



**DR. BABASAHEB AMBEDKAR  
OPEN UNIVERSITY**

# BCA



**BCAR-601  
E- commerce**

# **E-COMMERCE**



**DR. BABASAHEB AMBEDKAR OPEN UNIVERSITY  
AHMEDABAD**

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## **ROLE OF SELF-INSTRUCTIONAL MATERIAL IN DISTANCE LEARNING**

The need to plan effective instruction is imperative for a successful distance teaching repertoire. This is due to the fact that the instructional designer, the tutor, the author (s) and the student are often separated by distance and may never meet in person. This is an increasingly common scenario in distance education instruction. As much as possible, teaching by distance should stimulate the student's intellectual involvement and contain all the necessary learning instructional activities that are capable of guiding the student through the course objectives. Therefore, the course / self-instructional material is completely equipped with everything that the syllabus prescribes.

To ensure effective instruction, a number of instructional design ideas are used and these help students to acquire knowledge, intellectual skills, motor skills and necessary attitudinal changes. In this respect, students' assessment and course evaluation are incorporated in the text.

The nature of instructional activities used in distance education self-instructional materials depends on the domain of learning that they reinforce in the text, that is, the cognitive, psychomotor and affective. These are further interpreted in the acquisition of knowledge, intellectual skills and motor skills. Students may be encouraged to gain, apply and communicate (orally or in writing) the knowledge acquired. Intellectual-skills objectives may be met by designing instructions that make use of students' prior knowledge and experiences in the discourse as the foundation on which newly acquired knowledge is built.

The provision of exercises in the form of assignments, projects and tutorial feedback is necessary. Instructional activities that teach motor skills need to be graphically demonstrated and the correct practices provided during tutorials. Instructional activities for inculcating change in attitude and behaviour should create interest and demonstrate need and benefits gained by adopting the required change. Information on the adoption and procedures for practice of new attitudes may then be introduced.

Teaching and learning at a distance eliminate interactive communication cues, such as pauses, intonation and gestures, associated with the face-to-face method of teaching. This is

particularly so with the exclusive use of print media. Instructional activities built into the instructional repertoire provide this missing interaction between the student and the teacher. Therefore, the use of instructional activities to affect better distance teaching is not optional, but mandatory.

Our team of successful writers and authors has tried to reduce this.

Divide and to bring this Self-Instructional Material as the best teaching and communication tool. Instructional activities are varied in order to assess the different facets of the domains of learning.

Distance education teaching repertoire involves extensive use of self-instructional materials, be they print or otherwise. These materials are designed to achieve certain pre-determined learning outcomes, namely goals and objectives that are contained in an instructional plan. Since the teaching process is affected over a distance, there is need to ensure that students actively participate in their learning by performing specific tasks that help them to understand the relevant concepts. Therefore, a set of exercises is built into the teaching repertoire in order to link what students and tutors do in the framework of the course outline. These could be in the form of students' assignments, a research project or a science practical exercise. Examples of instructional activities in distance education are too numerous to list. Instructional activities, when used in this context, help to motivate students, guide and measure students' performance (continuous assessment)

## **PREFACE**

We have put in lots of hard work to make this book as user-friendly as possible, but we have not sacrificed quality. Experts were involved in preparing the materials. However, concepts are explained in easy language for you. We have included many tables and examples for easy understanding.

We sincerely hope this book will help you in every way you expect.

All the best for your studies from our team!

# **E-COMMERCE**

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## **E-COMMERCE**

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### **BLOCK 1 : REVOLUTION AND BASICS OF E-COMMERCE**

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UNIT 1 THE REVOLUTION IS JUST BEGINNING

UNIT 2 A SHORT HISTORY OF DOT COM IPOs

UNIT 3 ELECTRONIC COMMERCE TECHNOLOGY

UNIT 4 ELECTRONIC COMMERCE AND INTERNET

# ***REVOLUTION AND BASICS OF E-COMMERCE***

## **Block Introduction :**

E-commerce often refers to any business transaction carried out over a computer network that involves the transfer of ownership or usage rights for products and services. According to data compiled by Jay Ritter, IPOs were promoted at a typical price-to-sales ratio of about 6 cycles the level of the prior year at the height of the dot-com effervescence in 2000.

We will go into detail about the fundamental idea of electronic commerce and where it came from in this block. The research and concept of e-commerce-related activities, as well as its features, will be the main topics of this block. You'll discuss the benefits and drawbacks of e-commerce.

You will make an effort to acquire and comprehend the fundamentals of programmed DMA input output management methods in this module. The pupils will also be given an explanation of the idea of input output supervisors and input output drivers. By using given examples, the learner will see how e-commerce ideas are used realistically.

## **Block Objectives :**

**After learning this block, you will be able to understand :**

- The requirements of E-commerce
- Seven Specific Features of E-Commerce
- Research the various e-commerce platforms.
- Concept of Internet and Web growth
- The History and Development of E-Commerce
- A Framework for E-Commerce Understanding
- Examining the development of corporate computing
- Elements of online trade
- Electronic Data Interchange: Basics
- Positive aspects of electronic data exchange

**Block Structure :**

**Unit 1 : Revolution and Basics of E-Commerce**

**Unit 2 : A Short History of Dot Com IPOs**

**Unit 3 : Electronic Commerce Technology**

**Unit 4 : Electronic Commerce and Internet**

# ***THE REVOLUTION IS JUST BEGINNING***

## **UNIT STRUCTURE**

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- 1.1 Introduction**
- 1.2 What is Business ?**
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- 1.15 Assignment**
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- 1.17 Case Study**
- 1.18 Further Readings**

### **1.0 Learning Objectives :**

**After learning this unit, you will be able to understand :**

- Idea about Business and E-Business
- About E-Commerce
- Advantages & Disadvantages of E-Commerce
- Difference between E-Commerce and E-Business
- Details of Types of E-Commerce
- Idea about unique features of E-Commerce
- Evolution of Internet and Web
- Detail of growth of E-Commerce
- Idea of Technology and E-Commerce in perspective

**1.1 Introduction :**

We are in the electronic century. Internet use and other information and communications technologies (ICT) are essential for productivity and economic growth. Networks and technologies based on the internet have the potential to boost output, save costs, and create new market opportunities.

Individuals have an interest in shopping, and internet retail is progressing, allowing them to shop whenever they want and from anywhere in the world. Online shopping is accessible 24/7 and may be done at any time. This changes the company model and changes it in light of how retail customers approach it. On the other hand, although having a significant impact on the buying experience, e-commerce seems to be more innovative and evolves. Typically, specific producers and retailers may see particular opportunities brought forth by new technologies.

It should be highlighted that several industries have not yet taken advantage of chances, such as internet shopping for consumer-packaged goods, which often comes after industries like media, electronics, and fashion.

**❑ Check Your Progress – 1 :**

1. ICT stands for \_\_\_\_\_.
- a. Information and Communication Technologies
- b. Information and Communication Topology
- c. Information and Communication Transaction
- d. Information and Communication Transfer

**1.2 What is Business ?**

An organization or enterprising entity engaging in commercial, industrial, or professional activity is referred to as a business. A business's goal is to coordinate some form of economic production (of goods or services). Businesses can be for-profit corporations or nonprofit organizations working to advance a social cause. Businesses varies in size and scope from small, local enterprises to enormous, global conglomerates.

A person's efforts and operations to produce and sell goods and services for profit are also referred to as business.

To make sure that everything runs smoothly and successfully, businesses engage in a variety of operations and activities. Employees can operate completely within their own field of expertise by grouping these operations. By concentrating on a number of important variables, including accounting, finance, production, research & development, and sales, these operations support the overall business structure.

- **Accounting** : maintaining track of all financial transactions for the company and assisting management in resource allocation choices.
- Finance includes controlling the company's finances, keeping track of its capital requirements, and assessing the potential effects of borrowing money on the health of the company.
- **Manufacturing** : creating goods and/or services to satisfy consumer need.
- **Marketing** : identifying consumer requirements to provide goods or create services.

- **Research and development** : knowledgeable analysts assist the company in staying competitive.
- **Sales** : In order for a firm to remain profitable, its constant goals are to boost sales and income.

❑ **Check Your Progress – 2 :**

1. An organization or enterprising entity engaging in commercial, industrial, or professional activity is referred to as a \_\_\_\_\_.  
a. Commerce    b. Business    c. Research    d. Marketing
2. Business variables includes \_\_\_\_\_.  
a. Accounting    b. Finance    c. Manufacturing    d. All of Above

**1.3 What is E-Business ?**

E-business, often known as electronic business, is the practice of conducting business via the Internet, intranets, extranets, or a mix of these. Similar to e-commerce, e-business involves more than just the online purchase and sale of goods and services. Supply chain management, electronic order processing, and customer relationship management are just a few of the business activities that fall under the umbrella of e-business. Therefore, e-business procedures can aid businesses in running more successfully and effectively.

**1.4 What is E-commerce ?**

E-commerce, or electronic commerce, is a modern business practice that aims to meet the needs of companies, suppliers, and clients by lowering costs, enhancing product quality, and accelerating delivery times. E-commerce describes the following methods for exchanging commercial information without using paper.

- Electronic Data Exchange (EDI)
- Electronic Mail (E-mail)
- Electronic Bulletin Boards
- Electronic Fund Transfer (EFT)
- Other Network-based technologies

E-commerce is the idea of using the internet to do business more effectively and quickly. E-commerce is the practice of conducting transactions involving the sale and purchase of products and services over the Internet or via computer network without the need for paper documentation.

Electronic commerce, sometimes known as e-commerce, covers a broad spectrum of online business ventures involving goods and services. Additionally, it applies to "any type of economic transaction in which the participants communicate electronically as opposed to through direct physical contact or exchanges".

Business conducted without the exchange of paper-based documents using computers, telephones, fax machines, barcode readers, credit cards, or other electronic devices. It includes ordering, processing transactions, authenticating payments, maintaining inventories, and providing customer service. There are four categories of e-commerce which are as follows :



## **E-Commerce**

- Business-to-Business
- Business-to-Consumer
- Consumer-to-Consumer
- Consumer-to-Business

By offering a less expensive and more effective distribution channel for their goods or services, e-commerce has helped businesses create a market presence or strengthen an already strong position.

Examples of E-Commerce are as follows :

- ✓ Online book shopping is done by a person.
- ✓ A government worker uses the internet to book a hotel room.
- ✓ A company uses the seller's interactive telephone system to place an order for a computer by dialing a toll-free number.
- ✓ A company purchases office supplies online or through a computerized auction.
- ✓ A retailer places product orders through the extranet of a supplier or an EDI network.
- ✓ Using the company's intranet, a manufacturing facility orders electronic components from another facility inside the organization.
- ✓ A person uses an ATM to withdraw money.
- ✓ Using credit cards for internet purchases for business.
- ✓ Using an organization's network to distribute information
- ✓ Using extranet partners to drive manufacturing and distribution along a value chain.
- ✓ Offering products to customers on a pay-per-download basis via a website, etc.

### **1.4.1 Advantages :**

- 1. Faster Buying Process :** For consumers, e-commerce has sped up the entire purchasing process. They can buy goods while sitting at home instead of having to go to actual stores to accomplish their shopping. It speeds up transactions and saves a ton of time.
- 2. Reduces Operating Cost :** The overall operational costs of firms have decreased as a result. The requirement for businesses to establish physical shops has been replaced by e-commerce. Rent, utilities, other bills, employee pay, and other running costs are very expensive. It avoids all of these costs and manages every aspect of corporate operations online.
- 3. Customize Your Shopping Experience :** Customers can enjoy a tailored buying experience thanks to e-commerce. Customers are free to look for a wide range of products that suit their preferences and demands. Online business shows products to clients according to their interest and their location.
- 4. 24 × 7 Accessible :** The option to shop online is always available—24 hours a day, seven days a week. The ability of consumers to obtain online goods at any time is one of the main benefits of e-commerce. Here, unlike with real stores, there is no set opening or closing time.

5. **World Wide Connection** : Online enterprises are able to connect and reach customers from extremely remote locations without regard to geography. People can order from anywhere and have it delivered to their home or business.
6. **Detailed Product Information** : Online enterprises are able to connect and reach customers from extremely remote locations without regard to geography. People can order from anywhere and have it delivered to their home or business.

#### 1.5.2 Disadvantages :

1. **Lack of Personal Touch** : In the case of internet shopping, customers cannot touch or feel the merchandise. When buying from real stores and thoroughly inspecting the thing before purchase, they are occasionally happier.
2. **No Guarantee about Product Quality** : Customers cannot be guaranteed that the things they purchase online are of a certain caliber. They could be duped by businesses and given subpar goods.
3. **Security Issues** : Customers who shop online run the risk of losing their crucial credentials. There are many online hackers that could steal customers' data and leave them with significant financial losses.
4. **Long Delivery Period** : The requirement for customers to wait extended periods of time for product delivery is another significant drawback of internet purchasing. Customers receive immediate product delivery when buying offline.

#### ❑ Check Your Progress – 3 :

1. EDI stands for \_\_\_\_\_.
  - a. Electronic Data Exchange
  - b. Electronic Document Exchange
  - c. Electronic Data Expert
  - d. Electronic Document Expert
2. EFT stands for \_\_\_\_\_.
  - a. Electronic Fund Transaction
  - b. Electronic Fund Transfer
  - c. Electronic Fund Transport
  - d. Electronic Fund Topology
3. EBB stands for \_\_\_\_\_.
  - a. Electronic Business Boards
  - b. Electronic Busy Boards
  - c. Electronic Bulletin Boards
  - d. Electronic Big Boards

### **1.5 The Difference between E-commerce and E-business :**

E-commerce is the practice of conducting business online or participating in the purchasing and selling of goods via the internet. It includes financial transactions as well. Other examples of online e-commerce operations are :

- ✓ Purchasing tickets online
- ✓ paying various taxes
- ✓ Online transactions
- ✓ Items bought or sold online
- ✓ Accounting Software Online
- ✓ Support for customers online

## E-Commerce

Find instances of e-commerce websites in the meantime. They include Amazon, Myntra, Flipkart, Paytm Mall, and others.

E-business includes using the internet to conduct all forms of business transactions and services. These covers acquiring raw materials, online learning, business dealings, online financial transactions, and more. This shows that many different kinds of companies and services are present online.

Examples include e-commerce businesses and their auxiliary internal operations, such as websites for classified ads, auctions, software or hardware developers, etc. In the meantime, the E-Business online activities consist of :

- ✓ Establishing an internet store
- ✓ Supply chain administration
- ✓ Internet-based business transactions (buying and selling products)
- ✓ Customer Education Financial Business Deals
- ✓ Email Promotion

E-Commerce	E-Business
E-commerce is the activity of carrying out commercial activities and transactions online.	The word "E-Business" refers to conducting any kind of business transaction online.
It required using the internet.	The internet, intranet, and extranet have to be used.
It includes limited transactions.	It includes unlimited transactions.
E-commerce covers outward/external business procedures.	Both internal and external business activities and processes are included in e-business.
E-commerce involves financial transactions.	E-business includes both financial and non-financial activities.
It includes purchases, sales, and internet transactions.	It refers to the company's online presence.

### Check Your Progress – 4 :

1. Explain the difference between E-commerce and E- business ?

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### 1.6 Why E-Commerce ?

Businesses change as a result of the growth and rising usage of Internet and online technology. Due to this change, many firms now do their transactions online. It should be remembered that e-commerce first gained traction when businesses switched from paper to digital formats for managing and controlling information in order to conduct business. As the government works on information technology as a method to transform electronic government, this business e-trend has gained significance in the world of e-commerce.

As online and internet services become more and more invasive, many company domains that are created as a result of information technology-enabled business transactions tend to adopt the most recent technology. E-commerce is mostly used in transactions that take place between :

- Businesses and Consumers
- Businesses and Businesses
- Internal company operations

E-commerce technology is considered to be distinct from past technologies and to be more powerful since it causes fundamental shifts in commerce that are currently occurring. E-commerce is hugely popular today because :

- ✓ Compared to conventional retailing, business on the internet generates an increasing number of clients.
- ✓ The ability for consumers to purchase anything with a mouse click from anywhere in the world lowers business's barriers to entry.
- ✓ Business eliminates costs associated with opening a store vs online sale, which will save all essential additional costs.

### **1.7 Unique Features of Ecommerce :**

There are seven different types of distinctive qualities that are used by e-commerce websites to function, including :

1. **Ubiquity** : Access to treatment is available in the general business sector through the distribution of documents. It has been observed that customers are typically influenced by clothing and footwear because they are essential elements for dressing.
2. **International Spread** : E-commerce makes it possible to conduct business throughout the nation, which is more convenient and effective than traditional trade. Businesses benefit from a prospective market through e-commerce, which may be carried out across a large network population.
3. **Worldwide Standards** : The technical standard of the Internet results in sharing between nations when using e-commerce technologies. The standard will have an impact on market entrance costs as well as the cost of items on the market, which lowers expenses applied with various indirect cost reduction strategies as well as the monthly cost of commerce websites and simplifies the technological company.
4. **Richness** : It is acknowledged that branding and advertising are crucial components of any business. You may transmit music, video, animation, billboards, signs, and more through e-commerce.
5. **Interactive** : Today's e-commerce industry is interactive because it enables two-way communication between firms and customers.
6. **Knowledge Density** : Since the creation of the internet, there has been a significant increase in information density as a result of consumer and industry trends toward bettering information quality across all industries. Time and accuracy are saved, and the cost of information gathering, storing, communicating, and processing is reduced.
7. **Personalization** : The personalization aspect of e-commerce technology arises from the tendency of businesses to modify name, interests, and buy message objects with marketing message that is delivered to the consumers.

❑ **Check Your Progress – 5 :**

1. Explain unique features of E-Commerce ?

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**1.8 Types of E-commerce :**

Typically, when we think about e-commerce, we picture online transactions between suppliers and customers. It can be shown that this theory is accurate at the same time since we can be precise and real based on the types of e-commerce qualities listed below, such as :

1. **Business-to-Business (B2B)**
  2. **Business-to-Consumer (B2C)**
  3. **Consumer-to-Consumer (C2C)**
  4. **Consumer-to-Business (C2B)**
  5. **Business-to-Administration (B2A)**
  6. **Consumer-to-Administration (C2A)**
1. **Business-to-Business (B2B) :** Business-to-Business (B2B) E-commerce between businesses is viewed in a variety of ways that distinguish it from its consumer-facing competitors. In business-to-business markets, segmenting the market depending on firm size is a common strategy. Because business-to-business consumers have such a wide range of consumption levels, this often makes sense because huge organisations typically think and act differently than tiny ones.
  2. **Business-to-Consumer (B2C) :** The formation of electronic business interactions between firms and actual clients is different from business-to-consumer e-commerce. It has to do with the e-commerce segment for retail, which is where typical retail trade takes place.
  3. **Consumer-to-Consumer (C2C) :** The term consumer-to-consumer (C2C) e-commerce refers to any internet transaction involving customers for goods or services. These transactions are typically carried out with the aid of a third party that provides an internet platform for transactions.
  4. **Consumer-to-Business (C2B) :** E-commerce of the consumer-to-business variety displays a reversal of the conventional pattern of transferring commodities, which is significant for initiatives involving crowdsourcing. Numerous stores participated in this by making their goods and services available to businesses who required them.
  5. **Business-to-Administration (B2A) :** Online transactions between businesses and government agencies are referred to as business-to-administration e-commerce. It makes extensive use of a variety of services, including but not limited to those related to finances, social security, employment, and legal records.

6. **Consumer-to-Administration (C2A)** : All electronic transactions between citizens and the government will be handled by a model of consumer-to-administration e-commerce.

**1.9 Evolution of the Internet and the Web :**

It has been discovered that government research laboratories appear to be connected via the internet. Since 1994, its growth has resulted in millions of users and a wide range of uses across the globe. In a nutshell, the internet functions as a potent platform that continues to transform how businesses operate and communicate. Because it is a powerful tool for communication, the internet has significant worldwide implications. Millions of individuals use it as a worldwide source of knowledge at work, school, and home. The internet is constantly evolving, and two key milestones of evolution include :

- Social web
- Mobile technology

These developments changed how people use the Internet. In the social web community, people have access to new forms of communication. Beginning in 2004, Facebook first debuts in a global network with 1,100 million users. As mobile technology develops, more and more individuals can interact quickly and easily around the world.

The internet seems to offer the most benefits for mass media activities in terms of demography. Anyone can create their own web page and publish it online for a minimal expenditure. This allows for direct, quick, and cheap business outreach to a vast market without the need for a certain business size model. People from all over the world are expressing and publishing their views and opinions like never before thanks to blogging, which has consolidated social media. The history and development of the Internet from 1995 to the present are shown in the table below.

<b>Date</b>	<b>Numbers of Users</b>	<b>World Population in Percentage</b>
December, 1995	16 million	0.4 %
December, 1996	36 million	0.9 %
December, 1997	70 million	1.7 %
December, 1998	147 million	3.6 %
December, 1999	248 million	4.1 %
March, 2000	304 million	5.0 %
July, 2000	359 million	5.9 %
December, 2000	361 million	5.8 %
March, 2001	458 million	7.6 %
June, 2001	513 million	8.6 %
April, 2002	558 million	8.6 %
July, 2002	569 million	9.1 %
September, 2002	587 million	9.4 %
March, 2003	608 million	9.7 %
September, 2003	677 million	10.6 %
October, 2003	682 million	10.7 %

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December, 2003	719 million	11.1 %
February, 2004	745 million	11.5 %
May, 2004	757 million	11.7 %
October, 2004	812 million	12.7 %
December, 2004	817 million	12.7 %
March, 2005	888 million	13.9 %
June, 2005	938 million	14.6 %
September, 2005	957 million	14.9 %
November, 2005	972 million	15.2 %
December, 2005	1,018 million	15.7 %
March, 2006	1,023 million	15.7 %
June, 2006	1,043 million	16.0 %
Sept, 2006	1,086 million	16.7 %
Dec, 2006	1,093 million	16.7 %
Mar, 2007	1,129 million	17.2 %
June, 2007	1,173 million	17.8 %
Sept, 2007	1,245 million	18.9 %
Dec, 2007	1,319 million	20.0 %
Mar, 2008	1,407 million	21.1 %
June, 2008	1,463 million	21.9 %
Sept, 2008	1,504 million	22.5 %
Dec, 2008	1,574 million	23.5 %
Mar, 2009	1,596 million	23.8 %
June, 2009	1,669 million	24.7 %
Sept, 2009	1,734 million	25.6 %
Dec, 2009	1,802 million	26.6 %
June, 2010	1,966 million	28.7 %
Sept, 2010	1,971 million	28.8 %
Mar, 2011	2,095 million	30.2 %
Jun, 2011	2,110 million	30.4 %
Sept, 2011	2,180 million	31.5 %
Dec, 2011	2,267 million	32.7 %
Mar, 2012	2,336 million	33.3 %
June, 2012	2,405 million	34.3 %
Sept, 2012	2,439 million	34.8 %
Dec, 2012	2,497 million	35.7 %
Dec, 2013	2,802 million	39.0 %
June, 2014	3,035 million	42.3 %
Dec, 2014	3,079 million	42.4 %
June, 2015	3,270 million	45.0 %
Dec, 2015	3,366 million	46.4 %

## **1.10 Beginnings and Growth of E-commerce :**

The practice of trading online is continued by electronic commerce (e-commerce), in which a customer enters a seller's website and initiates a transaction there. Less firmly, it includes methods where the Internet plays a part, such as favoring the customer when choosing or matching merchants and/or products.

The modernization process began in 1977, when the American Law Institute's fixed editorial board and the National Conference of Commissioners on Uniform State Laws established a committee to assess whether current payment categories posed a threat to the country's constitutional order because they were not covered by the UCC. The code, which has been established by all states with the exception of Louisiana, is jointly administered by the ALI and the NCCUSL. The responsibility for drafting anticipated changes to the code rests with the fixed editorial board, which is made up of lawyers from two delegations. An amendment must be reviewed and approved by two organizations after it has been drafted and before it can be submitted for adoption to state legislatures.

Edward Guilbert, who was the director of the 1948 Berlin Airlift, had created the idea of electronic data interchange after finding it to be extremely unpleasant to manage corporate operations on paper. The documentation describing the products reached Berlin days after the things were shipped. Eighty years after the Hungarian airlift, Guilbert revised the procedure and included a requirement that proper documentation must come before a plane may take off.

He was unable to use his international competence domestically until 1966. While working for the Department of Transportation, he gave the go-ahead for the Office of Facilitation to give company managers a project to show how businesses could increase productivity if the government would cut bureaucracy slightly. Guilbert was so taken aback by the explanation that he began to wonder whether it would be a good idea for business managers to actually implement what they had discussed. Because of this, he and a small group of colleagues founded the Transportation Data Coordinating Committee in 1968 to aid in the coordination of tariffs for international shipments.

In the previous five years, e-commerce has experienced unprecedented growth in terms of both the number of participants and the variety and sophistication of features that e-tailers may use to facilitate their products. The impact of e-commerce is expected to continue to grow unabated for the foreseeable future as a result of extending developments in communications technology as well as approach devices and an ever-richer array of software expediences that designers can use to carry their description across the internet. The momentum built up thus far makes it possible to find useful answers to ongoing issues like security concerns and representational complexity.

Brilliant agents will no longer be able to take advantage of the advantage through artificially high pricing as the benefit becomes more elegant and widely distributed. Merchants of nearly identical products and services can seek to differentiate themselves from their rivals and gain market share by ascribing a variety of accompanying values to their core offering. For those who are successful in understanding this, the potential benefits are fantastic.



**1.11 Technology and E-commerce in Perspective :**

The e-commerce sector is steadily evolving and increasing its ability to attract clients by offering them new advantages and contradicting amenities as beneficial technologies emerge. Consumers today have greater access to conveniences than ever before. Due to this, it's essential for online agents to stay current with industry advancements in order to obtain the upper hand in the most recent, highly competitive online market.

When looking for clothing, shoes, hats, jewelry, eyeglasses, and other accessories, many people still choose the traditional rout of visiting brick-and-mortar stores since it is effective to compare various designs, styles, sizes, colors, etc. to see which products fit best. If you sell anything made from this content online, you'll have a great chance of luring in a lot of new customers from this target market going forward. You will profit from being able to allow your clients to check on nearly anything they expect only online to find the best things from the comfort of their own homes or offices thanks to innovative solutions for virtual trying-on and fitting.

The entire notion of virtual fitting and sizing is still quite simple and comfortable. Your visitors will be able to try on your products by using a standard webcam in addition to a specific application built into your online store. The most recent technological developments enable online business owners to offer this customized, customer-tailored purchasing experience in a relatively simple and affordable manner.

Today's cutting-edge online technologies make it possible to connect with customers in a manner that is nearly identical to that found in a physical store. Many of them offer a variety of features, like personalized welcomes, client preference tracking, client-specific promotions creation, dynamic price adjustments, popularity ratings for each and every item in your inventory, real-time consulting, and many more.

You can enable co-shopping for your clients by utilizing the most recent social networking tools. In other words, people will be able to shop together while debating items, costs, features, offers, and other details in real time, even from various places around the world.

**1.12 Let Us Sum Up :**

In this lesson, we learned that e-commerce, also known as electronic commerce, is the buying and selling of products and services as well as commercial transactions that may be carried out over electronic networks, mostly with the aid of the Internet. E-commerce often refers to any business transaction carried out over a computer network that involves the transfer of ownership or usage rights for products and services.

There are seven different types of special features that are used by e-commerce websites to function, such as. Business-to-Business (B2B), Business-to-Consumer (B2C), Consumer-to-Business (C2B), Business-to-Administration (B2A), and Consumer-to-Administration are just a few examples of the various sorts of e-commerce features that can be noticed (C2A).

**1.13 Answers for Check Your Progress :**

- ❑ **Check Your Progress 1 :**  
1 : a
- ❑ **Check Your Progress 2 :**  
1 : b            2 : d
- ❑ **Check Your Progress 3 :**  
1 : a            2 : b            3 : c
- ❑ **Check Your Progress 4 :**  
1 : Refer 1.5
- ❑ **Check Your Progress 5 :**  
1 : Refer 1.7

**1.14 Glossary :**

1. **Business :** An organization or enterprising entity engaging in commercial, industrial, or professional activity is referred to as a business.
2. **E-Business :** E-business, often known as electronic business, is the practice of conducting business via the Internet, intranets, extranets, or a mix of these.
3. **E-Commerce :** E-commerce, or electronic commerce, is a modern business practice that aims to meet the needs of companies, suppliers, and clients by lowering costs, enhancing product quality, and accelerating delivery times.

**1.15 Assignment :**

1. Explain Advantages and Disadvantages of E-Commerce.

**1.16 Activities :**

1. Explain types of E-Commerce.
2. Explain evolution of the Internet and the Web.

**1.17 Case Study :**

1. Study the beginnings and growth of the E-Commerce.

**1.19 Further Reading :**

1. Kenneth C. Laudon, Carol G. Traver (2008). E-Commerce : Business, Technology, Society, Second Edition.
2. Jim Collins (2001). Good to Great : Why Some Companies Make the Leap... and Others Don't.

**UNIT STRUCTURE**

- 2.0 Learning Objectives
- 2.1 Introduction
- 2.2 Today's E-Commerce
  - 2.2.1 Success
  - 2.2.2 Failures
- 2.3 Future Forecasts
- 2.4 E-Commerce Infrastructure
- 2.5 The Internet and the Evolution of Commercial Computations
- 2.6 Academic Restraints with E-Commerce
- 2.7 Let Us Sum Up
- 2.8 Answers for Check Your Progress
- 2.9 Glossary
- 2.10 Assignment
- 2.11 Activities
- 2.12 Case Study
- 2.13 Further Readings

**2.0 Learning Objectives :**

After learning this unit, you will be able to understand :

- Idea about the Today's E-Commerce
- About future forecasts
- Idea of E-Commerce Infrastructure
- About the Internet and the Evolution of commercial computations
- Idea about Academic Restraints with E-Commerce

**2.1 Introduction :**

According to data compiled by Jay Ritter, IPOs (Initial Public Offering) were promoted at a typical price-to-sales ratio of about 6 cycles the level of the prior year at the height of the dot-com effervescence in 2000. When the Fed raised interest rates in late 1999, the economy slowed down and Internet company growth prospects were negatively impacted. This is when the dot-com crisis started. Established technology companies like Microsoft Corp. and Dell Inc. have failed to meet their financial targets and have alarmed investors in the present Internet marketplaces. In March 2000, shares started to decline as a result of remuneration and retail wants, which are modestly based on indicators like web traffic that, inadvertently, rose too high for many dot-com enterprises to gather.

❑ **Check Your Progress – 1 :**

1. EDI stands for \_\_\_\_\_.
  - a. Initial Public Offering
  - b. Initial Price Offering
  - c. Initial Program Offering
  - d. Initial Private Offering

**2.2 Today's E-Commerce :**

E-commerce is the modern method of conducting business today. Many businesses, both old and new, have started incorporating the electronic aspect. They have decided it is reasonable to set up a website as a tool for electronically locating occupancy. Additionally, it is a fact of life that not all enterprises succeed with elegance. In fact, the following are some crucial reasons why a firm might judge its success or failure :

**2.3.1 Success :**

There are significant aspects that influence the e-commerce industry's success, and you must maintain a balance between all of those factors outlined.

1. **Product :** The creation, acquisition, fulfilment, or delivery of whatever is being offered are only a few of the many components that make up the initial element of your long-term success in the eCommerce sector. It doesn't matter what you are selling because you could be making and selling handcrafted goods, manufactured goods, or something else.
2. **Target Audience :** The products you have chosen for the aim of marketing are thought to be inspired by your target market. This is a terrific understanding of who and where your audience is, as well as how you will talk to them and increase sales. Additionally, if you have compiled a list of "must-have" goods or services, you can advertise using specific strategies that you are also offering "nice-to-have" goods and services.
3. **Value plan :** This is one of the factors that influences a customer's decision to purchase your product more than ever before. If consumers are trying to buy a particular type of solution, they may search on Google or look for it in a vending machine-like Amazon. This makes it difficult to obtain the customer's email address, and a lack of fundamental and owned email marketing channels makes it difficult or impossible to maintain a contact with customers.
4. **Transparency :** This element promotes trust-building. It helps make your website's contact information readily available. Every website should be able to allow visitors to locate an email address and a phone number at the bottom or top of the page.
5. **Boosts overall appointment :** Using natural social media outlets and then marketing the brand in realtime on various social media platforms, including as Instagram, YouTube, Facebook, LinkedIn, and Pinterest, is the simplest way to increase engagement with your online store.
6. **Strong Margin :** A good gross margin enables the eCommerce industry to operate smoothly. Additionally, it allows for the investment of additional client acquisition opportunities. Revenue and cost are two aspects that affect this face. The costs associated with marketing must also be considered. There are additional expenses as well, such as : Product Cost, Shipping Cost, and Other Expenses.

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7. **Low Customer Purchase Cost :** It is important to anticipate the lucrative clients that serve as the holy grail for the majority of eCommerce enterprises. Additional elements that affect this one includes : Ideal Margin, Lifetime Value, and Your Competitors.
8. **High Repurchase Rate :** The most profitable orders, upon which the stores are based, are those that are placed repeatedly. According to the study, the top eCommerce businesses reach the point where recurring consumers account for more than 50% of their overall sales after about 20 months. Additionally, it begins to contribute more to the revenue than the new clients do later.

### **2.3.2 Failures :**

Today, the eCommerce sector is expanding quickly. But maintaining an online store is a difficult task. eCommerce startups typically fail for a variety of reasons. You will have worry over a number of concerns if you wish to launch a new eCommerce firm. Additionally, there will be a lot of misunderstanding when you first start your firm. Additionally, that uncertainty will lead to errors in your company. Therefore, you must grasp both how to launch an online business and the factors that led to the collapse of the most recent eCommerce firm. I'll now go over a few causes of e-commerce blunders and failures.

1. **Lack of Planning :** The secret to any business success is better planning. You must conduct thorough business planning before beginning an online store. You must therefore make plans for how to advertise your website. You must also develop a sound business concept. If not, you won't be able to survive in the real-world market. Furthermore, the process takes a while. As a result, you must continue your process quickly and effectively. It occasionally doesn't work the first time; in which case you must decide and re-plan your task. Your business plan should also include a monetization strategy. Otherwise, you don't achieve successful outcomes. So, the foundation of any business is sound planning.
2. **Faulty Inventory Management :** The most crucial component of every business is an eCommerce shopping cart software that is centered on inventory management. You will experience a product shortage if you manage the inventory system improperly. Additionally, if your inventory is overstocked when you first launch an online store, it will negatively affect your company's cash flow. Additionally, you will face issues with product shortages if your inventory is depleted. Customers are often highly frustrated when they are unable to find the things they are looking for. You must therefore set up your inventory system in accordance with your business model. In any other case, your online store will fail.
3. **Lack of Maintenance :** Proper maintenance is one of the eCommerce entrepreneurs' biggest worries. Your business won't last if you don't adequately maintain your system. You must thus draught some terms and conditions. Additionally, you need to update several privacy policies. Furthermore, you must continue the return policy in your terms and conditions. If a customer discovers a flaw in a product after you've sold it, you must either fix the goods or issue a refund.

Additionally, you need to treat the customer with respect and be courteous. Additionally, you must check in all of your site's functionalities after

a specified amount of time. For update purposes, you must execute this testing procedure regularly. You cannot provide the customer with a better platform if the system is not updated. Therefore, you must properly manage your website to lower the likelihood of failure.

4. **Lack of Customer Support :** A good customer experience is an indication of a successful business. You must always be prepared to assist the customer. Additionally, if any consumers have any questions, you must answer them as soon as you can. Because all firms place a high priority on client pleasure. Additionally, if you do not promptly respond to customer service requests, those clients will disregard your website the next time. Additionally, they won't recommend anyone to this website. As a result, you must promptly and effectively provide customer service. Otherwise, it will have a detrimental effect on your company.
5. **Selling Wrong Product :** Selecting the ideal product is every company's main strategy. You must understand client demand and choice if you want to launch new eCommerce businesses. If you don't put the needs of the customer first, they won't make any purchases from your website. Your startup will then fail, and you will suffer a tremendous loss.
6. **Bad Quality Photos :** Customers will see product images for purchasing things when they visit your website. Customers will have an unfavorable image of your company if your product photos are of poor quality. Some buyers find the product description tedious to read. Additionally, customers may judge the quality of your product from the image. Therefore, you must make sure that your website has high-quality images. Otherwise, your eCommerce companies will fail and you will lose a number of clients.
7. **Aggressive Competition :** There are numerous eCommerce platforms accessible today. However, different platforms can't compete in the real-world market. Only those whose platforms can deliver high-quality services can survive in the current cutthroat industry. In any other case, your company will initially fail. You must therefore provide superior service in order to lower the likelihood that your eCommerce company will fail.
8. **Mismatch of Price & Cost :** Your firm will continue to run smoothly if you make a profit. However, aiming for excessive profit is bad for business. You must set the pricing of each product in accordance with its cost. Otherwise, you won't be able to balance pricing and cost. You will lose clients if you charge a hefty price in exchange for a significant profit. Your eCommerce companies will fail as a result.
9. **Lack of Proper Website :** You require a top-notch platform to help your eCommerce startups develop. Moreover, you can build this platform using the right website. Additionally, even if your system is quick, safe, and adaptable, using a quality website will make these qualities meaningless. Lack of a suitable website is one of the main reasons why many startups fail. Therefore, if you do not select an effective website, your organization will have a number of challenges.
10. **Lack of Patience :** You require a top-notch platform to help your eCommerce startups develop. Moreover, you can build this platform using the right website. Additionally, even if your system is quick, safe, and

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adaptable, using a quality website will make these qualities meaningless. Lack of a suitable website is one of the main reasons why many startups fail. Therefore, if you do not select an effective website, your organization will have a number of challenges.

### ❑ Check Your Progress – 2 :

1. E-Commerce success includes \_\_\_\_\_.
  - a. Product
  - b. Target Audience
  - c. Transparency
  - d. All of Above
2. E-Commerce failures includes \_\_\_\_\_.
  - a. Selling wrong product
  - b. Bad quality photos
  - c. Lack of Customer supports
  - d. All of Above

### 2.3 Future Forecasts :

The eCommerce industry is expanding and will soon undergo a significant evolution. It significantly alters consumer behavior, demands, and shopping trends. In just 25 years, this industry has generated global revenues of more than 2 trillion US dollars.

The eCommerce sector has been completely transformed by the adoption of new technology, extensive customization, policy evolution, and clever integration with cutting-edge solutions. Additionally, you may now combine the physical and online selling processes to maximize your use of these two channels.

We'll talk about future e-commerce trends today, which will illustrate how the sector will develop over the coming years.

You must stay current with the upcoming eCommerce trends in this area if you want to keep up with this fast-paced market. You can use it to boost the client purchasing experience.

#### 1. The Growth of Global Retail eCommerce Sales :

Worldwide, e-commerce sales have been steadily increasing. In the past 25 years, it has completely transformed the retail industry. Statista projects that sales will rise from \$1.3 trillion in 2014 to \$4.5 trillion in 2021. With the development of technology and the shift in consumer demand, it has undergone significant change.

Online shopping has recently risen to the top of the list of web activities. Therefore, business owners place a strong emphasis on improving the user experience. They are constantly implementing innovative procedures that give their customers a more pleasant online purchasing experience.

Websites today are easier to navigate and more user-friendly. It enables users to choose their items and carry out the relevant tasks with ease. Additionally, these websites provide a variety of secure payment channels that have been validated. The majority of them feature refund policies and a committed support staff.

The companies also implement stringent security measures to guarantee the privacy of all customer data. These facts are encouraging customers to shop more on eCommerce sites than in brick-and-mortar stores because they eliminated all the trouble of going to stores.

## **2. Increase in Online Shopping :**

In recent years, mobile shopping has grown significantly. Customers from all over the world plan to use their smartphones or tablets to buy goods and services. As mobile shopping increases, online businesses also adopt the mobile-first strategy. For online purchases, people are more likely to use their smartphones.

In 2020, there are expected to be 7.26 billion mobile users worldwide. And in the upcoming years, this e-commerce trend will continue. Nowadays, customers frequently verify the merchandise on their portable devices before placing their orders. For online retailers, it necessitates the use of mobile optimization.

Online sales are expected to be dominated by mobile devices by more than 50% share by 2022. Therefore, if eCommerce businesses wish to experience rapid company growth, they must make their websites mobile-friendly.

## **3. B2B eCommerce will remain more successful than B2C eCommerce :**

Both B2B and B2C businesses are changing their strategies in response to the emerging trend of eCommerce. It is believed that B2B eCommerce is outperforming B2C and will do so in the near future. In business-to-business eCommerce, suppliers sell products to other business owners.

Additionally, B2B reduces the inconvenience of manual procedures by employing an online sales gateway. Through internet platforms, it enables businesses to sell and distribute their goods to other businesses. However, a larger online presence at a reduced cost will enhance your sales.

Additionally, they estimated that B2B eCommerce will increase at a 10% compound annual growth rate (CAGR) during the following five years. This paper illustrates the potential for US B2B eCommerce. Due to the growing popularity of B2B eCommerce, online retailers are entering this industry. Customers will have seamless online shopping experiences thanks to it.

## **4. Personalized Multichannel Distribution :**

Modern sales strategies like omnichannel retail make sure that customers have a seamless purchasing experience. Multi-channel eCommerce refers to the promotion and sale of goods through various channels, including marketplaces, online stores, and even physical stores.

It will interestingly muddy the lines between offline and online outlets. More opportunities will exist for customers to learn more about your goods or services. Additionally, when you advertise your brand through various media, it may lead to new potential for sales and brand recognition.

Customers may, however, use a variety of channels when purchasing. It enables a user to begin their adventure on one channel and finish their purchase on another. To help their eCommerce businesses grow, many marketing methods have used the Omnichannel retail approach.

## **5. Voice Shopping Will Take the Lead :**

Online shoppers of the next generation are increasingly using voice shopping. By 2022, more than 50% of all searches, according to researchers, will be voice-driven. Voice shopping has already been implemented in online grocery stores run by major players like Amazon, Alibaba, Walmart, and other enormous corporations. When Amazon introduced its smart speaker, Echo, in 2014, this eCommerce trend began to gain popularity.



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You'll be shocked to learn that more than 30% of internet users in the US have used voice assistants to research products or make purchases. Because of this, internet merchants haphazardly incorporate voice commerce into their operations. As a result, customers may effortlessly make purchases using their voices.

The purchasing procedure will be more streamlined with voice shopping. By providing a vocal description, users can search for, evaluate, compare, and buy things. These data and figures demonstrate that there will be a significant rise in voice shopping over the next few years.

### **6. Social Media is used in online retail :**

Social media is no longer just a tool for bringing people together. Social networking platforms enable retailers to sell their goods directly while also advertising their goods and services. Shoppers on social media can now buy items by clicking the Buy button on Facebook or Instagram Checkout.

The social media platform is frequently the initial point of contact for many customers with any company. Consumers today prefer to read reviews written by actual people. They support the brands and are more likely to purchase goods from such businesses.

However, Facebook and Instagram influencers can assist online store owners in widely promoting their business. Your audience's interaction with your brand will be continuously influenced by social media exposure.

As a result, social media emerges as a remarkable marketing technique to boost client loyalty and maximize sales for your company. Both social media users and social influencers are steadily growing in number. Therefore, in order to explore more chances for their stores, online retailers need develop stronger social marketing techniques.

### **7. More Ecommerce Use of AI :**

With the aid of artificial intelligence, e-commerce or digital shops have advanced business prospects. Your company may evaluate customer behavior and store data more effectively by incorporating AI technology.

Additionally, AI has given users access to a variety of cutting-edge experiences. They may use voice assistant, visual search, personalized recommendations, and other functions thanks to it. The purchasing experience will be worthwhile with these cutting-edge gadgets. Additionally, an online retailer can use AI to enhance the price module and product depiction.

In fact, a recent report by Business Insider predicts that by 2020, chatbots would handle more than 85% of client contacts. Numerous eCommerce business owners are currently utilising AI tools to increase lead generation, improve user experience, and better understand their customers.

### **8. A game using headless eCommerce :**

Due to its simplicity, headless eCommerce is becoming more and more popular among store owners. Both the front end and the back end-use different types of technology. Regular front ends make the most of content while eCommerce back ends can efficiently manage your business's operations.

Your eCommerce platform's frontend and backend are separated by headless eCommerce. Let's say a customer clicks the Buy Now button; as soon as that happens, the store receives a call to fetch data from the backend. This

is basically how traditional eCommerce works. By leveraging an API to access the data, headless eCommerce will speed up the transaction.

Using Headless eCommerce has a lot of benefits for online retailers.

- ✓ The ability to use successful marketing campaigns without negatively impacting the backend eCommerce operation;
- ✓ Familiarity with the web developer;
- ✓ Ownership of the site structure;
- ✓ Lower costs for customer acquisition and retention; and
- ✓ Higher conversion rates compared to traditional websites and eCommerce platforms
- ✓ Once more, it is compatible with open-source programs that facilitate expansion.

#### **9. Using augmented reality to see purchases :**

Having everything delivered to your door thanks to online shopping makes modern living simpler. You can now make the purchase in only a few clicks, saving time on traffic and line waiting. You also have the freedom to quickly compare the price and quality of many different things as you shop. The eCommerce buying experience is now better than ever thanks to quick delivery.

Online purchasing does have a significant drawback in addition to its many advantages. Not every time can you see the product in great detail. Customers can make incorrect assumptions about the goods and experience high unhappiness. Virtual and augmented reality, however, can close this gap. It gives you a 360-degree view of any object or location. As a result, it is simple for you to see how it will help you achieve your goals in real life.

As a result, VR offers customers a virtual tour of how a thing appears in real life. In order to determine whether it satisfies their demands or not, AR provides additional details.

Take the well-known beauty retailer Sephora as an example. Customers can try on various products and create different looks using their "Virtual Artist" tool. This gives them more self-assurance and guarantees a unique shopping experience. Anyone is unlikely to say no to this facility, especially fashion enthusiasts.

#### **10. Growing Adoption of Subscription Models :**

Customers that use digital products prefer subscription-based business models to one-time purchases. It gives them self-assurance regarding their expenditures. Additionally, eCommerce business owners find it to be a simpler approach to bring in new customers and keep them coming back.

Over the past few years, this eCommerce model has gained popularity. You may lay the groundwork for your internet business by having a solid understanding of how it operates and by establishing a reasonable pricing strategy. Customers can pay recurrent fees on a monthly or annual basis to access a good or service. Customers need not pay a significant sum all at once as a result. Instead, customers have a limited time during which to use the goods. With the option to choose whether to renew the subscription after it ends.

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Companies like Netflix and Apple Music are converting to subscription business models in order to develop enduring relationships with their customers and recurrent income. Additionally, digital payment systems like PayPal, Stripe, and WePay make it simple to set up regular payments. Start considering this cutting-edge method right away if you want to keep this business going!

### ❑ Check Your Progress – 3 :

1. CAGR stands for \_\_\_\_\_
  - a. Compound Annual Growth Rate
  - b. Cost Annual Growth Rate
  - c. Continue Annual Growth Rate
  - d. Commerce Annual Growth Rate

## 2.4 E-Commerce Infrastructure :

In a rapidly evolving environment, it is essential to adapt corporate needs to reflect shifting client needs, market trends, and technological demands.

Whether you are new to e-commerce or are currently involved, improving organizational efficiency should be your top focus. When attempting to increase productivity, it is essential to have a plan in place as well as a flexible infrastructure that can cater to the needs of the user.

### • Ecommerce Infrastructure Categorization :

1. **Ecommerce environment** : This outlines the broad principles and structures that will qualify your company to operate online. It adheres to the same standards as technical tools, legal and regulatory frameworks, and service provider participation.
2. **Infrastructure services** : These are the ones that define e-commerce features. The ecommerce business will receive specific functions from one or more providers working in concert. When a user checks out their purchases, services like user authorization, payment processing, order validation, etc. are helpful.

The services that the infrastructure services offer to a user or an organization can be used to further categorize them. Common infrastructure service suppliers to the customer include network services, directory services, payment services, and security services.

3. **Ecommerce solution providers** : They provide a full solution for online retailers without an implementation crew.

### • Ecommerce Infrastructure Components :

The hardware, software, and network functions of each component are listed along with their primary functions in e-commerce infrastructure. You can set up the e-commerce platform more effectively if you are aware of how the various components work.

1. **Hardware** : Hardware has many functions, one of which is giving you access to the internet and your network. You can store, retrieve, and utilize your data thanks to it. Several significant hardware elements include : Computers, hubs, routers, data centers, and other devices.

**Servers** : A server is a software that gives other applications the functionality they need. It might be a tool or a computer software, and

it can serve a variety of functions. Proxy servers, web servers, application servers, etc. are a few examples of common servers.

2. **Software** : Services like system management tools, analytical tools for predicting your business, and service providers are examples of software components.

**Management Tools** : Running an e-commerce company requires managing a number of services, including content, databases, and resources. Data centers, enterprise resource planning, and content management are a few examples of software services that aid in effectively managing a company's resources.

**Analytical Tool** : Since e-commerce is expanding daily, it is more competitive. In order to improve your system's performance, it is crucial to assess your capacity. Tools for text and web analytics will aid in determining the value of your e-commerce website.

**Middleware** : Between service providers and service customers, middleware serves as an intermediary. Data access for components, communication protocols, specialized servers, or a combination of all of them, could be the cause.

**API** : The construction of software applications uses a protocol or tool known as an application program interface. It outlines the appropriate interactions between various software components.

3. **Network** : Through the Internet, the network offers the communication channel and services needed to connect users, processes, applications, services, and external networks.

**Internet Connectivity** : Establishing the link between diverse processes and equipment.

**Firewalls** : Your networks are shielded from outside intruders by firewalls. It provides an additional degree of protection by allowing you to choose the types of traffic that are allowed through.

**Security Services** : Even firewalls occasionally may fall short in defending against hackers, including security services.

**DNS** : A system for naming your website is the domain name system. They find your domain name's internet protocol address.

- **Effective Planning and Management** :

Ignoring the value of organizing and creating an ecommerce infrastructure is a huge short-term mistake for an owner of an online store. Your infrastructure must be based on the requirements and priorities of your business. Even managing your e-commerce infrastructure can be difficult, but with clear planning and management, risk can be minimized and availability can be guaranteed.

**Check Your Progress – 4 :**

1. Explain E-Commerce Infrastructure ?

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2. DNS stands for \_\_\_\_\_.
  - a. Domain Name Server
  - b. Domain Name System
  - c. Domain Name Service
  - d. Domain Name Structure
3. API stands for \_\_\_\_\_.
  - a. Application Program Instruction
  - b. Application Program Information
  - c. Application Program Interface
  - d. Application Program Infrastructure

### **2.5 The Internet and the Evolution of Commercial Computations :**

Every type of commercial communication, including those involving the purchase of products or services handled electronically by telephones, televisions, computers, and the Internet, is taken into consideration by electronic commerce. It is believed that these are the channels through which many businesses should advance in the future. With more people using the Internet to connect, electronic commerce is becoming more widely accepted among them. Many individuals consider online shopping or other forms of electronic trade, which are considerably more prevalent than these. More ways than we can imagine will be impacted by electronic commerce.

The current commercialization of the Internet has substantially sped up the development of electronic commerce, even though it encompasses all forms of electronic commercial communication. The U.S. government's development of and investment in computer networking technologies, which first surfaced in the 1960s, laid the groundwork for the modern Internet. The Internet was initially used to link and communicate information between colleges and scientists conducting government-sponsored research in various regions.

On the other side, the network became commercialized in the 1990s. Given that the volume of corporate communication conducted electronically has increased at an unreasonable rate. According to projections, electronic commerce will generate an amount ranging from \$8 billion in 1997 to over \$327 billion in 2002.

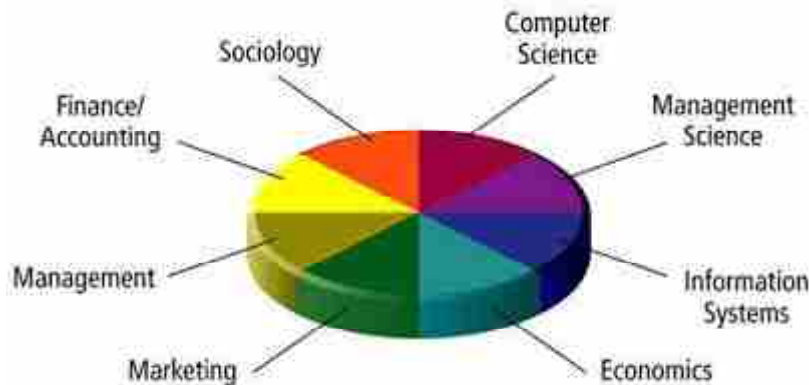
On the Internet, services and goods are arranged in a variety of ways. As an illustration, many retail establishments and catalogue businesses currently provide their produce for client selection and purchase online. There are also numerous new online or "virtual" retailers operating on the World Wide Web, offering everything from old cars and computer hardware to CDs and books. Additionally, service providers including real estate agents, insurance providers, and travel agencies have online presences. For instance, some airlines offer passengers who book tickets online affordable "cyberfares."

However, online shoppers are not required to make a direct trip to the store of their choice in order to make a purchase. Numerous media websites, ISPs, and search engines prominently acknowledge retailers and provide direct links to their websites. Specialty retailers, big discounters, services, and malls/marketplaces from around the globe all have a presence online.

### **2.6 Academic Restraints with E-Commerce :**

E-commerce-related academic disciplines relate to both technical and behavioral approaches :

- **Technical strategy :**
  - Information technology
  - Science in management
  - Information technology



**Academic Disciplines**

- **Behavioral approach :**
  - Information system
  - Economics
  - Marketing
  - Management
  - Finance/accounting
  - Sociology

## **2.7 Let Us Sum Up :**

While studying this unit, we discovered that IPOs, which were promoted at a traditional price-to-sales ratio of six cycles over closing year's level, serve as an elevated of the dot-com effervescence since 2000.

It should be emphasized that e-Commerce is a modern method of conducting business, and many organizations-both old and new-have started implementing electronic elements.

As the Internet has eliminated the geographical aspect from the transaction, the quantity to quality affinity of e-commerce is also becoming more and more apparent.

E-commerce has continued to expand more than any other technologically enabled phenomenon over the past 50 years, dreaming of a variety of information technologies as well as fundamental computer science ideas.

## **2.8 Answers for Check Your Progress :**

- Check Your Progress 1 :**  
1 : b
- Check Your Progress 2 :**  
1 : d          2 : d
- Check Your Progress 3 :**  
1 : a

## E-Commerce

### ☐ Check Your Progress 4 :

1 : Refer 2.4

2 : b

3 : c

### 2.9 Glossary :

1. **Server :** A server is a software that gives other applications the functionality they need. It might be a tool or a computer software, and it can serve a variety of functions.
2. **Firewalls :** Your networks are shielded from outside intruders by firewalls. It provides an additional degree of protection by allowing you to choose the types of traffic that are allowed through.

### 2.10 Assignment :

1. Explain the causes for success and failure of E-commerce.

### 2.11 Activities :

1. Study evolution of commercial computing.

### 2.12 Case Study :

1. Study the academic disciplines where E-commerce can be used ?
2. Study future forecasts of E-Commerce.

### 2.13 Further Reading :

1. Kenneth C. Laudon, Carol G. Traver (2008). E-Commerce : Business, Technology, Society, Second Edition.
2. Jim Collins (2001). Good to Great : Why Some Companies Make the Leap...and Others Don't.

**UNIT STRUCTURE**

- 3.0 Learning Objectives
- 3.1 Introduction
- 3.2 The Internet and the Web
  - 3.2.1 Internet
  - 3.2.2 World Wide Web
- 3.3 Packet Switching Networks
- 3.4 Intranet and Extranet
- 3.5 Internet–II
- 3.6 Internet Service Provider (ISP)
- 3.7 Basics of Web Server
- 3.8 Hardware and Software for Web Servers
- 3.9 Electronic Mail (E–Mail)
- 3.10 Electronic Commerce over the Internet
- 3.11 Examples of Internet E–Commerce
- 3.12 Let Us Sum Up
- 3.13 Answers for Check Your Progress
- 3.14 Glossary
- 3.15 Assignment
- 3.16 Activities
- 3.17 Case Study
- 3.18 Further Readings

**3.0 Learning Objectives :**

**After learning this unit, you will be able to understand :**

- Idea about the Internet and Web
- About Packet Switching Networks
- Idea of Internet, Internet–II and Extranet
- About the Hardware and Software for Web Servers
- Idea about E–mail
- Detail of Electronic Commerce on Internet and its example
- Idea of Starting of New Business



### **3.1 Introduction :**

Electronic commerce, sometimes known as ecommerce, is the umbrella term for a variety of economic activities or commercial exchanges that include the transfer of information over the Internet. It includes a wide range of diverse business types, including customer-based retail websites, sale or music websites, and commercial deals transferring stocks and services between corporations. It is currently one of the most important arrangements to appear on the Internet.

Customers can swap goods and advantages inductively through e-commerce without being constrained by time or location. Electronic commerce has advanced quickly over the previous five years and is expected to keep growing at this rate or perhaps accelerate. As more companies move parts of their activities online, the boundaries between "customary" and "electronic" trade will gradually disappear in the near future.

### **3.2 The Internet and The Web :**

#### **3.2.1 Internet :**

The latest buzzword in computer world is "Internet". The term Internet has been copied from two terms : *Interconnection* and *Network*. Internet is short form of the term Internetwork. A network is simply a group of computers that are connected together for sharing information and resources.

Using internet, organizations on all over the world can exchange data, people can communicate with each other in a faster and effective way, and researchers can gather information in their respective areas of research. With the help of video conferencing over internet, it has become possible that people can even see each other while communicating. Even one can do all his shopping sitting back at home. He does not bother to go to the crowded market place.

Internet is the largest network spread across the world, linking together thousands of individual networks of universities, educational, research institution, military and government agencies, industrial and financial organization.

Internet offers many services like WWW, E-Mail, Discussion Groups, Chat, File Sharing, Instant Messenger, Games, and E-Commerce. In short slowly market or businesses take place over the "Internet".

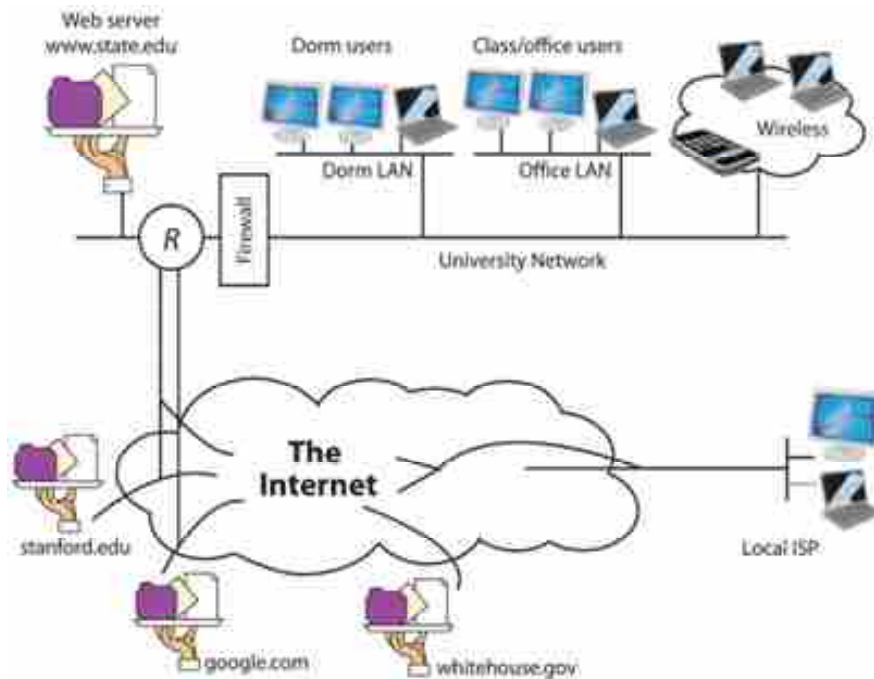
It is an unlimited commercial opportunity. It is a set of computers talking over fiber optics, phone lines, satellite links, and other media. It is a cyber space where data surfing can be done. It is an ocean of information. It is a gold mine of professionals from all fields sharing information about their work. It is a worldwide interconnected system of thousands of computer networks, each network in turn links thousands of computers together.

- **Definition of Internet :**

"Internet is a global system of interconnected computer networks that use the standard internet protocol suits".

"Internet is a collection of networks or network of networks".

"It is the name for a vast, worldwide system consisting of people, information and computers".



**The Internet**

### 3.2.2 World Wide Web :

WWW is stand for World Wide Web and also known as W3 or Web. The web began in 1989 at CERN, was invented by **Tim Berners-Lee**, the European center for nuclear research. WWW is hypertext-based information retrieval tool.

The internet includes a browsing service that expands the concept of hypermedia like Text, Movies, Pictures, and Sounds to include many computers known as World Wide Web or WWW, the service is a mechanism that links together information stored on many computers.

One can easily surf the web by jumping from one document to another using links in those documents. These documents can be in many formats, such as text, graphics, animation, sound and latest is video. All the information on internet is presented to the user as a document known as **Web Page**.

All these web pages are link to each other or even to section within a Web Page, and these links are known as **Hyper Links**. The tool used to view these Web Pages on Internet is known as **Internet Browser** or simply **Browser**. WWW is an example of an information protocol/service that can be used to send and receive information over the Internet. It supports :

- ✓ **Multimedia Information** (text, movies, pictures, sound, programs...).
- ✓ **Hypertext Information** (information that contains links to other information resources.)
- ✓ **Graphic User Interface** (So users can point and click to request information instead of typing in text commands).

- **Basic Elements :**

The basic elements of WWW are as follows :

**Client/Server System :** The Web is based on a Client/Server System. We use a Web client to communicate with the web server. A Web server is a computer connected to the Internet that runs a program, that takes responsibility

## E-Commerce

for storing, retrieving, and distributing some of the Web files. A Web Client or Web browser is a computer that request files from the Web.

**URLs (Uniform Resource Locator) :** URLs are used by Web browsers to locate Internet resources. A URL specifies the protocol to be used in accessing the resources, the name of the server on which resource resides and optionally the path of resource.

**HyperText Transfer Protocol :** HTTP is the standard protocol that allows Web clients and server to communicate. This protocol is used to carry requests from a browser to a Web server and to transport pages from the Web server back to the requesting browser.

**HyperText Markup Language :** The HTML is the universal language of the Web. It is used for writing web pages. HTML allows text to include codes that define fonts, layout, embedded graphics, and HyperText links.

**Web radio and TV Broadcasts :** You can tune into Web radio and TV Broadcasts and listen to live broadcasts or call up older one from the archives. The ability to send sound and video over the Internet also has other uses.

**Multimedia :** Full multimedia, which include graphics, sounds, video, and animation is widely available over the Web.

### ❑ Check Your Progress – 1 :

1. \_\_\_\_\_ is a global system of interconnected computer networks that use the standard internet protocol suits.
  - a. Internet
  - b. Intranet
  - c. Network
  - d. Extranet
2. WWW stands for \_\_\_\_\_.
  - a. World Web Wide
  - b. World Wide Web
  - c. Wide World Web
  - d. None of Above
3. URL stands for \_\_\_\_\_.
  - a. Universal Resource Locator
  - b. Uniform Research Locator
  - c. Uniform Resource Locator
  - d. Universal Research Locator
4. HTTP stands for \_\_\_\_\_.
  - a. Hybrid Transfer Protocol
  - b. Hypertext Transaction Protocol
  - c. Hypertext Transform Protocol
  - d. Hypertext Transfer Protocol
5. HTML stands for \_\_\_\_\_.
  - a. Hypertext Markup Language
  - b. Hypertext Manage Language
  - c. Hypertext Many Language
  - d. Hypertext Master Language

## 3.2 Packet Switching Networks :

In the early 1960s, *Paul Baran* at the Rand Corporation pondered a very simple problem : How do you ensure that a military network would continue to operate even under nuclear attack ? In other words, Paul's job was to establish a way to get information across a network so that there isn't a single point of failure.

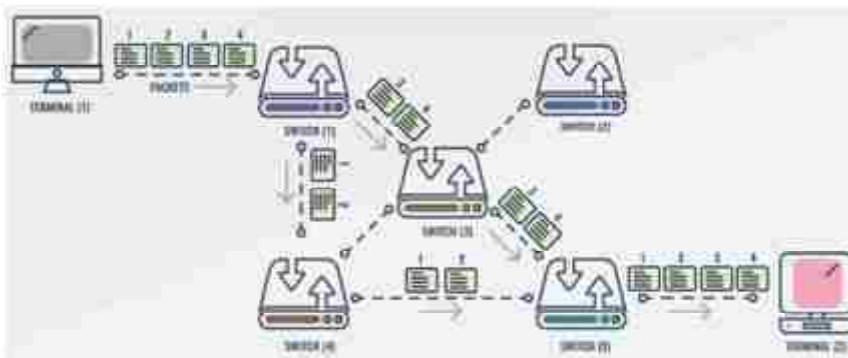
The solution that *Paul Baran* came up with is now called **Packet Switching**. A network of computers sends messages (packets) that contain information about its route so that any one computer on the network knows

where to forward (switch) the message. National Physical Laboratory created the first packet switching network in 1968.

In short Packet Switching method was divide the data into small packets and labeled to identify the sender & recipients. Long messages are broken into smaller units called PACKETS. Each packet contains a header, which includes destination and source identifiers and packet number. Packets from several sources are routed to their destinations, where they are reassembled into their original messages.

They are sent to various destination stations in a mixed sequence, which result in continuously receiving data until all packets of the messages are sent and received. The receiving station is then identified destination address for that station. The packet numbers in the header are used by receiving stations to reassemble messages in to a complete and correct order. This form of network switching, called Packet switching, is used with many different networks.

Each packet is handled as a separate communication. The packets from the same message may travel along several different lines.



**Packet Switching**

The main drawback of message switching is that it requires a large data storage buffer to hold incoming message and the time it takes for a message to reach its destination.

**❑ Check Your Progress – 2 :**

1. Write a note on Packet Switching Networks.

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**3.4 Intranet and Extranet :**

➤ **Intranet :**

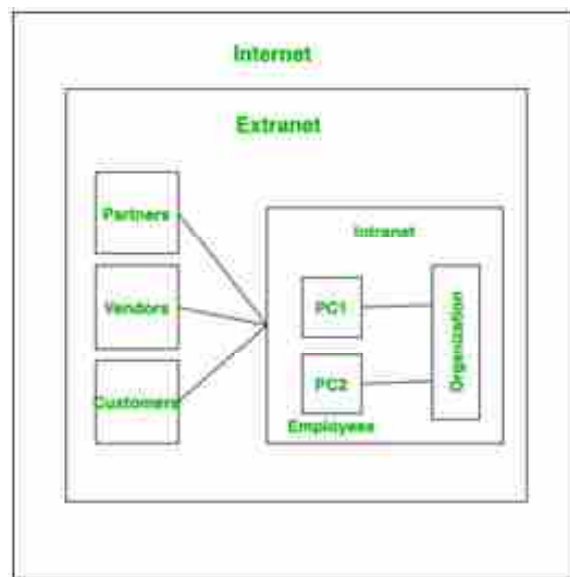
Intranets are basically "small" internets. Intranet is a private computer network that uses internet protocol (TCP/IP). Intranet is the general term for a collection of private computer network within an organization.

"A network belonging to any organization and can be used only by the member of the organization within the organization is called Intranet".

They use the same network facilities that the Internet does, but access is restricted to a limited area. For example, a company can set up an intranet

## E-Commerce

within the boundaries of the company requirement. Access can be tightly controlled and limited to authorized employees and staff. There is no connection to the Internet or any other outside network. Simply, Internet is the global World Wide Web, while Intranet is a private internet operating within a company. Intranet can be run without an Internet connection.



**Idea of Internet, Intranet & Extranet**

### ➤ **Extranet :**

An Extranet is an extension of an Intranet that makes the later accessible to outside Companies or individuals with or without an Intranet. It is also defined as a collaborative Internet connection with other companies and business partners. Parts of an Intranet are made available to customers or business partners for specific applications. The extranet is thus an extended Intranet, which isolates business communication from the Internet through secure solutions.

Extranets provide the privacy and security of an Intranet while retaining the global reach of the Internet. The key characteristic of an extranet is that it extends the Intranet from one location to another across the Internet by securing data flows using cryptography and authorization procedure to another Intranet of a business partner. This way, intranets of business Partners, material suppliers, financial services, distributors, customers, etc. are connected the extranets by an agreement between the collaborating parties.

A network designed by an organization to share information with the members of other organizations using username and passwords than it is called extranet for the members of organization. Member of organizations can access shared information using username and password given to them. In extranet access of information will be given as per the rights given to the users of other organizations. An extranet is network that connects a number of intranets into a truly mini-Internet.

❑ **Check Your Progress – 3 :**

1. Write a note on Intranet and Extranet.

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**3.5 Internet-II :**

A multinational nonprofit networking collaboration called Internet2 is run by academics, business and government leaders, as well as researchers. Internet2, which was established in 1996, promotes networking education and international collaboration to facilitate cutting-edge Internet technology.

The Internet2 Network, a next-generation optical and Internet Protocol network, is managed by Internet2. Delivering production network services to meet the high-performance needs of educational and research services is the responsibility of Internet2 Network. Additionally, it offers its users a secure setting for network testing and study.

The worldwide IT village and its educational sectors are provided with ground-breaking IT facilities by Internet2, including a 100 GBPS network central source to 70 enterprises, more than 210 U.S. educational institutions, and 45 nonprofit and governmental departments.

Internet2 also offers cutting-edge technologies, such as sophisticated functionalities like the scheduling and on-demand creation of extremely effective, high-bandwidth circuits, massive network performance management and measurement tools, simple and secure access and identity administration tools, and more.

Following are Internet2's key goals and duties :

- **Distributed E-Libraries :**

E-libraries are often used by students and require high-bandwidth Internet IP networks. Tools are available from Internet2 to assist and improve network capacity for high-speed data traffic.

- **Retrieval of Data and Bandwidth :**

Data was text-based before the advent of the digital computer, and pupils were unfamiliar with digital transmission technologies. The availability of educational data on the Internet today has increased the need for high-speed bandwidth. The creation of networks, services, and support with increased bandwidth is made easier by Internet2.

- **Virtualization :**

Multiple users now have the option to work in and access virtual laboratories from distant locations, including students, scientists, and teachers. The cutting-edge characteristics of Internet2 make educational equipment and tools virtually accessible. Additionally, it offers online training and education programs.

**3.6 Internet Service Provider (ISP) :**

An internet Service Provider (ISP) is an organization or business offering public access to the Internet. It is your gateway to the Internet. You have to subscribe to a provider for your Internet connection. You use computer and modem to access the provider's system and provider handles rest of the details of connecting to the Internet.

There are many types of Internet providers. You can, for instance, choose one of the big commercial on-line service providers. The primary business of an ISP is hooking people to the Internet by giving an Internet account to subscribers, and providing them with two different kinds of access : shell access and SLIP/PPP access.

Once you register your provider will give you a user name, a password, and a phone number to dial. To establish the Internet connection, communications software dials the number. User then logs in using a particular user-id and password. To summarize, here is what you want from an Internet Service Provider :

- ✓ Access via a local phone call.
- ✓ A flat monthly fee.
- ✓ An ISDN or fast connection.
- ✓ A PPP accounts.
- ✓ A shell account at no extra charge.
- ✓ The ability to use whichever Internet client you want.
- ✓ Internet access to all resources.
- ✓ The capability of having your own web home page.
- ✓ Software support, through which you can connect to and use the Internet.
- ✓ Technical support should be open 24 hours a day, 7 days a week.

**☐ Check Your Progress – 4 :**

1. ISP stands for \_\_\_\_\_.  
a. Internet Service Provider                      b. Internet System Provider  
c. Internet Structure Provider                  d. Internet Security Provider
2. Explain Internet Service Provider.

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**3.7 Basics of Web Server :**

A web server is software and hardware that responds to client requests sent over the World Wide Web using the HTTP (Hypertext Transfer Protocol) and other protocols. A web server's primary responsibility is to show website content by storing, processing, and sending webpages to users. In addition to HTTP, web servers also support the email, file-transfer, and storage protocols SMTP (Simple Mail Transfer Protocol) and FTP (File Transfer Protocol).

While web server software manages how a user accesses hosted files, web server hardware connects to the internet and enables data interchange with other connected devices. The client/server model is exemplified by the web server operation. Web server software is a must for all computers that host websites.

Web hosting, also known as hosting data for websites and web-based applications, or web applications, uses web servers.

Either a static web server or a dynamic web server is required to publish a website.

- **Static Web Server :**

An HTTP server is installed on a computer (hardware) that serves as a static web server (software). Because the server provides the hosted files directly to your browser, we refer to it as "static."

- **Dynamic Web Server :**

In addition to a static web server, a dynamic web server also includes other software, most frequently an application server and a database. We refer to it as "dynamic" because, before delivering material to your browser over the HTTP server, the application server refreshes the hosted files.

❑ **Check Your Progress – 5 :**

1. SMTP stands for \_\_\_\_\_.  
a. Simple Mail Transfer Protocol    b. Some Mail Transfer Protocol  
c. Small Mail Transfer Protocol    d. System Mail Transfer Protocol
2. FTP stands for \_\_\_\_\_.  
a. Fast Transfer Protocol            b. File Transfer Protocol  
c. Firewall Transfer Protocol        d. Fund Transfer Protocol

<b>3.8 Hardware and Software for Web Servers :</b>
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- **Hardware for Web Server :**

In 1989, the World Wide Web browser and the first web server, named CERN http, were developed. As is common knowledge, a web server is a piece of hardware and software that responds to client requests sent through the World Wide Web using the HTTP (Hypertext Transfer Protocol) and other protocols. A web server's primary function is to display website content by storing, processing, and sending users' requests for web pages. SMTP (Simple Mail Transmission Protocol) and FTP (File Transfer Protocol), which are used for email, file transfer, and storage, are also supported by web servers in addition to HTTP. If we look more closely at a subject that is relevant from a hardware standpoint, it is a web server that houses both the software and component files for a website.

A hardware server is the real computer that stores website data and transmits it to users upon request via website click. These large computers are kept in datacenters that have a variety of security guards on duty as well as other security measures including CCTV monitoring in brick-and-mortar or cloud modes and video surveillance.

Making an accurate estimate of how much physical space is required, as well as logical space requirements, connecting infrastructure, and everything



## E-Commerce

in between, is necessary when planning for hardware capability. This includes everything from the server frame to the network card.

While web server software manages how a user accesses hosted files, web server hardware plays a significant role in connecting to the internet and enabling data interchange with other connected devices. Therefore, a single computer can manage the HTTP server along with an FTP server for file downloads, an SMTP server for email, and other Internet-related tasks for a very small business.

Every service would run on one or more dedicated servers in a huge corporation with several locations and cross-border operations, and a massive website may need hundreds of servers to switch between Web hosting and cloud computing.

When selecting a web server, the CPU or processor, memory (RAM), and hard drive are the three primary hardware elements to take into account (storage). Other elements that contribute to the effectiveness of your server, such as bandwidth, dependability, security, support, backups, and other concerns, should also be taken into account.

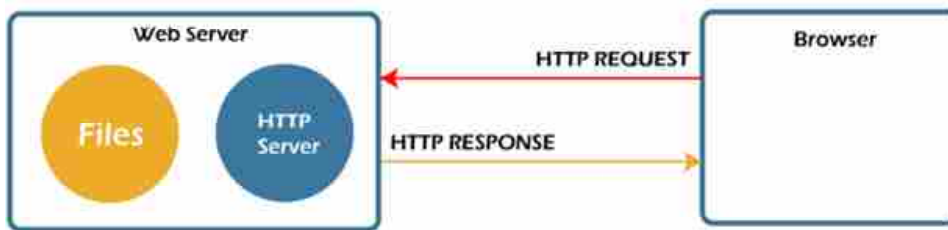
An HTTP server is installed on a computer (hardware) that serves as a static web server (software). Because the server provides the hosted files as-in to your browser, we refer to it as "static." A static web server with additional software, most typically an application server and a database, make up a dynamic web server.

Large	Medium	Small
Support up to 7500 parallel users.	Support up to 1000 parallel users.	Support up to 400 parallel users.
1 TB of disk space for cache.	500 GB of disk space for cache.	200 GB of disk space for cache.
16 CPU Cores.	12 CPU Cores.	8 CPU Cores.
64 GB RAM.	32 GB RAM.	16 GB RAM.

- **Software for Web Server :**

A web server program that responds to client queries sent across the World Wide Web using the HTTP (Hypertext Transfer Protocol) and other protocols. This software can fulfil client requests on the World Wide Web through a web server program. Web servers that only support a local network are frequently found integrated in devices like printers, routers, and webcams.

A web server's software consists of a number of components that regulate how hosted files are accessed by web users. This is at the very least an HTTP server. Software that comprehends HTTP and URLs (web addresses) is known as an HTTP server (the protocol your browser uses to view web pages). The content of these hosted websites is sent to the end user's device through an HTTP server, which may be accessed via the domain names of the websites it stores.



**Web Server and Browser**

The web server might then be integrated into a system for managing or watching over the concerned device. Since only a web browser is required, this often means that no further software needs to be installed on the client computer (which now is incorporated with most operating systems). Most frequently, the material on these web pages is static and consists of HTML documents, graphics, style sheets, tests, etc. In addition to HTTP, a web server also supports the SMTP and FTP protocols for emailing and transferring and storing files, respectively.

### **3.9 Electronic Mail (E-Mail) :**

E-mail stands for Electronic Mail. E-mail or Electronic mail is a paperless method of sending messages, notes or letters from one person to another or even many people at the same time via internet. E-mail is private communication between two parties, who have accounts on the internet.

E-mail is method of composing, sending and receiving messages over electronic communication system. E-mail is very fast compared to the traditional (normal) post. E-mail messages usually take only few seconds to arrive at their destination.

One can send messages any time of day or night and it will get delivered immediately. It works  $24 \times 7$ . It gives you privilege of sending something extra such as file, graphics, images etc... along with you E-mail.

The biggest advantage of using E-mail is that it is cheap, especially when sending messages to other states or countries and at the same time it can be delivered to a number of people around the world. Once the mail is received and read, it can be forwarded, replied, store it for later use, or delete. E-mail provides the following facilities :

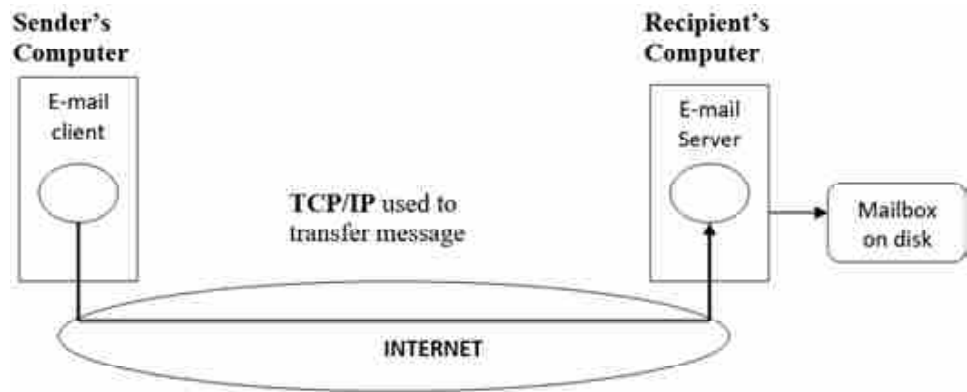
- ✓ Composing and sending/receiving a message.
- ✓ Storing/forwarding/deleting/replying to a message.
- ✓ Send a single message to many recipients.
- ✓ Send a message that includes text, audio, video or graphics.

#### **• How E-Mail Works ?**

E-mail systems follow the client-server approach : two programs cooperate to transfer an email message from the sender's computer to the recipient's mailbox (transfer requires two programs because an application running on one computer cannot store data directly in a mailbox on another computer's disk).

When a user sends an email message, a program on the sender's computer becomes a client. It contacts an email server program on the recipient's computer and transfer a copy of the message.

The server stores the message in the recipient's mailbox. Figure bellow shows the exact idea.



### Internet Works

Client software starts automatically as soon as a user finish composing an e-mail message.

The client uses the recipient's email address to determine which remote computer to contact. The client uses TCP to send a copy of the e-mail message across the Internet to the server.

When the server receives a message, it stores the message in the recipient's mailbox and informs the recipient that e-mail has arrived. The interaction between a client and server is complex because at any time computer on the Internet connecting them can fail.

To ensure that e-mail will be delivered reliably, the client keeps a copy of the message during the transfer. After the server informs the client that the message has been received and stored on disk, the client erases its copy.

### 3.10 Electronic Commerce over the Internet :

Online sales are now approaching several billion, and it is expected that electronic commerce over the Internet will rise at an ever-increasing rate over the coming years. This new sales channel is being used by many businesses, and several shops have now developed sizable online shopping destinations. Some initiatives have been successful, especially in the fields of technology, business-to-business, and specialized markets.

The majority of businesses having an online presence have a simple marketing website. The website aims to complement conventional marketing strategies, possibly provide more information, and overall advance the business. Because the goal is to get visitors to phone or write to the company for further information and therefore make contact, there is frequently a reluctance to provide detailed product specifics.

A shopping site is distinct. The goal is to complete the deal electronically and get payment online. Since users are going to be expected to base their purchases on the information provided, this kind of website will be made to provide in-depth product information.

When the customer is through shopping, he or she clicks on a link that directs them to the checkout page. The consumer is now given a list of the items designated for purchase, along with information on the total cost, shipping, handling, tax, etc. After that, the customer can enter their name, address, and other information.

### **3.11 Examples of Internet E-Commerce :**

Early on in the evolution of online commerce, shopping malls on the internet were created, offering a natural and shared atmosphere where many clients are using a single website. Such advantages are unusual in most cases. In the actual world, malls are successful at attracting customers thanks to their abundance of operating department stores. It is convenient for customers or visitors to make purchases at other businesses with nearby locations after parking their cars and arriving. This won't be the case with the Internet.

To visit a different store, anywhere in the world, is as simple as going to the "next" store in a virtual mall. People who are looking to buy books will look up book websites. If people explore, it is a search engine's list of results that fit their criteria rather than an online store.

### **3.12 Let Us Sum Up :**

In this chapter we learn about the Internet and the web. Where Internet is a global system of interconnected computer networks that use the standard internet protocol suits and WWW is stand for World Wide Web and also known as W3 or Web. The web began in 1989 at CERN, was invented by Tim Berners-Lee, the European center for nuclear research. WWW is hypertext-based information retrieval tool.

We also discussed about the Intranet and Extranet. Intranets are basically "small" internets. Intranet is a private computer network that uses internet protocol. An Extranet is an extension of an Intranet that makes the later accessible to outside Companies or individuals with or without an Intranet.

We also learn about the Internet-II, Internet Service Provider, Basics of Web Servers, E-Mail and Electronic Commerce Over the Internet.

### **3.13 Answers for Check Your Progress :**

#### **Check Your Progress 1 :**

1 : a          2 : b          3 : c          4 : d          5 : a

#### **Check Your Progress 2 :**

1 : Refer 3.3

#### **Check Your Progress 3 :**

1 : Refer 3.4)

#### **Check Your Progress 4 :**

1 : a          2 : Refer 3.6

#### **Check Your Progress 5 :**

1 : a          2 : b

### **3.14 Glossary :**

1. **Network :** A network is simply a group of computers that are connected together for sharing information and resources.
2. **Internet :** Internet is a global system of interconnected computer networks that use the standard internet protocol suits.
3. **Internet :** Internet is a collection of networks or network of networks.

## **E-Commerce**

4. **Web Page** : All the information on internet is presented to the user as a document known as Web Page.
5. **Hyper Links** : All these web pages are link to each other or even to section within a Web Page, and these links are known as Hyper Links.
6. **Browser** : The tool used to view these Web Pages on Internet is known as Internet Browser or simply Browser.
7. **Packet Switching** : A network of computers sends messages (packets) that contain information about its route so that any one computer on the network knows where to forward (switch) the message.
8. **Packet** : Long messages are broken into smaller units called packets.

### **3.15 Assignment :**

1. Explain Internet-II.

### **3.16 Activities :**

1. What is Web Server ? Explain its Hardware and Software.
2. Explain E-mail in details.

### **3.17 Case Study :**

1. Study How E-Mail Works.

### **3.18 Further Reading :**

1. Broadcasting, Cable, the Internet and Beyond : An Introduction to Modern Electronic Media, Joseph Dominick, Barry Sherman and Fritz Messere, (Paperback), 2007.
2. Internet for Seniors- Windows Vista Edition, Michael Gorzka, 2008.
3. An Introduction to Computer Networking and the Internet with Practical Engineering Examples, and an Internet Server Silo Video Tour : Part 2 of 2 Starring Paul G Ranky, 2005.

**UNIT STRUCTURE**

- 4.0 Learning Objectives
- 4.1 Introduction
- 4.2 What is a Network ?
- 4.3 More about Networks
- 4.4 Information Transfer
- 4.5 Packets and Protocol
- 4.6 Internet Protocols : The OSI Reference Model
- 4.7 Other Networks
- 4.8 Cable Type
- 4.9 Wireless Technology
- 4.10 Let Us Sum Up
- 4.11 Answers for Check Your Progress
- 4.12 Glossary
- 4.13 Assignment
- 4.14 Activities
- 4.15 Case Study
- 4.16 Further Readings

**4.0 Learning Objectives :**

After learning this unit, you will be able to understand :

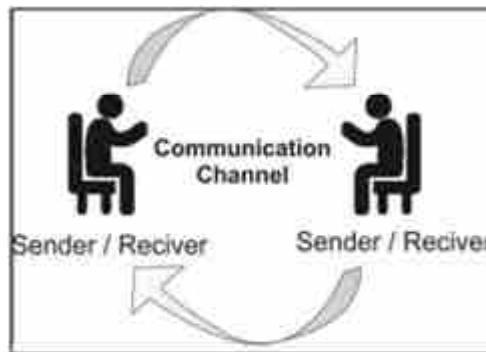
- Idea about Network
- Idea about transfer of information over the networks
- Detail of Protocol
- Detail of OSI Reference Model
- Idea about other networks
- Different types of Cable

**4.1 Introduction :**

You can define protocol as a collection of guidelines or the accepted standard of behavior or etiquette in very simple terms. In order to communicate effectively, there must be a set of rules. As a result, you will learn all about protocols in this unit. Therefore, protocol is how two computers will communicate with one another over the internet. You can access and use a variety of internet services because of different protocols. There are many different internet services, and each of them has a special protocol that enables it to operate and function.

**4.2 What is a Network ?**

In general, a network is the connection between a sender and a receiver. Two persons are seated in a network in figure below :

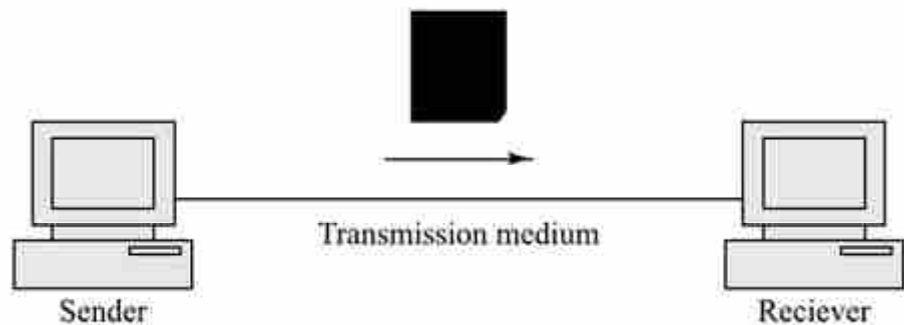


**Network**

The general network comprises of :

- Sender
- Communication Channel Medium
- Receiver

An interconnection of two or more computer systems, whether they are situated in the same location or not, is known as a computer network. A network that can link two computers is what is depicted in the diagram below.



**Computer Network**

A group of two or more interconnected computers is referred to as a computer network. People can share files and peripherals like modems, printers, tape backup drives, and CD-ROM drives when these computers are connected to a network.

**Computer network consist of :**

- ✓ Two or more computers Server or Client workstation.
- ✓ Networking Interface Card (NIC)
- ✓ A connection medium wires or wireless.
- ✓ Network Operating system software, such as Microsoft Windows NT or 2000, Novell NetWare, Unix and Linux.

**Advantages of Computer Network :**

- ✓ Resource sharing
- ✓ Remote login (Access to remote data base)
- ✓ E-Mailing (person-to person communication)

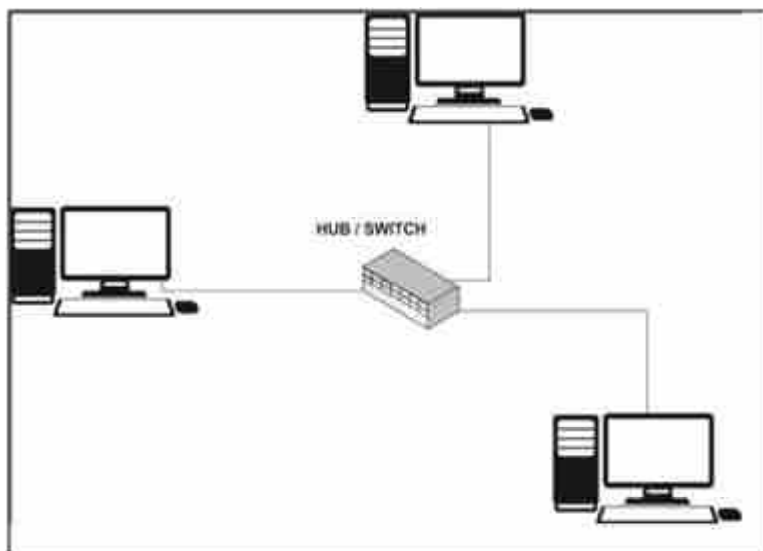
- ✓ Entertainment
- ✓ Internet services
- ✓ Video conferencing
- ✓ Exchange of messages
- ✓ Sharing information at Low Cost
- ✓ Storing Files in server allows data to be shared easily
- ✓ Fast and Quick backing up of Files
- ✓ Software and resources can be easily managed.
- ✓ Network software have fast installation
- ✓ Devices can be shared easily
- ✓ Accessing files from any workstation

❑ **Check Your Progress – 1 :**

1. What is the advantage of using computer network ?
  - a. Resource sharing
  - b. Remote login
  - c. E–Mailing
  - d. All of these
2. NIC stands for
  - a. Network Interface Card
  - b. Net Identity Card
  - c. Network Internet Card
  - d. None Of these

**4.3 More about Networks :**

A connection between two or more computers is known as networking. Information sharing between users is the goal of a network. A HUB or a PORT, as indicated in figure below, is required if more than two machines are to be connected in a network.



**Network with HUB**

Some of the common networks are :

- ✓ LAN – Local Area Network
- ✓ WLAN – Wireless Local Area Network
- ✓ WAN – Wide Area Network



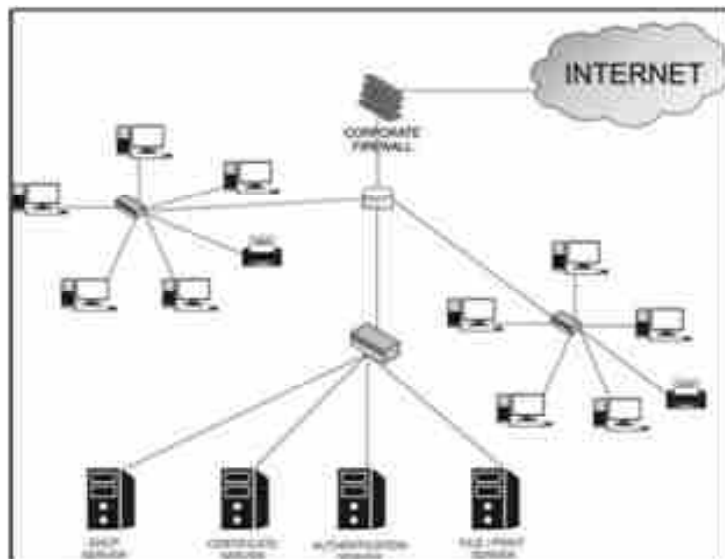
## E-Commerce

- ✓ MAN – Metropolitan Area Network
- ✓ SAN – Storage Area Network, System Area Network, Server Area Network, or sometimes Small Area Network
- ✓ CAN – Campus Area Network, Controller Area Network, or sometimes Cluster Area Network
- ✓ PAN – Personal Area Network
- ✓ DAN – Desk Area Network

LAN and WAN are the original categories of area networks. The other networks have actually emerged over many years out of technology evolution.

### ➤ LAN :

The local area network, or LAN, is a common type of network. This network carries a collection of computers and the connected hardware that share a communications path. As illustrated in the following image, there will be just one primary computer, and all other computers will be connected and share the same processor speed.



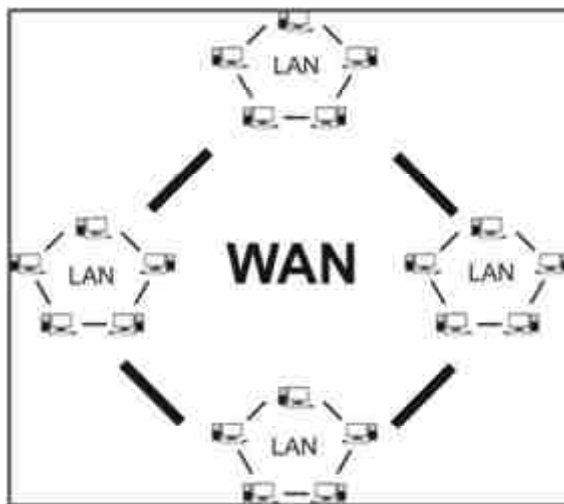
**LAN Network**

Office buildings, schools, and universities typically have it installed and accessible. This server includes software and data storage that are typically used by lots of computer users. Such a network can accommodate a few users—as few as two or three—all the way up to thousands.

If handled properly and security measures are taken to protect its internal programs and data from outside access, a LAN server may also be utilized as a web server.

### ➤ WAN :

A network called WAN connects users over longer distances. It is mostly utilized to connect between different cities, states, or nations. The configuration of WAN around the world is depicted in figure below :



**WAN Network**

WANs typically transmit data through satellite links and the public telephone network. For WAN, data transmission speeds are less than 1 Mbps. It typically has a number of entities as owners. Due to the longer distances & different transmission mediums used, WAN transmission times are longer.

**☐ Check Your Progress – 2 :**

1. What do you mean by LAN :
  - a. Long Area Network.
  - b. List Application Network.
  - c. Local Area Network.
  - d. Local Army Network.
2. Which network is used to connect people globally ?
  - a. Local Area Network
  - b. Wide Area Network.
  - c. Metropolitan Area Network.
  - d. None of above.

**4.4 Information Transfer :**

The Internet is a huge computer network that connects other networks. Internet is widely used, well-known, and prominent. Have you ever questioned why so many people are drawn to the internet ? The numerous services that the internet offers are solely responsible for its popularity. Email, chat, browsing, surfing, uploading, downloading, video conferencing, and many more sorts of services are popular and widely used.

Online communication has transformed how we interact with one another, but it may be incredibly perplexing to navigate the electronic world. For the purpose of referencing distinct facets of Internet media, brand-new, sector-specific vocabulary has been developed.

For the price of a local phone call, any computer can connect to the Internet, a global network of computers. With others, you can exchange information. Among the previously mentioned, the World Wide Web (WWW), a collection of hypertext-based files, is a rapidly expanding internet service. These are readily available online and offer a quick and simple method of recovering these files so that a browser can view them.

These services will offer :

- ✓ Community information;
- ✓ Fundamental data

**E-Commerce**

- ✓ Customized Mail list
- ✓ Distance learning
- ✓ Local Knowledge
- ✓ Online Question
- ✓ Services for e-mail
- ✓ Database Administration

Information on Internet can be transferred or shared using :

- **E-Mail :**

Electronic mail is another name for email. It is a form of global electronic communication in which a user of a computer can create a message at one terminal and send it to the terminal of the recipient.

Email is correspondence that is sent electronically through your computer. This allows you to instantly send messages to anyone, anywhere in the globe. In reality, more people have several e-mail addresses than multiple telephone numbers, and there are more e-mail addresses than telephone numbers in the globe today. A technique for receiving, sending, and storing electronic messages, email is only a condensed version of electronic mail. The popularity of email has increased as the Internet has grown. Email has frequently taken the place of other forms of communication.

- **Forums :**

Many common community websites already include forums. They are frequently a compilation of topics and titles, and are also referred to as billboards or message boards. The categories, topics, threads, and postings in a forum are separated. Most forums demand registration, and each new comment made by a member is referred to as a post. A thread is started when a person starts a conversation and allows other users to respond.

- **Instant Messaging :**

Larger Internet-savvy organizations created instant messaging because people desired a way to connect more quickly with their friends and family online. A console, such as Yahoo Messenger or MSN Messenger, is frequently used for instant messaging. These are compact applications that you downloaded on your PC. These systems employ usernames to track members' availability and activity when they are connected to the Internet.

- **Chat :**

Chat is comparable to Instant Messaging and Forums. Users can access a conversation room in chat, which combines both of these features. On occasion, clients or websites with Java support might connect you to chat rooms. Multiple people can access chat rooms, which function similarly to a messenger conference.

**Check Your Progress – 3 :**

1. Write a note on Information Transfer.

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## **4.5 Packets and Protocol :**

In the context of computers, a protocol is a collection of guidelines that enables communication between computing equipment. Through a network, the communication is conducted. A network serves as a conduit for connecting individual computers with one another and enabling information sharing. Of course, the ability to share data just by connecting to one another is limited. However, in order to ensure accuracy, computers must be led and given instructions on how to properly communicate data.

It can be seen that connections change from location to location and are not fixed at any one location or point for the course of transmission. A telephone call is a circuit switched communication channel with a fixed path where you can share your conversation. When data is transported over the internet using packet switching, it transmits a portion of the data and then, upon verification, sends further data in the direction of the destination folder. Only a portion of the user's information must be supplied along the same path in packet switched networks.

Protocols manage the entire network communication process in addition to being the collection of guidelines for communication across a network. And for this reason, protocols are sometimes known as network protocols. Once the protocol is put into place, it establishes the guidelines for network communication and the frameworks for data sharing between two machines.

Protocols are crucial, but only one protocol can complete a task; instead, several protocols work together to provide a service or complete a task. These also go by the name "protocol stacks." The network protocols function as a single unit when they are layered one on top of the other, dividing up the jobs in a certain way that makes it possible to administer networks completely.

### ➤ **Users :**

- ✓ Disburses information
- ✓ Enable information sharing between computers.
- ✓ It connects two computers together.
- ✓ Displays network services
- ✓ Provide formulas for message passing
- ✓ Provide specifics regarding message formats.
- ✓ Describes how to deal with incorrect situations

### ➤ **TCP/IP Protocols :**

Additional standards for the exchange of news, mail, and a number of other services are available on the Internet. Email, FTP, and remote login are all supported by application packages on the Internet. Based on the fundamental TCP/IP protocols that underpin the Internet, some applications have their own protocols.

### • **IP Protocol :**

While data travels across the internet, IP protocol determines the fundamental unit of transfer and the precise format of every data. IP has a set of rules that specify how data must be conveyed in packets, how to process them, and how to manage faults during communication and transfer. The default protocol on Unix platforms is IP.

- **TCP Protocol :**

The TCP protocol determines and specifies the data format, acknowledges the exchange of data between two computers to accomplish a dependable transfer, and also the steps taken by the computers to guarantee that the data is delivered correctly. TCP is not limited to the IP protocol and can be used with a variety of packet delivery technologies.

- **Check Your Progress – 4 :**

1. Explain Packets and Protocols.

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<b>4.6 Internet Protocols : The OSI Reference Model :</b>
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By facilitating and regulating computer communication across the Internet, protocols created the framework for networks throughout the internet. Protocols are currently very essential and have a powerful influence, and they have contributed to the success of the internet and network communication as the applications and the computer industry increase. In the modern computer sector, protocols are required and in high demand. Since protocols are a set of regulations, they determine whether host–host communications are possible.

- **HTTP :**

The hypertext transfer protocol (HTTP) is a technology used by the World Wide Web. You can see that the HTTP protocol is used as the first part of the URL, which is `http://www.itetrust.com`. Its name, hypertext transfer protocol (HTTP), derives from the fact that it is a transporter for information, html, and web pages. When you request a web page, HTTP is crucial in carrying your request and providing you with a response or reply in response. This is the rationale behind why the domain name appears first in the URL before it. On port 80, this protocol runs.

- **SMTP :**

Simple Mail Transfer Protocol is what it means. The SMTP protocol is installed on your computer once you have internet access and access to any email server, and it is because to this SMTP protocol that you are able to send emails across the world quite easily. On port 25, this protocol runs. Protocol POP3 : Users may access mailboxes and download messages to their computers easily and uniformly thanks to the POP protocol.

- **FTP :**

File Transfer Protocol is an alternative name for it. High–level protocol is used on the Internet to transmit files from one system to another. FTP is used to upload and download files from server to client and client to server, as the name suggests.

There are two sorts of FTP : public and private. A user name and password–protected FTP server is required if you're utilizing private FTP. You must log into the FTP server with the known user's name and password before

you can upload or download files if you wish to copy files from your computer to the server using FTP or download files from the server to your computer using the client.

Again, in this situation, you must enter into the public FTP server with username anonymous and password your email address. If you are dealing with a public FTP server, it depends on how much audience access the public server has granted. After that, you can download or upload. Public FTP sites are typically constrained, making it impossible for you to always post your files; instead, you can typically download data in the form of files, music, photos, movies, etc.

- **Telnet :**

The remote terminal connection service protocol on the Internet. One of the most popular methods for connecting to a Unix computer (or VMS computer) from a microcomputer or another Unix machine is Telnet. You need a user id and a known password in order to utilise telnet. Since you can utilize the computer's hard disc once you gain access, this must be strongly protected with a user ID and password.

- **Mail Transfer Agent (MTA) :**

The recipient's mail server will get your email using this method. Telnet enables remote administration and gives users the option to run programs from a distance.

Between DAP servers and LDAP clients, LDAP (Lightweight Directory Access Protocol) is the preferred protocol for communication. LDAP clients can access "directories" that are stored on LDAP servers. People can be found using their first and last names, common names, cities, countries, localities, companies, etc. People from all over the world will then be able to search you according to the credentials that are requested as a format on that website in the form of a web form that is the search web form if they log in to that LDAP-using website.

The protocol definition for sharing structured information in the implementation of Web Services in computer networks is called SOAP, or Simple Object Access Protocol. Extensible Markup Language (XML) is used as its message format, while other Application Layer protocols, most notably HTTP and RPC, are typically used for message negotiation and transmission.

**☐ Check Your Progress – 5 :**

1. Which protocol among the following works on port number 80 ?  
a. HTTP            b. SMTP            c. FTP            d. Telnet
2. Which protocol is responsible for uploading and downloading of files from server to client and back to the server ?  
a. HTTP            b. SMTP            c. FTP            d. Telnet
3. Which among the following is responsible for delivering of e-mail to the recipient's mail server ?  
a. MTA            b. SMTP            c. FTP            d. Telnet

**4.7 Other Networks :**

In this chapter, we learned that computer operating systems keep track of all attached input and output devices.

**Different Types of Area Networks :**

There are several other computer networks apart from LAN and WAN, including :

- **MAN (Metropolitan Area Network) :** It is a network that needs a lot more space than a LAN but less than a WAN. It is an individual-owned and -operated computer network.
- **CAN or (Campus Area Network) :** It is a network that stretches across a smaller region than MAN and includes several LANs.
- **SAN or (Storage Area Network) :** It is a network that connects servers to data storage devices using fiber optics-based channels for communication.
- **SAN or (System Area Network) :** It is a different kind of network that connects with powerful computers that have high-speed connections in a zigzag pattern. Cluster Area Network is another name for it.

**❑ Check Your Progress – 6 :**

1. Which of the following network type uses fiber optic channel for communication ?  
a. CAN                      b. SAN                      c. WAN                      d. None of these

**4.8 Cable Type :**

Cat 5 cables, which can be straight from the server, main line, or network, are used for cable internet. The cable network can be described as follows :

- **Dial-Up Network :**

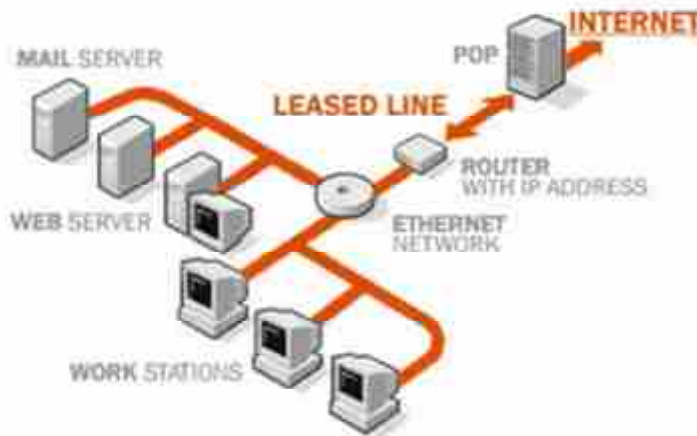
The modem for the dial-up network, which can be internal or external, is connected to the computer using cat 5 cables. Your computer will dial a phone number via a telephone line as indicated in order to establish a dial-up connection.



**Dial-Up Connection**

- **Leased Connection :**

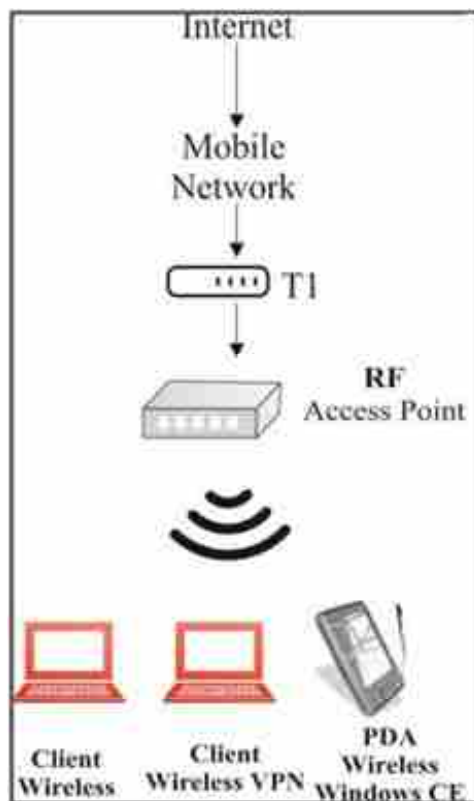
Direct Internet access or a Level Three connection, which is quite secure and devoted but also pricey, are other names for a leased connection.



### Leased Connection

- **Broadband Connection :**

A fast Internet connection is what it is. With broadband, your phone line is not constrained like it is with dial-up.



### DSL Connection

A group of technologies known as Digital Subscriber Line (DSL) allows for the transfer of digital data over local telephone network lines. Digital subscriber loop was the initial abbreviation for DSL.

- **Fixated Internet Connections :**

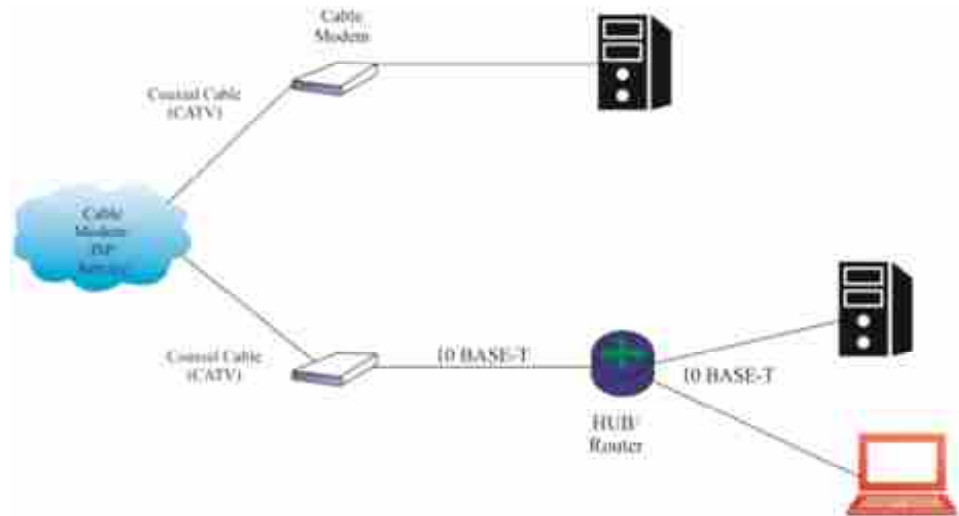
A "fixed broadband connection" is an ongoing Internet connection. You should have a broadband modem that you can put a cable into if you have fixed broadband at home. You will be able to connect wireless Internet devices to your modem without using a cable if your modem is also a wireless modem.



**E-Commerce**

➤ **Connection to a cable modem :**

A network bridge and modem that offers bi-directional data connection across radio frequency channels on an HFC and RFOG infrastructure is known as a cable modem.

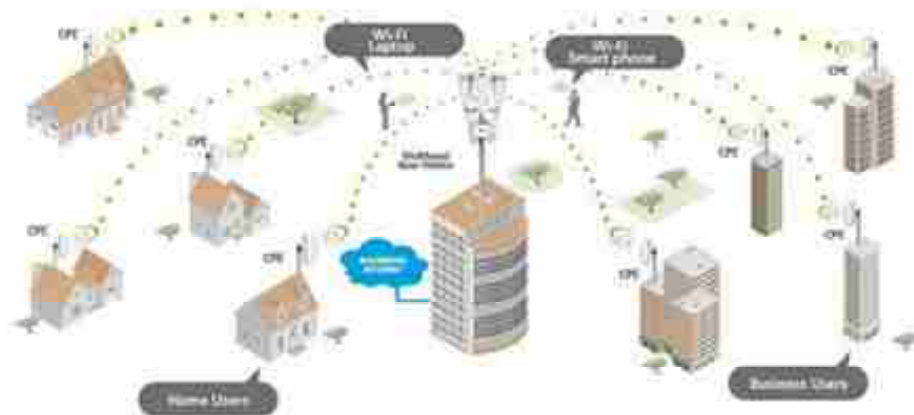


**Cable Modem Connection**

The most typical network connection topologies when using cable modems are shown in the above graphic. To supply its Internet service, the cable TV provider runs a coaxial cable into the structure.

**4.9 Wireless Technology :**

Businesses that have access to a major Internet route may offer wireless Internet connections. Through a direct line of sight (LOS) from your home to the provider's antenna, data is downloaded around 50 times faster than with dial-up. To send and receive data, your property must have a powered receiving antenna.



**Wireless Technology**

**Wireless ISP :**

- ✓ Is always active, eliminating the need to wait for a slow dial-up connection.
- ✓ 50 times quicker than most dial-up connections, on average
- ✓ Enables simultaneous use of the telephone and the Internet
- ✓ Necessitates no cable line

- ✓ Installation may cost a few hundred dollars; a powered antenna is needed. The connection won't function if you can't see the provider's antenna from your own; hills, trees, and structures that block your view will break the connection.

#### **4.10 Let Us Sum Up :**

In this unit, we learned that a protocol is a set of guidelines, a code of behavior, or, to put it another way, a set of precise regulations. As we've seen, there are many different internet services, and each of them has a special protocol that enables it to operate and be useful.

A network is used for communication in a protocol. These laws for communication also govern how information is communicated via networks. As a result, protocols are often known as network protocols. Businesses that have access to a major Internet route may offer wireless Internet connections. Through a direct line of sight (LOS) from your home to the provider's antenna, data is downloaded around 50 times faster than with dial-up.

#### **4.11 Answers for Check Your Progress :**

- Check Your Progress 1 :**  
1 : d            2 : a
- Check Your Progress 2 :**  
1 : c            2 : b
- Check Your Progress 3 :**  
1 : Refer 4.4
- Check Your Progress 4 :**  
1 : Refer 4.5)
- Check Your Progress 5 :**  
1 : a            2 : c            3 : a
- Check Your Progress 6 :**  
1 : b

#### **4.12 Glossary :**

1. **Protocol :** protocol is a collection of guidelines or the accepted standard of behavior or etiquette in very simple terms. It is a simple a set of rules.
2. **Computer Network :** An interconnection of two or more computer systems, whether they are situated in the same location or not, is known as a computer network.
3. **E-Mail :** Electronic mail is another name for email. It is a form of global electronic communication in which a user of a computer can create a message at one terminal and send it to the terminal of the recipient.

#### **4.13 Assignment :**

1. Explain the Cable type.
2. Discuss the Wireless Technology.

## **E-Commerce**

### **4.14 Activities :**

1. Write down the uses of each of the protocol.

### **4.15 Case Study :**

1. Make a poster in networks with diagram and explanation.

### **4.16 Further Reading :**

1. Broadcasting, Cable, the Internet and Beyond : An Introduction to Modern Electronic Media, Joseph Dominick, Barry Sherman and Fritz Messere, (Paperback), 2007.
2. Internet for Seniors– Windows Vista Edition, Michael Gorzka, 2008.
3. An Introduction to Computer Networking and the Internet with Practical Engineering Examples, and an Internet Server Silo Video Tour : Part 2 of 2 Starring Paul G Ranky, 2005.

## **BLOCK SUMMARY :**

In this block, you have learnt and understand about Business, E-Business, Electronic commerce, its advantages, unique features, types of e-commerce. The block gives an idea on evolution of the internet and the web, beginning and growth of the e-commerce.

The block detailed about the origin of IPOs with features of dot-com. The concept related to today's e-commerce and factors related to success and failure. Detail of future forecast, e-commerce infrastructure. You have also learnt about the Internet and the web as well Internet related technologies like packet switching network, intranet, extranet, web server, internet service provider, e-mail and so on.

You also gone through the network with its different types, information transfer over the network, packets and different internet protocols, cable types and various wireless technologies.

<b>BLOCK ASSIGNMENT :</b>
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❖ **Short Questions :**

1. What is Business ?
2. What is E-Business ?
3. What is the difference between E-Business and E-Commerce ?
4. Write a note on E-Commerce Infrastructure.
5. Write a note on Academic Restraints with E-Commerce.
6. Explain Packet Switching Network.
7. Explain Internet Service Provider.
8. What is Network ? Explain its various types.
9. Explain Packet and Protocols.
10. Explain various Cable Types.
11. Write a note on Wireless Technology.

❖ **Long Questions :**

1. What is E-Commerce ? Discuss its advantages and disadvantages.
2. Explain Unique features of E-Commerce.
3. Explain various types of E-Commerce.
4. Explain Success and Failure Factors of today's E-Commerce.
5. Write a detailed note on the Future Forecast.
6. Explain Web Server and its hardware and software.
7. Explain Internet Protocols.

**E-Commerce**

❖ **Enrolment No. :**

1. How many hours did you need for studying the units ?

Unit No.	1	2	3	4
No. of Hrs.				

2. Please give your reactions to the following items based on your reading of the block :

Items	Excellent	Very Good	Good	Poor	Give specific example if any
Presentation Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Language and Style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Illustration used (Diagram, tables etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Conceptual Clarity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Check your progress Quest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Feed back to CYP Question	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

3. Any other Comments

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**Dr. Babasaheb Ambedkar  
Open University Ahmedabad**

**BCAR-601**

## **E-COMMERCE**

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### **BLOCK 2 : E-COMMERCE PROCESS AND IMPLEMENTATION**

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UNIT 5 ELECTRONIC COMMERCE (EC) REVENUE STRATEGY  
AND IMPLEMENTATION

UNIT 6 ONLINE SELLING TO CUSTOMERS

UNIT 7 ONLINE SELLING TO BUSINESSES

UNIT 8 SOCIAL NETWORKS, ONLINE COMMUNITIES AND  
AUCTIONS



# ***E-COMMERCE PROCESS AND IMPLEMENTATION***

## **Block Introduction :**

In order to get successful results, strategic planning is agreed upon everywhere an organization starts over the next year or more with elements of its working through involving marketing domains. The e-commerce solutions assist in integrating all of your company's communication procedures. Additionally, it makes supply chain integration and streamlining possible. For organizations looking to get online and connect with B2B and retail clients, e-commerce solutions appear to be an unstoppable option.

This section will go into detail about how the internet was used to launch the e-commerce industry and conduct business. The study of online shopping facilities for customers as well as business-related aspects of e-commerce will be the main topics of this block. You'll provide information on the major drivers of e-commerce industry growth.

You will make an effort to grasp and comprehend e-commerce solutions in this block, which assist in obtaining integrated commercial communication operations. You are also given an explanation of the notion relating to services with online payment options. You will see how the features of online shopping for products actually operate in practice.

## **Block Objectives :**

**After learning this block, you will be able to understand :**

- Idea about Strategic Planning For EC
- Basic of Strategy Formulation
- Formulation of Push Technology for Competitive Intelligence
- Features of Electronic Commerce Leadership
- Idea about Internet Access and Professional Experts Solutions
- Understanding of Ecommerce Payment System

**Block Structure :**

**Unit 5 : Electronic Commerce (EC) Revenue Strategy and Implementation**

**Unit 6 : Online Selling to Customers**

**Unit 7 : Online Selling to Businesses**

**Unit 8 : Social Networks, Online Communities and Auctions**

**UNIT STRUCTURE**

- 5.0 Learning Objectives
- 5.1 Introduction
- 5.2 Strategic Planning for EC
- 5.3 Industrial and Economical Analysis
- 5.4 Strategic Formulation
- 5.5 Critical Success Factors for E-Commerce
- 5.6 Various issues in Revenue Strategy
- 5.7 Electronic Commerce Strategy in Action
- 5.8 The Process for Successful E-Commerce Programs
- 5.9 Use of Internet in Competitive Intelligence
- 5.10 Implementation
- 5.11 Electronic Commerce Leadership
- 5.12 Creating a Web Team and Assigning Functional Skills to Subproject
  - 5.12.1 Measuring Result
  - 5.12.2 Collecting Information
- 5.13 Let Us Sum Up
- 5.14 Answers for Check Your Progress
- 5.15 Glossary
- 5.16 Assignment
- 5.17 Activities
- 5.18 Case Study
- 5.19 Further Readings

**5.0 Learning Objectives :**

After learning this unit, you will be able to understand :

- About Success Factors for EC
- About Value Analysis Approach
- About Electronic Commerce Scenarios
- About Competitive Strategies
- About Electronic Commerce Strategy in Action

**5.1 Introduction :**

E-business has become the guiding principle of firms in the modern human race because to the growth of the Internet and the abundance of web development technology available worldwide. The Internet provides a variety of features that enable businesses to advertise their products more successfully

and creatively while also reaching a larger audience of consumers. Additionally established on the Internet are corporate communications, interface designs, and cutting-edge apps. The most recent area of business has been e-business, which is also becoming an essential, fiercely competitive technology that operates in a free market. The term "e-business strategy" can be condensed to "schemes that dominate e-businesses from start to finish through the discovery of information propagation".

### **5.2 Strategic Planning for EC :**

In order to get successful results, strategic planning is agreed upon everywhere an organization starts over the next year or more with elements of its working through involving marketing domains. In strategic planning, a variety of outlooks, concepts, and innovations are used. The following methods are used to build a strategic plan :

- ✓ Nature of organization's leadership
- ✓ Culture of organization
- ✓ Size of organization
- ✓ Complexity of organization's environment
- ✓ Expertise of planners

The general strategic planning model starts with a focus on objective and idea of an organization with vision and strategies to achieve goals. This model typically includes goals connected to planning.

There are undoubtedly many faces for organizational analysts, but the evolving perspectives on strategy will reveal multiplicity as well as postulation difficulty. The amount and personality of strategic planning for specific systems in the area where consumer development of e-commerce is highlighted have been the subject of a small number of studies that have come out in recent years.

The need to reduce expenses has been a major motivator because doing so also increases revenue. 25% investments are not unusual in the online business community since they create supply chain relationships. By setting goals and outlining the methods to achieve them, strategic planning allows you to develop your business in your imagination with the necessary prospects.

In order to understand the value of the E-commerce attention structure, a significant amount of planning and work would need to be made. By creating certain workflow methods, I want to hasten these processes. This could be accomplished internally, externally, or by combining the two, depending on the strength and quality of a company. The following three basic requirements must be met when using framework and workflow :

1. Digital sales have been identified as a crucial component of a firm.
2. Significant executive and business function(s) support and buy-in.
3. Capability of tracking digital sales with non-digital ones.

Five phases would be utilized in a typical process to deploy the E-commerce Preparedness framework :

- **Initiate**
- **Discover**

- **Analyze**
- **Identify**
- **Strategize**

Changes and substitutions are permitted, but the following will be observed for clarity and to provide an example that may be used in practice :

- **Initiate :**

This stage begins with the intention of organising corporate processes and creating objectives for assessment. Initial inquiries about the building must be addressed, and suggestions for e-commerce problems should be made to an organisation for growth. Resources will be recognised, and a strategy for developing the E-commerce structured structure's leftovers will be developed and accepted by all stakeholders.

- **Discover :**

Data and information need to be combined and double-checked from both internal and external perspectives. Such data consist of :

- ✓ Sales reports
- ✓ Production costs
- ✓ Shipping costs
- ✓ Competitive data
- ✓ IT metrics

In order to execute the structure that identifies holes in the current model where information has to be enhanced, a team with data is required, not just one person. Together with the Analyze phase, this phase will probably be iterative.

- **Analyze :**

Various analyses that support or refute the original ideas will be conducted at this phase. To enhance our understanding of organizations, a variety of earlier frameworks may be used. Financial models will undoubtedly be created to test the worth of investments in technologies, outside services, etc. in addition to modelling them. It is very likely that this phase will iterate along with the gather phase.

- **Identify :**

Every important domain will be paired with an E-commerce structure. To find a proper procedure and start the objective with the necessary action as requested, consultation with the team will be conducted.

- **Strategize :**

The organization's recommended adjustments will start to be developed and given a priority. To confirm the value of the E-commerce Ready Framework and to ensure that lessons learned will be applied to future processes and analyses, a review of the entire process will be conducted.

**❑ Check Your Progress – 1 :**

1. \_\_\_\_\_ methods are used to build a strategic plan.
  - a. Nature of organization's leadership
  - b. Culture of organization
  - c. Size of organization
  - d. All of Above

**5.3 Industrial and Economical Analysis :**

The emergence of e-commerce has significantly changed how business continues to be conducted, whether on the open market or between businesses. Prior to the Internet, success in the retail industry was based on position, emplacement, and position.

The Internet is a worldwide marketplace right now, giving even the tiniest merchant the opportunity to have a national, if not international, presence. Brick-and-mortar stores now have websites, and present businesses are now selling goods that were unimaginable before the Internet and the advancement of related technology. The size of the e-commerce market is challenging to quantify. It's difficult to define exactly where the e-commerce industry starts and the traditional economy stops because it has grown to be such a significant component of the economy.

In online commerce, a precise and immediate competitive analysis looks at the strengths and shortcomings of rival retailers in relation to the seller's own operations, attributing a significant advantage or identifying opportunities. A simple, inexpensive analysis should include a routine, qualitative review of the websites, costs, product mix, customer service, policies, and marketing of the rival small- and medium-sized online agencies. Both aggressively and securely can be utilized this evidence to increase your bottom line. The cheap analysis mechanism is a little frontend loaded, so the initial run will take longer to complete than subsequent updates will.

Keeping track of what your rivals and competitors are doing online can seem like a very difficult chore. Unfortunately, it's essential if you want to stay competitive and relevant to your audience. The first significant piece of advice we can give is to refrain from trying to track everyone. In the end, you ought to already be aware of who your main rivals are, as well as the industry trailblazers you most like, as well as your own time and resource limitations. A hit list of no more than 10 competitors and peers should do the trick, unless you're feeling really ambitious. However, for some hacks, like Twitter lists, you might want to go a little farther.

Industry participants have long displayed comparable products and services, the most significant of which functions as an adversarial war for clients and market share. Additionally, it appears that IBM, Microsoft, Cisco, and other IT giants participate directly in e-commerce on a regular basis and can continually offer clients additional services at discounted rates. Therefore, it is difficult to predict which e-Commerce companies will emerge and continue to grow from one quarter to the next. This harmful activity continues with erratic revenue and profit streams from year to year. After that, it is not

surprising that many of the stocks in this group get low scores for earnings certainty. To better compete with larger competitors, e-Commerce enterprises should increase their R&D spending while focusing their new software contributions on client needs.

This establishment also has modest entrance obstacles. Undoubtedly, well-received superiority groups from creative businesses can take a large chunk out of another company's current business. The e-commerce sector is still expanding quickly. This group should continue to be able to demonstrate income and profit over the next years, as more and more businesses are determined to improve their IT capabilities and increase their online presence. It is now exceedingly difficult to predict which businesses will perform successfully during that time period.

**□ Check Your Progress – 2 :**

1. Write a note on Industrial and Economical Analysis.

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2. An industry is less concerned for suppliers when the rivalry among existing competitors is \_\_\_\_\_.
- a. Medium      b. Low      c. High      d. None of these

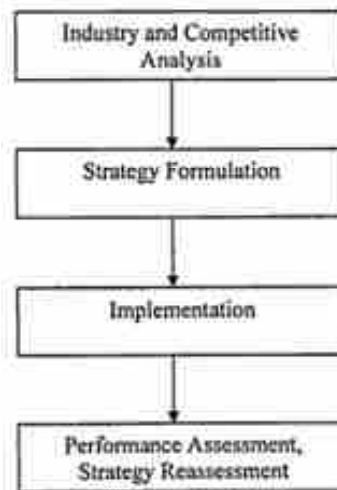
**5.4 Strategy Formulation :**

Although there are hundreds of thousands of internet enterprises, the truth is that only a small number of business methods actually provide a path to success. Numerous dot-corn businesses were established beginning in 1999, and many businesses launched E-commerce operations after discovering the advantages of sharing goods and services with the world as well as how to boost their return on investment. By 2002, though, things had changed dramatically; a growing number of businesses had failed, and investors were reluctant to put their money into online businesses.

Many large businesses struggle to develop an e-commerce strategy. Before deciding whether to go in that direction, senior management should first have a general understanding of the benefits of making e-commerce easier. E-commerce brings about a crucial change that must be well planned out in order to work in harmony and avoid misunderstanding and ambiguity.

E-commerce is a field that is always in its infancy and intermingled with economic uncertainty, necessitating a broad understanding of business. Websites are constantly being updated to meet client demands and requests. Businesses must continuously innovate in order to expand. Take a look at the schematic procedure in the figure below :





**Strategy Formulation Process**

The specific route the business will take in relation to dealing in the electronic marketplace is recognized by an e-commerce approach. It assists in setting business objectives for its E-commerce strategy and puts out a strategy for accomplishing those objectives. A comprehensive collection of principles and a schematic created for a wide range of businesses make up strategy formulation structuring. As a result, the process of formulating a strategy involves identifying certain framework components that are appropriate in a variety of unique situations and then correctly implementing those components.

The strategy skeleton is not intended to be the sole means of achieving victory, nor is it merely a series of instructions for how to use it. It is intended to provide a stepping-stone for E-commerce business owners to utilize as a guide to avoid missing important details and to avoid moving too quickly into uncharted territory. Below figure shows the modification of strategy framework :



**Strategy Framework**

The following framework outlines the steps involved in setting goals and objectives, determining whether it is reasonable to offer services, planning how to launch an online business, and lastly implementing and evaluating results. The project's systems lifetime is discussed from side to side.

In the context of e-commerce, the strategy life cycle model also incorporates Turban's tactical arrangement cycle, as seen in the Strategy Formulation Process. With this, a market analysis and strategy formulation are developed in addition to evaluating project requirements, decisions, planning, design, or research needs that need to be addressed. The modified model incorporates feedback loops with a more iterative Ecommerce approach. E-commerce requirements necessitate ongoing market-driven learning.

❑ **Check Your Progress – 3 :**

1. Strategy formulation process consists which of the following steps :
  - a. Industry and competitive analysis
  - b. Strategy formulation and implementation
  - c. Performance assessment
  - d. All of these

**5.5 Critical success Factors for E-Commerce :**

Most of the time, the revenue earned by online sales is based on the sale of soft items and services, which may include :

- ✓ ad impressions
- ✓ e-books
- ✓ premium membership's fees

E-commerce is a fusion of established business strategies and cutting-edge technology that enables online retailers to sell tangible things without having a storefront. The formula for a successful e-commerce firm is rather easy to understand : get relevant visitors for a fair price, convert them into customers at a good rate, upsell everywhere you can, and foster loyalty that encourages repeat business.

- **Visibility :** More than 13 billion web pages have been downloaded since 2011. By utilizing the right technique to increase traffic to your e-commerce site, you run the risk of being buried beneath all other websites that are comparable to yours. The most crucial methods for bringing in customers include online and offline advertising, search engine optimization, and networking.
- **Product :** You need to suggest a product to customers once they visit your website. Position markets are consistently the simplest to fill, especially if you can offer a produced commodity or service that is not readily available on major e-commerce platforms. Taking care of regional markets, such as a burger delivery restaurant that accepts online orders and payments, can set you apart from your rivals and establish you as the market leader in a certain region.
- **User Interface :** A customer must be savvy to conduct business readily and impulsively if they intend to purchase something from a specific website. Online buyers have a low threshold for uncertainty and annoyance, so if they can't quickly locate what they're looking for or figure out how to purchase it, they're likely to go somewhere else. Create your website such that it is obvious to a user where to discover products. Each page should provide clear instructions, such as click here or register now, on how to finish the next step in the buying process.

## E-Commerce

- **Consumer Trust :** Customers are wary of strange websites that want information from them, including names, email addresses, and credit card numbers. Build customer confidence by including a clear, understandable privacy policy and using reputable and well-liked security services on pages to gather personal information. Customers' confidence is increased by redirecting them to a well-known, prominent online payment facility for the investigation procedure. Additionally, website design affects client trust. Unprofessional websites won't encourage visitors to give their money or personal information.
- **Loyalty :** It makes obvious that you'd want as much repeat business as you can give the difficulty of attracting people to your website and convincing them to make a purchase first.

### ☐ **Check Your Progress – 4 :**

1. What factors are responsible in the success of E- commerce ?
  - a. User Interface
  - b. Loyalty
  - c. Consumer Trust
  - d. All of these

## **5.6 Various issues in Revenue Strategy :**

### • **Competitive Strategy :**

The strategic role that information systems play in the development of products, services, and capabilities that enable business anticipated compensation over the hostile forces it encounters in the broad market. As a result, strategic information systems are created, which are information systems designed to monitor or assess the competitive position and tactics of an endeavor. Consequently, a category of information systems called strategic information systems can assist an organization in :

- ✓ Gain a competitive advantage
- ✓ Reduce a competitive disadvantage
- ✓ Meet other strategic enterprise objectives

If a company creates effective strategies to deal with five aggressive forces with the aim of influencing the structure of competition in an industry, it will be able to survive and succeed in the long run.

- ✓ Competition of competitors within its industry
- ✓ Threats of new entrants
- ✓ Threats of Substitute
- ✓ Bargaining power of customers
- ✓ Bargaining power of suppliers

To assist a company in fending off these competitive forces, many competitive strategies can be established. These consist of :

### **Cost Leadership Strategy :**

- ✓ Become a low-cost producer of product and services.
- ✓ Find ways to help suppliers or customers reduce their cost
- ✓ Increase the cost of competitors

**Differentiation Strategy :**

- ✓ Develop ways to differentiate products and services from competitors
- ✓ Reduce the differentiation advantages of competitors

**Innovation Strategy :**

- ✓ Find new ways of doing business
- ✓ Develop new products & services
- ✓ Enter new markets & marketing segments
- ✓ Establish new business alliances
- ✓ Find new ways of producing product/services
- ✓ Find new ways of distributing product/services

**Growth Strategies :**

- ✓ Significantly expand the company's capacity to produce goods and services.
- ✓ Expand into global markets
- ✓ Diversify into new products and services
- ✓ Integrate into related products and services.

**Alliance Strategies :**

- ✓ Establish new business linkages and alliances with customers, suppliers, competitors, consultants and other companies.
- ✓ Cooperative Strategies

A strategy in which businesses collaborate to achieve a common goal and which includes planned alliances signifies a significant shift away from achieving strategic competitiveness and above-average profits through first-to-last aggressive strategies and toward achieving them through first-to-last cooperative strategies. Strategic alliances have a number of justifications or guiding principles. These motives vary depending on the state of the market. either a slow, standard, or quick cycle.

**Reasons for entering alliances in slow-cycle markets :**

- ✓ Gaining access to market that is not open to other entry strategies
- ✓ Establishing a franchise in a new market
- ✓ Maintaining market stability

**Reasons for entering alliances in standard-cycle markets :**

- ✓ Gaining market power
- ✓ Gaining access to complementary resources
- ✓ Overcoming trade barriers
- ✓ Meeting competitive challenges from other competitors
- ✓ Pooling resources for very large capital project
- ✓ Learning new business techniques

**Reasons for entering alliances in fast-cycle markets :**

- ✓ Speeding up the development of goods/services
- ✓ Speeding up new market entry
- ✓ Maintaining market leadership

## E-Commerce

- ✓ Forming an industry technology standard
- ✓ Overcoming uncertainty

The most significant cooperative strategy is a strategic association, which is also equivalent to a corporation wedged between two corporations and in which resources, talents, and competencies are pooled to pursue shared goals in the creation, production, or distribution of goods or services. They represent the clear-cut appearance of connections between businesses. Significant risks are associated with cooperative methods because businesses are collaborating as well as competing with one another. These dangers consist of :

- ✓ Ineffective contract creation that could lead to one of the partners acting opportunistically and taking advantage of the other venture partners
- ✓ Falsely misrepresenting or exaggerating an intangible resource, such as knowledge of regional market circumstances, to reflect the competencies of partner organizations o
- ✓ Partner firms' failure to provide the venture with complementary resources
- ✓ Being held prisoner by some investments, particularly if foreign legislation does not safeguard investments in the event of nationalization.
- ✓ Misinterpreting the strategic objective of a partner

### ☐ **Check Your Progress – 5 :**

1. Which of the following is a cost leadership strategy ?
  - a. Become a low-cost producer of products and services
  - b. Develop ways to differentiate products and services from competitors.
  - c. Reduce the differentiation advantages of competitors
  - d. None of these
2. What can be the significant risks that accompany cooperative strategies.
  - a. poor contract development
  - b. misrepresentation of partner companies' competencies
  - c. misunderstanding a partner's strategic intent
  - d. All of these

### **5.7 Electronic Commerce Strategy in Action :**

Electronic commerce strategies help businesses manage their markets through e-business by assisting them in changing how they interact with clients, communicate, handle information, make decisions, and conduct business.

As of right now, e-business relies on innovative crossover point instead of a website to handle a limited number of online transactions. It focuses on retooling your company to develop compelling value propositions for both employees and customers. Nothing else counts if your consumers aren't engaged in revenue-generating activities thanks to a well implemented business procedure, technology, and e-business strategy.

Business communication boundaries and the structure of business are both being changed by e-business. Your clients should be able to communicate and transact business anywhere, at any time. Knowing how Web-based technologies and the Internet affect business will help you decide what to do. Electronic commerce effectively alters and broadens your company's behavior in a way

that is unique to attach economy. It is more than just a web browser into your business. In reality, e-business occasionally focuses more on enhancing internal corporate operations and the more effective use and sharing of business information than it does on customer-facing transactions.

You must reevaluate your business processes in the area of client value proposition in addition to exercising e-business technological mechanisms if you want to succeed in the associated world of an Internet economy. We can help you integrate consumers, employees, suppliers, and business partners into an e-business framework that will agree to achieve efficiency and optimize value proposition because of our experience in operations and system incorporation.

Among the technologies we can help you explore are :

- ✓ Business Intelligence – data warehousing, online analytical processing, data mining and advanced executive information systems (EIS).
- ✓ Collaborative Computing – leveraging knowledge, connecting people, improving information flow, and streamlining business processes.
- ✓ Custom Design & Build – technology solutions when off-the-self applications do not meet the requirements.
- ✓ Customer Relationship Management (CRM) – driving customer loyalty through process and technology.
- ✓ e-Architectures – network and database design, tuning and recovery.
- ✓ Enterprise Application Integration – middleware solutions for integrating and extending legacy, ERP, financial, telecommunications and web applications.
- ✓ Enterprise Resource Planning (ERP) – implementation, integration and post-implementation services.
- ✓ e-Procurement – optimizing the procurement of non-production goods through strategy, process, and technology.
- ✓ Internet-Enabled Supply Chain Management – leveraging knowledge and the frictionless flow of information to enable a customer-driven supply chain.
- ✓ Mobile Computing – putting the power of the enterprise and the Internet in the palm of your hand.
- ✓ Quality Engineering – validation and verification of complex systems.
- ✓ Web Technologies researching, designing, architecting, constructing and integrating e-solutions

**☐ Check Your Progress – 6 :**

1. Write a note on Electronic Commerce Strategy in Action.

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## 5.8 The Process for Successful E-Commerce Programs :

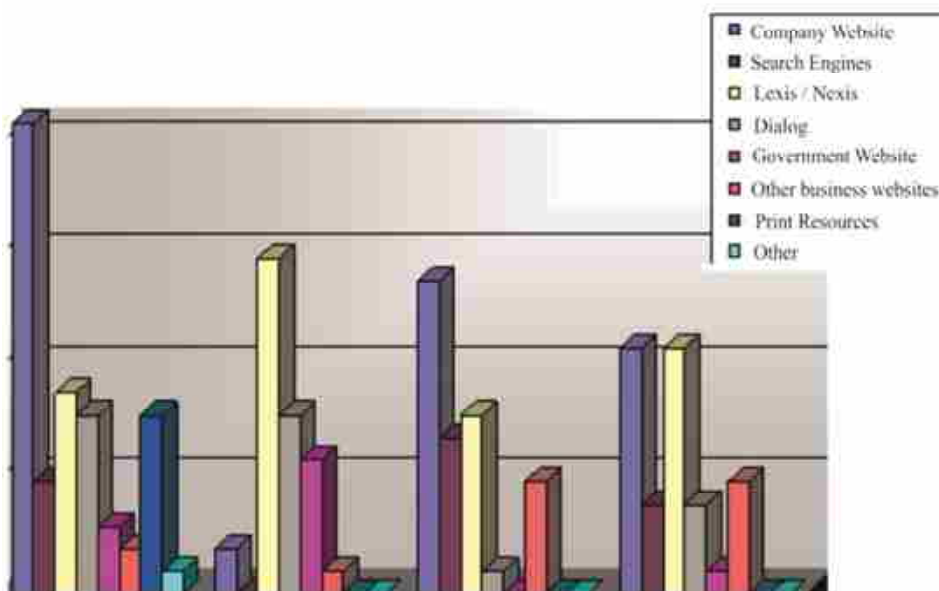
A successful direct e-commerce program has the power to completely transform your company. E-commerce opens the door to a stronger brand, which may be supported by reliable MAP pricing for products and an engaged bricks-and-mortar retail effort for a better, more empathetic, and quicker engagement with your customers.

- **Step – 1 Clarify the Opportunity :** Whether you want to launch your e-commerce business right away or want a kickstart, start by looking into current potential. It discusses an evaluation of the present brand's strength, website traffic, conversion rates, price issues online, rival success, search engine potential, and technological ramifications.
- **Step – 2 Explore the business model :** If you want to succeed in e-commerce, you must provide best-in-class consumer comprehension. In this way, the development of not only a classy online shopping experience, but also a responsive customer care center, unquestionable in addition to proper fulfillments, as well as continual digital message strategy that built the loyalty. When you've evaluated the company's potential in each of these areas, it's time to decide which areas you should try to manage internally vs externally.
- **Step – 3 Nail down the software investment :** There are a variety of speculative software model options. Every model has a diverse range of solutions below it that span a wide range of technological platforms.
- **Step – 4 Simplify the integration strategy :** Finding software methods that reduce the number of internal platforms that must be controlled is now a trend. The IT sector is overrun with disparate tools and systems that don't communicate with one another. Marketing teams are becoming increasingly frustrated with their inability to intelligently manage content and product information across company websites and e-commerce purchasing platforms without centralized programming.
- **Step – 5 Button down the software :** There are not many solutions left that are in line with corporate needs and technology requirements if the aforementioned job is not completed.
- **Step – 6 Explore implementation partners :** Implementing e-commerce frequently reveals problems that need to be fixed with branding, content, CRM, and marketing. A corporate reference list of businesses your size and with your demands that the software vendor can connect you to as potential partners should also be available.
- **Step – 7 Shape the program vision :** It is time to priorities the site's overall needs, the outsourcing strategy, the closing production approach, and the development timelines in conjunction with the consulting partner.
- **Step – 8 Design as well as building e-commerce website :** Design and e-commerce website construction are two areas where many businesses are investing at least partially, if not fully, in constructing their websites.
- **Step – 9 Break out champagne :** But also, be aware that, similar to a new child, this program will demand an ever-increasing amount of effort from your staff and money from your business.

## 5.9 Use of Internet in Competitive Intelligence :

It has been discovered that most of the literature on competitive intelligence is based on absurd issues in the CI community, like the performance of intelligence gatherings on or after both primary and secondary information resources. On the other hand, with the advent of e-commerce, many small businesses have created their websites, making available a variety of useful information such company history, explanations of products and services, make contact with information, press releases, etc. However, the Internet is also known as a "double-edged sword" for CI collecting because, while it delivers a wealth of information, it is frequently difficult to determine whence the information originated.

The aggressive aptitude fiction, which has previously been referred to as characteristics of information-seeking activities effective in CI congregation, gives a substantial amount of regulation suggestions everywhere in addition to how one should go along with aggressive aptitude. Numerous models and categorizations of information-seeking behavior in both non-electronic and electronic information contexts are available in the literature on library and information science (LIS).



**Competitive Intelligence**

Students used all eight of the distinct resource types shown in above figure to compile the all-purpose company data on Internet start-up companies with the objective of the CI assignment. On the firm website, resources were grouped primarily repeatedly, which accounts for 36% of all usage.

Findings show that free Web-based resources are most frequently used, along with a few useful sources of background knowledge, to respond to aggressive intelligence queries on fledgling Internet startups. The students strictly used the data that was established on the websites of the businesses that they are, supporting claims that the firm websites act as the primary sources of aggressive data. The learning participant used the company website as their most significant and effective source for acquiring general company information, as well as for learning about the company's corporate affiliation and sources of venture capital investment.



## E-Commerce

It is possible to uncover aggressive intelligence about small, Internet start-up organizations by considering a variety of enticing findings in value to different secondary information funds.

### 5.10 Implementation :

When is Internet commerce possible to provide a business with a huge range of benefits ? The implementation process is crucial in e-commerce. One of the finest strategies for the success of your own company's online business is to hire an ecommerce website developer. Additionally, an ecommerce scheme also requires ecommerce expansion.

The first step in creating an e-commerce strategy is e-commerce expansion. An effective e-commerce software system, shopping cart program, payment method, web hosting, and other crucial e-commerce website developer solutions are the first things that Internet commerce needs in this regard.

Basic ecommerce marketing is also necessary for developing an ecommerce strategy. After all, choices made regarding a company's target audience, customer wants, the best way to deliver a service, and previous basic audience knowledge are the most crucial factors in determining the success of an e-commerce strategy as well as the general development of e-commerce.

Creating an e-commerce plan involves both technological and commercial considerations, as successful e-commerce depends on both strong marketing and development strategies. Ecommerce strategy, in this sense, is all about determining what a firm requires in order to appeal to its entire client base and, as a result, to promote the most online business transactions.

The first stage of strategic planning, during which the organization analyses its surroundings and itself. This phase's specific results include :

#### **Company analysis and value proposition :**

The advantages that business's goods or services offer to businesses and their clients Forecasts and key competencies.

#### **Competitor analysis Strategy formulation :**

The creation of business environment strategies to take advantage of opportunities and control dangers in light of corporate strengths and weaknesses. Activities and results from this stage specifically include :

- ✓ Business opportunities
- ✓ Cost – benefit analysis
- ✓ Risk analysis
- ✓ Assessment
- ✓ Management

#### **Business plan Strategy implementation :**

The creation of thorough, immediate strategies for carrying out the initiatives decided upon during strategy formulation. Activities and results from this stage specifically include :

- ✓ Project planning
- ✓ Resource allocation

**Project management Strategy assessment :**

Continuous examination of the organization's progress toward its predetermined goals should result in counteractive action in addition to, but not in lieu of, strategy reformulation.

**5.11 Electronic Commerce Leadership :**

In addition to this figure of 8.8% in 2018, the online retail industry made up 5.9% of the total retail market in 2014. With such a significant amount on the line, e-Commerce leaders are under more pressure than ever to influence new tools and technologies to reach customers at every touch point they use, which is primarily smartphones and tablets. Customers now have the option to connect with their favorite companies wherever they are and whenever they want. The change to "m-commerce" has also given marketing and e-commerce leaders the possibility to employ big data and digital analytics to better value the omni-channel consumer.

E-commerce Leadership offers a more in-depth examination of how to define the function that websites play in general business goals, the operating structures required for success, the "must-haves" for e-commerce leadership, and the techniques for luring this talent.

The "information highway" that is the Internet has evolved to encompass interactive options that range from interpersonal and social interaction to almost endless business-related connections. E-commerce has long been regarded as having grown beyond its computer support to take account of mobile communications and other developing technologies, much as stores have broken out from the brick-and-mortar norm. The e-commerce industry does not grow incrementally, but rather rapidly and in a variety of directions.

**5.12 Creating a Web Team and Assigning Functional Skills to Subproject :**

The team's composition will likely change at each step to reflect the project's dynamic character. A large applications development team is not likely to benefit from the ideal organizational structure for a small, highly effective business design team. There are some guidelines that can be used to determine the composition of the teams :

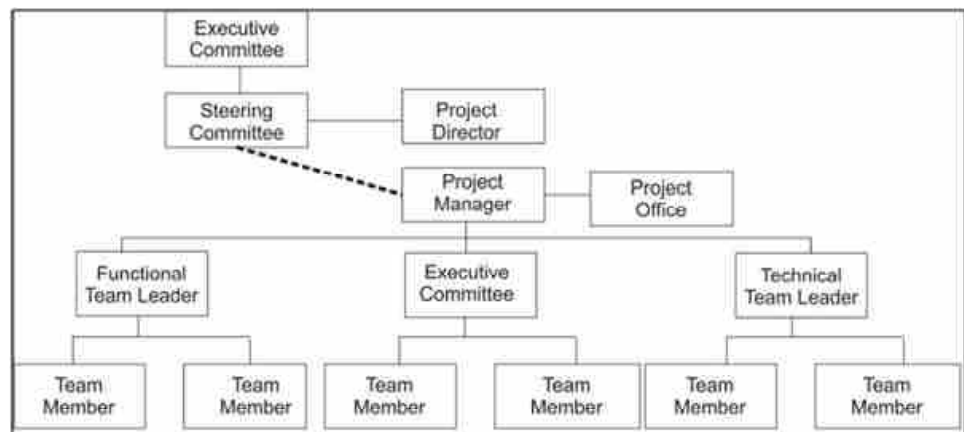
- ✓ Team members typically perceive one another as "being on their side" when they work together. Normally, they will cooperate and support one another in order to accomplish their shared objectives.
- ✓ When people work together as a team, they collaborate, share knowledge, and transfer skills. This can happen, for instance, between the software package's specialists and its most important potential consumers.
- ✓ Establishing a strong, efficient team is essential since team dynamics will affect how the team functions. Create a team that works well together, where members are motivated to accomplish the team's objectives and exchange information.
- ✓ The best method to acquire a balanced picture of all aspects, such as business needs, practicality, technological feasibility, efficiency, and performance, is through team member interaction.
- ✓ The abilities, understanding, and knowledge of team members on other teams are rarely fully utilized.

**E-Commerce**

- ✓ Members of other teams are frequently seen of as a bother because they impede our team's success.
- ✓ According to the complexity theory, having a large team result in more interaction than advancement.

**5.12.1 Measuring Result :**

The duties that go into addressing a complete business solution are numerous and varied. The main full-time project team will likely be made up of some of these. Others could be representatives of other parties involved in the project or part-time professionals. It is frequently vital to consider the degree of capability or power in addition to the type of person. We need to find the correct person if we need someone who can make business decisions. We shouldn't waste the time of a more expensive resource if we only need someone to complete regular tasks. A team can be organized in a variety of ways to produce effective results. Team organization is shown in the figure below for producing positive results :



**Team Structuring**

Teams devoted to that area have tackled the primary functional areas in this framework. Subject to any additional specialized support that may be required, the team would consist of a variety of individuals with the requisite skills, expertise, and understanding.

**5.12.2 Collecting Information :**

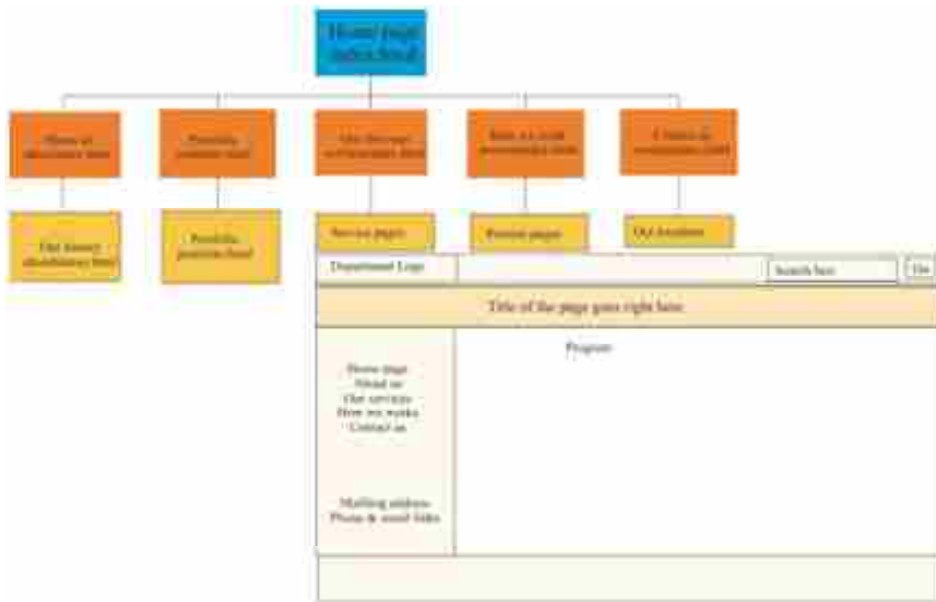
The executor of the site's details plans the layout and content of the website. Early on in the design and planning stages of the project, the information executor is particularly active, developing rough content categorization guidelines, uniform site terminology, content organization across the site, and site architecture blueprints that outline the overall site planning for both the sponsor and the web team members.

Additionally, information architects collaborate closely with site designers to create "wireframes," diagrammatic page grids that depict how different portions of the page will be used to support the site's identity, navigation, and content. Page wireframes are an essential link between the overall site design and what the user sees on each page of the website, determining how simple it is for the user to understand the site's features and information while balancing the user's overall competence.

At the time, information architects had a foundation in library science and used controlled terminologies, carefully crafted material, guiding jargon, and search algorithms to help users find pertinent stuff. Charts and diagrams

are frequently used in the information architect's basic deliverables, such as site architectural overviews, page wireframes, and user interaction descriptions. In order to effectively convey site structure and user competency to sponsors as well as other members of the web team, particularly the back-end technical engineers who support the interactive portions of the site, these visible approximations of the site design process are essential.

The usability lead definitely uses wireframes to test design concepts with people shown in below figure :



**Test Design Concepts with Users**

**5.13 Let Us Sum Up :**

In this chapter, we learned that the widespread use of web development technologies and the introduction of the Internet have made e-business the current catchphrase for firms in the modern human race. Strategic planning has been found to agree on all aspects of an organization's starting over the next year or more, including its working through and engaging marketing domains in case of attaining successful results.

The emergence of e-commerce has significantly changed how business continues to be conducted, whether on the open market or between businesses. It should be mentioned that there is a tendency for different services and active networks to coexist in the modern electronic communication system, giving rise to a cutting-edge type of network called the Next Generation Network.

Additionally, information systems have a strategic obligation to use information technology to develop products, services, and skills that will help businesses plan ahead for compensating against the hostile forces they will encounter in the broad market. The competitive intelligence literature is based on absurd CI congregational difficulties, such as how intelligence gatherings perform on or after both primary and secondary information sources.

**5.14 Answers for Check Your Progress :**

**❑ Check Your Progress 1 :**

1 : d

## **E-Commerce**

- ❑ **Check Your Progress 2 :**  
1 : Refer 1.3                      2 : c
- ❑ **Check Your Progress 3 :**  
1 : d
- ❑ **Check Your Progress 4 :**  
1 : d
- ❑ **Check Your Progress 5 :**  
1 : a                      2 : d
- ❑ **Check Your Progress 6 :**  
1 : Refer 1.7

### **5.15 Glossary :**

1. **Strategic Planning :** In order to get successful results, strategic planning is agreed upon everywhere an organization starts over the next year or more with elements of its working through involving marketing domains.

### **5.16 Assignment :**

1. Explain the key factors for successful business.

### **5.17 Activities :**

1. Find the areas where E-commerce is applied nowadays

### **5.18 Case Study :**

1. Study various forms of E-commerce applied on various sites.

### **5.19 Further Reading :**

1. Allen, E. and Fjermestad, J., (2000). E-Commerce Strategies : The Manufacturer Retailer Consumer Relationship, August 2000.
2. Behrendorff, G, Fisher, J., Goldsworthy, M. A., Corbitt, B., & Perks, G. (1996). Electronic Commerce Programs for Small to Medium Sized Enterprises,
3. Bennett, D. and Eustis, B., (1999). External Relationship Management : Information Systems Frontiers, 1999.
4. Burn, J. M. and Barnett, M. L. (2000) Emerging Models for Global e-commerce world.

**UNIT STRUCTURE**

- 6.0 Learning Objectives**
- 6.1 Introduction**
- 6.2 Online (Web) Marketing Strategies**
- 6.3 E-Marketing**
- 6.4 Promotion on the World Wide Web (WWW)**
- 6.5 Customer Relationship Management (CRM)**
- 6.6 Let Us Sum Up**
- 6.7 Answers for Check Your Progress**
- 6.8 Glossary**
- 6.9 Assignment**
- 6.10 Activities**
- 6.11 Case Study**
- 6.12 Further Readings**

**6.0 Learning Objectives :**

After learning this unit, you will be able to understand :

- About Online Marketing Strategies
- About Market Segment Communication
- Idea about E-Marketing
- About Promotion on the WWW
- About Customer Relationship Management
- About search engine and domain names

**6.1 Introduction :**

E-commerce, often known as electronic commerce, is the exchange of goods and services as well as the sending of money and data through an electronic network, most commonly the internet. These business dealings can be either B2B (business-to-business), B2C (business-to-consumer), C2C (consumer-to-consumer), or C2B.

E-business and e-commerce are frequently used interchangeably. The transactional procedures that make up online retail shopping are also occasionally referred to as e-tail. Online selling needs to have marketing strategies, market segment communication, E-marketing, promotion on world wide web, and customer relationship.

**6.2 Online (Web) Marketing Strategies :**

The top ecommerce marketing techniques that can greatly increase your sales and draw in a tone of new clients. I'll discuss many marketing methods, including email marketing, search engine optimization, and others.

## **E-Commerce**

You may outsmart competitors by having a clear e-commerce marketing strategy, whether they are traditional rivals, disruptors, subscription-based services, rental services, other alternative retail models, or something else.

### **1. Use SEO to improve your e-commerce website :**

Optimizing your website for organic search traffic is one of the best e-commerce marketing tactics to promote growth. People frequently use Google to do online product searches. In actuality, Google accounts for 46% of all product searches. That percentage rises when you consider those who are looking for a product but don't have a particular brand in mind (people who are most open to learning about brands and their alternatives).

How can you reach all of these internet shoppers with your brand ? Create a thorough e-commerce SEO strategy!

How successful is SEO as a method of e-commerce promotion ? Within 15 months, one of our e-commerce clients increased their monthly organic traffic from zero at launch to over 1,532,000. The brand is currently valued at more than \$1.5 billion.

In contrast to AdWords, and Google Shopping, enterprise-level SEO investments grow over time. As a result, the overall lift benefits numerous landing pages throughout your website rather than just one.

From our SEO check list, these are just a few brief suggestions.

- ✓ Make that Google has indexed all crucial pages.
- ✓ Create a three-click deep website architecture that makes sense.
- ✓ speed up page loading.
- ✓ Research keywords and match material to search intent.
- ✓ Deal with content duplication.
- ✓ Put organized data to use.
- ✓ Confirm that all pages are responsive.
- ✓ Fix faulty links.
- ✓ Employ picture

### **2. Improve the pages in your categories :**

You must optimize your category pages in addition to your website as a whole. This is crucial for e-commerce in particular. It is important to thoroughly optimize your category pages for the broad search phrases that have a significant search traffic.

Which approaches work the best for this ? Making distinctive category pages that are simple to find is the first step. A page should not have numerous categories, and similar or duplicate material should not be added to category pages.

Use subcategory folders and concise, keyword-rich URLs that also contain the main keyword. Use keywords to improve your page's meta descriptions and title for Google searches. However, businesses must also utilize language that tempts users to click through from search engine results pages (SERP).

Use internal links properly and only one H1 tag per page. Additionally, make certain that your category pages include actual pertinent content rather than just products. Integrating high-quality content into your category pages is a fantastic idea if you want to rank for relevant keywords.

### **3. Improve your product pages :**

The bottom of the funnel needs to be covered in ecommerce marketing techniques as well. Optimizing your product pages is crucial for bringing in bottom of the funnel visitors because of this. These buyers are prepared to make the final choice and already know what they want.

Check out our post on ecommerce product page SEO for a comprehensive guidance. Here are some salient ideas to remember from that article :

- ✓ Use URLs that are optimized for SEO and include the main keyword.
- ✓ Create title tags that are appealing to customers and SEO-friendly.
- ✓ Create captivating meta descriptions with your keyword in them.
- ✓ For both website users and search engines, use keywords in H1 tags.
- ✓ Make your product descriptions stand out.
- ✓ Create content that speaks to the personas that you want to reach.
- ✓ Keep your stuff original.
- ✓ Use product photographs of the highest quality with accurate alt tags.
- ✓ Offer suggestions for comparable products.
- ✓ Add customer testimonials or product reviews.
- ✓ Aim for rapid page loading.
- ✓ In order to collect rich snippets, use structured data.
- ✓ Adapt to mobile platforms

### **4. Use a blog to boost ecommerce content marketing :**

Blogging and content marketing are essential components of an effective ecommerce marketing plan. What precisely is content marketing ? It involves producing excellent content that is really valuable and then disseminating it to a larger audience. Blogging is one possible aspect, but it's not the only one. You can also use social media, infographics, look books, podcasts, videos, webinars, and social media in your content marketing strategy.

### **5. Prepare for voice search :**

The popularity of voice search has skyrocketed since the release of Siri. By 2022, voice search is predicted to be responsible for a startling \$40 billion in retail transactions in the US and the UK. As a result, in order to profit from this expanding sector of ecommerce, you must optimize your website for voice search.

Here are a few straightforward yet potent voice search SEO strategies.

- ✓ Make your answers to inquiries brief and to the point.
- ✓ Use long-tail, conversational keywords that represent the way people actually speak.
- ✓ Avoid using complex terms that will confuse voice assistants in your content.
- ✓ Put your efforts towards implementing page-speed upgrades. Because voice search is like a conversation, your pages must load quickly in order to be chosen by Google.



**6. Use influencer marketing :**

Because it enables you to reach a particular audience through a person with incredibly strong relationships of trust in the community, influencer marketing is an effective ecommerce marketing method. It's particularly effective when launching new products.

The good news is that influencer marketing may be profitable even if you don't sell lifestyle goods. Almost every sector has influencers, including the pet, DIY, beauty, and automotive industries. Others have smaller, more specialized followings while some have vast audiences.

**7. Invest fully in social media :**

With billions of users each month, social media is undoubtedly an excellent digital marketing channel for connecting with your target market and increasing sales.

Identifying the platforms most frequently used by your target demographic is the first step. Facebook is definitely your best option if you sell mostly to Baby Boomers. You might want to concentrate more on Instagram and TikTok for Millennials and Generation Z. Pinterest is a wise choice if the majority of your clientele are women.

For social media marketing to be successful, you must establish real connections with your audience. Be receptive to their feedback, assist them in finding solutions, amuse and captivate them, etc. Avoid simply producing content without any interaction. The use of social media is reciprocal.

Which companies are mastering the use of social media as a vital component of their e-commerce marketing strategies ? To name a few, Glossier, H&M, Chanel, Lowe's, Target, Gym shark, and Nike.

**8. Highlight user-generated content (UGC) :**

Using user-generated content as social proof can be quite effective. It displays individuals utilizing and enjoying your goods in the open. People might not always believe what you say about your goods, but they will unquestionably believe what real customers have to say.

Users who interact with UGC are 161% more likely to convert, according to a study of 200,000 e-commerce stores! How can you make user-generated content (UGC) a bigger part of your e-commerce marketing strategies ? Here are a few easy methods :

- ✓ Request images from current consumers who are utilizing your items and tagging your company in them.
- ✓ Make a #hashtag for your merchandise and encourage users to use it when referencing it.
- ✓ Reshare consumer testimonials that might not otherwise be noticed.
- ✓ Hold a UGC contest with a predetermined topic.

**9. Include on your website a keyword-driven FAQ section :**

Many marketers overlook the significance of a keyword-driven FAQ when considering effective ecommerce marketing methods. Your website's FAQ section enables you to swiftly address queries and dispel any potential clients' reservations. Consider the usual terms and queries users might use while developing your FAQ. Utilize your customer service team to identify the frequently requested questions.

For instance, if your business is called "Cool Clothing," there is a significant probability that consumers may look for branded terms such as :

- ✓ Return procedures
- ✓ Optional payment terms
- ✓ Consumer assistance
- ✓ product assurance
- ✓ Credit cards
- ✓ picking the appropriate size

You can increase your chances of receiving SEO traffic by structuring your FAQ section around pertinent keywords. Additionally, you make it simple for consumers to do a rapid search for information, which lowers resistance during the purchasing process.

#### **10. Produce videos relating to products :**

Customers of e-commerce cannot physically touch things, in contrast to brick-and-mortar stores. Insecurity in the shopping process may result from this. To close that gap and boost online sales, product videos can be an effective marketing strategy.

Making movies about your items can help customers learn more about them and lessen consumer uncertainty.

Additionally, don't just stop at product summaries. Display product unboxing activities or introduce similar goods for upselling or cross-selling.

#### **11. Spend money on live chat :**

A sizable chunk of your consumers, particularly the younger ones, prefer email over phone calls and desire prompt responses to their inquiries. The main forms of communication for Gen Z and millennials are texting and chat apps. Calls are only placed if they are absolutely essential.

According to the report, 38% of shoppers are more likely to make a purchase from a website if live chat is available. Retailers claim that enabling live chat has increased online sales, revenue, and client loyalty in 79% of the businesses studied.

Given this, adding a live chat feature to your e-commerce website may be one of your best e-commerce marketing techniques. For individuals who don't want to wait for an email response or pick up the phone and be put on hold, it enables you to offer immediate customer care.

Live chat is just another approach to ensure that your consumers have a wonderful experience from beginning to end.

#### **12. Increase conversion rate optimization (CRO) for online stores :**

If you don't invest in CRO, you're just throwing money away. By raising your conversion rate, you can generate more income from current traffic. This money can then be used to buy more traffic, which converts at a faster rate and produces more money, and so on. A flywheel for your marketing initiatives is CRO.

The truth is that even a little increase in conversion rate can result in significant increases in income.

**13. Make your email marketing and ecommerce strategies personalized :**

If you include personalized email marketing in your e-commerce marketing plan, it may have a significant impact on whether someone decides to buy from your company. According to Accenture, 91% of consumers are more inclined to make a purchase from businesses who send them tailored emails.

Customers genuinely want to engage with brands, that much is obvious. They don't want to be seen as nothing more than a number. Personalization improves the relationship you have with clients. Here are a few methods for customizing email campaigns :

- ✓ Based on your previous purchasing habits, recommend products.
- ✓ In the subject line, mention the person's name.
- ✓ On a person's birthday, anniversary, or any other significant day, send them a special gift or discount.
- ✓ Segment the members of your email list according to a characteristic such as age, gender, geography, or interest.
- ✓ Use triggers based on a person's behavior, such as when they haven't made a purchase from you in a while.

**14. Provide bonuses :**

Offering incentives can make you stand out from the competition and persuade clients to do business with you. If at all possible, provide shipping for free. For better or worse, Amazon has raised the bar for shipping, and customers now take it for granted.

In addition, there are additional incentives, such as :

- ✓ Special savings
- ✓ BOGO (buy one, get one free)
- ✓ Bundles
- ✓ Customization
- ✓ a sneak preview of forthcoming products
- ✓ Cash-back promise
- ✓ speedier delivery
- ✓ Contribution to charity
- ✓ Additional choices include gift-wrapping

**15. Provide a rewards scheme :**

A loyalty program is the last ecommerce marketing tactic on my list. Retaining current clients is much less expensive than increasing brand recognition and gaining new ones. Additionally, even a 5% increase in loyalty might result in a significant increase in revenues.

An excellent illustration of the effectiveness of a post-purchase loyalty program is Amazon Prime. Prime customers spend 133% more on Amazon annually on average than non-Prime customers. Additionally, over 45% of Prime members make an Amazon purchase at least once per week.

Making a program that recognizes and rewards your most devoted customers will keep them coming back. Your Customer Lifetime Value will increase as a result, which will be advantageous to your entire organization.

Consider the aforementioned tactics to be best practices for e-commerce marketing. They're a winning combination, but it's up to you to decide how to use them in accordance with your business strategy.

**❑ Check Your Progress – 1 :**

1. SEO stands for \_\_\_\_\_.
  - a. Search Engine Optimization
  - b. Search Engine Organization
  - c. Search Engine Option
  - d. Search Engine Offer
2. SERP stands for \_\_\_\_\_.
  - a. Search Engine Result Posts
  - b. Search Engine Result Pages
  - c. Search Engine Result Programs
  - d. Search Engine Result Products
3. UGC stands for \_\_\_\_\_.
  - a. User Granted Command
  - b. User Granted Comment
  - c. User Granted Content
  - d. User Granted Communication
4. CRO stands for \_\_\_\_\_.
  - a. Command Rate Optimization
  - b. Comment Rate Optimization
  - c. Common Rate Optimization
  - d. Conversion Rate Optimization

**6.3 E-Marketing :**

E-marketing, often known as electronic marketing, describes advertising done online. Internet marketing and online marketing are two terms that are frequently used interchangeably to refer to e-marketing. E-marketing is the practice of promoting a brand (a business, a good, or a service) online utilizing computers and mobile devices. According to this definition, eMarketing includes all the online actions a company engages in to build its brand identity, attract new customers, and keep existing ones.

**Advantages of E-Marketing :**

- ✓ Ability to target customers more quickly and inexpensively
- ✓ Automation of electronic media can lower marketing expenditures.
- ✓ Ability to analyze and collect user data Near-real-time contact between marketers and end Users Customized marketing experience
- ✓ Greater interaction
- ✓ The capacity to quickly implement marketing strategies
- ✓ Adaptability to market changes
- ✓ Evoke particular interests
- ✓ Geo-targeting

**❑ Check Your Progress – 2 :**

1. \_\_\_\_\_ describes advertising done online.
  - a. E-Marketing
  - b. E-Commerce
  - c. E-Business
  - d. E-Banking

**6.4 Promotion on the World Wide Web (WWW) :**

Sometimes the amount of Internet marketing information in your head can be so overwhelming. You are unsure about where to begin. The forest is not always visible for the trees. Although there is a lot of depth to grasp, I

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believe there are only eight fundamental forms of Internet promotion. You can understand what Internet promotion is all about if you can only get your head around these fundamental ideas. the following eight :

1. **Search Engines** : To locate what they're looking for on the Web, many people, probably even the majority of people, will use search engines and the Yahoo! directory. Therefore, the first step in promotion is to create websites that the search engines will properly index by employing meaningful titles and appropriate META tags.
2. **Linking Strategies** : Another crucial method of website promotion is link building. Your website will receive more traffic as there are more links going to it (and the search engines will give you a higher ranking as a result of the increased perception of "popularity"). You must ask if you want someone to link to your website. Finding complementary websites, linking to them on a linking page, and asking them to link to you is the quickest and easiest method. The secret, of course, is to have material on your site that is so excellent that it merits linking to. Nobody wants their website to be a dead link.
3. **Viral Strategies** : Designing a plan that encourages others to spread your marketing message via email using their own network of relationships—and preferably their own resources—is becoming an increasingly crucial activity. This practice is known as "viral marketing" after the way viruses quickly spread within a cell, taking over the cell's resources to serve their own purposes. The standard illustration is the free email service HotMail.com. Each email, which must be sent to the sender's own friends and acquaintances, has a message urging the recipient to open a HotMail account as well.
4. **Public Relations** : Obtaining newspaper attention through public relations is still an essential part of website promotion. You can significantly increase traffic for "free" by having a news release picked up by a number of print and/or online newspapers, allowing the network of the news outlet to spread your marketing message. Naturally, nothing is truly free. No respectable magazine will consider it news unless you have a truly noteworthy event, contest, free service, chat room, or other feature. Organizing "free" services and events is expensive, but the PR that results can be great. You might get objective editorial recommendations that you couldn't get for much money.
5. **Traditional Media** : Don't overlook traditional media while promoting your website, including paid advertising and news releases, of course. A modest display ad in a specialized trade magazine with some teaser language that directs people to your URL or an autoresponder email address for further information is a very efficient approach to advertise your website. In this manner, your website functions as an online brochure, giving interested customers complete information day and night. Making sure that your website URL appears on all of your company's literature, cards, letterheads, and envelopes should be a no-brainer.
6. **E-Mail Publishing** : If you're wise, you won't even consider creating a business website unless it's married to an e-mail publication. The website is like the reserved partner who waits for people to approach him. However, the spouse who sends the email is the outgoing, proactive

one who approaches people where they are and invites them to meet her groom. They work really well as a couple.

Publishing emails is primarily a way to get in touch with customers who have already expressed interest in your company by visiting your website or taking advantage of one of your offers. Getting visitors to sign up for your free newsletter, discussion list, or updated publication **MUST** be one of your website's top priorities. Offer a variety of incentives, such as entry into a contest, a free gift, or a free coupon, in order to ensure a continual flow of newsletter subscribers.

7. **Networking** : The networking process is a crucial part of website promotion. Small business members that belong to a local Chamber of Commerce are aware of the benefits of making friends, getting introduced, meeting new people at mixers, and having your company mentioned in the newsletter. Although networking takes time, it provides the foundation for relationships that will help spread the word about your company over time.
8. **Paid Advertising** : You'll see that the majority of the first seven sorts of Internet marketing may be carried out internally for comparatively little money (with the possible exception of search engine positioning). Although you might be able to locate a marketing company to which you can outsource some of these tasks, you can probably handle them yourself rather well since it is your company and you are the best person to market it.

However, there comes a point where you may need to turn to sponsored advertising in order to gain more visibility and enter the mind of the thousands of individuals who never visit your end of the Web. You will pay popular websites or online magazines to place an image or link that will drive plenty of visitors to your website.

**☐ Check Your Progress – 3 :**

1. Promotion on WWW includes \_\_\_\_\_.
  - a. Search Engine
  - b. E-Mail Publishing
  - c. Paid Advertising
  - d. All of Above

**6.5 Customer Relationship Management (CRM) :**

Systems for managing customer relationships enable businesses to assess past, present, and future clients on a number of levels. CRM is crucial for any company, including e-commerce websites, as it enables them to develop and flourish. This post will go over additional CRM capabilities related to e-commerce and how they differ from conventional CRM.

**Impact of E-Commerce in CRM :**

Although CRM is genuinely about managing customer relationships and offering a wonderful customer experience, e-commerce has had a number of effects on CRM. E-commerce has the potential to increase customer satisfaction and loyalty, according to one study. In fact, the research demonstrates that the following factors promote client loyalty :

- ✓ Competence
- ✓ Relationship-building skill

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- ✓ Commitment
- ✓ Solving the client's problem
- ✓ Trust
- ✓ Relationship quality

Implementing e-CRM is advantageous not only because it captures and retains client data continuously, but also because it can do all of the aforementioned tasks, leading to satisfied customers.

### The importance of CRM for e-commerce sites :

CRM has an effect on e-commerce websites because it has become crucial to a company's success. According to one study, building an organization's e-CRM capabilities, which eventually contributes to their corporate performance, may be done by interactively gathering and condensing client data. Future CRM solutions designed exclusively for e-commerce (along with developing a scalable e-commerce solution) may very well be required for web-based firms, it is safe to state.

For your e-commerce site, failing to recognize the value of CRM could mean losing out on a wide range of advantages, including but not limited to :

- ✓ A clearer grasp of supply and demand;
- ✓ Checking to see if your visitors can use your website without any problems;
- ✓ improved client service,
- ✓ simple check-out procedures
- ✓ a reduction in costs and losses as a result of improved client sales recording;
- ✓ able to produce adverts that are directed towards your specific market.

### 6.6 Let Us Sum Up :

In this chapter, we learned that the E-commerce, is the exchange of goods and services as well as the sending of money and data through an electronic network, most commonly the internet. Additionally, we seen the top ecommerce marketing strategies that can greatly increase your sales and draw in a tone of new clients.

Moreover, we have learned about the E-Marketing which play an important role in the online advertising. Also gone through the WWW promotion which includes search engine, linking strategies, public relations, traditional media, e-mail publishing, paid advertising and so on.

We learned about the Systems for managing customer relationships enable businesses to assess past, present, and future clients on a number of levels. CRM is crucial for any company, including e-commerce websites, as it enables them to develop and decoration.

### 6.7 Answers for Check Your Progress :

#### ☐ Check Your Progress 1 :

1 : a            2 : b            3 : c            4 : d

❑ **Check Your Progress 2 :**

1 : a

❑ **Check Your Progress 3 :**

1 : d

**6.8 Glossary :**

1. **E-Marketing** : E-marketing, often known as electronic marketing, describes advertising done online.
2. **CRM** : Systems for managing customer relationships enable businesses to assess past, present, and future clients on a number of levels.

**6.9 Assignment :**

1. Write a note on E-Marketing.
2. Explain Customer Relationship Management.

**6.10 Activities :**

1. Explain Online Marketing Strategies.

**6.11 Case Study :**

1. Study the promotions on the WWW.

**6.12 Further Reading :**

1. Allen, E. and Fjermestad, J., (2000). E-Commerce Strategies : The Manufacturer Retailer Consumer Relationship, August 2000.
2. Behrendorff, G., Fisher, J., Goldsworthy, M. A., Corbitt, B., & Perks, G. (1996). Electronic Commerce Programs for Small to Medium Sized Enterprises,
3. Bennett, D. and Eustis, B., (1999). External Relationship Management : Information Systems Frontiers, 1999.
4. Burn, J. M. and Barnett, M. L. (2000) Emerging Models for Global e-commerce world.



**UNIT STRUCTURE**

- 7.0 Learning Objectives
- 7.1 Introduction
- 7.2 Supply Chain Management using Internet
- 7.3 Portals and Electronic Marketplaces
- 7.4 Electronic Data Interchange
- 7.5 Benefits of Electronic Data Interchange (EDI)
- 7.6 Let Us Sum Up
- 7.7 Answers for Check Your Progress
- 7.8 Glossary
- 7.9 Assignment
- 7.10 Activities
- 7.11 Case Study
- 7.12 Further Readings

**7.0 Learning Objectives :**

After learning this unit, you will be able to understand :

- About Supply Chain Management using Internet
- Idea about the Portals
- Idea about E–Marketplace
- About Electronic Data Interchange and its benefits

**7.1 Introduction :**

Online selling to the business is also consider as e–commerce, but here whatever products and services are there that is directly going to sell to the business rather than the customers. Online selling to the business includes the supply chain management using the Internet, Electronic Marketplace and Electronic Data Interchange.

**7.2 Supply Chain Management using Internet :**

Recently, the Internet has become a dynamic route for transactions between clients and businesses in an online marketplace. The World Wide Web has in particular become a strong new supply chain channel, eliminating several middlemen and fundamentally altering the value chain. Due to online marketplaces' ability to lower the cost of supply–chain management and the execution of supply–chain tasks, B2B supply chains have moved in part to the Internet. Internet–based, widely accessible information that boosts transaction speed and transparency is a key factor in the cost reduction. Supply chain participants can easily and reliably locate the precise information they require to conclude a transaction for the exchange of goods or services and get prompt payment.

**Sourcing :**

By giving supply-chain partners instant access to data on suppliers, availability, pricing, and technical specifications, the Internet lowers the cost of purchases. The supply chain participants must work together to make this information accessible online, perhaps in protected files that are only open to account holders who are supply chain partners. Sourcing is more effective whenever the information needed to make a purchase is available online from multiple sources since the best source may be located more rapidly. The cost of the procurement transactions is reduced, even if the actual prices paid may not necessarily go down.

**Supply :**

The Internet's primary function on the supply side is to significantly expand the size of the market that is accessible. Global sales are possible for suppliers who use the Internet to market their products and services. Suppliers have lost some of the strategic tools that allowed them to build preferred accounts with larger margins as a result of the Internet's increased pricing transparency. This drawback is offset by competitive suppliers' capacity for higher sales volumes. Once a customer has been discovered, the supplier also enjoys lower transaction costs than the buyer because the transaction is completed more quickly and effectively.

**Direct Transactions :**

The Internet has served to lessen the influence of intermediaries in supply chains generally. Customers can immediately access suppliers' goods and services, while manufacturers can supply buyers with the goods they require. Disintermediation has made supply-chain management easier by giving markets access to real-time data on changes in demand and supply rather than having the information filtered through resellers. While intermediaries continue to play a larger role in retail transactions, this tendency has been particularly noticeable in B2B transactions.

**Collaboration :**

Even while Internet-based supply-chain management is still in its infancy, there is potential for even more integration between the supply and procurement activities. While buyers are looking for a dependable, affordable source, suppliers are interested in having a high, predictable sales volume. By sharing information about production and procurement requirements with one another throughout the course of long-term relationships, businesses can achieve both objectives. The supplier is able to sell his items at a lower price as a result of the large, consistent volume, and the buyer gains from the lower price and reliable supply.

**□ Check Your Progress – 1 :**

1. \_\_\_\_\_ is a key factor of Supply chain on internet.
  - a. Internet and speed
  - b. Transparency and speed
  - c. Intranet and speed
  - d. None of these

**7.3 Portals and Electronic Marketplaces :**

**• Portals :**

A webpage that provides users with access to data, resources, and links is known as an online or web portal or it's a platform that offers users a solitary access point to data.

## **E-Commerce**

According to market research 75% of consumers prefer to handle issues with products or services on their own. This indicates that a large number of clients now choose for self-service assistance solutions rather than contacting customer support representatives. This process is made considerably simpler by online portals, which are frequently given by companies or organizations.

A webpage that provides users with access to data, resources, and links is known as an online or web portal. Or to put it another way, it's a platform that offers users a single access point to data. Consider a central digital hub that interacts with the people in your area.

An online community portal is a one-stop shop that brings individuals together in a virtual community. Increasing client interaction is not the only goal of an online community site. It's capable of much more. Because it's a useful tool for mapping out the customer journey and boosting profitability, businesses are becoming more and more interested in creating their own web portal. Online portals use techniques like calculating client lifetime value to assist businesses in understanding the behavior of their consumers.

### **Who can use an online portal ?**

- ✓ Businesses
- ✓ Schools and Universities
- ✓ Healthcare communities
- ✓ Banking and Financial Services
- ✓ Food and Hotel Businesses
- ✓ Groups and Communities who provide Social Services

### **E-Commerce Portals :**

The corporate community has envisioned portal solutions as a chance to create and sustain customized, integrated e-commerce environments. In this article, portals have been divided into business-to-business, business-to-consumer, and content management system portals based on how each one naturally behaves.

#### **Business-to-Customer Portal :**

The following portlets should be included on a business-to-consumer portal :

- ✓ Browsing products
- ✓ Browsing information pages
- ✓ Portlet for the shopping cart
- ✓ Inform a friend.
- ✓ Subscription to news
- ✓ Postal service
- ✓ Agent in negotiations

#### **Content Management System Portal :**

The following modules must be present on a content management system portal :

- ✓ Category management
- ✓ Product administration

- ✓ Presentation management for web contents and pages.
- ✓ Customer service
- ✓ Subscription administration
- ✓ Email marketing campaign
- ✓ Management of orders and transactions

**Business-to-Business Portal :**

The presence of a B2B relationship within the organization enables the activation of the business-to-business portal, which is an additional portal. The B2B portal offers complex functionality and an advanced architecture to enable a variety of B2B activities, including :

- ✓ The handling of wholesale clients
- ✓ Supplier administration
- ✓ Management of online logins for wholesale customers
- ✓ Management of shipping, purchase orders, and orders received
- ✓ Improper product or stock management
- ✓ Reservation and billing system
- ✓ Monitoring of payment transactions
- ✓ Credit note administration
- ✓ Login account administration
- ✓ Account management in retail
- ✓ Individualized reports like those on revenue and expenses and late deliveries
- ✓ Communication and calendar module

• **Electronic Marketplace :**

Electronic marketplaces are essential to the economy because they make it easier to interchange payments, commodities, services, and information. They produce economic value in the process for buyers, sellers, market intermediaries, and society at large.

Markets, whether they are electronic or not, serve three main purposes :

- ✓ Bringing buyers and sellers together.
- ✓ Facilitating the exchange of information, goods, services, and money related to market transactions.
- ✓ Offering an institutional infrastructure, such as a legal and regulatory framework, that enables the market to operate effectively.

An electronic marketplace is a digital setting where buyers and sellers can interact and deal in various ways. Customers trade these goods and services for cash (or, if bartering is utilized, other goods and services). While an electronic market performs the same functions as a physical one, computerized technologies have the tendency to make markets significantly more effective by giving buyers and sellers access to more up-to-date information.

Many of the procedures used in trading and supply chains were altered by the introduction of electronic marketplaces (also known as e-marketplaces or marketspaces), especially those based on the Internet. These modifications, brought on by technology, produced :

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- ✓ The environment for transactions and relationships is more information rich.
- ✓ Lower expenses for buyers to look for information.
- ✓ reduced informational disparity between buyers and sellers.
- ✓ The e–marketplace allows for a longer period of time between the moment of purchase and the time of ownership of physical goods.
- ✓ Greater proximity in time between the time of purchase and the period of possession of digital goods bought over the internet.
- ✓ The potential for buyers and sellers to be in separate places.

### **E–marketplace components and participants :**

Electronic transactions that result in a new distribution of goods are part of a marketpace, services and products. Customers, suppliers, competitors, and other key players make up a marketpace. infrastructure, vendors, real or digital goods and services, a front end and a back end, intermediates, additional business associates, and assistance services. a succinct explanation of every as follows :

#### **Customers :**

Potential customers for the goods and services sold or advertised on the Internet are the 1.6 billion people who use the Internet worldwide. These customers are on the lookout for discounts, personalized goods, collectibles, entertainment, social interaction, and more. They are behind the wheel. They can perform in–depth information searches, compare, offer, and occasionally even negotiate. Over 85% of EC activities are consumed by organizations, making them the biggest consumers.

#### **Sellers :**

On the Internet, there are millions of storefronts that advertise and provide a wide range of goods. These shops are owned by businesses, governmental entities, or private citizens. There are new offerings of goods and services available every day. E–marketplaces or a seller's website are both options for direct sales.

#### **Products and services :**

The potential digitization of products and services in a marketpace is one of the key distinctions between a marketplace and a marketpace.

Although both kinds of marketplaces can offer physical commodities, the marketpace also allows for the sale of digital goods, or anything that can be converted to digital form and supplied quickly over the Internet.

#### **Infrastructure :**

Electronic networks, hardware, software, and other components make up the marketpace infrastructure.

#### **Front end :**

A front end is how users interact with a marketpace. The seller's portal, electronic catalogues, a shopping cart, a search engine, an auction engine, and a payment gateway are some examples of the front end's elements.

**Back end :**

The phrase "back end" of a firm refers to all tasks that are linked to order aggregation and fulfilment, inventory management, purchasing from suppliers, accounting and finance, insurance, payment processing, packaging, and delivery.

**Intermediaries :**

Marketers who act as intermediaries between merchants and purchasers are known as intermediaries. The function of these digital mediators, On the Web, intermediaries of every kind promote their offerings. For example, online intermediaries create and manage the online markets. They help match buyers and sellers, provide some infrastructure services, and help customers and/or sellers to institute and complete transactions.

**Support services :**

A wide variety of support services are offered, from content suppliers to certification and escrow services to maintain security.

**❑ Check Your Progress – 2 :**

1. \_\_\_\_\_ is an e-commerce site that connects sellers with buyers.
  - a. E-marketplace
  - b. B2B
  - c. B2c
  - d. None of these
2. \_\_\_\_\_ Can use the online portal.
  - a. Businesses
  - b. Schools and University
  - c. Banking and Financial Services
  - d. All of Above

**7.4 Electronic Data Interchange (EDI) :**

Everyone is connected to and dependent on the internet in today's world, whether they are aware of it or not. Today, the Internet is used for practically all work. Even now, the majority of communication is exchanged with the aid of the internet, whether it be chatting on WhatsApp with friends or sending crucial information through the mail; all work and communication is primarily carried out through the internet. Digital India is one example of how everything will be done through the internet in the upcoming years.

Can you image chatting with your friend while writing a letter to them every time ? Since people can readily contact with one another in this day and age thanks to the internet. Imagine a situation where businesses constantly need to communicate and exchange very important documents. If this were done the old-fashioned way, it would take an eternity for the messages to reach the other party, and the documents would also pile up because there would be a lot of information that needed to be kept and stored. It is a time-consuming and difficult process, and this is where EDI comes in.

Electronic Data Interchange (EDI) is the process of transferring data from one computer system to another without the use of a human being. Multiple businesses—possibly located in different nations – can exchange papers electronically thanks to EDI. Although peer-to-peer networks and serial lines can be used to send data, the majority of exchanges today rely on the Internet for connectivity.

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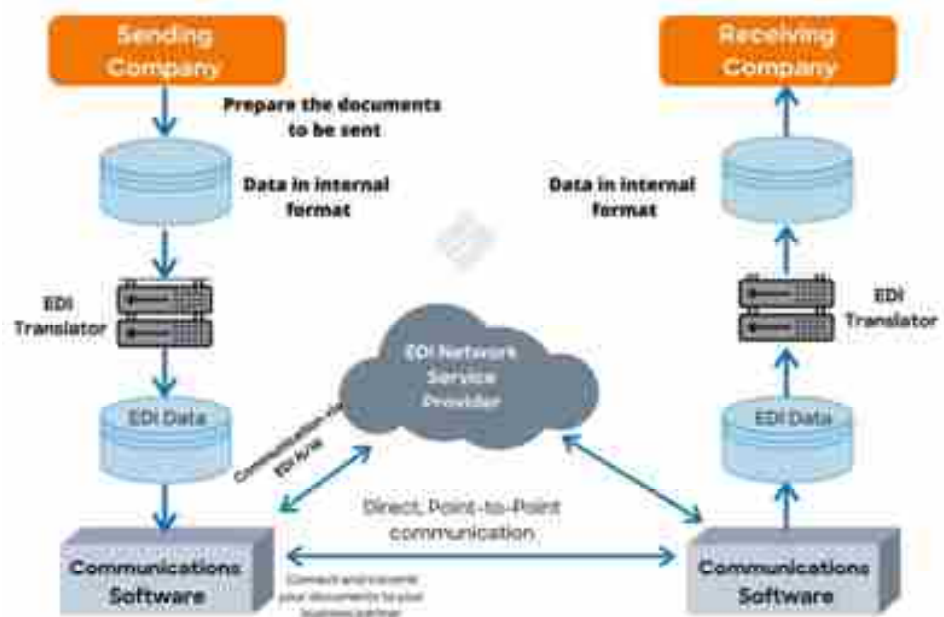
Electronic data exchange is the direct, highly professional interchange of information and critical business documents through the Internet. With the aid of EDI, two separate organizations located in opposite corners of the globe can simply exchange information or documents.

### EDI Documents :

- ✓ Invoice
- ✓ Transaction Bill
- ✓ Claim
- ✓ Transcript
- ✓ Purchase Order
- ✓ Financial Information
- ✓ Shipping Request and Feedback
- ✓ Business correspondence letters

### EDI Users :

- ✓ Industry
- ✓ Banking
- ✓ Retailing
- ✓ Manufacturing
- ✓ Insurance
- ✓ Automotive
- ✓ Educational Organization
- ✓ Healthcare
- ✓ Transportation
- ✓ Grocery



Electronic Data Interchange

❑ **Check Your Progress – 3 :**

1. \_\_\_\_\_ is the process of transferring data from one computer system to another without the use of a human being.
  - a. Portal
  - b. E-commerce
  - c. Electronic Data Interchange
  - d. None of these
2. EDI stands for \_\_\_\_\_.
  - a. Electronic Data Instruction
  - b. Electronic Data Interchange
  - c. Electronic Data Information
  - d. Electronic Data Interconnection

**7.5 Benefits of Electronic Data Interchange :**

- **Less Paper Usage :** The cost of printing, storage, and recycling lessened to the fullest extent possible thanks to EDI, which also decreased the amount of paper used.
- **Improved quality of Data :** The data entry errors are reduced due to EDI.
- **Speed Increases :** The improvement in data exchange speed is the biggest benefit. Everything moving online has drastically increased the pace at which information is transferred.
- **Security :** All vital documents are always kept secure and safe by adhering to the Protocols and general guidelines.
- **Information Accuracy :** The right information is always conveyed regardless of who the sender or receiver belongs to because the information exchange is based on standards agreed upon by both parties.
- **Less Cost :** The cost automatically decreases with very few errors, quick responses, automation of everything, and no usage of paper.

**7.6 Let Us Sum Up :**

In this unit we discuss about how Internet and its services are useful for e-commerce, It is also define the component which are used to organize business in well disciplinary in e-commerce. we learn about supply chain in this session which is help full to define how online businesses is run b2b and point to point.

The management of the supply chain is crucial to e-commerce. In e-commerce, supply chain management focuses on acquiring raw materials, producing, and distributing the appropriate product at the right time.

It includes managing supply and demand, warehousing, inventory tracking, order entry, order management, distribution and delivery to the customer. The e-commerce sector includes much more than merely creating a website and doing online sales. It covers supply chain management, logistics, appropriate infrastructure, and product configuration. To satisfy client expectations, e-commerce procedures are sped up by an effective supply chain.

We discuss about e-commerce portals at first glance, a web portal and an e-commerce website appear to be the same thing. You require a location where your consumers can go to buy the goods they require. So why is this so challenging ? Many business owners, however, are unaware that they actually require both. Businesses require a safe way for customers to view their



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purchases and other personal information as well as learn more about their products.

Yes, an e-commerce website and a web portal can and frequently do interact, but they remain distinct from one another. A webpage that provides users with access to data, resources, and links is known as an online or web portal or it's a platform that offers users a solitary access point to data.

We also discuss about electronic marketplaces as we know Businesses can register as buyers and sellers in an electronic marketplace (e-marketplace) to transact business with other businesses or with consumers online (B2B or B2C). Internet use has made it easier to conduct business without middlemen. The information system is web-based and offers options to both suppliers and purchasers.

There are some components are used in electronic marketplace which are used to gather customer online (B2B or B2C). Today, the Internet is used for practically all work. Even now, the majority of communication is exchanged with the aid of the internet, whether it be chatting on WhatsApp with friends or sending crucial information through the mail; all work and communication is primarily carried out through the internet. Digital India is one example of how everything will be done through the internet in the upcoming years.

Electronic Data Interchange (EDI) is the process of transferring data from one computer system to another without the use of a human being. Multiple businesses—possibly located in different nations—can exchange papers electronically thanks to EDI. Although peer-to-peer networks and serial lines can be used to send data, the majority of exchanges today rely on the Internet for connectivity.

### 7.7 Answers for Check Your Progress :

**Check Your Progress 1 :**

1 : b

**Check Your Progress 2 :**

1 : a          2 : d

**Check Your Progress 3 :**

1 : c          2 : b

### 7.8 Glossary :

1. **Business to Business :** It is a B2B business model and process of one company selling to another.
2. **Business to Consumer (B2C) :** A business model and process of company selling to direct consumers
3. **Electronic data Interchange :** The computer-to-computer exchange of business documents in a common electronic format between business partners is known as electronic data interchange (EDI).
4. **Electronic marketplaces :** It is an essential to the economy because they make it easier to interchange payments, commodities, services, and information.
5. **Website :** A web page (or webpage) is a hypertext document on the World Wide Web.

6. **Web portal** : A portal is a web–based platform that collects information from different sources into a single user interface and presents users with the most relevant information for their context.

**7.9 Assignment :**

1. What is EDI ? Explain the Advantages of EDI.

**7.10 Activities :**

1. What is E–Commerce ? List the E–Commerce applications which are working on Online shopping Portal.

**7.11 Case Study :**

1. Make a Diagram to display steps of Online Banking and Security Portals working model.

**7.12 Further Reading :**

1. Allen, E. and Fjermestad, J., (2000). E–Commerce Strategies : The Manufacturer Retailer Consumer Relationship, August 2000.
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**UNIT STRUCTURE**

- 8.0 Learning Objectives
- 8.1 Introduction
- 8.2 What is Social Network ?
- 8.3 Features and Technologies used for Social Network
- 8.4 The future of Social Network
- 8.5 Distinguish between Social Network and Portals
- 8.6 What is Auction ?
- 8.7 Types of Auctions
- 8.8 Advantages of Auctions
- 8.9 Risk and costs of Auctions for consumers and business
- 8.10 Let Us Sum Up
- 8.11 Answers for Check Your Progress
- 8.12 Glossary
- 8.13 Assignment
- 8.14 Activities
- 8.15 Case Study
- 8.16 Further Readings

**8.0 Learning Objectives :**

After learning this unit, you will be able to understand :

- About Social Network
- Idea about features and technologies used for social networks
- Distinguish between Social Network and Portals
- Idea about Auction and its types
- About auction advantage.

**8.1 Introduction :**

The Internet was designed originally as a communication medium to connect scientists in a computer science department around the continental United States. From the beginning, the Internet was intended, in part, as a community building technology that would allow scientists to share data, knowledge, and opinions. The result of this early Internet was the first "virtual communities".

As the internet grew in the late 1980s to include scientists from many disciplines and thousands of university campuses, thousands of virtual communities bounced up among small group of scientists in very different disciplines that communicated regularly using Internet e-mail and bulletin

boards. The early communities involved a relatively small number of web devotees, and users with intense interests in technology, politics, literature, and ideas.

The technology limited to posting text messages on bulletin boards sponsored by the community, and one-to-one, or one-to-many e-mails. By 2002, the nature of online communities had begun to change. Cell phones and mobile Internet devices provided widespread access, making it possible to communicate nearly instantly with friends and relatives, and keep track of one another in a way not possible before.

User created web sites called blogs become inexpensive and easy to set up without any technical expertise. This technology also enabled sharing of rich media such as photos and videos made possible by the spreading use of digital cameras, digital video cameras, cell phones with cameras, and portable digital music player.

The new social networking culture is very personal and "me" centered, displaying photos and broadcasting personal activities, interests, hobbies, and relationships on social network profiles. Currently, social network participation is one of the most common usages of the Internet.

## **8.2 What is Social Network ?**

Social network involves a group of people, shared social interaction, common ties among members, and people who share an area for some period of time. This will be out working definition of a social network. Social networks can be places where people just hang out, share space, and communicate.

An online social network as an area online where people who share common ties can interact with one another. It is a group of people who may or may not meet one another face to face, and who exchange words and ideas through the intermediation of an online social meeting space. The Internet removes the geographic and time limitations of offline social networks. To be in an online network, you don't need to meet face to face, in a common room, at a common time.

Social networking is the practice of maintaining contact with friends, family, coworkers, and consumers through web-based social media platforms. Through websites like Facebook, Twitter, Instagram, and Pinterest, social networking can serve a social purpose, a business purpose, or both.

Social networking is also a significant opportunity for marketers seeking to engage customers. Social networking is a tool used by marketers to promote brand loyalty and raise brand recognition. For a variety of requirements, social media can assist in connecting customers with businesses.

Social media has drawbacks, such as the dissemination of false information, issues raised by user anonymity, and the expensive expense of creating and maintaining social network profiles.

### **How Social Networking is work ?**

Social networking is the use of technology to establish and maintain interpersonal and professional connections. Social networking websites like Facebook, Instagram, and Twitter are used to do this.

Through private social networking sites like Facebook, family and friends may re-connect and stay in touch. They are able to post pictures and status

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updates about significant or regular life events. Additionally, people might make connections with strangers who have similar interests, objectives, or life experiences. Through hashtags, lists, and groups, people can locate one another.

Marketers frequently use social media to promote brand loyalty and raise brand awareness. The voice and content of a brand are promoted through social media marketing. It can assist in making a business more visible to current clients and approachable to potential ones.

### ❑ Check Your Progress – 1 :

1. \_\_\_\_\_ involves a group of people, shared social interaction, common ties among members, and people who share an area for some period of time.
  - a. Social Network
  - b. Social Media
  - c. E-Commerce
  - d. Auction

### 8.3 Features and Technologies used for Social Network :

Social networks have developed software applications that allow users to engage in a number of activities. Not all sites have the same features, but there is an initial feature set among the larger communities.

Some of these software tools are built into the site, while others can be added by users to their profile pages as widgets. Some of social network functionalities are as follows :

Features	Description
Profiles	User can create web pages that describe themselves.
Friends Network	Ability to create a linked group of friends.
Network discovery	Ability to find other networks and find new groups and friends.
Favorites	Ability to communicate favorite sites, bookmarks, and destinations.
E-mail	Send e-mail within the social network sites to friends.
Storage	Storage space for network members, content.
Instant messaging	Immediate one to one contact with friends through the community facility.
Message boards	Posting of messages to groups of friends, and other groups members.
Online polling	Polling of member opinion.
Chat	Online immediate group discussion; Internet Relay Chat (IRC)
Discussion groups	Discussion groups and forums organized by topic.

<b>Expert online</b>	Certified experts in selected areas respond to queries.
<b>Membership management tools</b>	Ability of site managers to edit content, and dialog; remove objectionable material; protect security and privacy.

**❑ Check Your Progress – 2 :**

1. Features and technologies used for social network includes \_\_\_\_\_.
  - a. Profiles
  - b. Friend Network
  - c. Instant Messaging
  - d. All of Above
2. \_\_\_\_\_ is online immediate group discussion.
  - a. Chat
  - b. E-Mail
  - c. Message Boards
  - d. None of Above

**8.4 The future of Social Network :**

Today's social networking scene is highly concentrated among the top 10 general networking sites, this is unlikely to remain the case. Networks are springing up all over the Internet based on intensely felt interests of smaller groups of people, draining potential members from the general sites.

General networking sites are poor places to meet new people, and most online social networks reflect offline friendship and association.

Today's networks are places you go online, but in the future, browsers, portals like Yahoo and Google, and general Web sites will have social networking functionality built in, making it less necessary that you go to a social network site, and more likely that social networking will come to you.

The biggest Web e-mail services are adding features that allow users to perform sociable functions like tracking friends, creating profiles, and joining groups. Social media platforms are gaining popularity steadily. The 4.66 billion individuals on the earth who have access to the internet use social networks, or more than 80% of them. and an increase in this share is predicted!

A few years ago, receiving likes from friends and family would have made us pleased; today, however, we exchange advice and expertise, advertise services, purchase things, etc.

Numerous well-known businesses, ranging from food producers to sizable automakers, already actively engage with their customers on Facebook, Twitter, Instagram, and other sites. Some companies have even abandoned their websites in favor of social media.

**1. An Increasing Social Networks' Role :**

Social media platforms now provide offer extremely tangible signs of direct sales in addition to brand exposure, interaction, and visibility. By the way, users are a part of this phenomenon since, according to studies, people trust social commerce and are comfortable making purchases through platforms like WhatsApp and Instagram.

Advertising of goods and services now uses specific types of targeting, which increases the number of impulsive purchases. This is because advertisers are increasingly focusing on mobile users. To expand their business, every

startup and established brand requires a reliable content solution. In addition to increasing social traffic, it also helps your SEO.

## **2. The Expanding Impact of Mobile Technology :**

Mobile devices are used by 91% of social media users to access their preferred channels. In what ways does this affect marketers ? For mobile apps, social networks already offer customized ad formats. Mobile-only advertising will grow even more in acceptance.

More and more professionals are becoming educated in the relationship between business and client loyalty. As a result, businesses will shift their focus from the fleeting chore of "leading pages" to the more focused creation of communities of devoted clients.

## **3. New Components :**

The restoration of ties was the original purpose of social networks, which were developed so that users could locate old friends online. Social networks, however, have altered the course of development. They now likely serve as an online representation of a person or business, providing an opportunity to develop a personal brand.

This has an impact on user behavior and needs, necessitating new services. The capacity to search for information, store files, modify photographs, manage blogs in social networks, and access geosocial services are just a few of the latest innovations that are already in high demand. Social media sites are practically synonymous with the Internet for many consumers.

## **4. Social Networks with Pictures :**

Text-based information has never been as popular as visual and video content. Instagram and Pinterest are now being aggressively developed as a result.

With the popularity of Snapchat, TikTok, and other visual storytelling platforms, or "stories" in general, visual content is currently increasing faster than any other type of media.

Both services will undoubtedly have an impact on how the SMM develops. They will soon be just as crucial for completing marketing objectives as Facebook.

## **5. Geo-Social Services :**

Companies are already aware of resources like Next-door and actively use them to advertise their goods. Additionally, these tools are employed by large corporations, telecommunications firms, banks, and members of the IT sector in addition to small businesses.

## **6. Social Engaging :**

More and more often, HR professionals are using social media to find candidates for a certain role. In the end, they aid in developing an impression of the candidate, obtaining a psychological profile, assessing the publications, and establishing contacts with previous coworkers and managers.

I see several significant developments, including the growth of social networks, that will significantly affect our lives :

- ✓ convergence of cars, TVs, home appliances, mobile gadgets, computers, etc. the creation of analytic tools for massive amounts of organized and unstructured data (big data).

- ✓ Focus on interactive media, which offers the chance to not only consume but also to participate, become involved, and take action. For the Z generation, who don't watch TV, read newspapers or magazines, or listen to the radio, such media will replace other forms of information consumption as the primary means of gathering and disseminating information.
- ✓ the creation of robotics and artificial intelligence algorithms, which serve as the foundation for contemporary informative, entertainment, recommender, and other services.

New business strategies are in great demand at the same time. Finding more efficient marketing and sales techniques is important, as is providing better customer service. A trend toward "mass personalization" or "adaptive personalized positioning" is beginning among marketing firms. Simply said, a new era of personalized employee activation has begun.

### **8.5 Distinguish between Social Network and Portals :**

Portals began as search engines and then added content, Internet, and e-commerce services.

In order to survive, portals have added many community-building and social networking features including chat groups, bulletin boards, free web site design and hosting, and other feature that encourage visitors to stay on the site and interact with others who share their interests.

Portals have begun to measure their success in terms of their social networking features. For instance, Yahoo has purchased several web properties, such as Flickr and HotJobs which have social networking features.

Portals have moved toward becoming general community meeting places in an effort to enlarge and retain audience share and increase revenues.

Social networking is a functionality, not a web site. As a result, social networks and portals have moved closer together and at times are indistinguishable from one another.

### **8.6 What is Auction ?**

Online auction sites are among the most popular consumer-to-consumer (C2C) e-commerce sites on the Internet. The market leader in C2C auctions is eBay, which has 222 million registered users from all over the world.

There are several hundred auction sites, some specializing in unique collectible products such as stamps and coins, other adopting a more generalist approach in which just about any good can be found for sale.

#### **Defining and measuring the growth of auctions and dynamic pricing :**

Auctions are markets in which prices are variable and based on the competition among participants who are buying or selling products and services. Auctions are one type of dynamic pricing, in which the price of the product varies, depending directly on the demand characteristics of the customer and the supply situation of the seller.

There is a wide variety of dynamically priced markets from simple bargaining between one buyer and one seller, to much more sophisticated public auctions in which there may be thousands of sellers and thousands of buyers, as in a single stock market for a bundle of shares.



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Traditional mass-market merchants generally use **fixed pricing** – one national price, everywhere, for everyone. The use of coupons sent to selected customers, and even college scholarship given to selected students to encourage their enrollment, are a form of both price judgement and dynamic pricing.

Newer forms of dynamic pricing on the Internet include forceful, trigger pricing, utilization pricing, and personalization pricing. **Trigger pricing**, used in m-commerce applications, adjust prices based on the location of the consumer. **Utilization pricing** adjusts prices based on utilization of the product. **Personalization pricing** adjusts prices based on the merchant's estimate of how much the customer truly values the product.

Auctions – one form of dynamic pricing mechanism – are used throughout the e-commerce landscape. The most widely known auctions are consumer-to-consumer (C2C), in which auction house is simply an intermediary market maker, providing a forum where consumers-buyers and sellers-can discover prices and trade.

Less well known are business-to-consumer (B2C) auctions where a business owns or controls assets and use dynamic pricing to establish the price.

### Why are Auctions so popular ?

- ✓ The Internet is primarily responsible for the rebirth in auctions.
- ✓ The Internet provide a global environment and very low fixed and operational costs for the aggregation of huge buyer composed of millions of consumers worldwide who can use a universally available technology to shop for goods.

### ❑ Check Your Progress – 3 :

1. \_\_\_\_\_ are markets in which prices are variable and based on the competition among participants who are buying or selling products and services.
  - a. Auction
  - b. Social Network
  - c. Social Media
  - d. All of Above
2. Dynamic pricing on the internet includes \_\_\_\_\_.
  - a. Trigger Pricing
  - b. Utilization Pricing
  - c. Personalization Pricing
  - d. All of Above

## 8.7 Types of Auctions :

Auction theory is a well-established area of research, largely in economics. Much of this research is theoretical, and prior to the arrival of public Internet auctions, there was a great deal of experimental data on auctions or consumer behavior in auctions.

Previous literature has identified a wide range of auction types, some of which are seller-biased, and others of which are more buyer-biased.

### Types of Auctions :

In some auctions, there are multiple units for sale, whereas in others, there is only a single unit for sale. The major types of Internet auctions are English, Dutch-Internet, Name Your Own Price, and Group Buying.

**1. English Auctions :**

The English auction is the easiest to understand and the most common form of auction on eBay. Typically, there is a single item up for sale from a single seller. There is a time limit when the auctions end, a reserve price below which the seller will not sell, and minimum incremental bid set.

Multiple buyers bid against one another until the auction time limit is reached. The highest bidder wins the item. English auctions are considered to be seller-biased because multiple buyers compete against one another – usually secretly.

**2. Dutch-Internet Auctions :**

The Dutch-internet auction format is perfect for seller that have many identical items to sell. Sellers start by listing a minimum price, or a starting bid for one item, and the number of items for sale. Bidders specify both a bid price and the quantity they want to buy.

The uniform price rules. Winning bidders pay the same price per item, which is the lowest successful bid. If there are more buyers than items, the earliest successful bids get the goods.

**3. Name Your Own Price Auctions :**

This auction is initiated by Priceline are the second most popular auction format on the web. Priceline also acts as an intermediary, buying blocks of airline tickets and vacation packages at a discount and selling them at a reduced retail price or matching its inventory to bidders, it is best known for its Name Your Own Price auctions, where users specify what they are willing to pay for goods or services, and multiple providers bid for their business.

**4. Group Buying Auctions / Demand Aggregator :**

A demand aggregator facilitates group buying or products at dynamically adjusted discount prices based in high-volume purchases. Demand aggregation did not work well for retail sales, but it has found a home in B2B commerce as a way of organizing group buying.

Trade association and industry buying groups have traditionally pursued group buying plans in order to reduce costs from large suppliers. Online demand aggregation is built on two principles. First, seller is more likely to offer discounts to buyers purchasing in volume, and second, buyers increase their purchases as prices fall. Prices are expected to dynamically adjust to the volume of the order and the motivations of the vendors.

**5. Professional Service Auctions :**

This auction is a sealed-bid, dynamic priced market for freelance professional services from legal and marketing services to graphic design and programming. Firms looking for professional services post a project description and request for bid on Elance.

Providers of services bid for the work. The buyer can choose from bidders on the basis of both cost and supposed quality of the providers that can be gauged from the feedback of clients posted on site.

**8.8 Advantages of Auctions :**

Participating in auctions, consumers, merchants and society derive a number of economic benefits from participating in Internet auctions.

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These benefits are as follows :

1. **Liquidity** : Sellers can find willing buyers, and buyers can find sellers. The Internet extremely increased the liquidity of traditional auctions that usually required all participants to be present in a single room.

Now, sellers and buyers can be located anywhere around the globe. Just as important, buyers and seller can find a global market for rare items that would not have existed before the Internet.

2. **Price discovery** : Buyer and sellers can quickly and efficiently develop price for items that are difficult to access, where the price depends on demand and supply, and where the product is rare.
3. **Price transparency** : Public Internet auctions allow everyone in the world to see the asking and bidding prices for items. It is difficult for merchants to engage in price discrimination (judgement) when the items are available on auctions.
4. **Market efficiency** : Auctions can, and often do, lead to reduced prices, and hence reduced profits for merchants, leading to an increase in consumer welfare—one measure of market efficiency.

Online auctions provide consumers the chance to find real bargains at possibly give-away prices; they also provide access to a very wide selection of goods that would be impossible for consumers to physically access by visiting stores.

5. **Lower transaction costs** : Online auctions can lower the cost of selling and purchasing products, benefiting both merchants and consumers. Internet auctions have very low transaction costs.
6. **Consumer aggregation** : Sellers benefit from large auction site's ability to aggregate a large number of consumers who are motivated to purchase something in one marketplace.
7. **Network effects** : The larger an auction site becomes in terms of visitors and products for sale, the more valuable it becomes as a marketplace for everyone by providing liquidity and several other benefits.

### **8.9 Risk and Costs of Auctions for consumers and business :**

There are number of risks and costs involved in participating in auctions which are as follows :

1. **Delay consumption costs** : Internet auctions can go on for days, and shipping will take additional time. If you ordered from a mail-order catalog, you would likely receive the product much faster, or if you went to a physical store, you would be able to obtain the product immediately.
2. **Monitoring costs** : Participation in auctions requires your time to monitor bidding.
3. **Equipment costs** : Internet auctions require you to purchase a computer system, pay for Internet access, and learn a complex operating system.
4. **Trust risks** : Online auctions are the single largest source of Internet fraud. Using auctions increases the risk of experiencing a loss.
5. **Fulfillment costs** : Typically, the buyer pays fulfillment costs of packing, shipping, and insurance, whereas at a physical store these costs are include in the retail price.

Auction sites such as eBay have taken a number of steps to reduce consumer participation costs and trust risk. For example, auction sites attempt to solve the trust problem by providing rating system in which previous customers rates seller based on their overall experience with the merchant.

### **8.10 Let Us Sum Up :**

In this chapter you learnt about the social network with its various advantage, features, technologies and the future. As Social network involves a group of people, shared social interaction, common ties among members, and people who share an area for some period of time.

Moreover, we have seen about the Auction and its type with various advantages and the risk related with the Auctions. As auctions are markets in which prices are variable and based on the competition among participants who are buying or selling products and services.

### **8.11 Answers for Check Your Progress :**

**Check Your Progress 1 :**

1 : a

**Check Your Progress 2 :**

1 : d          2 : a

**Check Your Progress 3 :**

1 : a          2 : d

### **8.12 Glossary :**

1. **Social Network** : Social network involves a group of people, shared social interaction, common ties among members, and people who share an area for some period of time.
2. **Auction** : Auctions are markets in which prices are variable and based on the competition among participants who are buying or selling products and services.
3. **Fix–Pricing** : Traditional mass–market merchants generally use fixed pricing – one national price, everywhere, for everyone.
4. **Trigger Pricing** : Trigger pricing, used in m–commerce applications, adjust prices based on the location of the consumer.
5. **Utilization Pricing** : Utilization pricing adjusts prices based on utilization of the product.
6. **Personalization Pricing** : Personalization pricing adjusts prices based on the merchant's estimate of how much the customer truly values the product.

### **8.13 Assignment :**

1. What is Social Network ? How it works ?
2. Discuss the features and technologies used for social network.

**8.14 Activities :**

1. Explain the future of social network.
2. Write a note on Auction.
3. Explain different types of Auctions.

**8.15 Case Study :**

1. Study the Advantages and Risk related to Auctions.

**8.16 Further Reading :**

1. Allen, E. and Fjermestad, J., (2000). E-Commerce Strategies : The Manufacturer Retailer Consumer Relationship, August 2000.
2. Behrendorff, G, Fisher, J., Goldsworthy, M. A., Corbitt, B., & Perks, G. (1996). Electronic Commerce Programs for Small to Medium Sized Enterprises,
3. Bennett, D. and Eustis, B., (1999). External Relationship Management : Information Systems Frontiers, 1999.
4. Burn, J. M. and Barnett, M. L. (2000) Emerging Models for Global e-commerce world.

## **BLOCK SUMMARY :**

In this block, you have learnt and understand about strategic planning for e-commerce, strategic formulation, critical success factor related to the e-commerce. The block gives an idea on selling online to the customer so as a part of this you seen various online marketing strategies e-marketing, ways to promote the things on the web, and the customer relationship.

The block detailed about the how Internet and its services are useful for e-commerce, It is also define the component which are used to organize business in well disciplinary in e-commerce. we learn about supply chain in this session which is help full to define how online businesses is run b2b and point to point.

You also gone through the social network with its various advantage, features, technologies and the future. As Social network involves a group of people, shared social interaction, common ties among members, and people who share an area for some period of time.

Moreover, we have seen about the Auction and its type with various advantages and the risk related with the Auctions. As auctions are markets in which prices are variable and based on the competition among participants who are buying or selling products and services.

<b>BLOCK ASSIGNMENT :</b>
---------------------------

❖ **Short Questions :**

1. Explain critical success factor of e-commerce.
2. Write a note on leadership.
3. Write a note on E-Marketing.
4. What is CRM in E-Commerce ?
5. Write a note on SCM.
6. What is electronic data interchange ?
7. Explain Advantages of EDI.
8. What is Social Network ?
9. Explain features and technologies of social network.
10. What is Auction ?

❖ **Long Questions :**

1. Explain strategic planning for E-Commerce.
2. Explain Strategy Formulation.
3. Explain the process for successful e-commerce program.
4. Explain online marketing strategies.
5. Explain Promotion on WWW.
6. Explain portals and electronic marketplaces.
7. Explain the future of social network.
8. Explain types of Auctions.
9. Explain Advantages and risk of Auctions.



**E-Commerce**

❖ **Enrolment No. :**

1. How many hours did you need for studying the units ?

Unit No.	5	6	7	8
No. of Hrs.				

2. Please give your reactions to the following items based on your reading of the block :

Items	Excellent	Very Good	Good	Poor	Give specific example if any
Presentation Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Language and Style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Illustration used (Diagram, tables etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Conceptual Clarity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Check your progress Quest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Feed back to CYP Question	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

3. Any other Comments

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**Dr. Babasaheb Ambedkar  
Open University Ahmedabad**

**BCAR-601**

## **E-COMMERCE**

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### **BLOCK 3 : E-COMMERCE PROCESS AND PAYMENT SOLUTIONS**

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UNIT 9 E-COMMERCE SOLUTIONS

UNIT 10 E-COMMERCE ETHICAL, SOCIAL AND POLITICAL PROBLEMS

UNIT 11 INTELLECTUAL RIGHTS OF PROPERTY

UNIT 12 LAW AND TAXATION

# ***E-COMMERCE PROCESS AND PAYMENT SOLUTIONS***

## **Block Introduction :**

Accepting credit cards online - a must in today's marketplace - can dramatically increase sales and give your business the boost it needs to succeed. With same-day approvals, 24-hour customer service, fast funding, personalized account support and industry-leading rates, Signature Card Services is the only e-Commerce merchant processing solution you'll need.

Online credit card processing requires extra care, but with the help of our experienced team, you will process transactions securely, conveniently and cost-effectively. Our ability to connect with a wide variety of online payment gateways helps you provide the peace of mind and convenience that your customers expect from an e-Commerce merchant.

## **Block Objectives :**

**After learning this block, you will be able to understand :**

- E-Commerce solution
- Technology Standards for
- Payment System :
- Basic Ethical Concepts
- Analysis of Ethical Dilemmas
- Ethical Principles of Candidate
- Types of Intellectual property protections
- Copyrights
- Patents
- Trademark
- What is Law ?
- Public Government and law
- Introduction to Taxation

**Block Structure :**

**Unit 9 : E-Commerce Solutions**

**Unit 10 : E-Commerce Ethical, Social and Political Problems**

**Unit 11 : Intellectual Rights of Property**

**Unit 12 : Law and Taxation**

**UNIT STRUCTURE**

- 9.0 Learning Objectives**
- 9.1 Introduction**
- 9.2 Solutions**
  - 9.2.1 Internet Access Solutions**
  - 9.2.2 Professional Experts to Design Solutions**
  - 9.2.3 Areas of Solutions**
- 9.3 Solutions Provider**
- 9.4 Online Commerce Solution**
- 9.5 Solutions for Successful E-commerce**
- 9.6 Advantages of E-commerce Solution**
- 9.7 Technology Standards for**
  - 9.7.1 E-commerce**
  - 9.7.2 Shopping Cart**
  - 9.7.3 Merchant Account – Meaning and Nature**
- 9.8 Payment System**
  - 9.8.1 Internet Payment Features and**
  - 9.8.2 Internet Payment services (IPS)**
- 9.9 Let Us Sum Up**
- 9.10 Answers for Check Your Progress**
- 9.11 Glossary**
- 9.12 Assignment**
- 9.13 Activities**
- 9.14 Case Study**
- 9.15 Further Readings**

**9.0 Learning Objectives :**

**After learning this unit, you will be able to understand :**

- About the solutions of Internet Access and Professional Experts
- About the Areas of Solutions
- About the Provider of Solutions
- About Online Commerce Solution
- About Successful of E-commerce
- About features of E-commerce Solution

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- About the Standards for E-Commerce, Shopping Cart and Merchant Account
- About the Internet Payment Features and Internet Payment Services

### **9.1 Introduction :**

It is essential to remain competitive in today's industry to be able to accept credit cards through the internet. If you make your website accessible to customers who pay with credit cards, you can anticipate a significant uptick in revenue, which will provide your business the impetus it needs to achieve its goals and become successful. Because they provide same-day approvals, 24-hour customer support, speedy financing, personalized account help, and industry-leading pricing, Signature Card Services is the only e-Commerce merchant processing solution you will need.

Processing credit cards online requires extra care, but with the help of our professional team, you will be able to carry out transactions in a way that is secure, straightforward, and efficient with regard to cost. We are able to help you in reaching the high standards of security and usability that your customers have come to expect from an online merchant due to the fact that we are able to link with such a wide variety of online payment gateways.

### **9.2 Solutions :**

E-commerce solutions are goods and services that enable a firm to more effectively engage in electronic commercial transactions. The variety of e-commerce solutions that are now accessible is extensive. These solutions include those that enable conventional companies to design, develop, and run websites on the World Wide Web. Some of the answers concentrate on resolving a particular issue. For instance, a business that sells its products online through a website on the World Wide Web may decide to acquire a bandwidth management solution from a company such as Packeteer Inc. in an effort to devote a greater share of available resources to the actual commerce transactions themselves rather than to other applications. In a similar vein, an online retailer that is interested in enhancing the customer experience during the checkout process for its online shoppers may go to a specialist vendor, such as Virtual Cart, for a shopping cart solution.

However, as the requirements of individuals involved in e-commerce have become more sophisticated, there has been an increase in the desire for solutions that are more all-encompassing. As a consequence of this, many companies that provide solutions for e-commerce are increasingly concentrating their efforts on developing product and service packages that are intended to satisfy a variety of requirements and issues. Companies are managing more and more aspects of their operations online, including consumer interactions and expanded supply chain management with trade partners. This trend is expected to continue in the foreseeable future. As a direct consequence of this, "companies are seeking support for more than simply online transactions." They need full-fledged E-business, which requires them to provide clients with a website that assists them in developing connections with those customers, regardless of whether the model is business-to-business, business-to-consumer, or an online marketplace. Many of the start-up companies that provided e-commerce solutions that had arisen in the early 1990s started working to fulfil these shifting requirements for e-commerce, as did many of the industry heavyweights in

the computer sector who were attempting to position themselves as major players in e-commerce.

### **1.2.1 Internet Access Solutions :**

In recent years, the Internet has become the key that unlocks the door to fresh opportunities in online business, sometimes known as e-commerce, depending on your preference. Putting your company online is not only necessary to stay in business in this day and age; it will also provide you a competitive advantage over other companies. After all, in this day and age, companies succeed or fail based on the actions of their target demographic. The development of the internet has fundamentally altered the way that people purchase nowadays. E-commerce got off to a sluggish start at first because customers needed time to get used to the concept and waited to be reassured about the safety concerns that were warranted at the time. At this time, internet shopping is a major growing sector all over the globe.

To enable the buying and selling of products and services through the internet is the meaning behind the terms "e-commerce," "e-business," "e-tailing," and "I-commerce." The advent of e-commerce has not only increased business's overall profitability but also introduced an entirely new facet to the commercial world. This straightforward expression refers to the pursuit of endeavors that ultimately result in the following : electronic trading; electronic messaging; electronic data interchange (EDI); electronic mail (e-mail); electronic catalogues; the internet; intranets and extranets; internet; electronic mail (e-mail).

#### **❑ Check Your Progress – 1 :**

1. To enable the selling and buying of products and services through the internet is not known as \_\_\_\_\_.
  - a. E-commerce    b. E-business    c. E-tailoring    d. I-commerce
2. EDI stands for \_\_\_\_\_.
  - a. E-commerce Digital Interface    b. Electronic Data Interchange
  - c. E-business Digital Interface    d. None of these

### **1.2.2 Professional Experts to Design Solutions :**

As a result of the global economy recognizing the potential of e-commerce, the method in which business is done is undergoing a significant transformation. Businesses are increasingly shifting away from traditional storefronts and toward online web shops, which have the advantage of being accessible to clients around the clock and without regard to physical location. The Digital Solutions provide you with e-commerce solutions that are tailored to the needs of your company's online presence.

To create a completely personalized e-commerce website that is also capable of representing your company online, our skilled web developers and online marketing strategists collaborate closely with one another. Designing Solutions are a kind of e-commerce solutions will help your company expand its reach while allowing you to participate in the emerging field of virtual economies.

The vast majority of customers believe that looking for goods and services online and making purchases there is very easy and simple. Our programmers and designers at Xtreme Digital Solutions will work with you to create an



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online shopping cart that is completely personalized and connected, and that accurately represents your company to customers. We build your e-commerce website to have clean code and a beautiful interface, both of which will lure your prospects and increase your conversion rate. Our e-commerce solutions promise your consumers will have great online experience.

Our web consultants at Designing Solutions will work closely with you to get an understanding of your company, as well as its goods and services, target audience, and competitors. To increase the amount of exposure that your company receives from the internet, the web plan that our online marketing team develops for promoting your website will be based on the inputs that you provide.

Our tactics for internet marketing guarantee an increased return on investment (ROI) as well as a substantial increase in web traffic. In addition to providing assistance for your marketing functions, the e-commerce website that we develop for you will assist you in efficiently selling the items and services that you provide.

Designing Solutions provides you with comprehensive e-commerce solutions that can also interact with your company's operational procedures, such as client administration, inventory management, account management, and so on.

### **1.2.3 Areas of Solutions :**

Are you thinking of establishing an online storefront for your company in the near future ? If you examine the situation as it is right now, I'm willing to bet that at least sixty percent of the stores have online shopping carts that are connected to their websites.

However, a shopping cart on its own won't accomplish the task at hand. There is a great deal more that you are capable of doing with your eCommerce Business in this day and age of intense competition!

Before you launch your eCommerce platform, make sure you give careful consideration to the following 10 important areas :

Shopping bag or cart is one of the essential components that must be included on an online retailer's website. The majority of online retailers are working hard to bring their preexisting shopping carts up to speed with the most recent technological developments (especially Mobile shopping cart features). It should function similarly to the way you shop at a hypermarket on a regular basis; for example, you should be able to remove or add items from your cart based on your need.

**Security :** It is not enough to just switch your website over to using HTTPS; there is a great deal more that has to be taken care of. You are required to host a website that has an interface that is compatible with the Payment Card Industry since companies are vulnerable to cyberattacks in today's world. Additionally, the Payment Card Industry, often known as PCI, conforms to the Data Security Standards that have been established. In addition, businesses that keep or distribute card information are required to comply with the PCI Data Security Standard.

**A Website or Application That Is Mobile-Responsive :** According to Business Insider, research that polled more than 1,000 U.S. companies showed that just 16% of those firms now have a mobile buying channel, while 32%

are considering creating one within the next year. In addition, Google has gotten pickier, and websites that are optimized for mobile devices now appear higher on the results page of a Google search. There is no way around including mobile responsive web design into your e-commerce platform; you have no other alternative. It is impossible to predict the computer or other access point from which a consumer will view your website. As a result, people may enjoy the best possible shopping experience instantaneously from any smartphone or tablet device.

**Search Engine Optimization and Social Integration :** Promotions via digital marketing or social media are at their highest point in recent history. A great number of companies are using this idea in order to increase the exposure of their brand and, ultimately, their conversion rates! In addition, individuals are talking about their experiences on blogs and other social media sites, such as Facebook and Twitter, amongst others. The same holds true for a website that deals with eCommerce. You do not have an option but to make all of the changes necessary to make your website search engine friendly. According to research conducted by Smallbiztrends, an overwhelming majority of online customers place their trust in online reviews. Customers have already completed seventy percent of the purchase process, as you are aware. Trust and the worth of the brand should be your primary concerns. It is essential, particularly for firms that deal in eCommerce, to include feedback from customers and to foster conversations that are linked to the product. Either via the website itself or through other social media platforms, reviews may be collected. You will get a website that is 100% search engine friendly with the x2x eCommerce Integration Suite.

**The ability to search for anything :** When login into an online store, I think it's safe to say that we are all irritated with the process. You do not have the time or ability to carefully examine each component of the website. Instead, you check the right-hand side of your screen for a button that looks like a sophisticated search bar and see whether it's there. Any website that sells products online should absolutely have a search bar integrated into it. Kindly take into consideration that your search is case-sensitive as well as facet-based. This contributes to the generation of additional information and makes it simpler for consumers to search for the material they are looking for. Instead of displaying a blank result page, the search function should be developed to automatically create results even when the user makes a mistake (by selecting the query that is the most similar or most likely to be a match). Search also plays a role in how well an SEO campaign performs, thus to cut a long tale short : this is unavoidable!

**Enhanced Logistics Operations :** This is one of the most significant challenges that each online retailer faces. Pick the finest platforms that can interface with your various delivery alternatives, such as FedEx, UPS, DHL, and so on. This assists in enhancing the efficiency of your dispatch process and enables clients to monitor the progress of their shipments. The distribution process of an eCommerce website may either make or kill the business. The more advanced ones include many delivery choices into the shopping cart, whether it is UPS, FedEx, or something else entirely. Not only does this make the process more streamlined, but it also makes it simpler for the consumer

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to monitor the status of their orders. Additionally, this will make the process of charging delivery costs more open and accessible to the customer. X2X eCommerce is very effective in capturing information on shipments. The following are the characteristics :

- ✓ Order includes mode of transport for goods
- ✓ Freight Cost.
- ✓ Address for shipping packages
- ✓ The GP online shop has been updated with the latest shipping status.
- ✓ There is information accessible for tracking shipments.

**Integration of the ERP System with the Online Shopping Cart Platform :** During the introduction of your eCommerce platform, you may not give ERP the serious consideration it deserves. Especially for companies that has been profitable for at least a year, the need of deploying an ERP enters the picture as a necessary step. The majority of them operate ERP in conjunction with the eCommerce platform, which results in a great deal of human intervention, which in turn affects both time and expense.

**Special Deals and Offers on Gifts :** You should experiment with loyalty programmers and coupon redemption if you want to increase user engagement. Gift promotion cards may also be made available, which will undoubtedly bring in customers throughout the holiday shopping season. Additionally, it is very desirable for the user profile section of the eCommerce site to have some kind of wish list functionality. It is possible to add a number of automatic features to an eCommerce website (for instance, sending a reminder email to clients with their wish list items or unfinished shopping cart items), which will ultimately drive engagement to your website.

**Marketing Promotion and Conversion Tools :** First, let's talk about up-selling and cross-selling before we go into this area. Upselling is the practice of recommending additional features or items of greater value to a client while they are considering a purchase of a lower-priced item, and it is also known as cross-selling. The practice of cross-selling encourages the sale of things that are complementary to another product that is being considered. Most e-commerce websites are now capable, thanks to recent developments in technology, of identifying the things that customers have placed in their virtual shopping carts and offering ideas for up-selling and cross-selling more products from the store's inventory. When you purchase an iPhone 7 plus, for example, you will get a popup that recommends a Silicon Mobile Casing for the same device.

**Providing the Greatest Possible User Experience :** Providing the best possible user experience does not only mean making sure that your website is user pleasant, mobile friendly, and SEO friendly. When talking about the eCommerce business, the term "user experience" refers to after-sales support services. In order to have their questions answered, your consumers have to either talk to or interact with genuine support workers at your company. In this stage of the process, you'll want to make use of live chat plugins and hotline services that are available 24 hours a day, seven days a week.

**❑ Check Your Progress – 2 :**

1. Which area is not important to launch the e-commerce platform
  - a. Special deals and offers on gifts
  - b. Marketing promotion and conversion tools
  - c. Offline shopping
  - d. The ability to search for anything

**9.3 Solutions Provider :**

A vendor, a service provider, or a value-added reseller (VAR) is referred to as a solution provider when they thoroughly manage the demands of their client's project from the idea stage all the way through installation and maintenance. The majority of recent developments in e-commerce focus on the fundamental aspects of building an online market place. These aspects include a fully functional shopping cart, website templates that can be modified, email marketing, search engine optimization, analytics, and inventory management. If you are the owner of a company, you only need to take the opportunity to create your own account in order to use the shop administration features.

E-commerce is beneficial to companies since it enables them to promote and disseminate their items or services to actual clients without limiting themselves. You will have the opportunity to reach out to clients not just in your immediate area but also all over the world when you make use of this online E-commerce service. The website assists companies in accessing their desired customer base, which is determined by the market. E-commerce was developed to assist consumers of today in locating the most suitable services or goods and to provide the most expedient delivery of such items. A great number of websites provide free delivery choices in order to attract new visitors.

People pay attention to and keep track of what they spend money on, and they educate themselves regarding the product that they intend to buy, including information regarding the purchase process, available discounts, payment methods, shipping services, and warranties, as well as other information that will help them make a decision and complete the order.

**9.4 Online Commerce Solution :**

E-commerce solutions are goods and services that enable a firm to more effectively engage in electronic commercial transactions. The variety of e-commerce solutions that are now accessible is extensive. These solutions include those that enable conventional companies to design, develop, and run websites on the World Wide Web. Some of the answers concentrate on resolving a particular issue. For instance, a business that sells its products online through a website on the World Wide Web may decide to acquire a bandwidth management solution from a company such as Packeteer Inc. in an effort to devote a greater share of available resources to the actual commerce transactions themselves rather than to other applications. In a similar vein, an online retailer that is interested in enhancing the customer experience during the checkout process for its online shoppers may go to a specialist vendor, such as VirtualCart, for a shopping cart solution.

However, as the requirements of individuals involved in e-commerce have become more sophisticated, there has been an increase in the desire for solutions that are more all-encompassing. As a consequence of this, many companies

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that provide solutions for e-commerce are increasingly concentrating their efforts on developing product and service packages that are intended to satisfy a variety of requirements and issues. According to a piece that was published on InformationWeek.com in October of the year 2000, "e-commerce isn't simply about transactions anymore. Companies are managing more and more aspects of their operations online, including consumer contacts and expanded supply chain management with trade partners. This trend is expected to continue in the foreseeable future." As a consequence, "More than simply the ability to do transactions online, companies want much more. They need full-fledged E-business, which requires them to provide clients with a website that assists them in developing connections with those customers, regardless of whether the model is business-to-business, business-to-consumer, or an online marketplace." Many of the start-up companies that provided e-commerce solutions that had arisen in the early 1990s started working to fulfil these shifting requirements for e-commerce, as did many of the industry heavyweights in the computer sector who were attempting to position themselves as major players in e-commerce.

### □ Check Your Progress – 3 :

1. E-commerce solutions include those that enable conventional companies to \_\_\_\_\_ websites on the World Wide Web.
  - a. Execute and draw
  - b. Sell and buy
  - c. Copy, buy and sell
  - d. Design, develop, and run

### 9.5 Solutions for Successful E-commerce :

Your company might be completely reshaped by the implementation of a successful direct e-commerce operation. E-commerce paves the way for a more powerful brand, reliable minimum advertised price (MAP) pricing for your items, a revitalized effort in brick-and-mortar retail, and, of course, a greater knowledge of and tighter contact with your consumers. If you have been through this procedure before, you are familiar with the routine. STOP! If you are thinking of going through with this procedure! If you want to be successful in e-commerce, you should follow the below given 9 steps :

In the beginning, the problem of e-commerce was assigned to the IT department to solve. It was believed to be a fault with the programme. In today's business world, astute CEOs are aware that e-commerce presents a cross-functional business opportunity, and that their participation is essential to the venture's success. The following nine phases are often carried out in the order that they are listed in successful e-commerce projects :

#### **I Step : Determine the nature of the opportunity**

If you are just getting started with your e-commerce firm or are attempting to get it off the ground, your first step should be an evaluation of the possible opportunities now available. This requires an analysis of your present brand's power, as well as your website's traffic and conversion rates, concerns over online pricing, the achievements of your competitors, the potential of search engines, and the implications of technology. You won't be able to begin developing the appropriate strategic approach unless you have first crafted a vision that accurately depicts the breadth and depth of the opportunity. If you haven't looked into these concerns lately, you could be missing out on some crucial developments and challenges to your competitive position. Simply click

this link to begin your very own personalized online E-commerce Readiness Check-up.

## **II Step : Investigate various business models**

If you want to be successful in e-commerce, you have to provide the finest consumer experience possible. This necessitates the development of not just a sophisticated online shopping environment, but also a customer contact center that is attentive to its clients' needs, faultless and punctual fulfilment, and a continuous digital communication plan that fosters consumer loyalty. After doing an analysis of the company's performance in each of these categories, it is time to decide which, if any, of these features should be attempted to be managed in-house rather than contracted out. You may choose to have any combination of customer support, fulfilment, technology installation, website design, online promotion management, traffic building, and content strategy creation outsourced. There are options available for all of these. It is essential that you choose if you want to collaborate with outside partners on a fee basis or share the risk and be compensated depending upon the development of your income.

## **III Step : Finalize the software investment**

There is a wide variety of options available for making the necessary software investment. Do you want to have ownership of the software (the cost of the programme alone may range anywhere from 50,000 to 500,000 dollars) ? Do you want to serve as the software's host ? Would you want to accrue the charges over time or pay for them as you go each month ? Under each of these models, there is a diverse range of potential solutions that may be implemented on a wide variety of technological foundations.

## **IV Step : Simplifying the integration plan**

Which of your current enterprise resource planning (ERP) systems, internal tools, and technologies will need to be integrated ? Are there important aspects to take into consideration ? Net vs. Java vs. open-source technologies ? Finding software solutions that cut down on the number of internal platforms that need to be handled is becoming more popular in today's world. IT departments are inundated with a wide variety of tools and technologies, many of which are incompatible with one another. The inability of marketing departments to coordinate content and product information in a seamless manner across corporate websites and e-commerce shopping systems without considerable programming is a source of growing frustration for these departments. Current software solutions are considered to be among the finest in their category incorporate a content management system (CMS), shopping cart, customization tools, marketing tools, and analytics into a single platform.

## **V Step : Turn off the programme and press the button**

If you've done the work listed above, there won't be many solutions left that meet the requirements of your company model in terms of the technology you use. Research organizations like as Gartner and Forrester are able to provide further information on the major companies.

## **VI Step : Seek implementation partners**

Many times, the software product businesses will be able to recommend some possible business partners to you. Keep in mind, however, that their primary goal is to sell their goods. They are unlikely to propose an implementation

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partner who might logically dispute the selection of their product; hence it is unlikely that they would do so. In addition, they won't be of much use if your consulting requirements extend far more than the actual engineering work. E-commerce installations often reveal problems with branding and content, in addition to customer relationship management (CRM) and marketing problems that need to be fixed. In addition, the seller of the software should supply a corporate reference list of businesses similar in size and requirements to your own that could be able to put you in touch with possible business partners.

### **VII Step : Formulate the Program's Goals and Objectives**

It is important to identify with your consulting partner how the site's overall needs should be prioritized, how your outsourcing strategy should be framed, how the construction strategy should be determined, and how time frames should be developed. To complete an approach to overall growth and financing, you need now identify the budget allocations to branding, site development, content production, and traffic generating operations that will be carried out over the next three years.

### **VIII Step : Design and construct the online storefront**

A growing number of businesses are adopting at least a portion of, if not all, an agile methodology for the construction of their websites. Scrum, one of the several forms of agile methodology, has two unique benefits. First, it makes it possible to rapidly construct software that can be used, which enables the customer to monitor the development of the website and make adjustments as necessary along the way rather than having to wait until the completion of the project development process. Second, it gives customers the opportunity to alter their minds at any point throughout the process. The business climate may shift over the average implementation phase of these types of initiatives, which lasts anywhere from six to twelve months. You may lessen the likelihood of needing to make a course correction in the middle of an ongoing project or wasting valuable time and money on pointless work if you regularly revisit the most essential priorities and construct the most vital components first.

### **IX Step : Celebrate**

Toast your success with some champagne; you've just made your first sale. But you should also be aware that, similar to the needs of a new kid, this programme will take an ever-growing amount of time and financial resources from your team and your firm. Don't worry; it won't be difficult to justify the greater expenditure and effort once the financial data are analyzed. This indicates that you will always be required to build a process that is capable of continuously monitoring, managing, and improving all components of the process.

#### **❑ Check Your Progress – 4 :**

1. CMS stands for \_\_\_\_\_.
  - a. Content Management System
  - b. Contact Management System
  - c. Contract Management System
  - d. Company Management System

### **9.6 Advantages of E-commerce Solution :**

Even in this day and age, sometime after the so-called "Internet revolution," the field of business management and information technology that pertains to e-commerce is still considered to be relatively young, developing, and continually

expanding. E-commerce, or electronic commerce, refers to the business practice of promoting goods and services, transacting sales, fulfilling customer orders, and providing support to clients over the internet. People have been compelled to remain inside as a result of the worldwide spread of the coronavirus, which has resulted in a large increase in the amount of business conducted online. It has fundamentally altered the operations of a great number of businesses.

When it comes to running a company from an online platform, there are a variety of benefits, some of which are more visible than others. Individuals may better use e-Commerce to their benefit, as well as the benefit of their enterprises, if they have a thorough understanding of how it operates.

- **A Larger Market :** E-Commerce allows individuals to reach customers all across the country and all around the world. E-Commerce gives business owners the platform to reach people from the comfort of their homes. The customers can make any purchase anytime and anywhere, and significantly more individuals are getting used to shopping on their mobile devices.
- **Customer Insights via Tracking and Analytics :** Whether the businesses are sending the visitors to their eCommerce website via PPC, SEO, ads, or a good old postcard, there is a way of tracking the traffic and the consumers' entire user journey for getting insights into the keywords, marketing message, user experience, pricing strategy, and many more.
- **Fast Response to The Consumer Trends and the Market Demands :** Especially for the business people who do "drop ship," the logistics, when streamlined, allow these businesses to respond to the market and the trends of eCommerce and demands of the consumers in a lively manner. Business people can also create deals and promotions on the fly for attracting customers and generate more sales.
- **Lower Cost :** With the advancement of the eCommerce platforms, it has become very affordable and easy to set up and run an eCommerce business with a lower overhead. Business people no longer need to spend a big budget on TV ads or billboards, nor think about personnel and real estate expenses.
- **More Opportunities for "Selling" :** Business people can only offer a limited amount of information about a product in a physical store. Besides that, eCommerce websites give them the space to include more information like reviews, demo videos, and customer testimonials for helping increased conversion.
- **Personalized Messaging :** E-Commerce platforms give people the opportunity to provide personalized content and product recommendations for registering customers in business. These targeted communications can help in increasing conversion by showing the most relevant content to the visitor.
- **Increased Sales Along with Instant Gratification :** For businesses selling digital goods, eCommerce allows them to deliver products within seconds of placing an order. This satisfies the needs of the consumers for instant gratification and assists increase sales, especially for the low-cost objects that are often known as "impulse buys."



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- **Ability to Scaling Up (Or Down) Quickly Also Unlimited "Shelf Space"** : The growth of any online business is not only limited by the availability of space. Even though logistics might become an issue as one's business grows, it's less of a challenge compared to running any brick-and-mortar store. E-Commerce business owners can choose to scale up or down their operation quickly by taking advantage of the non-ending "shelf space," as a response to the market trends and demands of consumers.

### **9.7 Technology Standards for :**

Technology standards pertain to the hardware, software, and platform that are involved in the majority of the technical aspects of the identity lifecycle. These aspects include the creation and verification of identities, the issuance of credentials, the authentication of identities, and the interoperability of identities with other databases.

Maintain system compatibility while allowing for product customization and specialization. Build brand-new markets and broaden the scope of current items and technologies' potential customer bases. Make it possible to achieve improved cost efficiency via economies of scale and the use of several vendors.

#### **9.7.1 E-commerce :**

There is one set of technical standards of the internet that are considered to be universal standards, which is yet another unique and evident characteristic of e-commerce technology. Internet is resources that are shared by all countries throughout the globe and make it possible for any computer to connect with any other computer, despite the fact that each of these computers may utilize a different technological platform. For illustration purposes, one may trade files with a person located in a different nation. On the other hand, the majority of the technology used in traditional trade varies significantly from country to country. For instance, the requirements for television and radio might vary greatly from country to country.

The universal technological standards of the internet and e-commerce have resulted in a significant reduction in market entry costs. Market entry costs are the expenses that merchants have to pay in order to bring their items to market. At the same time, customers benefit from universal standards since they lower the "search cost," or the amount of work necessary to locate items that meet their needs.

In the past, only a select few businesses were capable of competing on a worldwide market since doing so required going through a wide variety of systems that were determined by the cultural and social features of the host nation. These kinds of commercial structures differed from one nation to the next. Because of the widespread adoption of universal standards around the globe, which has been made possible by the proliferation of e-commerce, this effect has been significantly mitigated. Benefits in terms of networking externalities may also be developed using universal standards. This is possible since everyone utilizes the same technology.

#### **9.7.2 Shopping Cart :**

A shopping cart is a sort of software that serves as both the catalogue of an online company and the ordering methods for that store. Typically, a shopping cart acts as an interface between a company's website and its internal

framework. This allows customers to select merchandise; check about selected or can alter required modifications along with additions when purchasing merchandise; and assigns customers to select shipping and billing addresses.

Individually, the shopping cart is a significant component that is necessary for the operation of e-Commerce to run smoothly. The essential components of a shopping cart are as follows : website wizards; merchant tools; shopping features; payment choices; shipping and tax calculations; statistics; and safety measures. These days, consumers may choose from a wide range of shopping cart styles. They vary from simple scripts to comprehensive ecommerce platforms and everything in between. An e-Commerce solution is believed to be a shopping cart that is of a very high quality.

### **9.7.3 Merchant Account – Meaning and Nature :**

With the expansion of client buying impacting more and more on the e-commerce business on a regular basis, this result in safe payment solutions, which further will be of use for growth and potential, which is actually necessary in online transaction. Over the course of the last several years, an increasing number of customers have been using their credit cards to make purchases of goods and services completed online. The e-commerce business is growing despite the fact that there are more security risks as online shopping becomes more widespread. It is more crucial today than it has ever been to make sure that all of the information on your customers is kept private and preserved in the appropriate manner in order to avoid the misuse of private data and information.

If you own an online store, you should use a payment gateway because it will provide you access to the resources and tools you need to manage your account, increase the number of payment choices available to your customers, and safeguard you from fraudulent activity. It will be possible for you to take a diverse range of payments from your clients, including the following :

- American Express
- Discover
- E-Check
- JCB
- MasterCard
- Signature Debit Cards
- Visa

You will have the ability to easily access your account online as a vendor, as well as perform and evaluate simple online transactions, as well as have access to graphic reports and account statements. In addition to facilitating the management of account information, the payment gateway solutions will make it possible to do business in a safe and secure environment. You also have the authority to bestow permits to access anything you chose upon either your management team as a whole or certain personnel individually.

<h3><b>9.8 Payment System :</b></h3>
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A payment system may be defined as any system that is used to settle financial transactions by transferring monetary value from one account to another. This comprises the organizations, tools, people, regulations, processes,

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standards, and technology that make its exchange feasible. Also included in this category are the monetary policies that govern its circulation. An operational network is a popular sort of payment system that connects bank accounts and permits for monetary exchange utilizing bank deposits. This type of payment system is also known as an electronic clearing house (ECH). Credit mechanisms, which are effectively a distinct subset of payment mechanisms, are included in certain payment systems but not all of them.

In both local and foreign transactions, payment methods are employed in place of physically handing over cash payments. This is a significant part of the service that banks and other financial organizations provide their customers. Documentary credits, such as letters of credit, and negotiable instruments, such as draughts (e.g., checks), are examples of traditional forms of traditional payment systems. There has been a proliferation of different kinds of electronic payment systems brought about by the rise of computers and other forms of digital communication. The phrase "electronic payment" refers to the transfer of funds from one bank account to another via the use of electronic techniques, as opposed to the traditional approach of having bank workers physically transfer the funds. In its most restricted sense, the term "electronic payment" refers to "e-commerce," which is defined as "a payment for buying and selling products or services supplied over the Internet." In its most general sense, the term "electronic payment" refers to "any sort of electronic money transfer."

When opposed to old payment systems, modern payment systems make use of several alternatives to cash. This includes the use of :

- ✓ Credit cards,
- ✓ Debit cards,
- ✓ Direct credits and debits, as well as
- ✓ Electronic money transfers,
- ✓ Internet banking, and
- ✓ Other forms of online commerce payment systems.

### 9.8.1 Internet Payment Features :

Because clients have a variety of payment options accessible to them, it is critical for companies to have the appropriate payment gateway. When looking into the possibility of using one, they need to search for a payment gateway that is not only safe but also convenient for the users of the service. When looking for a suitable payment gateway for your requirements, the following aspects are absolute necessities to take into account :

- **Security** : When searching for a payment gateway, security is one of the most essential characteristics to look for. Not only is this crucial for you, but it is also important for the people that buy from you. When choosing a payment gateway, you need to make sure that the platform offers solid security. This is a concern that is addressed if the payment gateway is compliant with PCI DSS Level 1, so be sure to look for that certification.
- **Uncomplicated incorporation** : You should look for a payment gateway that gives third-party plugins the ability to connect easily with your current platform. You will save time and effort by not having to manually update your data when you have payment integration enabled, which will

also lessen the likelihood of making mistakes. When a new sale is made and the payment is processed electronically, the data relating to that transaction will begin to display in the tool that you are using currently.

- **Comprehensive reporting** : Many stores see a payment gateway as nothing more than a virtual terminal that records the transactions that take place. However, if it is configured well, it is capable of providing many more benefits than that. You will be able to make more educated choices for your company if you choose a reliable payment gateway that provides comprehensive reports and expedited reconciliation.
- **Alternative forms of invoicing** : Any shop would be fortunate to have access to a safe payment gateway that also had an integrated capacity for creating invoices. This makes the payment process more streamlined and may provide a handy option to take payments.
- **Multiple payment options** : Your payment gateway should be able to take a wide variety of payment methods, including debit and credit cards, wallets, and loyalty programmes, given that more and more consumers are gravitating toward making digital payments. When a business offers its consumers the option of paying using the method of payment that is most convenient for them, it helps to win their trust, which in turn leads to repeat visits, which in turn leads to an increase in sales.
- **Quick processing time and efficiency** : It is of the utmost importance that the money be moved from the account of a consumer to the account of a store as quickly as possible. Customers have a more pleasant and stress-free user experience when the processing speed is increased.

❑ **Check Your Progress – 5 :**

1. Which one is not including in the features of Internet Payment ?
  - a. Single Payment Option
  - b. Alternative forms of invoicing
  - c. Security
  - d. All of these

**9.8.2 Internet Payment services (IPS) :**

Instant payment, also known as real-time payment or speedier payment is a way of exchanging money and processing payments that enables the transfer of money between bank accounts to take place practically immediately, as opposed to the more customary one to three business days.

As a result of the growing need for transactions that are both quick and secure, a number of nations have already introduced immediate payment systems, and several instant payment systems and platforms are now undergoing development all over the globe.

Instant payments are defined as follows by the Euro Retail Payments Board (ERPB) : Electronic retail payment solutions that are available 24 hours a day, seven days a week and that result in the immediate or close-to-immediate interbank clearing of the transaction and crediting of the payee's account with confirmation to the payer (within seconds of payment initiation).

<b>9.9 Let Us Sum Up :</b>
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During the course of our studies for this unit, we came to understand that the acceptance of credit cards online is essential in the modern market since it helps to significantly increase sales and provides a boost to businesses.

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It has been discovered that in order to accept payments online, same-day approvals are required because customers can shop around the clock. In addition, Signature Card Services is the only e-Commerce merchant processing solution you'll require because of its fast funding, personalized account support, and rates that are the highest in the industry.

E-commerce solutions may assist in the integration of your company's various communication procedures, which is an important goal. In addition to this, it makes it possible to integrate and streamline the supply chain. E-Commerce solutions seem to be the unwavering option for companies looking to get online and communicate with B2B and retail clients. Smart design does more than simply make your organization seem nice; it incorporates trust signals that help put first-time visitors at ease. These trust signals assist put first-time visitors at rest. Trust signals are elements that may be seen on a company's website and serve the purpose of convincing customers that it is a reliable and risk-free environment for making online transactions.

It has been discovered that e-commerce makes it easier for firms to promote and broadcast their items or services to real consumers without putting any restrictions on themselves. You will have the opportunity to reach out to clients not just in your immediate area but also all over the world when you make use of this online E-commerce service. The fact that it may be conducted at a low cost and that retailers are able to avoid overhead expenses like those associated with a physical storefront, employees, and safety measures contributed to the widespread adoption of electronic commerce as a method of doing business. Because of the Internet's really widespread adoption, many people were concerned about its potential impact on publishing activity and, in particular, on online business. As a result of the fact that these projections were also accurate in the short term, commercial and policy fundamentals shifted to become obstacles in the way of the expansion of e-commerce.

### 9.10 Answers for Check Your Progress :

- Check Your Progress 1 :**  
1 : c          2 : b
- Check Your Progress 2 :**  
1 : c
- Check Your Progress 3 :**  
1 : d
- Check Your Progress 4 :**  
1 : a
- Check Your Progress 5 :**  
1 : a

### 9.11 Glossary :

1. **Payment Gateway :** The online portal same as cash register which connects websites for credit card operations for online transactions
2. **Merchant Account :** A bank account keeps funds from credit card purchase.

3. **Cross Selling** : Selling a related or complimentary product to a customer to entice a larger order value.
4. **Ecommerce** : Ecommerce, also known as electronic commerce or internet commerce, involves online purchases and transfers of money and data.
5. **Value-added reseller (VAR)** : A value-added reseller adds features or services to a product and resells it as an integrated or "turn-key" solution. In the electronics and IT industries, VARs bundle software with hardware.

**9.12 Assignment :**

1. Write a short note on Ecommerce and the advantages of Ecommerce solutions.

**9.13 Activities :**

1. Study about the Internet Payment Services in detail.

**9.14 Case Study :**

1. Why is e-commerce essential for business success ?

**9.15 Further Reading :**

1. Allen, E. and Fjermestad, J., (2000). E-Commerce Strategies : The Manufacturer Retailer Consumer Relationship, August 2000.
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**Unit**  
**10**
***E-COMMERCE ETHICAL, SOCIAL  
AND POLITICAL PROBLEMS***
**UNIT STRUCTURE**

- 10.0 Learning Objectives**
- 10.1 Introduction**
- 10.2 A structure for organizing the problems or issues**
- 10.3 Basic Ethical Concepts**
- 10.4 Analysis of Ethical Dilemmas**
- 10.5 Ethical Principles of Candidate**
- 10.6 Let Us Sum Up**
- 10.7 Answers for Check Your Progress**
- 10.8 Glossary**
- 10.9 Assignment**
- 10.10 Activities**
- 10.11 Case Study**
- 10.12 Further Readings**

**10.0 Learning Objectives :**

After learning this unit, you will be able to understand :

- About the structure for the problems or issues organization
- About the basic concepts of Ethical
- About the Ethical Dilemmas analysis
- About the Ethical Principles of Candidate

**10.1 Introduction :**

E-commerce is reducing technical issues. E-commerce's ethical, social and political issues—from privacy disclosure to IP infringement—have drawn attention. Internet technology and how businesses have used it are part of the answer. Internet technology and e-commerce alter social and corporate interactions and understandings.

Because the internet connects the world, personal privacy can spread instantly. If you publish a selfie of yourself eating a vanilla cookie in New York, Parisians will know immediately. Internet crime is like interstate crime before autos. Pre-Internet "cybercrime" was rare.

Political, ethical, and social issues are interconnected. E-commerce and the Internet affect people, societies, and governments. Four moral dimensions—property rights, information rights, governance, and public safety and welfare—describe these effects.

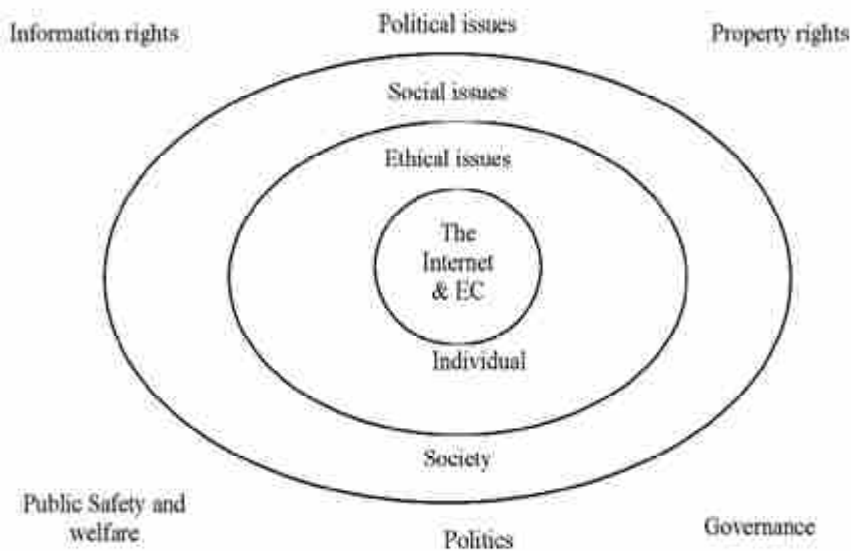
**10.2 A structure for organizing the problems or issues :**

E-commerce's rapid growth raises several ethical, social, and political challenges, including copyright owners' property rights and people's free speech

rights. E-commerce's ethical, social, and political challenges provide a framework for organizing them and make recommendations for managers who must run e-commerce enterprises ethically. E-Commerce Ethics, Social, and Politics Internet and e-commerce have brought unprecedented ethical, social, and political concerns for computer technology.

In an "information society," power and fortune increasingly depend on information and expertise. Information disputes often involve power, wealth, influence, and other valuables. The Internet and ecommerce have mostly advanced society, like steam, electricity, telephones, and television. However, these technologies can be exploited to perpetrate crimes, pollute the environment, and undermine social norms. Before vehicles, interstate crime and federal authority were rare. Pre-Internet "cyber-crime" was rare.

Internet commercialization benefits many businesses and individuals, but it also costs individuals, organizations, and communities. In this new climate, ethical and socially responsible judgments must weigh these costs and rewards.



**A structure of organizing problems or issues**

**Ecommerce Public Policy Issues :** Information rights, property rights, governance, and public safety and welfare are the main ethical, social, and political challenges surrounding e-commerce over the past seven to eight years. These areas raise ethical, social, and political challenges like :

- **Information rights :** When Internet technology makes information collection so pervasive and efficient, what rights do people have to their personal data in public or private spaces ? What rights do people have to business and organization information ?
- **Property rights :** How can traditional intellectual property rights are enforced online, where perfect copies of protected works may be generated and circulated worldwide in seconds ?
- **Governance :** Should e-commerce and the Internet be regulated ? If so, what law-making bodies—state, federal, or international—have jurisdiction ?
- **Public safety and welfare :** How can we assure equal Internet and ecommerce access ? Should governments provide Internet connectivity to schools and colleges ? Does online pornography and gambling endanger



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public safety and welfare ? Should it be possible to conduct mobile commerce while in a moving vehicle ?

Imagine that society and individuals are always in an ethical equilibrium due to a careful balance of individuals, social groups, and governmental institutions. Individuals know what is expected of them, social groups like businesses know their limits, capacities, and roles, and political institutions provide a supportive framework of market regulation, banking, and commercial law that sanctions offenders. Imagine dropping the Internet and e-commerce into this serene setting. People, businesses, and governments face new behavior options. People find they can download faultless digital versions of music tracks, which was impossible with CDs. Even though musicians and record label firms control the copyright, this can be done.

Internet and e-commerce affect people, societies, and governments. Four moral dimensions—property rights, information rights, governance, and public safety and welfare—describe these effects. Even though they don't "own" these songs, businesses find that they can make money by aggregating or distributing them. Online digital copying first overwhelmed record corporations, courts, and Congress. Courts and legislatures will need to decide who owns digital versions of copyrighted works and how they can be "shared." This one social effect area may take years to change understandings, regulations, and behavior. As a person and manager, you must decide what you and your firm should do in legal "grey" regions when ethical values conflict yet there are no clear cultural rules. How can you make wise choices in this situation ?

### ❑ Check Your Progress – 1 :

1. The four moral dimensions that describe the effects on societies, public and politics are :
  - a. E-commerce, E-business, E-tailoring and I-commerce
  - b. Procedures, Functions, Issues and Elections
  - c. Property rights, Information rights, Governance, and Public Safety and Welfare
  - d. None of these

### 10.3 Basic Ethical Concepts :

The concept of ethics is at the center of both social and political discussions around the Internet. The study of principles that can be used by individuals and organizations to judge what courses of action are appropriate and what are not is the field of ethics. In ethics, it is generally accepted as a given that people are free moral agents who are in a position to make decisions for themselves.

It may be challenging, but it is not impossible, to extend ethical standards beyond people and into businesses, corporations, and even entire societies. As long as there is a body or a person that is responsible for making decisions (such as a Board of Directors or CEO in a business firm or a governing body in a society), the decisions that they make can be evaluated in light of a number of different ethical principles. Your capacity to reason about more significant social and political debates will be boosted if you have a fundamental understanding of ethical principles. There are certain ideas of responsibility and liability that are shared by all ethical schools of thought in western society. These include responsibility, accountability, liability and due process.

- **Responsibility** : Individuals, organizations, and communities are all held accountable as free moral agents for the deeds that they commit when it comes to their respective levels of responsibility.
- **Accountability** : Individuals, institutions, and entire communities should all be held responsible before other people for the results of the decisions they make. This is what it means to be accountable. The ideas of responsibility and accountability are brought into the realm of legal matters by the third principle, which is known as liability.
- **Liability** : A characteristic of political systems known as liability is the existence of a body of law that makes it possible for individuals to seek compensation for losses sustained as a result of the actions of other people, institutions, or organizations.
- **Due Process** : A society that is ruled by laws is said to have due process, which is a procedure in which the rules are known and understood, and there is the capacity to appeal to higher authorities to guarantee that the laws have been applied appropriately. Due process is a characteristic of law-governed communities.

#### **10.4 Analysis of Ethical Dilemmas :**

Disputes that arise in the realms of ethics, society, and politics frequently take the form of conundrums. A predicament is considered to be a problem when there are at least two courses of action that are diametrically opposed to one another and each promotes a conclusion that is desirable. How can you examine and reason about the problem when you are confronted with a situation that appears to create ethical dilemmas ? The following is a process broken down into five steps that ought to be of assistance.

- **Determine the facts, and describe them in as much detail as possible :** Find out who did what to whom, where it happened, when it happened, and how it happened. In many situations, you may be startled to find inaccuracies in the facts that were first provided, and frequently, you will find that just correcting the facts helps define the solution. It is also beneficial to get the conflicting parties involved in an ethical conundrum to agree on the facts.
- **Define the difficulty of the situation or the issue, and pinpoint the higher order value at stake :** Concerns relating to ethics, society, and politics almost invariably involve references to higher values. If that weren't the case, there wouldn't even be a dispute. All of the disputants assert that they are working toward more important goals (e.g., freedom, privacy, protection of property, and the –enterprise system). For instance, Double Click and its supporters contend that the company's surveillance of customer movements on the Internet promotes both the efficacy of markets and the wealth of the entire society. Opponents believe that the claimed effectiveness comes at the expense of individual privacy, and that Double Click should either stop operations or offer the opportunity to Internet users to opt out of engaging in such tracking.
- **Determine the various parties involved :** Stakeholders are players in the game who have an interest in the outcome, who have its involved in the situation, and who typically have strong opinions regarding the matter at hand. Stakeholders are present in every ethical, social, and

political issue. Determine the nature of these organizations and the goals they hope to achieve. This information will prove useful in the later stages of the solution design process.

- **Determine the courses of action that you are capable of doing :** It's possible that none of the choices will please all the parties involved, but you might discover that certain choices are more effective than others in accomplishing the task at hand. Sometimes, finding a "good" or ethical solution may not necessarily require striking a balance between the repercussions suffered by various stakeholders.
- **Determine the potential repercussions that could result from each of your decisions :** Some choices might be acceptable from an ethical standpoint, but they could have extremely negative consequences in other contexts. It's possible that alternative choices won't work in other situations that are similar to this one, but they might work here. Asking you "what if I chose this option consistently over time ?" is an important habit to get into. After you have finished your analysis, you can use the following well-established ethical principle to assist you in making a decision regarding the subject.

❑ **Check Your Progress – 2 :**

1. Which of the following is not the part of the basic ethical concepts ?
  - a. Due process
  - b. Accountability
  - c. Responsibility
  - d. Assets
2. In how many steps we can analyze the ethical dilemmas ?
  - a. 4
  - b. 3
  - c. 8
  - d. 5

<b>10.5 Ethical Principles of Candidate :</b>
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When carrying out their responsibilities in information management, managers would be well to act in accordance with ethical principles. Following a predetermined set of ethical rules can be of great assistance to information systems administrators when they find themselves in the midst of ethical conundrums on a regular basis. To begin, when confronted with an ethical conundrum, managers will examine the problem by analyzing the many options they have available to them and considering the potential repercussions of those decisions. They will think about how each choice will affect the many stakeholders in the organization, and then they will make a decision that is as fair and just as the circumstances will allow. The majority of the deciding elements would be unique to the particular ethical challenge that is currently at hand. The IS managers can consider several tried-and-true, overarching ethical standards when making decisions, in addition to the specifics of the problem at hand.

- **Golden Rule :** The first one is an old adage with Christian connotations : "Do unto others as you would have them do unto you." This adage has been around for a long time. The foundation of this idea is the practice of putting oneself in the position of the other party and judging the situation using the same criteria. For example : If you are using a pirated software then think being in shoes of a person who has developed that software. All of his hard work is going in vain and he is getting nothing from you.

- **Immanuel Kant's Categorical Imperative** : The application of categorical imperatives is the second strategy, which is a concept that was initially formulated by the philosopher Immanuel Kant. According to this principle, in order for a community or group to keep its cohesion, there are certain behaviors that are forbidden to all of the members of the community or group, regardless of the circumstances and other conditions that may be present. In a similar vein, there are certain obligations that absolutely must be met by each and every member of the group. And those in charge of managing information should make it their business to avoid violating such categorical imperatives. For example : While using pirated software if you think that it doesn't make any difference to developer's income but, you think that if everyone started using pirated software then developer will get nothing from his software and then no one will develop any software because there is no income from that, which ultimately hurts the world as a whole.
- **Descartes' Rule of Change** : The Rule of Change proposed by Rene Descartes is another helpful guideline that IS managers should adhere to. According to what it says, "If an activity cannot be conducted again, then it is not right to take at all." In everyday language, this principle is known as the slippery-slope rule, and it once again places an emphasis on the interests of the team or corporation over those of the individuals. It's possible that some activities won't have huge repercussions if they just happen once, but if everyone in the group did something different at the same time, it could bring the whole organization to its knees. IS managers ought to take this into consideration when making decisions and do so with caution. For example : If you are downloading songs from unauthorized sites for free and you think that let me do it once next time I will download it from authorized sites. Thus you think that doing this repeatedly is unethical then doing it once is also unethical.
- **Utilitarian Principle** : The Utilitarian philosophical system is the source of the fourth guiding principle (promoted by such intellectuals as John Stuart Mill and Jeremy Bentham). According to this guideline, acts should be carried out in such a way that they would result in the greatest good for the greatest number of people. In the context of management in the context of the business environment, decisions should be made in such a way that all stakeholders, who include the general public and the environment, gain the greatest possible advantage from it.
- **Risk Aversion Principle** : The Risk Aversion principle, which is a corollary for the Utilitarian principle, is the next principle in the hierarchy of ethical principles. In light of this, it instructs us to "Take the action that results in the least potential expense or the least amount of harm." Some activities have extremely high failure costs with a somewhat low risk of failure, such as building a nuclear power plant in the middle of a city. Other acts, on the other hand, have extremely high failure costs with a very low probability of failure (speeding and automobile accidents). Stay away from those acts that have a high risk of failing and pay extra attention to the ones that have a moderate to high probability of having a high failure cost.
- **Ethical "No Free Lunch" Rule** : And lastly, the rule that there will be no free lunches should serve to remind managers of the obligation

they have for the general public. Even though the law does not hold them accountable to them, they are expected to uphold ethical standards and ensure that they do not jeopardize or take advantage of the general population in order to maximize their profits.

❑ **Check Your Progress – 3 :**

1. Which principle is suitable for "Take the action that results in the least potential expense or the least amount of harm." ?
  - a. Ethical "No Free Lunch"                      b. Risk Aversion
  - c. Descartes' Rule of Change                      d. Golden Rule
2. Which principle is suitable for "Do unto others as you would have them do unto you." ?
  - a. Golden Rule    b. Ethical "No Free Lunch"
  - c. Descartes' Rule of Change                      d. All of these

<b>10.6 Let Us Sum Up :</b>
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Existing social and commercial ties and ways of thinking are vulnerable to being upended by the advent of internet technology and the rise of e-commerce. All of a sudden, individuals, business firms, and political institutions are faced with new possibilities of behaviors for which understandings, laws, and rules of acceptable behavior have not yet been developed. This presents a challenge for all of these groups because there are currently no rules of acceptable behavior. The commercial expansion of the Internet has been beneficial to a great number of businesses, firms, and individuals; nevertheless, this development has also resulted in negative consequences for individuals, organizations, and society. Those who are trying to make judgments that are ethically and socially acceptable in their new environment, particularly in situations where there are not yet any clear-cut legal or cultural rules have a responsibility to carefully assess the costs and advantages of their options.

An ethical dilemma is a situation in which there is a conflict between two different courses of action that are considered to be morally correct. There is a disagreement between the ideals or principles that are held. The catch is that you would be doing something good and something wrong at the same time, and if you take one correct course of action, it will prevent you from taking the other right course of action. This presents a problem.

Information rights, property rights, governance, and public safety and welfare are the four key dimensions that can be used to broadly classify the major ethical, social, and political challenges that have developed around e-commerce during the past seven to eight years.

Nevertheless, I believe that it is vitally important to conduct one's life according to the Golden Rule. Even the most insignificant acts of kindness you perform for other people can eventually have a positive impact on your own life. Someone else will appreciate even a small amount of assistance very much. It's possible that the fact that you went out of your way to assist someone will be that person's favorite part of the day.

**10.7 Answers for Check Your Progress :**

- ❑ **Check Your Progress 1 :**  
1 : c
- ❑ **Check Your Progress 2 :**  
1 : d            2 : d
- ❑ **Check Your Progress 3 :**  
1 : b            2 : a

**10.8 Glossary :**

1. **Ethical :** Involving or expressing moral approval or disapproval
2. **Dilemmas :** A situation in which you have to make a difficult choice between two or more things.
3. **Cyber Crime :** Criminal activities carried out by means of computers or the internet.
4. **Repercussion :** An unpleasant effect or result of something you do.
5. **Rights :** Rights are legal, social, or ethical principles of freedom or entitlement; that is, rights are the fundamental normative rules about what is allowed of people or owed to people according to some legal system, social convention, or ethical theory.
6. **Principles :** A basic general law, rule or idea.

**10.9 Assignment :**

1. Write a short note on Candidate Ethical Principles.

**10.10 Activities :**

1. Study about the ethical, social and political issues in detail.

**10.11 Case Study :**

1. Examine how we can solve the problem of cyber-crime and the effects of this on ecommerce.

**10.12 Further Reading :**

1. Allen, E. and Fjermestad, J., (2000). E-Commerce Strategies : The Manufacturer Retailer Consumer Relationship, August 2000.
2. Behrendorff, G., Fisher, J., Goldsworthy, M. A., Corbitt, B., & Perks, G. (1996). Electronic Commerce Programs for Small to Medium Sized Enterprises,
3. Bennett, D. and Eustis, B., (1999). External Relationship Management : Information Systems Frontiers, 1999.
4. Burn, J. M. and Barnett, M. L. (2000) Emerging Models for Global e-commerce world.

***INTELLECTUAL RIGHTS OF  
PROPERTY*****UNIT STRUCTURE**

- 11.0 Learning Objectives
- 11.1 Introduction
- 11.2 Types of Intellectual property protections
- 11.3 Copyrights
- 11.4 Patents
- 11.5 Trademark
- 11.6 Let Us Sum Up
- 11.7 Answers for Check Your Progress
- 11.8 Glossary
- 11.9 Assignment
- 11.10 Activities
- 11.11 Case Study
- 11.12 Further Readings

**11.0 Learning Objectives :**

After learning this unit, you will be able to understand :

- About the Intellectual Property
- About how we can provide protections to Intellectual Property
- About the types of Intellectual Property Protections
- About the Copyrights
- About the Patents
- About the Trademark

**11.1 Introduction :**

The intangible products of the human brain are under the umbrella of intellectual property (IP), which is a type of property category. There are a wide variety of forms of intellectual property, some of which are recognized in more nations than others. Copyrights, patents, trademarks, and trade secrets are the most well-known categories of intellectual property. During the 17th and 18th centuries, England was the birthplace of the modern concept of intellectual property. Although the concept of "intellectual property" has been there since the 19th century, it wasn't until the late 20th century that the bulk of the legal systems around the world began to recognize its significance.

The primary goal of laws pertaining to intellectual property is to foster the production of a wide range of different types of intellectual commodities. In order to accomplish this, the law grants individuals and companies' property rights to the information and creative goods that they create, although these rights are typically only valid for a predetermined amount of time. This provides

an economic incentive for their development because it enables individuals to benefit from the information and intellectual goods they produce, as well as enables individuals to protect their ideas and prohibit imitation of those ideas. It is anticipated that these economic incentives will drive innovation and contribute to the technical growth of countries. The quantity of protection afforded to innovators is directly related to the amount of progress made in technological advancement.

When opposed to traditional forms of property, such as land or things, intellectual property offers a number of challenges due to the fact that it is intangible. In contrast to other types of property, intellectual property is referred to as being "indivisible." This is due to the fact that a limitless number of people are able to "consume" an intellectual product without resulting in the good's depletion. In addition, investments in intellectual goods are plagued by issues of appropriation. While landowners can protect their property by erecting a sturdy fence around it and employing armed guards, producers of information or literature typically have little power to prevent their first buyer from duplicating their work and reselling it at a lower price. The fundamental focus of modern intellectual property law is on striking a balance between the strength of rights in order to ensure that they are sufficient to encourage the production of intellectual goods while not being so strong as to restrict the widespread use of the goods.

### **11.2 Types of Intellectual property protections :**

The goal of the laws governing intellectual property was to provide the inventor with as little protection as possible in order to foster creativity. Legal protection was only provided in situations where it was absolutely necessary to do so in order to foster invention, and it had time and scope restrictions. This is mostly due to the fact that, historically speaking; knowledge has been seen as a public good in order to facilitate its wide-scale transmission and continuous improvement.

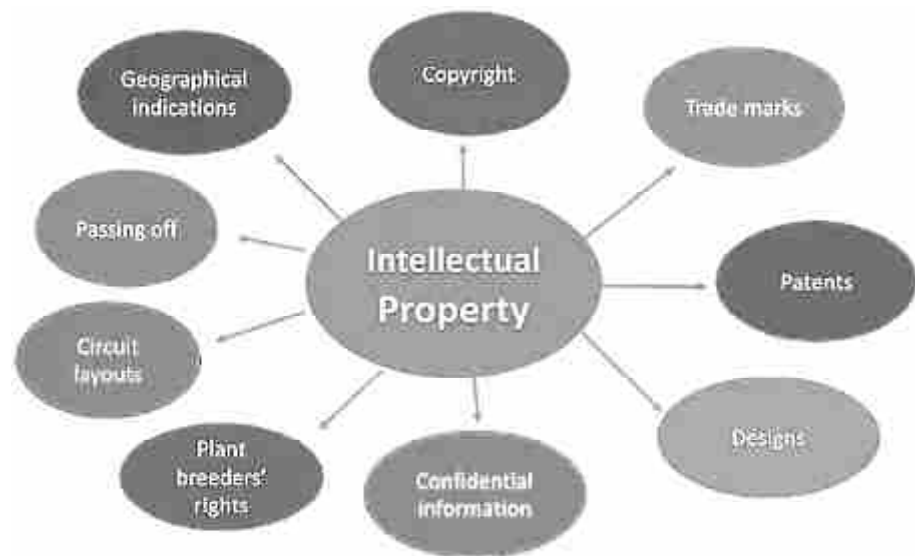
Inventors, designers, developers, and authors all have the ability to protect the ideas they have generated through various mechanisms, such as patents and copyright laws. The objective is to forestall other people from unfairly benefitting from one's own innovations or inventions. It also provides them with the option to recoup the financial resources they put in the production of a product. There are various types of protections of Intellectual property that are as follows :

- Patents,
- Copyrights,
- Neighboring Rights,
- Trademarks,
- Design Rights,
- Database Rights,
- Tradename Law,
- Plant Breeders' Rights,
- Semiconductor Topography Rights



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The objective of intellectual property rights is to stimulate new developments, such as technological advances, artistic endeavors, and inventions that may contribute to economic expansion. The protection of intellectual property rights provides individuals with additional incentives to continue producing things that further provide job possibilities and new technology, so enabling our world to progress and advance at an even more rapid rate. People are able to get notoriety or financial advantage from what they produce or create thanks to intellectual property, which is protected in law through mechanisms such as patents, copyright, and trademarks, among other mechanisms. The purpose of the intellectual property system is to establish an environment that is conducive to the growth of creativity and innovation by achieving a healthy equilibrium between the interests of innovators and the interests of the general public.



### Types of Intellectual Property Protections

The primary goal of laws pertaining to intellectual property is to foster the production of a diverse range of intellectual goods that may be purchased by end users. In order to accomplish this, the law grants individuals and companies' property rights to the information and creative goods that they create, although these rights are typically only valid for a predetermined amount of time. This provides a financial incentive for their creation as it allows them to profit from them after they have created them. When opposed to traditional forms of property, such as land or things, intellectual property offers a number of challenges due to the fact that it is intangible. Intellectual property, in contrast to traditional property, is indivisible; this means that a limitless number of individuals can "consume" an intellectual good without the good's supply being diminished. In addition, investments in intellectual goods are plagued by issues of appropriation. Whereas a landowner can protect their property by erecting a sturdy fence and staffing it with armed guards, a producer of information or an intellectual good typically has very little power to prevent their first buyer from duplicating the product and reselling it at a lower price. This is a problem because landowners have the ability to protect their land. The fundamental focus of modern intellectual property law is on striking a balance between the strength of rights in order to ensure that they are sufficient to encourage the production of information and intellectual goods while not being so powerful as to prohibit their widespread application.

By exchanging limited exclusive rights for disclosure of creative works and innovations, society and the patentee or owner of copyright benefit mutually. Additionally, an incentive is created for authors and inventors to develop and publish their work. Some observers have pointed out that "total protection" appears to be the goal of intellectual property legislators and those who support the implementation of their policies. "They conclude that if some intellectual property is desirable due to the fact that it stimulates innovation, then more intellectual property must be desirable. The prevalent school of thought holds that innovators will not have a strong enough motivation to produce new ideas unless they have the legal right to appropriate the total societal value created by their creations ". This position, also known as the full value or absolute protection view, considers intellectual property to be a form of "real" property, generally adopting the law and vocabulary of that category. The America Invents Act is only one example of a more recent change in intellectual property law that places an emphasis on international harmonization. Recently, there has also been a great deal of discussion over whether or whether it is desirable to use intellectual property rights to protect cultural heritage, including intangible forms, as well as concerns regarding the hazards of commodification generated from the possibility of doing so. The question is still unresolved in the field of legal scholarship.

**☐ Check Your Progress – 1 :**

1. Which one is not the type of Intellectual Property Protections :
  - a. Copyright
  - b. Patent
  - c. Trademark
  - d. Patient

**11.3 Copyrights :**

The rights that authors and artists have over their own creative works are referred to as copyright in the legal world. Copyright is a legal term. Books, songs, paintings, sculptures, and films are only some of the works that fall under the protection of copyright. Other types of works include computer programmes, databases, ads, maps, and technical drawings.

Ideas are not shielded by copyright protection. In its place, it exclusively protects "tangible" kinds of creative and original work, such as works of art, musical compositions, architectural plans, and even computer code. Any literary, musical, dramatic, artistic, or architectural work that the author has created is the property of the owner of the copyright, and that owner has the exclusive right to sell, publish, and/or reproduce the work.



**Copyright Symbols**

Infringing on someone's copyright can be defined as the reproduction, distribution, display or performance of a work, as well as the creation of derivative works, without the permission of the copyright holder. The copyright holder is typically a publisher or another company that is assigned or represents the work's creator. It is commonly referred to as "piracy." Even though copyright is established the moment a work is fixed, in most cases, the owner of the copyright must register it in order for the copyright holder to be eligible for monetary damages. In most cases, the person who owns the copyright is the

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one who is responsible for carrying out the copyright's enforcement. The ACTA trade agreement, which was signed in May 2011 by the United States of America, Japan, Switzerland, and the European Union, but which has not yet come into force, mandates that the parties to the agreement add criminal penalties, including incarceration and fines, for the infringement of copyright and trademarks, and obligates the parties to actively police for infringement. The ACTA trade agreement has not yet come into force. There are several restrictions and exemptions to the rule of copyright, which means that certain uses of works that are protected by copyright are not considered to be infringing. The "fair use" theory and the "fair dealing" doctrine are two examples of such doctrines.

By safeguarding the legal interests of the people who came up with an idea in the first place, copyrights foster an environment that is fertile ground for creative endeavors. The Copyrights Act protects a wide variety of different kinds of works from infringement. The following is a list of the several forms of copyrights that can be acquired in India.

- **Literary Works** : Works that contain an original or distinctive invention of literary art are protected by copyrights that fall under this category. Scripts, novels, biographies, technical texts, and computer programmes are all examples of the kinds of literary works that fall under this category. It is possible to stake a claim to these copyrights regardless of the literary merit, artistic merit, or overall quality of the work. The copyright that is attached to a literary work grants the owner exclusive rights. To create distinct variants of a work :
  - ✓ For a presentation of the work before an audience (Copyright Public Performance)
  - ✓ Because they distributed free copies of the works to the general audience
  - ✓ Regarding the reproduction of the work (Cyber squatters Rights to Reproduction)
  - ✓ To render the work in another language
- **Dramatic Works** : Another type of literary work is shown here. It encompasses all aspects of preparation for a play that is going to be staged, as well as entertainment in the form of a stupid show, drama, choreography, or work on fixed writing. Films of any kind, however, are not considered to be part of the category of dramatic works. Copyright protection for theatrical works grants their owners unique legal rights :
  - ✓ For the purpose of producing any variants of the work,
  - ✓ Reproducing the work,
  - ✓ Bringing the work to the attention of the general public, or
  - ✓ Including the work in any cinematic film
- **Musical Works** : Copyright protection can be granted to individual musical works. Lyrics and sound are not typically included in musical pieces. Even though the work associated with sound recordings is typically dependent on the musical works, a separate application must be made to the Copyright Office in order to protect musical works. This is because the protection of musical works requires a separate application. To qualify

for protection under copyright laws, a musical work need not be reduced to written form. Under the category of musical works, the Copyright for Songs in India grants the holder exclusive rights :

- ✓ In consideration for the reproduction of the musical work
  - ✓ In the interest of making the work accessible to the general population
  - ✓ To make any type of change to the work
  - ✓ To perform the musical work in public to make any kind of change to the work
  - ✓ To make available to the general public copies of the work in relation to the musical work,
  - ✓ To create an audio recording or a film using cinematographic techniques
- **Artistic Works :** Original artwork such as paintings, photographs, buildings, diagrams, cartoons, molds, plans, etchings, cast for sculptures, graphics, and drawings are all examples of the types of artistic works that are protected by the Copyright Act of 1957. Among the other types of artworks that are protected by this law are artistic works that include etchings. The copyright that is attached to a creative work grants the owner exclusive rights :
    - ✓ To make available to the general public copies of the work
    - ✓ For the purpose of incorporating creative work into cinematic films
    - ✓ In order to reproduce the work
    - ✓ In order to convey the artistic work to the public
    - ✓ In order to make any necessary modifications to the work
- **Cinematograph Films :** Films made specifically for the cinematographic medium often feature every single recorded work with moving images and graphics. It refers to any work that combines a visual recording with the sound recordings, and it can be produced using any technology, whether analogue or digital. It also includes video films. It is possible that this might include visual recordings in any medium, as well as any technology that is used to retain such visual records. The copyright that applies to cinematograph film works grants the holder exclusive rights :
    - ✓ To rent, sell, or provide a copy of the movie for hire or offer
    - ✓ For the purpose of distributing the cinematograph film to the general public
    - ✓ For the purpose of duplicating the film or creating variants of it
- **Sound Recording :** The term "sound recording" is intended to encompass any kind of recording, regardless of the medium used to store it. It could be a podcast or a recording of an audio track, or it could be a song that only features a singer's voice (with or without music). Because sound recordings also include music, the authorization of the person who invented or created the music is required in order to protect the sound recording's copyright. This is because sound recordings include music. The copyright for a sound recording gives the owner exclusive rights to the recording :

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- ✓ To make any and all copies of the sound recording available for purchase or rental
- ✓ For the purpose of disseminating the audio recordings to the wider population
- ✓ To produce an additional sound recording that represents it symbolically

The protection of copyrights fosters an innovative environment that helps works reach their full creative potential. Nevertheless, it might be detrimental to the development of society if the work is claimed as ownership for many generations to come. As a result, the time period of copyright protection in India was fixed to the span of the creator's life, up until sixty years from the year in which the creator passed away. The development of a civilization can be impeded by overly strict copyright regulations. As a result, nations implement copyright laws that try to satisfy both the interests of the creators and the interests of the community as a whole.

### ☐ Check Your Progress – 2 :

1. If a person uses someone's song as background music in his/her music video then could be an act a person is an example of :
  - a. Copyright
  - b. Identity theft
  - c. Hacking
  - d. Cyber bullying
2. Which one of the followings is not included in the term "Work" under copyright Act 1957 ?
  - a. A Cinematographic film
  - b. Layout designs of integrated circuits
  - c. A sound recording
  - d. A dramatic work

## 11.4 Patents :

The protection afforded by a patent might extend to an innovation as well as a technical product or method. It is against the law for other people to produce the patented object or method, to use it, to resell it, to rent it out, or to provide it. However, the owner of the invention might grant a patent license to another party so that it can be used in that manner.

A patent can be used to stop another party from making, selling, or using an innovation without first obtaining permission from the inventor. People typically think about patents first when they consider the topic of intellectual property rights protection since patents are the most well-known kind of intellectual property rights. A patent owner has the absolute right to commercialize their property in any way they see fit, including but not limited to buying and selling the patent or issuing a license to the invention to any third party on terms that have been mutually agreed upon.



### Patent Symbol

A monopoly on an innovation is protected by a patent, which is an exclusive legal right. In general, the owner of a patent has the right to decide how the innovation can be used by others, as well as whether or not the

invention can be utilized at all by other people. In exchange for this right, the patent owner is required to make the technical details of the invention that are described in the published patent document available to the general public.

Infringing on a patent often occurs when an individual uses or sells an innovation that has been granted a patent without first obtaining permission from the patent holder, also known as the patent owner. The claims of the issued patent serve to specify the breadth of the patented innovation as well as the extent of the protection afforded by the patent. Utilizing an innovation that has been granted a patent for the purposes of study is permitted in many different legal systems. This kind of safe harbor does not exist in the United States, unless the research is conducted for simply philosophical reasons, or in order to gather data in order to prepare an application for the licensing of a drug by the regulatory authorities. In most countries, such as the United States, cases of patent infringement are adjudicated according to civil law; nevertheless, a number of countries also incorporate infringement into their criminal law systems (for example, Argentina, China, France, Japan, Russia, South Korea).

Inventors can apply to Congress for a variety of patents, each of which is designed to protect a certain form of innovation. Any inventor who wishes to protect his or her creation through the United States Patent Office should familiarize themselves with the many types of patent applications and how to use them properly. Because there are many various kinds of innovations, there are also many different sorts of patent applications. Inventors can use these to protect their creations. Inventors who are astute can use the various types of patent applications to their advantage in order to gain the rights they require in order to protect their creations. There are four distinct types of patents as follows :

- **Utility patent :** When most people think of patents, this is the first thing that comes to their mind. It is a detailed and technical document that explains to the general public how to use a newly introduced piece of machinery, procedure, or system. Congress establishes the categories of innovations that are eligible for protection under utility patents. The scope of the types of inventions that are eligible for utility patent protection is being pushed to its limits by emerging technologies such as genetic engineering and software that is delivered over the internet.
- **Provisional patent :** A less formal document that indicates the inventor was in possession of the invention and had satisfactorily figured out how to make the invention operate might be filed by an inventor in the United States in accordance with the law of that country. After such documentation has been submitted, the invention will be considered patent-pending. This filing date will be forfeited, however, if the inventor fails to submit a formal application for a utility patent within one year of the date on which the provisional patent was submitted. To the United States Patent and Trademark Office, any public disclosures that were made in reliance on that provisional patent application would now be counted as public disclosures (USPTO).
- **Design patent :** This patent provides protection for an ornamental design that is applied to an item of practical use. A design patent, for instance, can be used to protect the form of an item like a bottle or the pattern on the sole of a shoe. The design of the practical item is depicted in

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virtually its entirety in the form of photographs or line drawings contained inside the document. Simply put, there are relatively few words used in a design patent, which makes it notoriously difficult to search for anything within a design patent. In recent years, software businesses have been increasingly turning to design patents as a means of protecting parts of user interfaces and even the geometry of touchscreen devices.

- **Plant patent** : A plant patent is exactly what it sounds like : legal protection for newly created varieties of plants that were grown via cuttings or some other nonsexual method. Plant patents, on the other hand, do not often include genetically modified organisms and instead place more of an emphasis on traditional gardening.

### ❑ **Check Your Progress – 3 :**

1. Which among the following is not a correct statement regarding patent ?
  - a. A patent is a legal protection granted for an invention that is new, non-obvious and useful.
  - b. The patent grants the patent holder the exclusive right to make use or sell the patented products or process.
  - c. The exclusive purpose of the patent system is to benefit the patent holder.
  - d. The Indian Patent Act, 1970, was amended and made effective from January 1, 2005.

## 11.5 Trademark :

Entrepreneurs have the ability to differentiate their goods and services from those of competitors by registering a trademark for their brand. The names of products and services can be safeguarded by trademark rights. Additionally, they guard a product's logo as well as the aesthetic of the product's package. If business owners wish to ensure the safety of their trademark, they need to register it.

Another well-known method of protecting one's intellectual property is through the use of trademarks. Consumers are able to readily recognize the specific goods or services that a firm offers thanks to a sign known as a trademark, which is a distinguishing symbol. A few instances of this would be the golden arches at McDonald's, the logo for Facebook, and so on. Text, a phrase, a symbol, a sound, a fragrance, or even a color scheme can all function as trademarks. Other possible incarnations include sound and smell. A trademark, in contrast to a patent, can protect an entire category or range of goods or services rather than simply a single item or method of production.



**Trademark Symbols**

A sign that is able to differentiate the products or services offered by one business from those offered by other businesses is referred to as a trademark. Trademarks have been around since the days of ancient artists, who would sign their work or leave their "mark" on the items they produced.

Infringement of a trademark occurs when one party uses a trademark that is identical to or confusingly similar to a trademark owned by another party, in relation to products or services that are identical to or similar to the products or services of the other party. This can lead to confusion among consumers. A trademark is afforded protection even if it is not registered in many countries; nonetheless, registering a trademark grants the owner some legal benefits when it comes to enforcing the mark. Civil action and, in some jurisdictions, criminal law can also be used to remedy infringement of intellectual property rights.

When selling a one-of-a-kind product or service, registering a trademark can be an essential step in the process of safeguarding your intellectual property and assuring that no one else will be able to conduct commercial activity using your company's name or emblem.

Typically, the business that makes use of a mark is the one that owns the trademark for that mark. Just because you have the idea for a trademark does not mean you automatically have rights to that mark. In certain circumstances, a corporation or an individual may be the owner of a trademark, while another entity may be granted permission to use the mark through the purchase of a license to do so.

In contrast to patents and copyrights, trademarks do not become invalid after a predetermined amount of time has passed. As long as the owner continues to utilize the trademark in commerce, the mark will continue to exist. The owner of a trademark that has been granted registered status by the United States Patent and Trademark Office (USPTO) is required to continue making use of the trademark in regular business transactions. Different classifications of trademarks include the following :

- **Marks of Uncertainty and Imagination in Trade :** The most powerful trademarks are those that are in no way associated with the goods that bear their name. Even while arbitrary marks are lower down on the uniqueness spectrum than imaginative ones, the distinction between the two is, for all intents and purposes, purely aesthetic. Generally speaking, names that are expressly invented for the purpose of creating a trademark, such as Kodak, are considered to be fanciful trademarks. Arbitrary marks are words or designs that are already in use but are taken out of their context and used to symbolize a particular brand, service, or object. Some examples of arbitrary marks include Apple (electronics and software) and Shell (oil industry). The former are typically considered to be more powerful than the latter, although they are still comparable.
- **Suggestive Trademarks :** The next level down from random and imaginative trademarks, suggestive trademarks are created with the intention of igniting the consumer's imagination and associating a particular quality with the product in question. For instance, the trademarks Jaguar and Greyhound are both associated with the automotive industry, and they were both created to imbue the product with the traits of the respective animals. Even though suggestive marks lack the unique quality of other



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trademarks, they are nonetheless eligible for registration, albeit with a reduced ability to enforce trademark rights. This category has a large number of examples that can be used to answer the question "What is a trademark ?" since it is possible to combine almost any two terms.

- **Trademarks That Describe Their Products :** The descriptive trademarks hang all the way down to the bottom of the trademark food chain. These phrases are regarded to be too descriptive of the goods and services to be eligible for trademark protection and are thus not used. The explanation is straightforward. The use of a trademark for Candy Coated Apples against other businesses that provide candy coated apples might significantly reduce the amount of competition in the market. If the trademark is no longer associated with a specific product but is now associated with the firm that produces the product, then an exemption may be made to the rule. In practice, it transforms into a trademark that is either suggestive or arbitrary.

### Check Your Progress – 4 :

1. Which one of the following could not be registered as a trade mark ?
  - a. The mark is an image.
  - b. The mark is made up of letters and numbers.
  - c. The mark is made up of a symbol with no words or letters.
  - d. The mark represents the natural or technical shape of the goods.

### **11.6 Let Us Sum Up :**

As a result of this unit, we now understand that the objective of intellectual property rights is to stimulate new discoveries, such as technological advances, artistic endeavors, and inventions that may contribute to economic expansion. The protection of intellectual property rights provides individuals with additional incentives to continue producing things that further provide job possibilities and new technology, which in turn enables our world to progress and advance at an even quicker rate.

We were educated on the many forms of intellectual property rights, such as trademarks, patents, copyrights, and so on, as well as the applications of these rights.

### **11.7 Answers for Check Your Progress :**

#### Check Your Progress 1 :

1 : d

#### Check Your Progress 2 :

1 : a          2 : b

#### Check Your Progress 3 :

1 : c

#### Check Your Progress 4 :

1 : d

### **11.8 Glossary :**

1. **Neighboring Rights :** "Neighboring rights" are related to copyright. These rights protect artists, musicians, and broadcasters. Copyright and this protection are "neighboring" or "related" rights because they are similar. Copyright-like rights develop immediately under the Neighboring Rights Act.
2. **Design rights :** Design rights safeguard product appearance. Wallpaper, fabrics, alarm clocks, toys, and chairs are examples. This protection requires design registration.
3. **Database rights :** Database rights protect ordered databases. Overheid.nl and Statistics Netherlands publish official papers and statistics data (CBS). Building a database takes time and money. The Databases (Legal Protection) Act protects database producers.
4. **Plant breeders' rights :** New plant varieties can be protected by plant breeders. Long, expensive breeding methods produce these new types. Dutch plant breeders receive rights from the Board for Plant Varieties. The Netherlands Inspection Service for Horticulture investigates and inspects applications to determine admissibility. If successful, the Board gives plant breeders' rights.
5. **Semiconductor topography rights :** Semiconductor topography rights safeguard computer chip circuit design (also known as the topography of semiconductor products). These rights safeguard specific-function circuits. Chip rights can be requested from the Netherlands Patent Office.
6. **Trade Secret :** Businesses have trade secrets. These secret methods, formulas, tactics, and other confidential information are not for commercial use. This vital safeguard gives businesses an edge.

### **11.9 Assignment :**

1. Write the short note on Types of Intellectual Property Protections.

### **11.10 Activities :**

1. Visit any company, restaurant or any website and try to find out the types of Intellectual Property Protection Symbols.

### **11.11 Case Study :**

1. Examine how and where we use the trademarks, patents and copyrights in detail.

### **11.12 Further Reading :**

1. Allen, E. and Fjermestad, J., (2000). E-Commerce Strategies : The Manufacturer Retailer Consumer Relationship, August 2000.
2. Behrendorff, G., Fisher, J., Goldsworthy, M. A., Corbitt, B., & Perks, G. (1996). Electronic Commerce Programs for Small to Medium Sized Enterprises,
3. Bennett, D. and Eustis, B., (1999). External Relationship Management : Information Systems Frontiers, 1999.
4. Burn, J. M. and Barnett, M. L. (2000) Emerging Models for Global e-commerce world.

**UNIT STRUCTURE**

- 12.0 Learning Objectives
- 12.1 Introduction
- 12.2 What is Law ?
- 12.3 Public Government and law
- 12.4 Introduction to Taxation
  - 12.4.1 Types of taxes
- 12.5 Let Us Sum Up
- 12.6 Answers for Check Your Progress
- 12.7 Glossary
- 12.8 Assignment
- 12.9 Activities
- 12.10 Case Study
- 12.11 Further Readings

**12.0 Learning Objectives :**

After learning this unit, you will be able to understand :

- About the Law
- About the Public Government and Law
- About the Taxation
- About the Types of Taxes

**12.1 Introduction :**

A rule of behavior that has been formed by a government or community across a given territory is referred to as a law. In order to address issues pertaining to crime, commerce, social relationships, property, finances, and so on, the law adheres to specific traditions and norms. The governing authority exercises control over the law and ensures that it is followed. The relationship that exists between the state and its citizens, as well as the relationship that exists between individuals with direct ties to society, are both governed by public law.

Taxation is the process through which a government or other taxing authority imposes or levies a tax on the people who are subject to that government's jurisdiction, such as businesses and individuals. Every level of economic activity is subject to some form of taxation, from payroll taxes to the goods and services tax (GST).

A tax law is a system of regulations that determines the tax that residents are obligated to pay to the government. These regulations are referred to as "taxation law." Taxpayers deduct the amount of tax owed from their income

or the value of their property in order to comply with the requirements of the Central and State governments.

## 12.2 What is Law ?

Law is a system of rules that are formed and are enforceable by social or political organizations to regulate behavior, with its precise meaning being a source of long-standing debate. Laws are designed to protect individuals and communities from harmful or illegal activities. The administration of justice has alternatively been referred to as both a science and an art.

The application of the law can be broken down into two distinct areas. Constitutional law, administrative law, and criminal law are all examples of public law, which focuses on the relationship between the state and its citizens. Private law is concerned with resolving legal conflicts that arise between private parties, be they individuals or organizations, in areas such as property law, contracts, torts and commercial law. On the other hand, the public-private law divide is not as evident in common law jurisdictions because of the presence of separate administrative court systems in civil law countries. This division is more pronounced in countries that follow the civil law legal system.

The study of legal history, philosophy, economic analysis, and sociology can all benefit from law's role as a source of intellectual research. In addition to this, the law presents significant and difficult questions on equality, fairness, and justice.

E-commerce is a business model that is centered online and has been established in order to provide customers with an online market portal that can be utilized by individuals for the purpose of buying and selling various goods and services. The definition of the term "purchasing or selling of goods or services including digital items over digital or electronic network" can be found in the Consumer Protection Act, 2019, which was passed in 2019. Therefore, in order to function properly, e-commerce typically makes use of a variety of different electronic services such as internet services, electronic money transfer services, electronic data exchange services, and so on. The laws that govern the functioning of the online environment in India need to be oriented in a certain direction in order to keep checks and balances in place because a significant proportion of goods and services in India are obtained electronically in an online setting (especially in the current pandemic- and lockdown-ridden world).

As we have gained an understanding of the concept of e-commerce, it is very important that we be aware that the regulation of this sector in India is very disorganized, with a wide gamut of statutory enactments that have been amended or enacted to govern the sector. This information is very necessary. However, there are a variety of regulations that govern actions related to e-commerce, and these statutes can be broken down into the main categories that are as follows :

**Laws Governing E-Commerce :** There are different provisions under the IT Act which guides the working for the e-commerce. The obligation to encourage e-commerce and e-governance falls on the Central Government, according to Section 84A of the Information Technology Act. Additionally, it is required to allow for the safe utilization of electronic means. Section 43A of the Information Technology Act includes a number of provisions pertaining

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to the protection of data. Whoever dishonestly uses the password or identity of another shall be punished with imprisonment that may extend to two years or with a fine of INR 1 lac or both, as stated in Section 66A of the IT Act, which imposes a penalty in the event of identity theft and provides that the penalty shall be imposed in the event of identity theft.

The Information Technology (Reasonable security practices and procedures and sensitive personal data or information) Rules, 2011 apply to e-commerce companies. Intermediary websites and their content are governed by the IT Act's Intermediary Rules 2011. The Ministry of Electronics and Information Technology (MeitY) notified the Information Technology (Guidelines for Intermediaries and Digital Media Ethics Code) Rules, 2021 ("Rules") in conjunction with the Ministry of Information and Broadcasting on February 25, 2021. The government's rulemaking powers under Section 87 of the IT Act allow it to publish intermediary recommendations and content blocking measures.

Intermediaries must disclose their rules and regulations, privacy policy, and user agreement on their websites/applications and periodically notify users, place hosting, storing, publishing, etc., bans on intermediaries, and prescribe an information retention time.

The Consumer Protection Act, 2019 (CPA 2019) and the Consumer Protection (E-Commerce) Rules, 2020 were both recently notified by the Ministry of Consumer Affairs, Food and Public Distribution (E-Commerce Rules). The Consumer Protection Act of 2019 (CPA 2019) made major amendments to the consumer protection law that was originally passed in 1986 in order to address challenges that are specific to this era of digitalization and e-commerce. The E-Commerce Rules establish a framework for regulating the marketing of goods and services online as well as the sale and purchase of those goods and services. The following are subject to the E-Commerce Rules :

- ✓ Any and all goods and services, including digital products, that are bought and sold over an electronic or digital network;
- ✓ Any and all models of e-commerce, including marketplace and inventory models;
- ✓ Any and all e-commerce retail (including multi-brand and single-brand retail trading); and
- ✓ Any and all forms of unfair trade practices that occur across any and all models of e-commerce.

E-commerce entities are subject to the E-Commerce Rules; however natural persons are exempt from their jurisdiction in the following circumstances :

- ✓ The activities are performed in a personal capacity; and
- ✓ The activities are not part of any professional or commercial activity that is carried out on a regular or systematic basis.
- ✓ The activities are performed in a personal capacity; and
- ✓ The activities are not part of any professional or commercial activity.

Simply put, the E-Commerce Rules will not apply in the case where an individual engages in a transaction in their personal capacity rather than on a regular or systematic basis for any professional or commercial activity. This is because personal transactions are not considered to be part of any professional or commercial activity. As a consequence of this, natural persons

who only occasionally engage in transactions that require interaction between consumers or between businesses and consumers may be excluded.

In addition, the E-Commerce Rules have an extra-territorial effect on those e-commerce businesses that may not be established in India but which persistently provide their goods and services to customers located in India. It is currently unknown where this amendment is going, despite the fact that the Ministry of Consumer Affairs is in the process of mulling over a draught amendment to the E-Commerce Rules (also known as the "Proposed Amendment"), which has the intention of broadening the scope of application as well as the list of dos and don'ts for e-commerce entities.

**Sectorial and Regulatory Compliance :** At the moment, the Foreign Exchange Management (Non-Debt Instruments) Rules, 2019, are the ones in charge of regulating E-Commerce businesses and platforms that have Foreign Direct Investment (FDI). E-commerce entity, as defined by the laws cited above, refers to a corporation that has been incorporated in accordance with either the Companies Act of 1956 or the Companies Act of 2013.

The Legal Metrology Act defines "E-commerce entity" as a company that was incorporated under the Companies Act of 1956 or the Companies Act of 2013, or a foreign company that is covered under Section 2(42) of the Companies Act of 2013, or an office, branch, or agency in India that is covered under Section 2(ii)(v) of the Foreign Exchange Management Act of 1999 that is owned or controlled by a person who resides outside of India and is conducting e-commerce business.

The Legal Metrology Act of 2009, when read in conjunction with the Legal Metrology (Packaged Commodity) Rules of 2011, stipulates that any entity engaged in e-commerce must comply with and meet the standards relating to labelling and packaging that have been established. These rules state that the online platform must display such mandatory information about the goods on the network, just as it is required to be displayed on physical packages as well.

It is the responsibility of the product's producer, seller, dealer, or importer to ensure that the representations made on marketplace model e-commerce portals are accurate; nevertheless, it is the responsibility of the e-commerce business to make the declaration. E-commerce institutions will be held liable and punished for failing to make relevant pronouncements as required by the Legal Metrology Act and rules. This is in contrast to the situation in which the manufacturer, seller, dealer, or importer will be held responsible for false information declared on a marketplace model e-commerce portal and punished in accordance with the provisions of the Legal Metrology Act and rules.

**Other Laws :** E-contracts, which are actually just standard form agreements, are what are created during the course of e-commerce transactions. These contracts are governed by the Indian Contract Act of 1872. ("Contract Act"). Therefore, in order for contracts involving e-commerce to be valid, the following conditions need to be met : I the parties to the contract must have freely consented to its formation; and (ii) there must be a lawful consideration for the transaction. The Contract Act regulates the criteria for the validity of contracts that are made through electronic means; the communication and acceptance of offers; additionally, revocation and the formation of contracts

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between consumers, sellers, and intermediaries. 4 In addition, it is imperative that any online platform have legally binding agreements for their terms of service, privacy policies, and return policies. The Information Technology Act of 2008 includes laws that pertain to the establishment of contracts through the use of electronic means. The Information Technology Act of 2000 contains a provision called Section 10A that ensures the legality of any contracts that are made via electronic means. It states that whenever the communication and acceptance of the proposal, as well as its revocation and acceptance, are made in electronic form, such a contract shall not be deemed to be invalid or unenforceable solely on the ground that electronic means is used for the purpose. Rather, it states that such a contract shall be deemed to be valid and enforceable whenever the communication and acceptance of the proposal is made in written.

The provisions that must be included in an organization's sales and shipping policy are outlined in the Sale of Goods Act of 1930. When it comes to the regulation of the sale of products, several terms and conditions, including warranties, conditions, and the transfer of property in goods, are all stated. In addition, the return and refund options that do or do not exist must be stated, either explicitly or implicitly, in the return policy.

According to the Competition Act of 2002, there are several facets of the e-commerce ecosystem that are more likely to be affected by challenges related to competition than others. Exclusive agreements between online merchants (also known as e-tailers) and their respective suppliers, steep discounts provided by online platforms that are frequently of a predatory nature, platform neutrality and platform parity provisions. E-commerce platforms fall under the purview of the provisions outlined in Section 3, which address anti-competitive agreements, as well as Section 4, which addresses the abusive use of a dominant position.

### **☐ Check Your Progress – 1 :**

1. E-Commerce Rules which are not established a framework for regulating the marketing of goods and services online as well as the sale and purchase of those goods and services :
  - a. Any and all e-commerce retail (including multi-brand and single-brand retail trading)
  - b. Any and all forms of unfair trade practices that occur across any and all models of e-commerce.
  - c. Any and all models of e-commerce, including marketplace and inventory models
  - d. None of these

### **12.3 Public Government and law :**

Two years ago, Singapore's Economic Development Board (EDB) assessed the Asia-Pacific B2C e-commerce market at US\$770 billion, overtaking Western Europe and North America. Singapore and Indonesia are the most active B2C e-commerce markets in Southeast Asia, the fourth largest in the world. Southeast Asian B2C e-commerce is predicted to treble to US\$53 billion by 2023.

I spent a year working at Alibaba's Southeast Asian e-commerce site Lazada. Lazada eLogistics (LEL) tasked me to work on three major projects

and many operational initiatives in seven locations in five Southeast Asian nations and China. I received the unusual chance to observe the sector and learn about long-term developments in e-commerce, e-logistics, and the digital industry.

The accumulation of a substantial number of customers and sellers on an e-commerce platform, with the goal of achieving market dominance, is one of the most important factors that determine whether or not the platform will generate a profit. Once the platform has been developed, there are a few different ways to monetize it :

- ✓ Charging a commission for transactions;
- ✓ Charging a fee to optimize product listings for sellers.
- ✓ Providing a value-added service to sellers, such as logistics and fulfilment.

As a consequence of this, a significant portion of the efforts made by any e-commerce platform are focused on attracting a greater number of customers and merchants.

E-commerce platforms offer a great experience for customers in the following ways, in order to attract customers :

- ✓ Constructing an affordable, quick, and dependable logistics service;
- ✓ Expanding their selection by onboarding additional merchants;
- ✓ Ensuring the quality of the products that are being sold through data analytics and the monitoring of buyer feedback and product reviews; and
- ✓ Expanding their channels for sales beyond the boundaries of the local marketplace, such as by building global collections (by inviting foreign sellers onto the platform) and the introduction of "malls" such as Tmall, LazMall, and Shopee Mall

E-commerce platforms measure and grow key indicators such as Gross Merchandise Value (GMV), number of monthly and daily active users, etc., in an effort to entice more sellers to use their platforms. In addition to this, they offer merchants logistical services that are economical, dependable, and quick. There are also many features that can be found on the seller centers of e-commerce platforms that enable merchants to sell successfully. Some examples of these features include data analytic tools and "basket building" tools, which allow merchants to offer discounts for purchases that exceed a certain amount, as well as free delivery, and so on.

Understanding local markets and being able to successfully compete in them presents a significant obstacle for businesses in the digital industry that operate on a regional scale. Cultures from all around the world can be found in Southeast Asia. What does well in the marketplace in one nation might not do as well in another. In a similar vein, the efficiency of certain marketing strategies varies greatly depending on the nation in which they are employed.

The formation of a digital ecosystem is one of the most important steps in achieving a thriving and long-term digital economy. Many cities in the region are competing with one another to achieve the same goal and are using a variety of enticements to get businesses to locate their operations in their communities. It will become increasingly challenging for those who arrive late to catch up. The current situation in Singapore is favorable, and the actions we have taken to develop our digital ecosystem position us favorably for the near future.



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This in no way guarantees our success in the long run or in a sustainable manner. To maintain our competitive edge, we will need to continually evaluate our policies, programs, and initiatives. This will allow us to assist Singapore-based digital companies in gaining access to talent as well as regional partners and markets, and it will also allow us to entice more international companies to locate their headquarters in Singapore. This would require keeping a careful eye on the developments and trends occurring in the region.

### ❑ Check Your Progress – 2 :

1. GMV stands for :
  - a. Gross Machine Value
  - b. Great Mercantile Value
  - c. Gross Merchandise Value
  - d. All of these

## 12.4 Introduction to Taxation :

Nearly every nation on earth has some form of taxation, which is defined as the imposition of obligatory charges on individuals or entities by the governing bodies of those nations. Although taxation can be used for a variety of purposes, its primary function is to produce income to cover the costs of governmental expenditures.

Taxes are by far the most significant contributor to the government's coffers in contemporary economies. However, taxing is not the only means by which a government might bring in cash. Taxes are distinct from other types of revenue in that they are obligatory levies that are not required (with the exception of payroll taxes), which means that in most cases, they are not paid in return for a particular good or service.

A direct tax is a sort of taxation that is levied on an individual and is often calculated in accordance with the person's ability to pay, which may be determined by the individual's income, consumption, or total wealth.

A form of taxation known as an indirect tax is one that is levied not directly on the production or consumption of goods and services but rather on the transactions themselves.

The Value-Added Tax, or VAT, is a form of indirect taxation that is levied by a government on the amount that a company adds to the price of a commodity during the process of production and distribution of a thing. This tax is known as an excise tax. The credit technique is used to collect VAT; this method acknowledges and accounts for the taxes that have already been paid on inputs that have been purchased in the past.

### 12.4.1 Types of taxes :

The paying of taxes is beneficial on several fronts, including the growth of the nation, the improvement of infrastructure, the advancement of civilization, and even the funding of welfare programmes for the country as a whole.

There are two primary categories of taxes, each of which can then be further broken into a variety of subcategories. Direct taxes and indirect taxes are the two primary tax classifications. There are other smaller cess taxes that are classified under a variety of additional headings. There are several distinct

acts contained within the Income Tax Act that control each of these taxes.

- **Direct Tax :** A direct tax is a tax that is owed by the individual or legal entity directly to the government and must be paid in cash or by check. The Central Board of Direct Taxes does not pay sufficient attention to direct taxes (CBDT). It is not possible to pass on one person's direct tax liability to another person or legal entity. The direct tax system can be broken down into the following sub-categories :
  - o **Income Tax :** This refers to the tax that is imposed on the annual income or the profits and that is paid to the government in a straightforward manner. Taxes on income are required to be paid by everybody who has even the smallest amount of financial gain. The annual taxable income over which an individual is not exempt from paying tax is capped at Rs. 2.5 lakh if they are under the age of 60. The threshold at which an individual is eligible for a tax exemption increases to Rs. 3 lakh between the ages of 60 and 80. The tax exemption ceiling of Rs. 5 lakh applies to those who are 80 years of age or more. There are numerous tax brackets for people with varying amounts of income. Taxes must be paid by individuals as well as by legal entities like corporations and partnerships. All Artificial Judicial Persons, Hindu Undivided Families (HUF), Bodies of Individuals (BOI), Associations of Persons (AOP), Corporations, Local Firms, and Local Authorities are Included in This Group.
  - o **Capital gains :** When money or property is gained through investments or the sale of property, a taxpayer is subject to a tax known as a capital gain. Gains in capital from an investment could have been realized either quickly or over a longer period of time. This encompasses all forms of in-kind trades that are then evaluated according to their monetary worth.
  - o **Securities Transaction Tax :** The stock market and trading in securities are both subject to the STT. Both the price of the share and the value of securities that are traded on the ISE are subject to the tax (Indian Stock Exchange).
  - o **Prerequisite Tax :** These are the various levies that are placed on the advantages and privileges that are given to workers by their employers in the form of benefits and perks. The function of the privileges and advantages, regardless of whether they are official or personal, needs to be specified.
  - o **Corporate tax :** The term "corporate tax" refers to the income tax that a firm is required to pay. It is determined by which of the various categories the revenue falls within. The following is a list of the sub-categories that fall under corporate taxes :
    - **The dividend distribution tax (DDT) :** This tax is imposed on the dividends that businesses are required to pay to their shareholders. It is applicable to either the investor's net or gross income that they get as a result of the investment.

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- **Fringe benefit tax (FBT) :** This refers to the tax that is imposed on the perks and privileges that an employee receives from their employer. This includes costs associated with lodging, travel, the employee's leave travel allowance, and entertainment, the employee's contribution to a retirement fund, employee welfare, the Employee Stock Ownership Plan (ESOP), and other similar initiatives.
- **The Minimum Alternative Tax (MAT) :** MAT is the method by which businesses make payments to the IT Department. This method is governed by Section 115JA of the IT Act. MAT does not apply to businesses in the power and infrastructure industries; hence those businesses are exempt from the tax.
- **Indirect Tax :** Indirect taxes are those that are placed on top of prices already established for goods and services. The individual or company that is providing the service or product is the one responsible for collecting indirect taxes. The cost of the goods and services receives an additional increase to account for the tax. It leads to an increase in the cost of the item or service in question. At this time, the government only levies one form of indirect tax on individuals and businesses. The acronym for this tax is "GST," which stands for the Goods and Services Tax.

The Products and Services Tax, sometimes known as GST, is a consumption tax that is imposed in India on the provision of both goods and services. The Goods and Services Tax (GST) must be paid at each stage of production, regardless of whether the commodity in question is a good or a value-added service. It is anticipated that it will be returned to the many entities that participated in the producing process (and not the final consumer).

Because of the Goods and Services Tax (GST), several other types of taxes and fees, including the Value-Added Tax (VAT), octroi, customs duty, Central Value-Added Tax (CENVAT), and customs and excise taxes, have been done away with. Electricity, alcoholic beverages, and petroleum-based products are examples of goods and services that are exempt from taxation under the GST. These are subject to taxation by the different state governments in accordance with the taxation system that was in place previously.

- **Additional Taxes :** Other taxes provide a negligible amount of money and are relatively insignificant cess taxes. The following is a list of the different sub-categories that fall under other taxes :
  - o **Property Tax :** The term "property tax" refers to the same thing as "real estate tax" or "municipal tax." Property tax is something that applies to both residential and commercial property owners. It is put to use in the upkeep of a number of the essential aspects of the civil service system. The municipal entities that are based in each city are the ones that are responsible for collecting property tax.

- o **Professional Tax :** Those who practice a profession or receive a salary, such as lawyers, chartered accountants, doctors, and others, are subject to this employment tax, often known as the professional tax. The rate of this tax varies from one state to the next. There are certain states that do not impose a tax on professionals.
- o **Entertainment Tax :** The term "entertainment tax" refers to the tax that is levied on various forms of entertainment such as movies, television shows, and exhibitions. The amount of the tax that is deducted from the gross earnings is as follows : The tax on entertainment is sometimes known as the "amusement tax."
- o **Registration fees, stamp duties, and transfer taxes :** When a property is purchased, additional taxes and fees, such as registration fees, stamp duties, and transfer taxes, may be levied in addition to or as a supplement to the property tax that is already owed.
- o **Education cess :** This is a levy that is charged in order to pay the educational programs that have been initiated and are being maintained by the government of India.
- o **Entry tax :** Entry tax is a tax that is levied on the products or goods that enter a state, particularly through enterprises that are involved in e-commerce. This tax is applicable in the states of Delhi, Assam, Gujarat, Madhya Pradesh, and other similar states.
- o **Road Tax and Toll Tax :** The revenue from the road tax and the toll tax is put toward the upkeep of the road and toll infrastructure, respectively.

□ **Check Your Progress – 3 :**

1. Corporate tax further divided into \_\_\_\_\_ types of taxes :  
 a. 4                      b. 3                      c. 2                      d. All of these
2. Property tax is also known as \_\_\_\_\_ :  
 a. Municipal Tax                      b. Entertainment Tax  
 c. Professional Tax                      d. Value added tax
3. VAT stands for \_\_\_\_\_ :  
 a. Value adverse tax                      b. Value assessment tax  
 c. Value added tax                      d. None of these

<b>12.5 Let Us Sum Up :</b>
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A rule of behavior that has been developed by a government or society throughout a certain territory is referred to as a law. This rule of behavior must be followed throughout the territory. The law adheres to a number of specific customs and standards in order to address a variety of concerns, including those pertaining to crime, business, social relationships, property, finances, and so on. The governing authority maintains control over the legal system and works to guarantee that the law is adhered to. Both the relationship that exists between the state and its citizens and the relationship that exists between individuals who have direct ties to society are governed by public law. Public law also governs the relationship that exists between persons who do not have direct ties to society.

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The purpose of taxes is to provide the government with funds for spending without inflation. Taxes are used by the government for a variety of purposes, some of which are : Funding of public infrastructure, Development and welfare projects, Defense expenditure, Scientific research, Public insurance, Salaries of state and government employees, Operation of the government, Public transportation, Unemployment benefits, Pension schemes, Law enforcement, Public health, Public education, Public utilities such as water, energy, and waste management systems

A wide variety of incomes, including wages, profits from businesses, rental income from real estate, and others, are subject to taxation. In addition, there are taxes on wealth, sales, properties, payrolls, value-added products, services, and a variety of other things. Filing one's income tax returns is not only required but also helpful for people who earn salaries that are subject to taxation since they are considered to be above the threshold for the standard exemption amount. This is true even if the amount of tax that is owed after deductions is equal to zero. However, if your income is less than the ceiling for the basic exemption, you should still file your taxes because doing so has benefits. Few of the benefits are Loan approvals, Visa applications, Self-employed individuals, Government tenders, carrying forward of losses, Claiming tax refunds, High-cover life insurance and compensation.

### 12.6 Answers for Check Your Progress :

- Check Your Progress 1 :**  
1 : d
- Check Your Progress 2 :**  
1 : c
- Check Your Progress 3 :**  
1 : b          2 : a          3 : c

### 12.7 Glossary :

1. **Law :** an official rule of a country or state that says what people may or may not do.
2. **Tax :** Taxes are mandatory fees or financial charges made by any government on individuals or organizations to fund the greatest public services and infrastructure.
3. **Direct Tax :** Income and earnings are taxed directly.
4. **Indirect tax :** Products and services are subject to several forms of indirect taxation.

### 12.8 Assignment :

1. Write a short note on taxation and what are the types of taxes.

### 12.9 Activities :

1. Explain the difference between the direct tax and indirect tax including their sub-categories.

**12.10 Case Study :**

1. Study about the laws running in India for e-commerce.

**12.11 Further Reading :**

1. EDB Singapore, "E-Commerce Set to Burgeon in SEA", March 8, 2017, accessed January 22, 2020, <https://www.edb.gov.sg/en/news-and-events/insights/innovation/e-commerce-set-to-burgeon-in-sea.html>.
2. Satish Meena, "Online Retail in Southeast Asia Is Expected To Reach \$53 Billion by 2023", Forrester, November 29, 2018, accessed January 22, 2020, <https://go.forrester.com/blogs/online-retail-in-southeast-asia-is-expected-to-reach-53-billion-by-2023/>.
3. Bennett, D. and Eustis, B., (1999). External Relationship Management : Information Systems Frontiers, 1999.
4. Burn, J. M. and Barnett, M. L. (2000) Emerging Models for Global e-commerce world.

<b>BLOCK SUMMARY :</b>
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The block detailed on Laws for E-commerce in India and its usability to people across the globe. While studying this block, you will be made to understand about the problems of social, political and ethical with necessary solutions. While studying this block, you will learn about the taxation that which types of taxes are there which we pay.

This block provides you the knowledge about the Intellectual Property Rights like copyrights, patents, trade secrets and the candidates' ethical principles. While studying this block, you will be made to understand how to analyze ethical dilemmas which effects E-commerce.

<b>BLOCK ASSIGNMENT :</b>
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❖ **Short Questions :**

1. What is VAR ?
2. What are the steps for analyzing Ethical Dilemmas ?
3. What is taxation ?
4. What is Copyright ?
5. What are the types of taxes ?

❖ **Long Questions :**

1. Explain Candidates' Ethical Principles in detail.
2. Explain the types of Intellectual Property Protections.
3. What is tax ? Explain its types in detail.



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❖ **Enrolment No. :**

1. How many hours did you need for studying the units ?

Unit No.	9	10	11	12
No. of Hrs.				

2. Please give your reactions to the following items based on your reading of the block :

Items	Excellent	Very Good	Good	Poor	Give specific example if any
Presentation Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Language and Style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Illustration used (Diagram, tables etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Conceptual Clarity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Check your progress Quest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Feed back to CYP Question	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

3. Any other Comments

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## **E-COMMERCE**

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### **BLOCK 4 : E-COMMERCE WEBSITES AND E- BANKING**

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UNIT 13 E-COMMERCE WEBSITES

UNIT 14 PAYMENT SYSTEMS

UNIT 15 E-BANKING ONLINE

# ***E-COMMERCE WEBSITES AND E-BANKING***

## **Block Introduction :**

The Internet is a network of computers that allows for the simultaneous exchange of data between a large number of individual computers. In this scenario, the information can be transmitted by the Sender, and it is received by the Receiver. A further analysis reveals that a website is a form of electronic media that acts as a global representation of an individual, society, or company, among other things.

You will be able to gain knowledge and comprehension of the fundamentals of E-commerce as well as the fundamentals of the Internet and websites during this section of the course. This section will provide an in-depth explanation of Indian e-commerce websites. You are going to learn how the evolution of the Internet takes place, as well as what the earlier and current achievements were. During the course of this section, you will gain an understanding of the notion of electronic clearing facility as well as e-banking in India.

You will be able to get knowledge about fundamental internet tools after reading this block. They will be familiar with the processes involved in internet banking in addition to internet safety. The block will assist you in gaining a better understanding of their future elements, including how various financial technologies will function in the future with regard to the use of the most recent software and information.

## **Block Objectives :**

**After learning this block, you will be able to understand :**

- The various categories of websites
- Suggestion about the advertisement of websites
- The fundamental contributors to the expansion of the web
- Having a greater understanding of the many forms of web design
- The Characteristics of Online Shops That Use Hosting Services
- Concept concerning Indian online shopping websites
- Acquiring Knowledge of the Electronic Delivery Channel
- The Concept of Online Banking in India
- Components that make up the safe environment of internet banking

**Block Structure :**

**Unit 13 : E-Commerce Websites**

**Unit 14 : Payment Systems**

**Unit 15 : E-Banking Online**

**UNIT STRUCTURE**

- 13.0 Learning Objectives
- 13.1 Introduction
- 13.2 Website : The Concept
- 13.3 Types of Web Sites
- 13.4 Methods of Promoting Site and Searching the Web
- 13.5 Factors for Growth of Web
- 13.6 Web Page
- 13.7 Types of Web Design
- 13.8 Some-E-commerce Websites
- 13.9 Software Tools
- 13.10 Ecommerce Hosting Services
- 13.11 Website Service Providers
- 13.12 Some Popular Websites
- 13.13 Some Indian Websites
- 13.14 Working of Web Track
- 13.15 Let Us Sum Up
- 13.16 Answers for Check Your Progress
- 13.17 Glossary
- 13.18 Assignment
- 13.19 Activities
- 13.20 Case Study
- 13.21 Further Readings

**13.0 Learning Objectives :**

After learning this unit, you will be able to understand :

- Study about the Website and its types
- Study about the methods of Promoting Sites and Web Searching
- Study about the factors for Web Growth
- Study about the Web Page and the Types of Web Design
- Study about the Some-E-commerce Websites
- Study about the Software Tools
- Study about the Ecommerce Hosting Services and the Website Service Providers

- Study about Some Popular Websites
- Study about Some Indian Websites
- Study about the Working of Web Track

### **13.1 Introduction :**

The Internet is formed by the interconnection of several different networks. It is also known as the World Wide Web, and it is a massive web that is spread out over the world for the purpose of exchanging information. Internet is one such convention that cannot be seen, but based on the services it provides, internet is one large giant that is highly user friendly, practicable, and at your fingertips. In this section, you will learn a variety of ideas that are associated with the internet. The Internet is a massive global network consisting of computers. It is able to send and receive data from, in addition to a great many other services.

You will have no trouble establishing a connection to the Internet if you use these components. Buying and selling of goods is what "e-commerce" refers to. The buyer and the vendor will communicate with one another about this matter. Your website serves as an electronic medium through which your firm is represented to the rest of the world. As you continue to work through this lesson, you will progressively develop a comprehensive understanding of what a website is and the components that compose it.

Using the internet and specific software tools, people from all over the world will be able to communicate more effectively through e-commerce websites. The gathering and transmission of information is a pretty simple process. A user has the ability to collect and move to any topic they like, as well as discuss and talk with other people who are also available on the internet. People from different parts of the world who share like interests can become friends with one another. Because of the internet, we are able to conduct business online.

### **13.2 Website : The Concept :**

Businesses use intranets for internal communication, information, and use. Websites enable global interaction. Website visitors can be monetized in numerous ways. The most important thing to remember is that a website must have professional and fairly attractive design, high performance, high technological services, and all of the current services and features to fully profit from it.

Websites are online. Its unique Internet address provides access. It has several webpages. All websites have landing pages. Individuals, businesses, and organizations run websites. Digital information is shown on each website's pages. These websites have text, audio, video, photos, and more. Websites link pages internally. HTML underpins these tools and websites. Website creation starts with HTML, however there are many software programmes. Websites are essential in today's fast-paced, competitive environment. This is the easiest way to promote your business. Most websites are static or dynamic.

Websites benefit : Shoppers frequently find your website's products and services. Thus, your website helps these customers shop before buying. You'll have an edge over competitors without websites. Websites are online 24/7. 24/7. Thus, your internet store is constantly open. You earn huge. Your websites can reach international customers. You can answer inquiries on your website. Websites can help 24/7.

Clients can use your website after hours. Without a website, clients may seek support elsewhere, hurting your business. Websites stop this. Give your customers a bonus. Your website can include advice and content. Your website can sell these products and services. Customers may view everything you offer, including those stated. If your business website has accurate, timely, and current information, customers will trust, like, and return. Customers will feel more connected to your organization and work with you if your website offers information about your products, services, support, team, values, events, news, and more. Your webpage has company info. Internet advertising enriches businesses. These enterprises don't need real-time print or television advertising because they sell globally online. Companies save a lot. Thus, you make your company's products and services available worldwide via the Internet for free. Besides advertising, making your products and services available abroad boosts sales. This skill enhances firm earnings. Being available for clients and showing real concern will also increase customer loyalty.

Use common sense and learn to build websites for yourself or your business. Inform them of the benefits of having a website and develop excellent websites to promote you, your product, or your business.

### **13.3 Types of Web Sites :**

With the advent of websites, vast groups of people—whether they be companies, businesses, medicine, education, commercial, scientific, or personal—have seen a significant increase in their customer base. This is the case across all sets of domains.

- **Business Websites :** These websites offer a vast number of business services that assist in the process of retaining clients. These websites give consumers with solutions to problems pertaining to their businesses. These websites inform customers about his company and display the various items and services that are available to him that they require. The websites should be appealing in terms of designs, information, and technology in order to create a link between you and your customers. Websites can provide you with a global image and presence that is accessible around the clock.

A website of this kind enables a company to provide round-the-clock service to its clientele, regardless of the time of day. It ensures that the customers are always up to date and informed. If a customer is familiar with your company through your website, they should have an easier time conducting business with you because they will feel more at ease. It ensures that your clients are aware of the most recent information, services, and goods. Your customers will be informed of your specials, sales, and other offerings, which will contribute to an increase in your company's revenue. The level of competition in your market area decreases. You can improve your image by including the URL of your website, often known as the URL, on your business card and any other stationery items that you use. It is possible to achieve better commercial partnerships on a local level as well as on a global scale. When your customers need to get in touch with you, steer them towards simple channels like email and the like rather than other options.

- **Marketing Websites :** There are some websites that are utilized not only for advertising but also for the promotion of different companies and



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services. It lowers the overall cost of the marketing activities while simultaneously expanding their scope of promotion and publicity. By presenting your products on such a website, your company will become more well-known, reasonable, and productive. A global approach and improved product and service publicity across the globe are two advantages that come with using a website of this kind. Websites like this create a strong statement about your company, giving the image of careful preparation and a secure consumer future by securing an online presence.

Marketing websites leads to a growth in both communication and sales. These are significant sources of potential customers. When compared to print, you are able to show and transfer any type of information. Using websites of this kind grants you access to information about the shopping habits and acquisitions of customers and improves the marketing opportunities available to you. It contributes to the automatic collecting of orders, payments, and facts about the customer. You can also keep and obtain an online database of products, which makes modification quicker, simpler, and more affordable.

- **Search engines Websites :** These websites are more effective than any other kind of advertising in terms of targeting a certain demographic for a marketing campaign. Your customers will be able to know exactly what they are seeking for thanks to search engines, which will allow them to make purchases and sales in a much timelier manner. Achieving a high-ranking on-search engines will drive more visitors to your website, which will boost your site's popularity and ultimately your revenue. The website will reduce the costs associated with communication and upkeep for your business. You may also generate brand recognition by linking your website to other promotional websites or activities and increasing traffic to those websites. Your company now has an additional location for processing customer orders.
- **Customer Relationship Websites :** Websites help improve contact with customers by exhibiting and demonstrating products that meet their specific requirements. In order to improve communication, a website ought to be well-equipped, supportive, simple, and easy to navigate on one's own. Message boards, blogs, various web forms, and other contact information should all be included on such websites. Websites give convenient support for your customers. These websites should provide online assistance to customers in the form of lessons and tutorials for the products and services they require with the objective of assisting customers in achieving their goals. These websites should engage customers around the clock to provide support by maintaining a frequently asked questions page and a doubt blog. Communication, assistance, and access to the most recent information are all facilitated by these websites, which contribute to an improved business-to-customer relationship.
- **Credibility is increased by using websites :** It should make getting in touch with you as simple as possible. It lets the client to sign up and order items and services online while simultaneously collecting information about the customer from the website. It gives clients the ability to download any relevant forms or information without requiring them to make personal contact. It makes it possible to compile tailored mailing lists for use in your company.

- **Feedback Websites :** Some websites offer customer support in the form of feedback forms, where users can submit their issues. These websites offer an acceptable solution in a timely manner, which is provided by them. It makes business-to-customer relationships quicker, easier, and more cost-effective, which all contribute to an improvement. Such websites are an essential component of the overall promotional and marketing strategy employed by businesses. Websites can be configured with content management systems in such a way that you can update any section of your website anytime it is necessary to do so.
- **Online News Sources :** These websites display relevant news articles, which users can access whenever they like. These kinds of websites ought to be kept up to date with the most recent blogs and daily news.

❑ **Check Your Progress – 1 :**

1. Which one is not the type of Websites :  
a. Search Engine    b. Marketing    c. Feedback    d. Management
2. Which type of website contains message boards, blogs, various web forms, and other contact information in it :  
a. Marketing    b. Customer-Relationship  
c. Feedback    d. Search Engine

**13.4 Methods of Promoting Site and Searching the Web :**

Advertising is a sort of corporate communication that employs a variety of methods to reach a specific audience with a specific message in order to accomplish particular organizational goals. These goals can be summarized as follows : Promotion is an activity that is nearly always carried out by businesses, regardless of the sector in which they operate. The range may be anything from the money spent by multinational corporations on securing the assistance of high-profile celebrities to serve as corporate ambassadors to the proprietor of a one-person organization handing out business cards at a local business folk's conference.

For a promotional strategy to be successful, the dealer needs to have a firm grasp on the relationship between promotion and supplementary marketing activities. As a consequence of this, decisions regarding upgrades ought to be made with an obligation for how the decision would affect other areas of the firm. The participation of other people in the impacted serviceable regions is necessary for the publicity plan to be successful overall.

Consumer markets, include quick-moving consumer goods and durable consumer goods, as well as a coordinated marketing mix to accomplish goals : Differences from consumer markets, adding value through service, industrial, non-profit making, government, and re-seller markets are some characteristics of organizational markets, differences between services and tangible products, including intangibility, ownership, inseparability, the ability to expire, variability, the 7Ps, strategies, service elements of tangible product marketing, and tangible and intangible benefits and International markets, including topics such as globalization, the European Union, benefits and hazards, market attractiveness, and strategies.

It is possible to describe promotion as "the coordination of all seller-initiated efforts to set up channels of information and persuasion in order to

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facilitate the sale of products or services or the acceptance of an idea." It is a term that refers to the activities that are undertaken in order to push forward or advance a concept in such a way as to acquire acceptability and acceptance.

Promotion is telling and selling to potential customers. There are many other types of media that you can use to publicize your e-commerce websites, including but not limited to the following :

- **Television :**
  - ✓ Extensive scope
  - ✓ A prominent position
  - ✓ The credibility that is perceived Audio and visual
  - ✓ Messages and slogans
  - ✓ Curiosity, a sense of purpose, and eagerness
- **Radio :**
  - ✓ A range from moderate to extensive
  - ✓ A prominent position
  - ✓ Effective for short and straightforward messages and slogans
  - ✓ Has the potential to pique attention, raise awareness, and stimulate excitement
- **Newspapers :**
  - ✓ A prominent position
  - ✓ Able to read and conduct research
- **Internet :**
  - ✓ Information on a global scale can be gathered, not just on a local or regional scale
  - ✓ Children and teenagers learning how to use computers
  - ✓ List-serves can have a high status
  - ✓ Their costs are often relatively low
  - ✓ Capable of creating links to several other websites
  - ✓ Also, able to create pages on already existing websites
- **Brochures :**
  - ✓ Capable of conveying a greater amount of information than posters
  - ✓ Suitable for imparting educational information
  - ✓ Do not always need to be manufactured at a high cost

In addition to this, you can introduce various schemes online on your website in order to attract customers. Some examples of these schemes are as follows : Highlight Products in an Efficient Manner, Offers Relating to Promotions, Email reminder, Validating the Viewpoint of the Customers etc.

### **13.5 Factors for Growth of Web :**

It is common practice to observe that every store will consider upcoming trends that will fuel the expansion of e-commerce. When making predictions, the majority of vendors' thoughts are focused in the right direction, and they are easily able to determine which perspective is most accurate. It is only

possible to have an effect on a healthy growth figure of the success of e-Commerce by integrating a variety of tactics that can make buying online more fun and distinctive. However, these tactics may be put into action quite quickly.

It should be noted that the architecture of the World Wide Web was developed with the intention of having criteria that are planned and framed in accordance with specific principles, which lead to software design thinking about the state of the network with the following considerations :

- ✓ An information system, in contrast to the vast majority of database systems, needs to be able to store random relationships between any and all arbitrary objects;
- ✓ If two groups of users started using the system independently, establishing a link from one system to another should require just a little amount of work and should not require any non-salable activities such as combining link databases.
- ✓ Any attempt to restrict users as a whole to the utilization of specific programming languages or operating systems was destined to fail from the beginning;
- ✓ The information must be accessible across all platforms, including any that may come into existence in the future;
- ✓ Any effort to force the mental model that users have of the data into a predetermined pattern was bound to fail from the beginning;
- ✓ If the information that exists within an organization is to be accurately reflected in the system, it must be easy for the person who is directly knowledgeable to either enter it or make corrections to it.

### **13.6 Web Page :**

A web page is a representation of information and data that is found on the internet that is created using an electronic format. Every website that you visit will have its own web page. A website often contains a large number of individual pages. The graphic designer is responsible for the design of the web pages, which illustrate the structure of a website. It is a tool for communicating with other consumers, displaying information to them, and gathering their comments. You should design the websites of your website in such a way that they give off an air of professionalism or a personal touch in order to make your website appear more appealing. Plain text, pictures, motion, and even music can all be supported by webpages. Important Facts to Keep in Mind are as follows :

- ✓ The written content of the page is considered to be the most important component.
- ✓ The content that you create ought to provide something of value to the reader and encourage them to come back.
- ✓ Take a look at the goals of your website as well as the audience you intend to attract, and adjust your message accordingly.
- ✓ There shouldn't be any mistakes on the webpage that's being designed.
- ✓ The writing style should be one that allows for clear comprehension by the reader.

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- ✓ You should include photos, graphics, music, and movies on your webpages if you want them to be appealing.
- ✓ The design of the website ought to be such that it is simple for a single person to navigate their way through it.
- ✓ The webpage ought to be lightweight and should process quickly without requiring the user to wait.
- ✓ Use animations sparingly because they are resource-intensive and take up a lot of storage space on the web.
- ✓ If you want to attract clients, it is best to make your home page appealing by using things like photographs, animations, graphics, and music, among other things.
- ✓ When designing your website, make sure to use straightforward software so that it can be navigated easily by everyone.
- ✓ You must always make use of tables in order to arrange and align the text on the page, as this makes the page look more appealing.
- ✓ You have the option of centering, right justifying, or left justifying the text and visuals contained within table cells.

### ☐ Check Your Progress – 2 :

1. A webpage is :
  - a. A representation of information and data that is found on the internet
  - b. A term that refers to the activities that are undertaken in order to push forward or advance a concept in such a way as to acquire acceptability and acceptance.
  - c. Considered to be static if it does not have any server-side functionality
  - d. None of these

### 13.7 Types of Web Design :

Because it is becoming increasingly difficult to construct websites in a way that makes seeing them easily accessible for visitors, responsive design may be the type of design that is best suited for your company's website.

A website is considered to be static if it does not have any server-side functionality, does not have a database, and just has text and images that do not change. Smaller websites that do not contain or intend to display complicated features or content can benefit from static web design. Static websites can still be created to seem incredibly attractive with stylish graphics and content; however, they are unable to do any creative actions depending on any programming that is taking place behind the scenes. A website of this type is less difficult to use, works more quickly, can be developed for a lower financial outlay, and comes across as both professional and fashionable. A website uses various types of design formats like :

- **Fixed design :** Web pages utilizing the fixed design format are aligned for a standard layout, which cannot be changed regardless of the type of device being used to access a particular website or the size of the browser window. Content is difficult to see on smaller devices, such as smartphones or tablets, is not acceptable to the user and should not be displayed on these devices. The user will need to scroll horizontally in

order to see the rest of the content on the page, and they can zoom in order to make the text fit on the page. When the browser on a screen is made larger or smaller, the images and text on the screen may appear to be falling apart visually.

- **Liquid design** : The page's content will appear either larger or as though it has shrunk depending on the size of the browser window, which is the concept behind the term "liquid design." When the browser window is resized, the content on the page will spread itself out to fill the width of the browser when expanded. Because the columns on the webpage that hold the information are generated using percentages rather than the fixed columns that are used in fixed design, the sizes of the columns can vary relative to one another depending on how they relate to one another.
- **Responsive design** : Displaying webpages on various devices in formats that are simple to read and navigate brings the goal of simplifying the process of seeing websites one step closer to being realized. Because of this, the user does not need to resize the page, pan the page, or scroll over the page in order to read the content of the website. The website may, for the most part, be viewed and navigated without difficulty on desktop computers, tablets, and smartphones. When designing a website with a responsive layout, web developers do not need to create numerous website formats that have been reorganized for use on a variety of devices.

Websites are built utilizing responsive designs are meant to display content on the basis of the size of the browser window. It can be predetermined or changed dynamically. For instance, if the width of the browser window is decreased to 70% of its maximum width, the web page may have been configured to display only two columns on the screen rather than all three columns by default. The third column of content will be displayed once again on the screen once the browser window has been expanded to cover more than 70 percent of the screen. The quality of the photographs and videos that are downloaded is also variable from one internet connection to another, and this is dependent on the device that is doing the downloading.

#### □ Check Your Progress – 3 :

1. Web pages utilizing the \_\_\_\_\_ design format are aligned for a standard layout, which cannot be changed :
  - a. Responsive
  - b. Liquid
  - c. Fixed
  - d. Respective

### 13.8 Some E-commerce Websites :

People are increasingly drawn to the convenience of online shopping and exploring the internet in search of sales and discounts, which has led to the proliferation of a great number of websites that specialize in e-commerce. These online services allow for payment to be made at the customer's doorstep after the product has been delivered, which is both an interesting and natural development. The following is a list of some of the names of websites that currently offer e-commerce :

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Website	Link of Website	Detail
Amazon	<a href="https://www.amazon.in/">https://www.amazon.in/</a>	
Flipkart	<a href="https://www.flipkart.com/">https://www.flipkart.com/</a>	
Myntra	<a href="https://www.myntra.com/">https://www.myntra.com/</a>	

### 13.9 Software Tools :

There are several considerations involved in web design. These aspects will determine the attractiveness of your website as a whole. When developing websites, it is necessary to take a number of aspects into consideration, including appearance and feel, size, layout, color scheme, graphics, compositions, typography, downloading size, resolution, page layout, and functionality. The following pieces of software and hardware are required in order to construct an e-commerce website :

- ✓ **Software :** HTML, Cascading Style Sheets (CSS), JavaScript, and Visual Studio
- ✓ **Database System :** Oracle, SQL Server, MySQL
- ✓ **Search Engine Optimization (SEO) :** Effective Content, Dynamic URLs, and Server Management
- ✓ **Design Softwares :** Photoshop, Coral Draw, Illustrator
- ✓ **Framework :** Magento, .NET, PHP, OpenCart

The accuracy with which you make a selection in Photoshop is of the utmost importance for producing work that is nice and clean when it comes to image editing, image processing, and the creation of effects in photographs and images. Dreamweaver is a form of software that is typically employed in the design process but can be utilized for any purpose. Having this kind of designing software makes the process of developing websites much simpler.

### 13.10 Ecommerce Hosting Services :

The term "e-commerce hosting" refers to a specific kind of internet hosting infrastructure that services websites that deal in electronic commerce. It is distinct from standard web hosting in that it possesses one-of-a-kind

features and capabilities that are designed to manage and operate commercial websites. This includes the following :

E-commerce hosting is meant to provide start-up companies and established enterprises with all of the tools and services required to establish, administer, and operate an online storefront. When conducting business online, commercial firms will typically search for hosting providers that can sufficiently satisfy their requirements for e-commerce transactions. These e-commerce providers are essentially hosting companies that give their customers with e-Commerce hosting packages.

It is important to note that a company will engage into e-commerce contracts with its hosting provider and acquire hosting space on server, which is generally charged once per year, in addition to some processing expenses. The hosting server is shared with other customers or businesses to accommodate the necessary volume of traffic.

These hosting providers will normally assist in the setting up of Internet merchant accounts, which are a type of bank account that are established for the processing of Visa card, MasterCard, American Express, and other credit-card transactions. The purpose of these accounts is to ensure the security and safety of payment processing procedures.

**□ Check Your Progress – 4 :**

1. \_\_\_\_\_ hosting is different from standard web hosting in that it possesses one-of-a-kind features and capabilities that are designed to manage and operate commercial websites :
  - a. E-business
  - b. E-commerce
  - c. E-Transaction
  - d. All of the above

**13.11 Website Service Providers :**

Putting together a website is similar to putting together a collection of files that you intend to share with other individuals who are also connected to the internet. To get started, a web hosting server is required to house all of the individual files that comprise your website. Your website has a one-of-a-kind web address, also known as a URL, which is what makes it searchable on the internet. When a user makes a request for your website using a web browser, the web hosting server is responsible for storing your website replies to the user's request by searching for your website and delivering it to the web browser that is located on the machine of the requester.

When a user makes a request for a website to be loaded in their web browser, we can see here that the web hosting server will also store files in the process of loading the website.

In most cases, the hypertext transfer protocol HTTP is used to carry out this information exchange. You can recognize HTTP by the fact that it consists of four letters when it is highlighted in a browser. The storing of files and their distribution are two of the most basic aspects of this process, and both of these functions are carried out by a web server.

The software packages that make up a web server take HTTP requests and then proceed to transfer the associated files and documents.

If the resource in question is not available in response to the supplied request, the "Page cannot be found" message will be displayed. This indicates



that an issue occurred while the page was being processed. An IP address, which stands for "internet protocol address," is a number that is completely unique across the entire internet and is used to identify each web hosting server. Web servers are able to find one another in the vast internet environment by employing these IP addresses as a means of communication. Web server software may also boast extra capabilities, such as support for encrypted connections and user authentication procedures. These are only two examples of these kinds of capabilities. Web hosting servers might also be able to log information about client requests and server responses to those requests.

❑ **Check Your Progress – 5 :**

1. Function of the URL is to :
  - a. Locate for protocol
  - b. Locate for emails
  - c. Locate for website address
  - d. All of the above

<b>13.12 Some Popular Websites :</b>
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Your company's website will be hosted on a web server by the website provider in order to get your goods listed on the internet. There are numerous different e-commerce web site providers all over the world, each of which offers a unique set of e-Commerce capabilities.

- **E-commerce website providers :** Creating an internet store is not nearly as difficult as it may seem : You can begin selling your products online in a matter of minutes with the help of the design templates and tools provided by many of the best eCommerce hosting services. We have evaluated a number of eCommerce site builders and ranked them based on a variety of criteria, including their simplicity of use, cost, and shopping cart software. The following are some of our top recommendations for expanding an eCommerce business :
  - o **SiteGround.com :** WordPress.org recommends SiteGround as one of the best WordPress hosting services available. SiteGround was founded in 2004. The company has garnered a strong reputation for providing excellent customer service and support around the clock, in addition to providing a comprehensive range of services and solutions that have been designed with WordPress in mind particularly. In addition to its highly effective and blazingly quick hosting platform, which makes use of the cutting-edge technology provided by Google Cloud, there are a multitude of performance and security features, many of which are frequently updated and expanded.
  - o **Wix.com :** When you create a site with Wix, you have access to multi-cloud web hosting. Wix provides both the website builder and the dependable hosting needed to get any site up and operating, so it doesn't matter if you want to construct a website for a small business, professional agency, or enterprise. Wix has what you need. Wix hosting is dependable and requires less maintenance thanks to its multi-cloud architecture, which incorporates AWS and Google Cloud in addition to Wix's own private data centers and a network of Fastly CDNs.

- o **Nexcess.net** : Nexcess enables websites and online stores to get online more quickly and to expand. We have been providing our services to and providing support for small businesses, major corporations, as well as the designers, developers, and agencies that work on their behalf for more than 23 years.
- o **Cloudways.com** : CloudWays's hassle-free managed hosting helps us save time and money, which enables us to put more of our attention on expanding either our digital marketing agency or our online retail firm. Cloudways is G2's top recommendation for small and medium-sized businesses in need of managed hosting in 2021 thanks to its lightning-fast and highly secure infrastructure, which is used by more than 75,000 customers.
- o **iPage.com** : Not only does it concentrate on web hosting, but also on our people, which includes both customers and workers.
- o **Bluehost.com** : Bluehost is an industry-leading provider of web hosting solutions. Since our company's inception in 2003, Bluehost has consistently developed new approaches to fulfil our objective, which is to enable anyone to make full use of the internet. We provide extensive resources to millions of people all around the world so that anyone, whether they are a rookie or a seasoned professional, may go on the web and flourish with our web hosting services.
- o **InMotionHosting.com** : Shared hosting, WordPress hosting, virtual private server hosting, dedicated servers, and hosted private clouds are some of the services that InMotion Hosting excels at providing.
- o **Volusion.com** : Volusion is the industry leader when it comes to e-commerce software solutions. The company provides companies of all sizes with an all-in-one e-commerce software platform that can accommodate virtually any kind of online store. Their e-commerce system takes care of all the necessary aspects, including the checkout process, the processing of payments, and the management of orders.
- o **LiquidWeb.com** : You and other web and cloud professionals make up the target audience for the hosting services by Liquid Web. Developing companies as well as the Designers, Developers, and Agencies are responsible for their creations. This is where we put our attention. And the solutions, services, and support that result from this approach are tailored particularly to the requirements of mission-critical websites, shops, and applications.

### **13.13 Some Indian Websites :**

"E-commerce" or "online commerce" refers to online purchases and sales of goods and services. The most common kind of electronic commerce is online shopping, which involves buying and selling items on any device (ECM). India's top online retailers include Flipkart, Amazon, Paytm, and Indiamart.

Several Indian e-commerce enterprises have seen rapid growth and success. In 2021, 784.59 million Indians had internet connections, thanks to the "Digital India" programme and other government initiatives to make business

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easier. Online buying is popular because it saves time and money, which are scarce. It is the main driver of online shopping platforms and websites.

ECommerce has supplanted traditional business practices in India due to technology and consumer spending. Trends caused this. Grant Thornton predicts that India's eCommerce companies and market would be worth \$200 billion by 2026, up from \$38.5 billion. Despite COVID-19, NASSCOM expects India's e-commerce market to increase 5% in 2021 to \$56.6 billion. It led to the nation's most successful e-commerce platforms.

Among India's 19,000+ E-commerce companies, it's challenging to distinguish out. Depending on size, services, resources, and monthly traffic, e-commerce companies can be broad or specialized. India's leading e-commerce sites. All of these companies have simplified internet shopping :

- **Amazon** : Amazon started as a US online bookstore selling books on finance and health. % Since 2010, the ecommerce site has attracted 322.54 million monthly users, making it India's most popular online business website. Amazon reaches 89% of Indians, according to Statista.
- **Flipkart** : Flipkart, a privately hosted ecommerce company founded in 2007, sells fashion, mobile phones, and more. Walmart Inc. bought Flipkart for \$16 billion in 2018. With 39.5% of India's e-commerce market, it's Amazon's biggest competitor. Flipkart's big billion days provide significant discounts on all products. Many Indian shoppers and third-party sellers consider it the best ecommerce platform.
- **Myntra** : Myntra began as a customized gift shop. By 2012, Myntra has 350 foreign and Indian brands, and the number keeps growing. Flipkart bought it 2014. Myntra, an Indian online fashion and lifestyle retailer for men, women, and children, is popular.
- **IndiaMART** : IndiaMART is a popular Indian B2B and B2C marketplace. It aids customer-manufacturer communication. Manufacturers, producers, and exporters can post their items on IndiaMART, and customers can email or call them directly. India's online B2B classifieds market is 60% its.
- **Snapdeal** : Snapdeal, founded in 2010, silently dominates India's ecommerce websites. Electronics, apparel, and kitchenware are all cheap on Snapdeal. Thus, Snapdeal is utilized in 3,700 Indian localities.
- **eBay** : eBay, founded in California, operates in 179 countries, including India. C2C and B2C sales dominate its website. Buyers can access the site for free, but after a limited number of free listings, sellers will be charged for adding more products and when they sell. eBay acquired PayPal, StubHub, Skype, Craigslist, and qoo10.jpg.
- **Rediff** : Mumbai-based Rediff.com. India is a top eCommerce provider of news, entertainment, and shopping. Discounts and deals are the site's appeal. India's largest Internet destination, we offer the latest news, interviews, and opinion articles, a vibrant Get Ahead area for young people, videos, movie highlights and reviews, live cricket scores, live stock quotes, Enterprise Mail, and free email.
- **MakeMyTrip** : One of India's oldest and most well-known eCommerce travel and hospitality firms, Make My Trip, founded in 2000, offers great bargains, low airfares, exclusive discounts, and a hassle-free online

booking experience. The company has 5 million satisfied consumers in India, the US, and the UAE.

- **LimeRoad** : Limeroad.com, India's top 15 fashion and clothing eCommerce company, started as a women's fashion marketplace. It won the 2015 Coolest Start-up Award. Users can create a virtual scrapbook with the portal's items and sell it.

### 13.14 Working of Web Tracker :

- **Web Tracking** : Web tracking collects and shares information about an individual's internet activities, including what they do and how they do it. Internet tracking helps corporations tailor their content to your tastes.
- **Web Tracker** : In general, a tracker is a script that may be found on websites. Its purpose is to gather information about your preferences and who you are based on how you interact with the website. Sometimes the website you are visiting intentionally places these scripts on the page you are viewing, and other times a script may originate from a website that you have never visited before.
- **How websites keep tabs on their users' activities** : When you visit a website or app, data is collected from your device and web browser and used to tailor your experience or collect information on how and what you browse. This data can be used to collect information on how and what you browse.
- **Types of Website Tracking** : First-party and third-party tracking are the two most important forms of website visitor tracking that you should be familiar with "Data that is gathered directly by the website" that you are viewing is referred to as first-party tracking, whilst data that is acquired by a different entity is referred to as third-party tracking.
- **Tracking Technologies** : The most prevalent online tracking technologies and the methods through which they monitor users' activities are as follows :
  - o **IP Tracking** : Every connection to the internet has its own distinct IP address, also known as an Internet Protocol address, which is linked to a country and an approximate location. The vast majority of technologies used for website analytics, such as Google Analytics, make use of users' IP addresses to get an approximation of their location. This can assist teams in understanding where their audience is located and in segmenting data for insights.
  - o **Cookies** : Cookies are little text files that are stored in a user's browser. Cookies can be used to identify a person when they visit different pages on a website or, in some situations, follow users across multiple websites. The majority of web analytics tools put cookies in users' browsers. There are a few distinct varieties of cookies used on websites : Cookies that are generated by the website that you are currently seeing and are only active while you are viewing that website are referred to as first-party cookies. Cookies from third-party sites, which are generated by a site other than the one being visited, have the ability to follow users across several domains until the cookie from the third-party site is erased. Cookies used exclusively for the duration of a single browsing

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session are referred to as session cookies. Cookies that remain on a user's computer until they are manually erased are known as persistent cookies.

- o **Pixel Tracking** : Tracking pixels function in a manner that is analogous to that of cookies, with the exception that tracking pixels are miniature transparent pictures measuring 1 by 1 pixels that load via HTML on web pages or emails. When an analytics tool loads a tracking pixel, it is able to report on whether or not a user has opened an email or visited a page.
- o **Fingerprinting** : The practice of creating a one-of-a-kind identifier for a person by analyzing their computer preferences and browsing history is called fingerprinting. After then, fingerprints can be utilized to trace surfing activity across a number of different web pages or websites. A web fingerprint can be created using any identifier, including the following examples : Operating system (OS), Resolution of the screen, Fonts that were installed, Add-ons or extensions for a web browser, Version of the browser and configuration settings
- o **Device Tracking** : Many analytics systems capture device data, which includes the operating system, browser, and device type (i.e. desktop or mobile app). This data can be utilized to address website bugs and design difficulties on specific devices, browsers, or screen resolutions.

### ❑ **Check Your Progress – 6 :**

1. Web tracker will locate for :
  - a. Customers visiting time
  - b. Customer activity of site
  - c. Number of customers visiting site
  - d. All of above

### **13.15 Let Us Sum Up :**

In this unit, we discovered that a website is an electronic version of information. We also found that each website has a certain amount of web pages that contain text, audio, video, images, and other content. The Internet is formed by the interconnection of various separate networks. It is also known as the World Wide Web, and it is a gigantic web that is spread all over the world for the purpose of exchanging information. Internet is a convention that cannot be seen, but its services make it a giant that is user-friendly, practical, and accessible. Moreover, internet is a convention.

Businesses typically use intranet websites for internal use, communication, and knowledge. Websites allow dynamic communication with the world. Advertising uses several strategies to reach a target audience with a specific message to achieve organizational goals. These are "particular organizational aims." Businesses in every industry promote.

**13.16 Answers for Check Your Progress :**

- Check Your Progress 1 :**  
1 : d          2 : b
- Check Your Progress 2 :**  
1 : a
- Check Your Progress 3 :**  
1 : c
- Check Your Progress 4 :**  
1 : b
- Check Your Progress 5 :**  
1 : c
- Check Your Progress 6 :**  
1 : d

**13.17 Glossary :**

1. **Website :** A website is defined as a collection of web pages and other information that is linked together under a single domain name and is made available online via at least one web server.
2. **Webpage :** A web page or webpage is a document, commonly written in HTML
3. **Web Hosting :** Web hosting is a service that enables you to store the files for your website on a server, so making it viewable by anybody who is connected to the internet.
4. **Web Tracking :** What a person does online and how they go about doing it can be gathered through web tracking, which is the collecting and sharing of information about an individual's activity while using the internet.
5. **Shopping Cart :** A section of a website that preserves a record of the products selected to buy from that website.

**13.18 Assignment :**

1. Write a short note on the working of web tracker.

**13.19 Activities :**

1. Do the activity in which you will discuss how to develop ecommerce web pages for personal use.

**13.20 Case Study :**

1. Research the many multiple aspects of promoting online shopping websites.

**13.21 Further Reading :**

1. An Introduction to Modern Electronic Media, Joseph Dominick, Barry Sherman, and Fritz Messere.
2. Introduction to Internet Marketing; Lawrence Harte

**UNIT STRUCTURE**

- 14.0 Learning Objectives
- 14.1 Introduction
- 14.2 Types of Payment Systems
- 14.3 Offline Payment Systems
- 14.4 Online Payment Systems
- 14.5 Let Us Sum Up
- 14.6 Answers for Check Your Progress
- 14.7 Glossary
- 14.8 Assignment
- 14.9 Activities
- 14.10 Case Study
- 14.11 Further Readings

**14.0 Learning Objectives :**

After learning this unit, you will be able to understand :

- Study about the Payment Systems
- Study about the several types of Payment Systems
- Study about the Online Payment Systems
- Study about the Offline Payment Systems

**14.1 Introduction :**

A payment system is any mechanism that is used to settle financial transactions through the transfer of monetary value. Examples of payment systems include :

- ✓ Checks,
- ✓ Credit cards, and
- ✓ Wire transfers.

This comprises the institutions, instruments, people, regulations, procedures, standards, and technology that make its exchange feasible. Also included in this category are the monetary policies that govern its circulation.

An operational network is a popular sort of payment system that links bank accounts and permits for monetary exchange utilizing bank deposits. This type of payment system is also known as an electronic clearing house (ECH).

In both domestic and foreign transactions, payment methods are employed in place of physically handing over cash payments. This is a significant part of the service that banks and other financial institutions offer their customers. Documentary credits, such as letters of credit, and negotiable instruments, such

as draughts (e.g., cheques), are examples of traditional forms of traditional payment systems.

The term "electronic payment" refers to the transfer of funds from one bank account to another through the use of electronic methods, as opposed to the traditional approach of having bank workers physically transfer the funds. In its most restricted sense, the term "electronic payment" refers to "e-commerce," which is defined as "a payment for buying and selling goods or services offered through the Internet." In its most general sense, the term "electronic payment" refers to "any sort of electronic money transfer."

**❑ Check Your Progress – 1 :**

1. Any sort of electronic money transfer is known as :
  - a. Traditional Payment
  - b. Vocational Payment
  - c. Electronic Payment
  - d. None of these

**14.2 Types of Payment Systems :**

Payment systems are crucial to the efficient operation of monetary and financial institutions on a global scale. They serve as the conduits via which banks and other institutions transfer monies to one another in order to meet the payment obligations that result from economic and financial transactions across the whole economy. Cash, checks, credit cards, debit cards, and wire transfers are the various methods that can be used to make a payment. The internet and various digital platforms are being used by more recent payment techniques and types.

Transactions of a financial nature in India are handled via the country's Payment and Settlement Systems. The Payment and Settlement Systems Act of 2007 (PSS Act), which was passed into law in December 2007, governs them, and the Reserve Bank of India and the Board for Regulation and Supervision of Payment and Settlement Systems are responsible for their supervision and regulation.

Whether they are physical or electronic, payment systems each have their own set of procedures and regulations to follow. Standardization has made it possible for some of these systems and networks to expand to a worldwide scale, but there is still a great deal of systems that are unique to certain countries and products.

The various traditional or offline types of Payment Systems are as follows :

- ✓ Cash
- ✓ Checking transfer
- ✓ Credit Card
- ✓ Accumulating balance
- ✓ Stored Value

The various online or E-commerce types of Payment Systems are as follows :

- ✓ Online credit card transaction
- ✓ Digital wallets
- ✓ Digital cash



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- ✓ Online stored value systems
- ✓ Digital accumulating balance payment systems
- ✓ Digital checking payment systems
- ✓ Wireless payment systems

**Check Your Progress – 2 :**

1. Cash is considered in which type of payment system :
  - a. E-commerce Payment System    b. Traditional Payment System
  - c. Offline Payment System        d. Both b and c
2. Who is responsible of Payment and Settlement :
  - a. Board of Regulation
  - b. Supervision of Payment and Settlement Systems
  - c. Reserve Bank of India
  - d. All of these

<b>14.3 Offline Payment Systems :</b>
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Transactions that are handled in an asynchronous fashion are referred to as offline payments. Transactions of this nature are often handled offline and then manually or automatically reconciled with the console. When compared to online payments, which take place in real time, offline payments and reconciliation typically involve a delay. Online payments, on the other hand, take place immediately.

Payments done offline can be made using cash, checks, bank transfers, postal orders, or any other offline means in addition to online payment methods such as credit cards, digital wallets, and so on.

Your company's reach can be expanded even to regions that do not accept online payment methods if you provide clients the option of paying with offline payment methods. This flexibility is offered to customers.

A process for offline payment methods is supported by Chargebee's platform. The same Chargebee logic applies to offline payments. After completing the targeted action in Chargebee (for instance, creating a subscription), the next step is to follow up with consumers through dunning to remind them about paying the overdue amount. Offline payments adhere to the same logic.

Type	Description	Advantage	Disadvantage
Cash	Cash is a Legal tender defined by a national authority to represent value. It is the most common form of payment in terms of number of transactions. It is convertible into other forms of value without intermediation of any kind. It is portable, requires no authentication, and provides instant purchasing power.	It is free, anonymous and low cognitive demands.	It is easily stolen, limited to smaller transaction and does not provide any float.

Checking Transfer	Funds transferred directly via a signed draft or check from a consumer's checking account to a merchant or other individual. It is the most common form of payment.	It can be used for both small and large transactions.	Not anonymous, require third-party intervention (banks) and introduce security risks for merchants, so authentication required.
Credit Card	It represents an account that provides consumers with access to credit. It enables consumers to make purchases while postponing payment, and enables consumers to pay several suppliers at the same time.	It includes Credit card associations, non profit associations that set standards for issuing banks.	–
Accumulating Balance	Accounts that accumulate expenditures and to which consumers make period payments	It includes Utility, Phone and American Express Accounts	–
Stored Value	Accounts created by depositing funds into an account and from which funds are paid out or withdrawn as needed.	It includes Debit cards, Gift Certificates, Prepaid Cards and smart cards. It also includes Peer-to-peer payment systems such as PayPal.	–

**❑ Check Your Progress – 3 :**

1. Accounts created by depositing funds into an account and from which funds are paid out or withdrawn as needed is known as :
  - a. Credit Card Payment
  - b. Stored Value Payment
  - c. Checking Transfer Payment
  - d. None of these
2. "It is free, anonymous and low cognitive demands" is the advantage of \_\_\_\_\_ :
  - a. Credit Card Payment
  - b. Stored Value Payment
  - c. Checking Transfer Payment
  - d. Cash Payment

**14.4 Online Payment Systems :**

An electronic payment is a digital transaction that takes place between two parties. There are many different types of electronic payments, such as ACH, cards, bank transfers, digital wallets, mobile pay, and others.

Businesses can be directed toward the forms of electronic payment that are most likely to work to their advantage by a wide variety of various considerations. Each of the popular sorts of electronic payments comes with

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its own set of advantages and disadvantages, and it can be challenging for those in charge of making financial decisions to zero in on the kind of electronic payments that will be most beneficial to the operations they oversee.

We are standing by to lend a hand. Here we will discuss about the numerous forms that online payments might take.

- **Credit Card :** Diners Club issued the first modern card in 1950, marking the beginning of the modern card era. The primary purpose was to cover costs associated with business travel and entertainment; cardholders were responsible for paying any balances carried over from the previous month. Because the outstanding balance is required to be paid in full at the conclusion of each billing cycle, these charge cards are also known as non-revolving credit cards.

Credit cards from companies such as Visa, MasterCard, and American Express all function in a number of different ways for businesses in today's modern world. Credit cards, as opposed to charge cards, have revolved credit lines, means that cardholders have the option of paying off their entire balance at the end of each billing cycle. Charge cards do not have this option. That is, dependent on the terms stipulated by the card issuer. When it comes to accepting credit card payments for a business, the tried-and-true one-two punch consists of merchant accounts and payment gateways. First, the funds are deposited into the merchant account, which functions as a holding area for the funds before to their distribution to individual bank accounts. Payment gateways are the points of connection between businesses and their respective merchant accounts.

There are also solutions that integrate merchant accounts and payment gateways into one, such as PayPal, which is an example of an all-in-one service. This payment option is available to businesses who desire to reduce their reliance on cash on hand and have suppliers that are willing to accept the fees associated with credit card processing.

**Advantages :** The most common method for businesses to pay their suppliers is through the use of credit cards.

Cards are convenient; they enable businesses to accept payments using credit, and they frequently incorporate functionality for debit card use as well. Depending on the issuing bank and the card in question, credit card companies will occasionally provide cash-back incentives for cardholders to use. In addition, cards can be helpful for improving cash flow and offering a speedy source of funding, both of which can be particularly beneficial for small firms.

**Disadvantages :** When it comes to making purchases on credit, the use of credit cards presents several challenges. One of the most significant drawbacks associated with business-to-business transactions is that using credit cards will result in additional fees for the merchant. The National Retail Federation estimates that swipe fees brought in approximately \$20 billion yearly in 2001, but are projected to bring in \$137.8 billion by the year 2021. These fees have steadily climbed throughout the years.

Sometimes the fees are passed on to the customers, either directly in the form of an additional charge at the register or indirectly in the form of higher costs. This, in turn, can lead to frustration on the part of customers toward firms and the owners of businesses.

The fees that are associated with credit cards are only part of the problem. The most significant problem is that credit cards provide a significant threat of fraud because the same account numbers can be used for payment over and over again, regardless of whether or not these payments are allowed. Businesses are in need of more secure payment methods.

- **Virtual Payment Cards** : Only a very small number of businesses favored the practice of paying their suppliers with virtual or ghost cards. In spite of this, many in the know agree that this method of payment is an excellent way to pay vendors and other suppliers. This payment method is available for use by any business that is of the opinion that a B2B transaction need not always be completed using a check, a credit card, or the ACH.

**Advantages** : Businesses are able to print cards with programmable numbers and predetermined quantities that can be spent thanks to systems like Stampli Card, which are virtual payment solutions. There is no limit to the number of unique numbers that may be generated, and companies retain full control over whose employees and customers are authorized to use each Stampli Card.

Because of these features, virtual payment cards may be significantly less likely to be used fraudulently than credit cards. This mode of payment makes it easier for businesses to keep tabs on their spending and lowers the likelihood that money will be spent without authorization.

**Disadvantages** : Because not every vendor is familiar with virtual payment cards, it is possible that it will take some effort on your part to convince some of them to agree to be paid using this way. It's possible that smaller businesses don't have the resources to do the necessary education to bring their suppliers up to speed.

- **Bank Transfers** : Because of the internet, the process of receiving payments from clients via bank transfer has become more convenient. They are only required to provide their bank routing and account numbers at the time of payment, which paves the way for an adequate amount of money to be taken out of their respective accounts.

The process that businesses must follow in order to carry out these actions on behalf of their clients is a simple one, and it begins with the business giving the bank a reference number that is then incorporated into the transaction. There are situations when the company uses a bank that is distinct from the one used by the consumer. When this occurs, the transaction is handled by a clearing house to ensure its proper completion.

Any kind of electronic transfer can be considered a bank transfer, whether it be an ACH transfer, a wire transfer, or anything else. It is an adaptable and trustworthy method of making payments. The use of this payment system is available to businesses who work with nervous suppliers who require reassurance that they will be paid.

**Advantages** : When you process a payment through a bank transfer, you are given the assurance that the necessary money are accessible. This is perhaps the best aspect of the process. It is possible for sellers to get an almost instant indication that they will be paid for their goods or services.

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**Disadvantages :** The certainty that the transaction will go without a hitch comes hand in hand with the guarantee that it will take a little bit more time than other methods of payment.

Even while the time it takes to process an invoice may only be a few business days, which are only a fraction of the time it may take for an invoice to be accepted, this may still not be fast enough for some suppliers who require their payment right away.

There is currently a rise in the number of payment processors that are prepared to advance their clients' money in exchange for a little fee, which is normally 1 percent of the total amount transacted up to a predetermined cap. However, that is still money that is not going into the pocket of a merchant. As is the case with purchases made using credit cards, retailers may choose to levy additional fees on their customers or increase their prices in order to recoup the lost revenue.

- **eChecks, the Automated Clearing House (ACH) :** People may be familiar with the Automated Clearing House, also known as ACH, which is the procedure for direct deposit of paychecks. More than ninety percent of workers prefer to get paid in this manner. However, ACH can be utilized for more than just the immediate transfer of employee wages.

These days, electronic checks, also known as eChecks, also make use of ACH in order to transfer money to the appropriate location. Electronic checks can be processed swiftly, safely, and securely with the assistance of a clearing house. This normally occurs over the internet, but it can also occur over the phone or fax machine.

Finding a provider of electronic checks is necessary in order to use electronic checks, and firms that do so will enjoy a number of advantages. This kind of payment is available to businesses that deal with a significant number of suppliers that want to be paid with checks notwithstanding the rise in popularity of alternative payment methods.

**Advantages :** There are still many suppliers that prefer to be paid with a check, and for those suppliers, sending an electronic check rather than a paper check is both quicker and safer. Nobody ever needs to be concerned about an electronic check going missing in the mail or taking three weeks to arrive wherever it is meant to go because neither of those things can happen.

According to some reports, the cost of processing an electronic check is significantly lower than the cost of processing a paper check. The cost of processing an electronic check is typically a fraction of the cost of processing a credit card transaction, which can range anywhere from 3.4 to 3.6 percent.

**Disadvantages :** Electronic checks, like most other methods of payment, are susceptible to fraud. Because of this, companies run the risk of having their banking information obtained by criminals and used against them. When data breaches occur, it is possible for shady third parties to fake the origin of eChecks and make it appear as though they came from genuine companies. It's a whole muddle.

Even though electronic checks have the potential to have faster processing periods than paper checks, the National Automated Clearing House

Association (NACHA) has established various methods for processing payments on the same day. Regardless, electronic checks might not be the most convenient payment method for merchants who require payment as promptly as feasible.

- **Digital Wallet** : Nearly 30 billion payments were made using eWallets in the most recent year, indicating that digital wallets are quickly becoming the norm.

The rise in the use of electronic wallets to make payments can be attributed to a few different factors. According to Merchant Maverick, "a digital wallet is a broad phrase covering software that electronically keeps credit card numbers, debit card numbers, loyalty card numbers, and other types of card numbers on your laptop, tablet, phone, or in the cloud."

eWallet provides a wide range of functionalities, such as the ability to pay in-store, make peer-to-peer payments, make payments online, store funds, coupons, and loyalty cards, as well as store IDs and transit tickets. This payment option is available to businesses if they have suppliers or partners who are already utilizing or are open to taking payment through digital wallets.

**Advantages** : The use of digital wallets, which are now very popular, should continue to rise as broadband Internet becomes more widely available in rural and developing areas. Because of the buzzing Internet of Things, or IoT revolution that is presently taking place in the United States of America, it is anticipated that an increased number of payment devices will become online in the years to come.

The implication of this for accounts payable is that it is possible that businesses will have vendors eager to accept payment from them via virtually any device or payment method that is convenient for the enterprises.

**Disadvantages** : Transactions at points of sale (also known as POS) are not always simple to complete using digital wallets. "If you operate an online store or sell through a mobile app, then you can take digital wallet payments," explains Merchant Maverick. "However, it will most likely take a little work because you will need to install new code to your web store or your app." To put these payment alternatives into effect, you will need to employ a developer if you are unable to undertake the coding process on your own.

It is important to point out that digital wallets are working on this issue and aiming for the opposite : they are trying to make it simple for users to pay just by opening their phone and clicking a button. Companies like gas stations don't have to be forced to buy cumbersome point-of-sale systems if they don't want to. They have the option of going with solutions that are compatible with a variety of digital wallets.

- **Mobile Pay** : In recent years, there has been a meteoric rise in the use of mobile payments, which has corresponded with the spread of smartphones. According to projections produced by Juniper Research, the total number of mobile contactless payments completed would surpass 49 billion in 2023, representing a growth of 92% over the course of the previous two years.

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Mobile payment systems perform the same services as traditional wallets, with the exception that they spare users the inconvenience of carrying around cash. Aside from that, banking and credit card information can be manually entered into them, and the wallets will still be able to work normally and safely. It's possible that using mobile pay is simpler than using traditional wallets.

It is expected that the number of mobile payments will continue to rise as the usage of smartphones in developing countries continues to rise. This payment solution is available to businesses in which critical payables workers may frequently travel and have the requirement to make payments while on the go.

**Advantages :** People don't want to have to deal with currency or handle credit card payment terminals if they don't have to, particularly while the COVID-19 pandemic is still running strong. This is also true in the realm of business-to-business transactions and accounts payable, where employees have just as much to gain from chances for effective but remote payment processing.

During regular business hours, mobile payment is an excellent tool for enabling on-the-go personnel to pay their employees from any location in the world. This is a significant benefit. They don't even need to be in front of a traditional computer or at their work desk to perform what they need to do. It is possible for them to get remittance as long as they are within reach of a phone.

**Disadvantages :** Mobile payment places a significant burden on the consumer, which is one of the reasons why it is beneficial for businesses to make it available to customers but would be unwise for them to ever mandate it. After all, cellphones and other mobile payment providers might pose a security concern and need to have their operating systems updated nearly continuously.

Because not all of a company's suppliers will be willing to go through the bother of accepting mobile payments, the accounts payable departments of such companies should make preparations for alternate methods of payment.

- **Payment Service Provider :** There are instances when it is impossible for a company to be successful going it alone. In these circumstances, working with a payment service provider (PSP) that is independent from your business may be the best option. These companies are able to function as go-betweens for businesses and their vendors, helping to guarantee that the payment process goes as smoothly as possible. They are most commonly found online. Companies that have the financial resources to experiment with new ideas and personnel that are willing to do so because they can see the benefits and do not have concerns about being replaced by other parties can use this payment system.

**Advantages :** Because the PSP will take care of everything on their end, merchant accounts and payment gateways are not normally anything that a company that employs a PSP needs to be concerned about. Compliance with the payment card industry, commonly known as PCI, can be handled by them, along with monitoring for fraudulent activity, money transfers, and payment processing.

It is the equivalent of having an additional member of the accounts payable team, only this additional employee is well trained and will offer a greater probability of payments being sent out on time. It is also relatively simple to set up this kind of service, and companies are not obligated to have a particular number of transactions routed through PSPs each month. This frees up a lot of time and money for businesses.

Even if there are some limitations that should be noted, payment service providers are, in general, a developing service that is worth experimenting with for the correct kinds of businesses.

**Disadvantages :** Because this sector of the payment industry is still in its early stages of development, the fees associated with each transaction may be slightly higher than those associated with some of the other payment methods described above. If a critical mass of firms decides to use this service, hopefully the prices will be able to become a little more affordable over time.

Even though payment service providers should ideally only free up workers to undertake other higher-value duties, such as analyzing invoice data for trends, certain members of the accounts payable team may still be concerned that payment service providers will take their jobs.

**☐ Check Your Progress – 4 :**

1. Which one is not the E-commerce Payment System :
  - a. eWallet Payment
  - b. Mobile Payment
  - c. Cash Payment
  - d. PSP Payment
2. Compliance with the payment card industry, commonly known as \_\_\_\_\_ :
  - a. PSP
  - b. Digital Wallet
  - c. PCI
  - d. All of these

**14.5 Let Us Sum Up :**

In this unit, we discovered that for e-commerce we need some payment system. Payment Systems are Payment and settlement systems that support financial transactions. Payments can be done in multiple ways, traditional and electronic.

Traditional payments use cash. Cheques, demand draughts, and letters of credit are also used for it. Electronic payment systems are used to buy and sell products and services through the help of any electronic device. There are several modes of these payment systems which we have read in this unit and understood.

**14.6 Answers for Check Your Progress :**

**☐ Check Your Progress 1 :**

1 : c

**☐ Check Your Progress 2 :**

1 : d            2 : d



❑ **Check Your Progress 3 :**

1 : b            2 : d

❑ **Check Your Progress 1 :**

1 : c            2 : c

**14.7 Glossary :**

1. **Payment System :** Payment and settlement systems support financial transactions.
2. **Electronic Payment System :** Electronic payment systems are used to buy and sell products and services through the help of any electronic device.
3. **Traditional Payment System :** Traditional payments use cash. Cheques, demand draughts, and letters of credit are also used.
4. **ACH :** The Automated Clearing House network facilitates ACH transfers between banks and credit unions. Direct deposit of wages and monthly debits for recurring payments are all ACH transactions.
5. **PSS Act : India Code :** Payment and Settlement Systems Act, 2007. Long Title : An Act to regulate and supervise payment systems in India and designate the Reserve Bank of India as the authority for that purpose and related things.

**14.8 Assignment :**

1. Write a short note on Electronic Payment System with its types.

**14.9 Activities :**

1. Buy few products according to your need and pay for these products with the help of both traditional payment system and electronic payment system modes.

**14.10 Case Study :**

1. Study more about the payment modes which are using in shopping malls and shops.

**14.11 Further Reading :**

1. Electronic Payment Systems for E-commerce, Donal O'Mahony, Hitesh Tewari, and Michael A. Peirce.

**UNIT STRUCTURE**

- 15.0 Learning Objectives
- 15.1 Introduction
- 15.2 The Concept and Meaning
- 15.3 The Electronic Delivery Channel Includes
- 15.4 Automatic Teller Machine (ATM)
- 15.5 Electronic Fund Transfer
- 15.6 Computerization in Clearing Houses
- 15.7 Updating Bank Saving Accounts
- 15.8 Financial Transaction Terminals (FTT)
- 15.9 E-Banking in India and E-Cheque
- 15.10 Security of Internet Banking
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- 15.12 Answers for Check Your Progress
- 15.13 Glossary
- 15.14 Assignment
- 15.15 Activities
- 15.16 Case Study
- 15.17 Further Readings

**15.0 Learning Objectives :**

**After learning this unit, you will be able to understand :**

- About Electronical Delivery Channel
- About Automatic Teller Machine (ATM)
- About Electronic Fund Transfer (EFT)
- About Computerization in Clearing Houses
- About Financial Transaction Terminals (FTT)
- About E-Banking Security

**15.1 Introduction :**

As a result of the complete expansion of banking institutions, multiple business banking systems, such as Unit Banking, Branch Banking, Group Banking, also known as Holding Company Banking, and Chain Banking, have become popular. The branch banking model represents the standard for commercial banking operations in the vast majority of countries.

To attract customers, financial institutions offer a variety of services and products, such as loans, the issuance of debit and credit cards, computerized financial services, and even shockingly personal services or financial assistance.

Despite this, many commercial banks now offer some of the most fundamental services of the modern era.

There are a few other names for electronic banking, including web-based banking, e-banking, virtual banking, or web banking, and online banking. Simply said, it refers to the practice of transporting a variety of financial services and products through the use of electronic and telecommunications networks. A customer can access his financial record and take care of a number of transactions using his mobile phone or personal computer if the bank offers electronic banking.

### **15.2 The Concept and Meaning :**

Because most people are now able to handle the majority of their banking needs through internet platforms, traditional bank branches are becoming increasingly obsolete. They are able to carry out all of these activities at their own pace and at any location of their choosing, including at home, at work, or while they are travelling.

To conduct financial transactions online, you will need a computer or another device, a connection to the Internet, and a bank or debit card. Customers are required to register for the online banking service offered by their financial institution before they can use the service. They will need to generate a password in order to complete the registration process. As soon as that step is completed, customers will be able to use the service for all of their banking needs.

The kinds of banking transactions that can be completed online differ from institution to institution. The majority of financial institutions provide standard services such as money transfers and payment of bills. Through their online banking portals, several financial institutions also enable consumers to apply for credit cards and open new bank accounts. Other duties may include reporting a change of address, placing a stop payment on a check, or ordering checks.

Depositing checks is now possible over the internet by using a mobile app. When making a deposit, the customer only needs to enter the amount and then photograph the front and back of the check for the transaction to be complete.

The purchase of traveler's checks, bank draughts, certain wire transfers, and the fulfilment of certain credit applications like mortgages are not permitted by online banking. Face-to-face interaction with a bank representative is still required for these types of transactions.

The characteristics of the banking industry are now clear to us. The banking industry is almost entirely focused on customer service. Through the medium of a computer network is one of the ways that services can be provided to customers. The provision of banking services over the internet and other computer networks is referred to as "net internet banking." The term "Internet" refers to a global network of computers that are linked together using telephone connections. The internet is a network that allows millions of computers to communicate with one another. These computers may be found in places such as banks, offices, hospitals, educational institutions, and commercial businesses across the world.

If you have a personal computer, a telephone connection, and an instrument called a modem, you can connect to the internet and gain access to a variety of schools and universities as well as offices, allowing you to obtain essential information, send and receive messages, and perform other tasks. Likewise, the bank and its customers are able to communicate with one another via the internet banking system by exchanging banking messages.

Therefore, a customer can use internet banking to inquire about his or her bank balance, give other instructions pertaining to his account, call for his or her statement of account, transfer money from his or her account, pay college fees, call for Cheque book, and perform a number of other functions that are comparable to net banking without physically going to the bank. The term "net banking" or "internet banking" refers to this method of carrying out financial transactions. At this time, ICICI Bank is offering internet banking services. This approach is being gradually used in other financial institutions, such as banks.

**□ Check Your Progress – 1 :**

1. The banking industry is entirely focused on :
  - a. Cash
  - b. Products
  - c. Customers
  - d. None of these

<b>15.3 The Electronic Delivery Channel Includes :</b>
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However, banks are making preparations for the future by developing a wide variety of electronic delivery channels. The development is leading to the creation of touch point terminals, intelligent ATM machines, and interactive televisions that are capable of collaborating with the internet to facilitate proper PC banking.

Internet banking has led to the successful resolution of a number of issues, which is a consequence of the expansion of internet connectivity. Customers are able to access the banks' online resources regardless of their physical location because to the immense networking capability and ease of access provided by the Internet. They will be able to view their own financial data and carry out nearly any transaction of their choosing as long as they have a browser and an Internet Service Provider (ISP).

It is comparable to the introduction of automated teller machines (ATMs) to the market more than twenty years ago to introduce the concept of internet banking to today's clients. In the case of automated teller machines and credit cards, it took 15 years of development to reach the point of critical mass adoption.

Once we reached the critical mass, the transactions using credit cards and ATMs moved along rather rapidly. After a decade of development, electronic banking, which includes Internet banking, is reaching the same critical mass as traditional banking methods. Customers of most banks today have a good level of familiarity with using personal computers.

The number of banks that genuinely provide transaction services accounts for only 3.8% of the total, despite the fact that the number of bank websites has expanded dramatically over the course of the previous year. It would appear from this those financial institutions, despite the fact that they are looking into the possibility of using the internet as a future distribution channel for their services, are moving at a glacial pace. As a result, the goals of our research

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are to devise a plan for employing the Internet as the subsequent delivery channel and to endeavor, to the best of our abilities, to anticipate the potential issues and worries that financial institutions are likely to experience when their Internet services are put into production.

- **Branch Banking :** A location, office, or individual component of a bank that houses all of the functions typically associated with banking and is referred to as a branch. The branch is where customers go to take care of their banking needs. This is the channel that receives the most traffic, making it the most significant one for the bank.

Customers get the opportunity to visit the location in person and take advantage of a wide variety of banking services and products all in one convenient location. Customers are able to seek advice from the employees of the bank in the event that they run into any problems, which allows them to clear up any questions or concerns they have regarding the functioning of the bank.

In point of fact, a branch is a site that functions as a conduit of sales and services, and workers of the bank have the ability to play a crucial part in ensuring client pleasure with a simple smile. The branch is a channel that can raise the image of the entire bank by creating personal contacts with customers and improving the bank's customer relationship management. This can be accomplished by improving the bank's customer relationship management.

A component of Branch Banking is known as the Extension Counter. When a branch does business with a large company, institution, or organization of any kind—whether public or private—it is required to carry out multiple banking transactions at once. The branch is responsible for providing financial services to the employees of these large firms, who could number in the thousands. This is in addition to handling the accounts of such large houses. Additionally, it is necessary for the branch to offer a selection of supplementary services.

In the event that these organizations are not situated in close proximity to the branch, the dealing branch will open a counter within the premises of such organizations to provide quick access to banking necessities. Some staff will be assigned to work at these Extension Counters. The transactions that take place at these extension counters are always processed on behalf of the main branch, and those transactions are accounted for by the main branch itself.

To put it another way, the counter serves the same purpose as a miniature branch and offers the full range of financial services, either directly at the counter or by referring customers to the main branch. The Reserve Bank of India (RBI) formerly demanded that banks seek a license from it before opening extension counters; however, it has now given all banks freedom to do so without first receiving its permission.

- **Mobile Banking :** In this day and age of cutthroat competition, every financial institution wants to broaden their customer base by communicating with as many individuals as possible. During this process, several financial institutions, including banks, have begun offering mobile banking services. A few members of the crew are tasked with the responsibility of working out of mobile vans that are outfitted with the required equipment.

The purpose of these vans is to travel around the surrounding area in order to provide door-to-door service to the company's customers. However, this kind of technology only offers a very restricted range of banking services. The primary services consist of the acceptance and making of payments solely in cash. Additional services, such as checking one's account balance and having checks collected, are also made available.

- **ATM Channel of Banking** : Automated Teller Machine, or ATM for short, is the abbreviation for "automated teller machine." People had only ever dealt with a single teller up until the 1980s, when automated teller machines first became available. A living individual who sits behind the counter where cash transactions take place and handles either the payment of customers or the receipt of customer payments. One was necessary to physically go to the teller in order to complete cash transactions, and this had to be done during the bank's operating hours. The automated teller machine was a game-changer when it was first introduced.

Because an ATM has been constructed in the neighborhood, it is no longer necessary to travel to a bank in order to withdraw money; you may do it whenever you choose, 24 hours a day. Customers now have the opportunity to receive financial services outside of the traditional banking hours thanks to this innovation. A cash deposit and withdrawal can be made at any time using an automated teller machine (ATM). The only function it could accomplish when it was first introduced was dispensing cash; it was unable to carry out any other tasks.

- **Tele-Banking** : Many people use mobile or phone banking without realizing they have limited options. It's another 24-hour electronic banking channel like ATM. If you deposit cash or checks, an SMS will notify you that your account has been credited.

When you withdraw money, your phone will receive a similar message. Banks use phone banking to keep customers informed about account transactions. Customers can request phone or tele-banking from their banks. The bank's IVR will serve consumers. Interactive Voice Response (IVR) automates phone calls. IVR is helping banks lower service, inquiry, and support costs. Voice recognition allows spoken input and responses.

IVR solutions let users get bank information, transmit requests, and ask questions. Since IVR allows access to bank services from home, office, or work, phone banking is growing.

IVR technology connects the bank's computers to the telephone and modem. After identifying callers with a code word (PIN for ATMs), a suitable phone response is issued. Phone banking lets customers get answers without visiting the bank. IVR solutions are pre-recorded. Landline customers receive instructions after phoning the bank to enter their account number. Dial six-digit birthdate for identification. IVR offers service number. Service numbers vary. Press the service number. Then IVR prompts customers to receive their selected service.

Mobile banking uses SMS. This system displays bank balance, cheques status, and loan applications. As mentioned, banks send SMS to consumers regarding account transactions. RBI is considering mobile banking for amount transfers. It authorized mobile banking for everyone in the foreseeable future.

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- **PC Banking, Self Service Banking :** Internet banking has evolved throughout time. Names changed with each phase. In the early 1980s, it was called Home Banking, meaning home-based banking transactions. Self-Service banking was its modern name.

Customers may first do some banking at home. Home banking requires telephone or cable connections with a terminal, keyboard, and monitor (TV or PC). Customers could use this facility to check account balances, transfer funds, pay invoices, and buy/sell assets and securities. Customers did this on their own system at home, business, or job.

Though online, it was called self-service banking. It was for customer's luxurious life. Some New York banks began this service in 1981. Bank of Stock Land launched it in 1983 in U.K. But it was restricted to certain places and customers. Online banking has altered the banking business worldwide. It got converted from luxury to necessity. Banks are now worldwide.

- **Internet Banking, Online Banking, and E-Banking :** The majority of banks in India now have their very own websites, which they use to provide banking services to customers who access them over the internet. In addition, the Reserve Bank of India has provided standards for internet banking, which are mandated for all of the country's financial institutions to implement. Internet banking has been successfully implemented by both international and private sector banks; however certain public sector banks have lagged behind due to the fundamental challenges they face.

The majority of public sector banks have a very vast network of their branches, and a considerable percentage of those branches are located in far-flung isolated places that lack connectivity. This presents a challenge for the banks. These banks serve a very vast base of consumers, some of whom are illiterate as well as those who can read and write. Some people are stubbornly clinging to outmoded and conventional approaches to the application process, and they are not open to change.

There is a possibility that it will not be possible to provide the necessary infrastructure all at once in order to launch online banking across a widespread branch network. But it can be believed that these financial institutions have made significant progress and are getting close to a point when they will all have online access.

### ☐ **Check Your Progress – 2 :**

1. Which one is not the part of Electronic Delivery Channel :
  - a. Mobile Banking
  - b. PC Banking
  - c. Branch Banking
  - d. Product Banking

### **15.4 Automatic Teller Machine (ATM) :**

An automated teller machine, often known as an ATM, is a specialized kind of personal computer that makes it easier for account holders to manage their financial matters. The abbreviation "ATM" refers to this sort of machine. The automated teller machine was created by John Shepherd-Barron and his colleagues. The world's first automated teller machine was installed at Barclays Bank in London in 1967.

Using this feature, one is able to purchase stamps, check the balance of their account, take money out of their account or put money into their account, print a statement of their account activity or transactions, and check their account balance.

People are able to do financial transactions without having to physically visit their banks thanks to ATMs. Any individual is able to conduct a transaction at an automated teller machine (ATM) so long as they have a debit or credit card and a Personal Identification Number (PIN) for added safety. The acronym "ATM" stands for "automated teller machine," which is another name for "cash machine."

- **Type of ATM :** Customers can withdraw money from one of two primary varieties of automated teller machines (ATMs). Complex units make it possible to make deposits, transfers, and other transactions in addition to cash withdrawals and account balance updates. The types are as follows :

- ✓ Basic units
- ✓ Complex units

Customers are only permitted to withdraw cash and get their most recent account balances while using basic units. The more advanced devices are able to access account information, accept deposits, simplify payments and transfers related to lines of credit, and accept deposits.

A user typically needs to possess an account at the financial institution. It is responsible for operating the sophisticated unit in order to have access to its more advanced functions.

The quantity of cash withdrawals made at automated teller machines is expected to rise due to analysts' expectations that ATMs would continue to enjoy growing popularity. The automated teller machines (ATMs) of the future will probably be full-service terminals, either in place of conventional bank tellers or in addition to them.

- **Functions of ATM :** There are currently over 2.2 million automated teller machines (ATMs) located all over the world. The benefits and capabilities offered by ATMs are diverse. The following is a list of some of the functions :

- ✓ Cash withdrawal from an account
- ✓ Balance Checking
- ✓ Transferring of Money
- ✓ Deposits of Cash and
- ✓ PIN Updating

- **Design Elements of ATM :** Although every automated teller machine is unique in appearance, they all have the following components in common :

- ✓ **Card reader :** This component is responsible for reading either the chip that is located on the front of the card or the magnetic stripe that is located on the back.
- ✓ **Keypad :** The customer enters their information, such as their personal identification number (PIN), the type of transaction that is required, and the value of the transaction, using the keypad.



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- ✓ **Cash dispenser** : The bills are dispensed through a slot in the machine, which is connected to a safe that is located at the bottom of the machine. The cash dispenser
- ✓ **Printer** : Consumers have the option of requesting receipts to be printed out from the ATM if they feel it is necessary. The kind of transaction, the amount, and the remaining balance on the account are all recorded on the receipt.
- ✓ **Screen** : The automated teller machine (ATM) will deliver prompts that will guide the customer through the process of carrying out the transaction. Account information and balances are also transmitted on the screen. This information includes the information.

- **How much money can you take out of an automated teller machine (ATM) in one transaction ?**

The maximum amount that can be withdrawn from ATMs is capped at different amounts by different banks. The vast majority of banks will let you withdraw anywhere from INR 20,000 to INR 50,000 from an ATM on a daily basis. In addition, the total value of each transaction can be capped at a maximum of 10,000 INR. Therefore, if you want to withdraw INR 30,000, you might have to carry out three separate transactions of INR 10,000 each in order to do this.

According to the Reserve Bank of India, you are eligible for five free ATM transactions per month at the ATM of your own bank, three free transactions at ATMs belonging to other banks in metropolitan areas, and five free transactions at ATMs belonging to other banks in non-metro areas. If you make more than the allotted number of free transactions, you will be required to pay a small cost. The Reserve Bank of India has given its approval for banks to levy a transaction fee of Rs.21 beginning on January 1, 2022.

The kind of bank account you have will also affect the maximum amount of cash you can withdraw at one time. When compared to holders of standard savings accounts, customers with premium accounts have access to larger daily withdrawal limits and are not subject to any specified constraints on the number of transactions.

- **Advantages of ATM** : The automated teller machine offers a number of distinct benefits. The following is a list of some of the advantages :
  - ✓ Convenience in transactions
  - ✓ The service is provided around the clock, day and night.
  - ✓ It reduces the amount of labor that is required of the bank employees.
  - ✓ ATMs are useful for travelers.
  - ✓ ATMs are not only readily available but also simple to operate.
  - ✓ It ensures speedy transactions.

- **Check Your Progress – 3 :**

1. Which is the design element of ATM :
  - a. Mouse
  - b. Keyboard
  - c. Printer
  - d. Joystick

2. ATM stands for :
- Automated Trailer Machines
  - Automated Teller Machine
  - Automotive Training Machine
  - Automatic Transmission Machine

### 15.5 Electronic Fund Transfer :

EFT payments are electronic money transfers. EFT is often misunderstood as a payment method. We've all swiped, tapped, or inserted our card into an EFTPOS machine, but EFT payment means more. EFT, payment types, and how it works will be examined. Credit card processing is EFT. Online purchases require EFT. Since cash is becoming less frequent, EFT is the most common way to transfer money.

EFT payment methods are so common that many people no longer carry cash. Even your car's console coin collecting is useless when parking meters nationwide go digital. EFT payments are bank transfers. They can be from different banks. It transfers money quickly, easily, and transparently. If you transfer money electronically, your bank statement and financial institution always have a record.

- **Types of EFT :** The term "Electronic Funds Transfer" (EFT) encompasses more than simply "swiping your card while completing a purchase." There are actually a number of different EFT payment methods available nowadays. They are presumably things that we do on a regular basis without really giving them much thought.
  - o **Debit and credit card systems :** When you use a credit or debit card, you are making an electronic funds transfer (EFT) payment. This encompasses making purchases using a card in a physical store, on the internet, or even over the phone. Even though it could take a few days for the money that has been sent to clear, the EFT payment system will automatically validate that funds are available. This essentially makes the transfer or purchase valid almost immediately.
  - o **ATMs :** Even if you come out of the transaction with cash in your hand, using an automated teller machine (ATM) counts as a form of electronic money transfer. This is due to the fact that the ATM communicates with your bank in order to verify that sufficient funds are there before dispensing actual cash.
  - o **Electronic funds transmission :** Even if the sender may present cash over the counter at a bank or wire transfer facility, wire transfers are still considered to be an electronic form of payment. The monies are still sent over electronically so that the recipient, who could be located anywhere in the world, can access them whenever they need to.
  - o **Electronic funds transfer or a direct deposit :** There are many applications for electronic bank transfers, which can be utilized for a variety of purposes. There are a lot of companies that will let you pay your bills through direct deposit. The vast majority of businesses now pay their employees through direct deposits. You can use it to send money to people you know, such friends and relatives, or you can move money between your own accounts.

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However, the process is not fast and often takes two to three business days to complete before the cash are transferred.

- o **Online payment systems :** When you buy things on the internet, you have the option of using a credit or debit card, but there are also alternative payment options. Transactions may essentially take place via a safe connection thanks to the availability of online payment solutions. This could be for making purchases online or even for making payments on bills via the internet. One of these methods that make it simpler and more efficient for businesses to get paid more quickly is called Square Online Payments.
- **Payment Processing Time in EFT :** The amount of time it takes for funds to transfer from one account to another can vary substantially based on a number of factors, including the type of payment and the financial institutions that are involved in the transaction. In most cases, the majority of transfers take place within two to three working days. Even if you pay for anything with a credit or debit card, the money is removed from your account the moment the transaction is completed; however, it may still take the recipient a day or two to get the funds.

On the other hand, a number of banks and other financial organizations have recently made it far easier and quicker to transfer money. For instance, certain banks make use of a system known as Osko, which is able to assist in accelerating the procedure. When you use Osko to send money to an account that you have already sent money to in the past, the money might be delivered immediately to the recipient of the transfer. This system uses a PayID rather than BSB numbers, and it enables users to make instantaneous monetary transfers to other individuals by merely requiring knowledge of their mobile phone numbers.

- **Advantages of Electronic Fund Transfer :** As can be seen, the technology behind EFT is continuously undergoing development. But what are the primary advantages of using EFT for payment ? To be honest, there are a few of them.
  - o **Speed of transactions :** You can pay instantly for things purchased in-store, online, or over the phone.
  - o **Security :** Reduce the amount of cash you keep on the premises, as well as the amount of cash you carry with you when you go to the bank for your company.
  - o **Record keeping :** Every electronic funds transfer is documented somewhere. Additionally, all sales are quickly recorded for accounting purposes when utilizing a high-quality point-of-sale (POS) system.
  - o **Convenience for the clients of the business :** Making payments using EFT is a risk-free, simple, and uncomplicated process.
  - o **More revenue :** When you give customers more ways to pay for their purchases, there is a better probability that those purchases will be made.
  - o **Accuracy :** When you pay with an electronic method, you eliminate the possibility of receiving an incorrect or fraudulent amount.

❑ **Check Your Progress – 4 :**

1. The maximum withdrawal amount from Saving Account from an ATM on daily base will be :
- a. 20,000/-      b. 1,00,000/-      c. 50,000/-      d. 80,000/-

**15.6 Computerization in Clearing Houses :**

Clearing House Computer means

- The electronic data processing technology utilized by the Clearing House :
  - ✓ To which Members and CB may connect in order to carry out CHATS Transactions and other transactions through the Clearing House, depending on the circumstances, using the SWIFT network,
  - ✓ To which Members, Global Users, and CB may connect through the MBT in order to perform administrative functions related to CHATS Transactions (other than initiating/receiving payment instructions), as stipulated in the Operating Procedures, and
  - ✓ The entity to whom OTC Clear connects its system in order to transmit OTC Clear Debit Requests for the creation of OTC Clear Payment Instructions through the Clearing House and to receive OTC Clear Payment Instructions;
  - ✓ To which other computer systems may connect in order to carry out CHATS Transactions and other transactions through the Clearing House, depending on the circumstances; and
- Any additional computer systems that is pertinent with regard to the Clearing House.

As access to the internet and computing facilities has improved in recent years, computerization has also started to take place in clearing houses. This involves the passing of cheques, the clearing of checks, and other similar activities. A step forward in the direction of modernizing the payment system has been taken with this. The initial step in the incorporation of technology into clearing processes was the establishment of claims, which was carried out on the settlement system. Input statements containing the total value of claims that a bank has over other banks participating in the clearing house were required for the system to generate settlement reports, which were then utilized. Because of this, the clearing, balancing, and settlement processes, which previously took a lengthy time due to specific variances and errors that were manually entered, are now shortened.

The Electronic Clearing Service (ECS) is a component of the Automated Clearing House (ACH) system, which is a financial network that operates in several countries and provides debit clearing and credit clearing services, respectively. It has been discovered that the ECS credit clearing functions according to the principle of single debit many credits, which can be utilized for a variety of transactions relating to the following :

Including but not limited to :

- ✓ Payment of salary;
- ✓ Dividend;
- ✓ Pension;
- ✓ Interest

## **E-Commerce**

In addition, it should be mentioned that the ECS debit clearing service will operate according to the principle of single credit multiple debits, which will be used for a variety of services in the following areas :

- ✓ Collections of principal and interest repayments
- ✓ Invoices for power and telephone service

It would appear that the activities of ECS are being brought up to date now that the National Electronic Clearing Service has begun. In this scenario, each and every transaction is handled at a centralized site known as the National Clearing Cell against ECS. This is the location that is generally responsible for the data processing of each and every location. Users are responsible for creating their own unique ECS data sets, as the ECS system is designed to operate in a decentralized manner. Users are obligated to form partnerships with local sponsor banks in order to present ECS files to each and every ECS Center.

### **15.7 Updating Bank Saving Accounts :**

The automated teller machines often include attractive containers that appear to have apertures for taking coins and openings that can be sealed to keep the change safe. These openings can also be locked to prevent theft. In such a system, an electronic money sorter that is used in the process of calculating deposits will perform as expected. After the requisite deposit has been made, this type of cabinet will gather the money that has been deposited and will then remove the money out of an attractive container that is located inside of a computerized bank.

A money sorter is utilized in the processing of the accumulated cash before it is utilised for any purpose. It is only possible for the divisional bank where an account is maintained or, if the account holder is a juvenile, for the account holder's parents to access the storage space because it is password-protected and they are the only ones who know the password. At the time of the deposit, the electronic money sorter, by means of the computer attachment, connects to the online banking application of the regional bank in order to process and additionally describe the compensations as well as occupancies earning interest that are at that time acknowledged following the disbursement of money into the bank account. This occurs after the money has been deposited into the bank account. If the case is closed after it has been paid out, any credits or interest that were accrued will be lost, and they will not be retrievable until the account has been brought back into the positive and a new balance deposit has been made at the bank.

### **15.8 Financial Transaction Terminals (FTT) :**

A terminal for conducting financial transactions is built to accept both smart cards and debit cards, and it comes equipped with an access port that may be used to insert or remove various types of security modules, such as SIM or SAM modules. Around the access port is a security switch arrangement that has been installed for the purpose of protecting the components of the terminal that are now accessible. A terminal of this type offers the same uncompromised physical security as a debit terminal in addition to the flexibility and possibilities of a smart card terminal.

<b>15.9 E-Banking in India and E-Cheque :</b>
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- **E-Banking in India :** Since 1997, when the ICICI Bank became the first bank in India to provide consumers with online banking services, the majority of new-generation banks in India now provide these services to its clientele. In point of fact, all of the major banks provide their customers the option of using online banking services. E-banking services that is particularly well-liked in India :
  - ✓ ATMs (Automated Teller Machines)
  - ✓ Banking done over the phone
  - ✓ Clearing Cards Electronically Issued
  - ✓ Cards-intelligent
  - ✓ EFT (Electronic Funds Transfer) (Electronic Funds Transfer) System  
ECS (Electronic Clearing Services)
  - ✓ Mobile Banking
  - ✓ Internet Banking
  - ✓ Telebanking
  - ✓ Door-step Banking

Additionally, the following services are accessible in India under the category of internet banking :

- o **Bill payment :** Every single bank in the country is affiliated with a variety of other businesses, including utility companies, service providers, insurance firms, and other businesses. These partnerships allow the banks to facilitate the payment of bills online (electricity, telephone, mobile phone, etc.). In addition, the majority of financial institutions assess a negligible one-time registration cost for the use of this service. In addition, the client has the option of setting up a standing instruction to pay reoccurring payments in a timely manner every month.
- o **Funds transfer :** Anywhere in India, a consumer can move money from one account he has with a bank to another account he has with the same bank or even with a different bank. In order to complete the transaction, he must first log in to his account and then provide the payee's name, account number, his bank, and branch information, in addition to the amount being transferred. Within a day or so, the transfer will have been completed.
- o **Investing :** A client can open a fixed deposit with the bank online through electronic banking by transferring monies. This option is available to the client. In addition, a consumer is able to buy or sell shares over the internet if they have a trading account, a bank account, and a demat account all linked together. Additionally, some financial institutions give their customers the ability to buy and sell units of mutual funds through the use of their own online platforms.
- o **Shopping :** A consumer has the ability to make online purchases of products or services and then use his or her bank account to make the payment for those purchases. The mall was just at his fingertips.
- **E-Cheque :** E-Cheques or E-checks are online payments that work like paper checks. It takes fewer steps to process an electronic check. It also

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has authentication, public key cryptography, digital signatures, and encryption. Internet-based electronic checks work like paper checks. Many employers use direct deposit for electronic checks.

Electronic checks are cheaper than paper checks. Electronic checks are safer than paper checks. Electronic checks are part of electronic banking and electronic financial transfers (EFTs). Electronic checks, ATM withdrawals, debit card transactions, and remote check depositing are all included. Computer and networking technologies are used to access account data for transactions. Electronic commerce led to electronic checks. Electronic checks follow the same laws as paper checks and can be used to pay for any transaction. U.S. Treasury Internet payments began with this for online payments.

The Advantages of Using Electronic Checks in Today's World are when compared to the costs connected with producing paper checks, the costs associated with issuing an electronic check are, on average, significantly lower. Not only is there no requirement for a physical paper check, the production of which costs money, but the use of electronic checks also does not necessitate the use of physical postage in situations in which payments are made to entities that are beyond the direct reach of the entity that is issuing the funds.

### ❑ Check Your Progress – 5 :

1. Which service is not accessible in India under the category of internet banking :
  - a. Shopping
  - b. Bill Payment
  - c. Product Transfer
  - d. Investing

### 15.10 Security of Internet Banking :

Internet banking makes it possible for you to quickly and easily complete a variety of financial transactions, including the payment of bills, the transfer of funds, and the establishment of fixed deposits. Internet banking has made it possible to perform all financial operations with only a few mouse clicks, eliminating the need to physically visit a bank and wait in a line that never seems to end. Phishing is a fraudulent method of obtaining your sensitive banking information; therefore, this facility ought to be utilized with extreme caution so as to avoid the chance of being a victim of this scheme. Listed below are the main guidelines for internet banking :

- **Make frequent changes to your secure password :** When you log in to your internet banking account for the very first time, you will be required to use the password that was given to you by the bank. However, in order to maintain the security of your account, you will need to reset this password. Altering your password at regular intervals is another important security measure. Keeping the identity of the password a secret at all times is of the utmost importance.
- **You should never log in using a public computer :** Stay away from logging into your bank account using public computers, such as those found in cyber cafes or public libraries. Because of the high number of people present, the likelihood of your password being discovered or observed by others is significantly increased in certain settings. If you

are required to log in from one of these locations, ensure that the cache and browser history are cleared, and erase any temporary files that may be present on the computer. Additionally, you should never give the browser permission to remember your login information or password.

- **Your personal information should not be shared with anyone :** Your bank will never ask for information that is deemed confidential over the phone or by email. Therefore, if you get what seems to be a phone call from the bank or an email asking for your credentials, you should never give out your login information to anyone. Only use your user ID and password to log in on the bank's official website, which should be a secure website. When login in, look for the prefix "https ://" in the URL; this indicates that the website is encrypted and secure.
- **Maintain a consistent check-in schedule with your savings account :** After finishing any online transaction, you should check your account. Check to see if the appropriate sum has been taken out of your account. Notify the bank as soon as possible if you discover any inconsistencies in the total amount.
- **Always protect your computer with licensed anti-virus software :** Always using licensed anti-virus software is the best approach to keep your computer safe from viruses that haven't been discovered yet. Even while pirated versions of anti-virus software might be accessible for free download; they might not be able to protect your computer from the latest infections that are circulating in the online world. In addition, you will receive reminders at regular intervals about the availability of software update alerts. It is imperative that you maintain regular updates to your anti-virus software in order to ensure that the privacy of your sensitive data is never compromised.
- **When not in use, the internet connection should be disconnected :** The vast majority of people who use broadband do not turn off the connection to the internet on their computers when they are not making use of them. If your computer has an internet connection, it is possible for malicious hackers to gain access to it and steal your personal banking information. Make sure you disconnect from the internet whenever you don't need it to safeguard the safety of any data you could be storing there.
- **Type your internet banking URL :** Instead than clicking on links that are provided in an email, it is preferable to manually type the URL for your bank into the address bar of your browser. There have been incidents in which con artists have sent emails containing links to bogus websites that are designed to seem just like the legitimate website of the bank. Once you have provided such a website with your login information, it may then be possible for criminals to access your account and steal your money. Check the website's URL for the prefix "https ://" before you log in to guarantee that you are accessing the genuine website of your bank.

### **15.11 Let Us Sum Up :**

During the course of our studies for this unit, we came to understand that the term "Net Internet Financial" refers to the provision of banking services via the utilization of a distributed network of personal computers. The term



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"Internet" refers to a global network of computers that are linked together using telephone connections. Internet banking has led to the successful resolution of a number of issues, which is a consequence of the expansion of internet connectivity. Customers are able to access the banks' online resources regardless of their physical location because of the immense networking capability and ease of access provided by the Internet.

An automated teller machine, also known as an automated banking machine (ABM) or Cash Machine and by several other names, is a computerized telecommunications device that enables customers of a financial institution to conduct financial transactions in a public setting without the assistance of a cashier, human clerk, or bank teller. An ATM is also known by a few other names. The Electronic Clearing Service (ECS) is a component of the Automated Clearing House (ACH) system, which is a financial network that operates in several countries and provides debit clearing and credit clearing services, respectively.

Over the course of the previous three decades, the banking sector in India has amassed a number of remarkable accomplishments to its credit. The most remarkable aspect of it is its expansive reach. The phenomenon is no longer exclusive to the cosmopolitan or metropolitan areas of India solely.

### 15.12 Answers for Check Your Progress :

- ❑ **Check Your Progress 1 :**  
1 : c
- ❑ **Check Your Progress 2 :**  
1 : d          2 : b
- ❑ **Check Your Progress 3 :**  
1 : b          2 : d
- ❑ **Check Your Progress 4 :**  
1 : c
- ❑ **Check Your Progress 5 :**  
1 : c

### 15.13 Glossary :

1. **E-Banking :** Instead of relying on human connection, banking transactions can now be conducted over the phone or by computer thanks to advances in information technology and telecommunications.
2. **Automated Clearing House (ACH) :** An automated clearing house, or ACH, transfer is a type of electronic payment transfer that can be conducted between financial institutions such as banks and credit unions through a network.
3. **E-Cheque or E-Check :** Electronic checks are often called online checks, internet checks, and direct debits. A payments processor helps eChecks direct debit from a customer's checking account to a merchant's business bank account via the ACH.
4. **Financial Transactions Terminal (FTT) :** A financial transaction terminal accepts smart cards, debit cards, and SIM or SAM modules. The access port has a security switch to protect terminal components.

**15.14 Assignment :**

Write a short note on Automated Teller Machine (ATM).

**15.15 Activities :**

Try to get facts on the performance of E-Banking.

**15.16 Case Study :**

Simplify E-Banking Delivery Channels

**15.17 Further Reading :**

1. The Demand for Money Theories and Evidences, Laidler, D.
2. Introduction to Macro-Economics, Harney, J. and Johnson, M.
3. Liquidity Functions in the American Economy, Bronfenbrenner and Mayer.
4. Money and Banking, Ran'ett, J. G.
5. Money, Capital and Other Stores of Value, American Economic Review, Vol. 51, No. 2, May 1961, Tobin, James.

**BLOCK SUMMARY :**

You should now be familiar with the fundamentals of e-commerce webpages and the many sorts of websites after working through this section. The block presents an overview of the research and fundamental concept behind e-commerce websites in our country, along with a description of their characteristics. You have done an excellent job of explaining the basics of securing online banking and promoting websites.

The block provided information regarding the payment mechanism as well as how it is utilized in online commerce. We have learnt the various modes of monetary exchange. You now understand how the process of making payments online works.

The block provided specific information regarding the fundamentals of several Electronic Delivery Channel approaches. You will also have the notion of electronic clearing of checks in a clearing house taught to you at this time. The Automatic Teller Machine is something that has been brought to our attention (ATM). You will receive a hands-on demonstration regarding the safety precautions to take when using internet banking.

<b>BLOCK ASSIGNMENT :</b>
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❖ **Short Questions :**

1. What is Website ?
2. What are Web Pages ?
3. Explain about Digital Wallet ?

❖ **Long Questions :**

1. Explain Online Payment Systems.
2. Explain Automated Teller Machine in detail.
3. Explain E-commerce website providers in detail.

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❖ **Enrolment No. :**

1. How many hours did you need for studying the units ?

Unit No.	13	14	15
No. of Hrs.			

2. Please give your reactions to the following items based on your reading of the block :

Items	Excellent	Very Good	Good	Poor	Give specific example if any
Presentation Quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Language and Style	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Illustration used (Diagram, tables etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Conceptual Clarity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Check your progress Quest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Feed back to CYP Question	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

3. Any other Comments

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