D.N.R COLLEGE (AUTONOMOUS), BHIMAVARAM

DEPARTMENT OF COMMERCE

III B.COM (CA) – VI SEMESTER

E-COMMERCE

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LECTURER IN COMMERCE

UNIT - 1

Essay Questions:

1. Define E-Commerce? Explain the overview of E-Commerce.

Ans:

E-COMMERCE OVERVIEW

E-Commerce or Electronic Commerce is a methodology of modern business, which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing thespeed of delivery. Ecommerce refers to the paperless exchange of business information using the following ways −

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

Features

E-Commerce provides the following features −

- **Non-Cash Payment** − E-Commerce enables the use of credit cards, debit cards, smart cards, electronic fund transfer via bank's website, and other modes of electronics payment.
- **24x7 Service availability** − E-commerce automates the business of enterprisesand the way they provide services to their customers. It is available anytime, anywhere.
- **Advertising / Marketing** − E-commerce increases the reach of advertising

of products and services of businesses. It helps in better marketing managementof products/services.

- **Improved Sales** − Using e-commerce, orders for the products can be generated anytime, anywhere without any human intervention. It gives a big boost to existing sales volumes.
- **Support** − E-commerce provides various ways to provide pre-sales and post- sales assistance to provide better services to customers.
- **Inventory Management** − E-commerce automates inventory management. Reports get generated instantly when required. Product inventory managementbecomes very efficient and easy to maintain.
- **Communication improvement** − E-commerce provides ways for faster, efficient, reliable communication with customers and partners.

2. What is E-Commerce? Write the Scope of E-Commerce.Ans:

E-Commerce or Electronics Commerce is a methodology of modern business, which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing thespeed of delivery. Ecommerce refers to the paperless exchange of business information using the following ways −

- Electronic Data Exchange EDI
- Electronic Mail e−maile
- Electronic Bulletin Boards
- Electronic Fund Transfer EFT
- Other Network-based technologies

Scope of E-Commerce

The potential for e-commerce development is enormous. Now a days one can buy products online through some sites like Flipkart and Amazon. It includes E-trading, E-Franchising, E-Mailing, E-Engineering etc.
Scope of e-commerce can be enumerated as follows:

There are different models of E-Commerce:

- B2C – Business to consumer; this refers to the sale of goods to the end-user directly
- B2B – a business that sells to another business; for example, office equipment, wholesalers, construction equipment sellers.
- B2G – Businesses that sell or deal only with Government organizations.
- C2B – this is when a customer creates something that adds value to a business

1. Exchange of digitized information
2. Technology-enabled
3. Customers retention
4. Accounting
5. Supplier integration
6. Support the exchange

1. Exchange of digitized information: The digitized information exchange can represent communications between two parties, coordination of the flow of goods and service, or transmission of electronic orders. These exchange can be between organizations or individuals.
2.Technology-enabled: E-Commerce is about technology-enabled transactions. Web browsers are perhaps the best Know of these technology-enabled customer interfaces.
3. Customers retaining: E-Commerce enables organizations to get classified and customized market information that helps in retaining customers through fast order fulfillment and effective customers relationship management (CRM). End-to-End supply chain management in e-commerce provides the opportunity the overall flow of demand and supply and results in fruitful customers retaining.

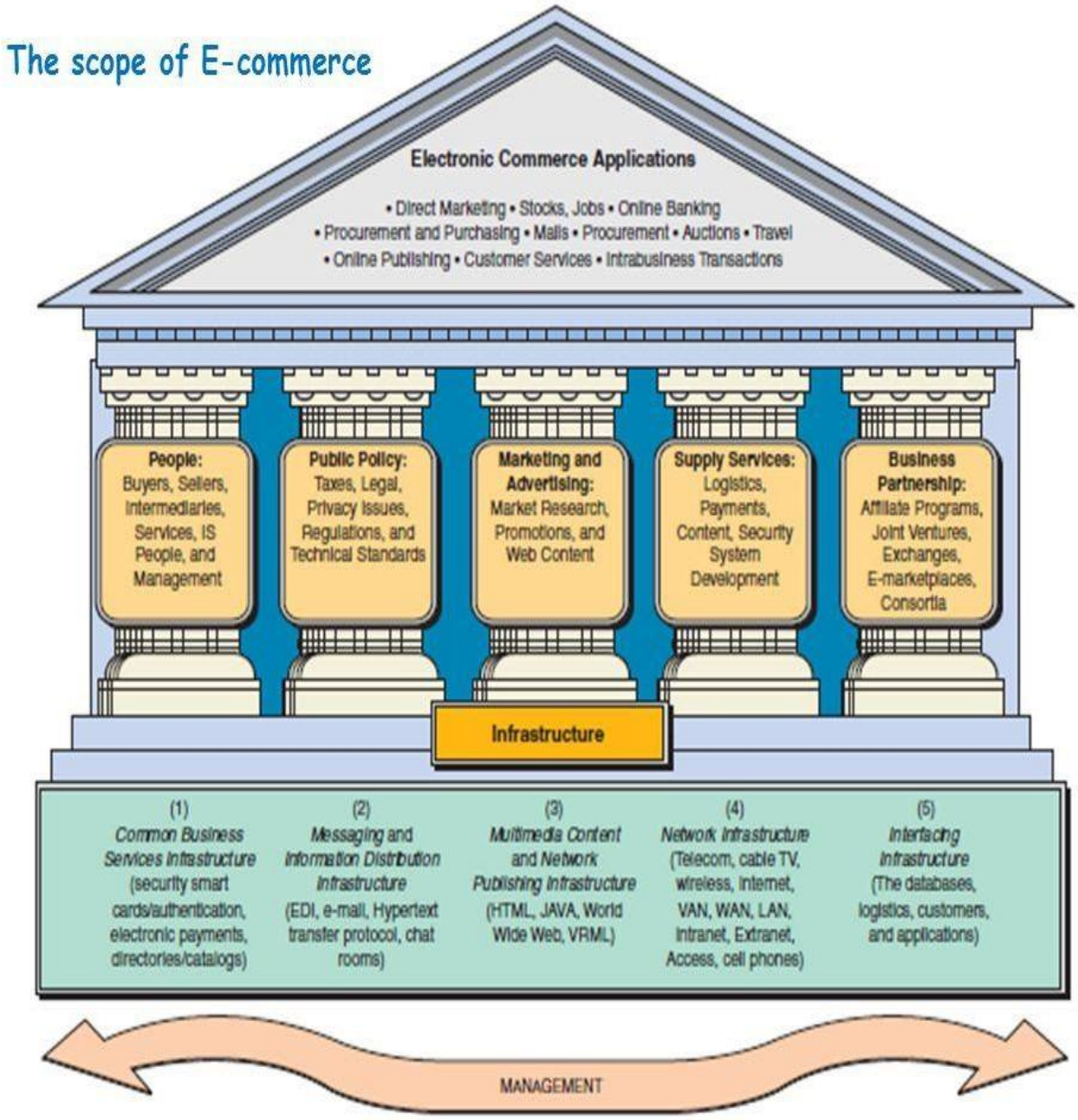
4. Accounting: Financial accounting, treasury management and asset management are best possible in e-commerce because of integrated database. Financial planning and strategy determination become more convenient in e-commerce.

5. Supplier integration: For lowering inventory-carrying costs and broader availability of material and opportunities suppliers network can be integrated through EDI to implement just-in-time (JIT) inventory management.

6. Support the exchange: E-Commerce includes intra and inter organizational activities that support the exchange. The scope of e-commerce includes all electronically based intra and inter organizational activities that directly or indirectly support marketplace exchange

The following diagram shows the scope of E-commerce.

It shows the complete picture of scope of ecommerce. It shows different electronic commerce applications, people involved, public policies, marketing and advertisement and supply services of ecommerce.



3.Distinguish between Traditional Commerce and E-Commerce.

1. Traditional Commerce :
Traditional commerce refers to the commercial transactions or exchange of information, buying or selling product/services from person to person without use of internet which is a older method of business style and comes under traditional business.

2. E-commerce :
E-commerce refers to the commercial transactions or exchange of information, buying or selling product/services electronically with the help of internet which is a newer concept of business style and comes under e-business.

Difference between Traditional Commerce and E-commerce :

BASIS	**TRADITIONAL COMMERCE**	**E-COMMERCE**
Meaning	Traditional commerce refers to the commercial transactions or exchange of information, buying or selling product/services from person to person without use of internet.	E-commerce refers to the commercial transactions or exchange of information, buying or selling product/services electronically with the help of internet.
Standard practices	In traditional commerce it is difficult to establish and maintain standard practices.	In e-commerce it is easy to establish and maintain standard practices.
Interaction	In traditional commerce direct interaction through seller and buyer is present.	In e-commerce indirect interaction through seller and buyer occurs using electronic medium and internet.
Carried out	Traditional commerce is carried out by face to face, telephone lines or mail systems.	E-commerce is carried out by internet or other network communication technology.
Processing of transaction	In traditional commerce processing of transaction is manual.	In e-commerce processing of transaction is automatic.
Delivery	In traditional commerce delivery of goods is instant.	In e-commerce delivery of goods takes time.
Accessibility	Its accessibility is for limited time in a day.	Its accessibility is 24×7×365 means round the clock.
Conduction	Traditional commerce is done where digital network is not reachable.	E-commerce is used to save valuable time and money.
Method of business	Traditional commerce is a older method of business style which comes under traditional business.	E-commerce is a newer concept of business style which comes under e-business.
Physical	In traditional commerce	In e-commerce customers can not

inspection of goods	customers can inspect products physically before purchase.	inspect products physically before purchase.
Scope	Its business scope of business is a limited physical area.	Its business scope is worldwide as it is done through digital medium.
Uniform platform	For customer support, information exchange there is no such uniform platform.	For customer support, information exchange there is exists uniform platform.
Information exchange	Heavy dependency on informationexchange from person to person.	Information sharing is made easy via electronic communication channels making little dependency on person to person informationexchange.

4.What is E-marketplace and explain different functions of E-marketplace?

E-Marketplace and Its Functions

Electronic Marketplace:

An electronic marketplace, also known as an E-marketplace, can be seen as a Website or a set of linked sites of common interest to specific types of participants.

E-marketplace helps enterprises to do business in several ways, which are described below:

Functions of E-marketplace:

Purchase order efficiency: It primarily transacts and. executes purchases on behalf of their participants. The main aim of these E-marketplaces is to improve purchase order efficiency and help customers by reducing complex, paper-based transactions between buyers and sellers.

Effective cost quality analysis: It helps customers when they face a large number of suppliers because itbecomes difficult to reach these suppliers off-line or to contact them online. In this case, E-marketplaces usually provide the possibility of a parametric search across suppliers and in-depth product information. In this way, they help customers to make an effective cost-quality analysis and to choose a product, which suits them the best.

Exchange offers: It helps in buying and selling products that are available in low volume and for changing the product when it is in warranty. In this case, an E-marketplace usually organizes an on-line spot exchange for its membersand helps to build market liquidity.

Collaborative E-Commerce: It helps in the establishment of E-marketplaces that provide a platform for Collaborative (C)-commerce.

Single Venue: Third-party E-marketplaces aim to achieve the right number and the right kind of participants for which they would provide a single venue for conducting business with different trade facilities.

Serve Big industries: E-marketplaces are serving big industries such as electronics, chemicals, medical and construction industries.

Work flow tools: Third-party E-marketplaces offer solutions to simplify the complexityof the construction industry processes. They also help in project management in an organization by providing workflow tools to get access to the most up-to-date information on the project regardless of their location.
Maintenance and repair and operations: The other important function of a third-party E-marketplace is the Maintenance, Repair and Operations (MRO) of market supply. It helps in reducing the risk of trading with unknown partners since the buyers can view their relationships with the existing suppliers as a business strategic resource.

5.Explain the Advantages of Electronic Commerce.
Ans:

E-COMMERCE - ADVANTAGES

E-Commerce advantages can be broadly classified in three major categories −

- Advantages to Organizations
- Advantages to Consumers
- Advantages to Society

Advantages to Organizations

- Using e-commerce, organizations can expand their market to national and international markets with minimum capital investment. An organization can easily locate more customers, best suppliers, and suitable business partners across the globe.
- E-commerce helps organizations to reduce the cost to create process, distribute, retrieve and manage the paper based information by digitizing the information.
- E-commerce improves the brand image of the company.
- E-commerce helps organization to provide better customer services.
- E-commerce helps to simplify the business processes and makes them faster and efficient.
- E-commerce reduces the paper work.
- E-commerce increases the productivity of organizations. It supports "pull" type supply management. In "pull" type supply management, a business process starts when a request comes from a customer and it uses just-in-time manufacturing way.

Advantages to Customers

- It provides 24x7 support. Customers can enquire about a product or service and place orders anytime, anywhere from any location.
- E-commerce application provides users with more options and quicker delivery of products.
- E-commerce application provides users with more options to compare and select the cheaper and better options.
- A customer can put review comments about a product and can see what others are buying, or see the review comments of other customersbefore making a final purchase.

- E-commerce provides options of virtual auctions.
- It provides readily available information. A customer can see the relevant detailed information within seconds, rather than waiting for days or weeks.
- E-Commerce increases the competition among organizations and as a result, organizations provides substantial discounts to customers.

Advantages to Society

- Customers need not travel to shop a product, thus less traffic on roadand low air pollution.
- E-commerce helps in reducing the cost of products, so less affluent people can also afford the products.
- E-commerce has enabled rural areas to access services and products, which are otherwise not available to them.
- E-commerce helps the government to deliver public services such as healthcare, education, social services at a reduced cost and in an improved manner.

6. **What is E-commerce? Explain advantages and disadvantages of E-Commerce.**

Ans:

E-Commerce:

Electronic commerce, better known as E-commerce, refers to the commercial activities, such as on-line shopping and payment transactions carried out using computers and the Internet.

Advantages and disadvantages of E-Commerce:

E-commerce covers the global information economy, which includes electronic trading goods and services, electronic fund transfer, online procurement, direct marketing and electronic Billing. E-commerce provides the procedures or the ways for generating profits by increasing the number of transactions. Some of the main advantages of E-commerce are as follows:

Increased access:

E-commerce has made it easier for businesses to reach people aroundthe world and run their operation without approaching their suppliers directly. E- commerce businesses provide access to the consumers and the other businesses all over the world

Reduces competitive gap:

E-commerce reduces marketing and advertising expenses. So, smaller companies can also compete on quality, price and availability of goods with the bigger companies.

Reduced sale cycle:

The customers access the product listing and the pricing directly from the Internet without any phone calls and e-mails.

Reduced cost of business:

E-commerce reduces the effort required to do business. It reduces the amount of manpower required, inventory costs, purchasing costs and order processing costs associated with faxing, phone calls and data entry.

Easy business administration:

With the use of efficient software, most of the business-related tasks can be done automatically. Business processes like storing of inventory levels, shipping and receiving logs and other business administration processes are automatically stored.

Better payment system:

With the advancement in payment technologies, E-commerce allows encrypted and secure payment facilities on-line.

Reduced burden on staff:

E-commerce simplifies the customer service and sales support tasks , thus relieving the staff from one of their job responsibilities.

Medium to grow business:

E-commerce serves as a medium for start-up, small- and medium-sized companies to reach the global market.

Network production:

E-commerce allows parceling of the production process to the contractors whoare geographically separated but are connected through the Internet. This helps in selling of add-on products, services and new systems.

Disadvantages:

E-commerce has helped customers to find the required product in an easy way. But, there are some difficulties that exist in the use of E-commerce. Some of the most common difficulties are as follows:

1) It is difficult to decide the criteria on which taxes should be charged on the selling of goods over the Internet in case the business and the customer are in different states
2) The issue of security is another major area of concern on E-

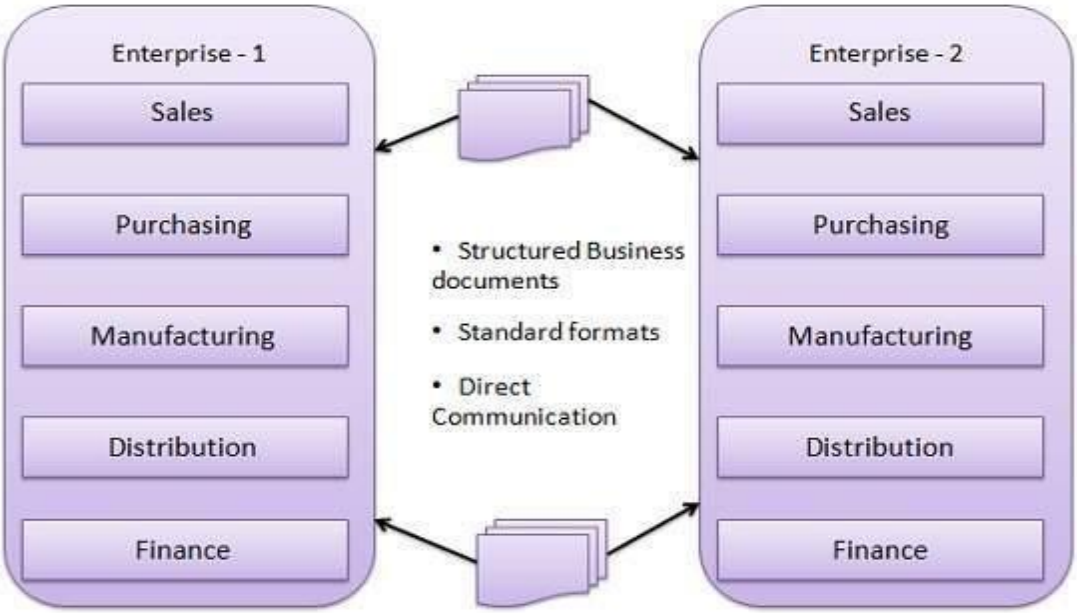
Commerce. The security issues concerning personal and financial information abouta customer still exists even with the improvement of data encryption techniques.

3) The cost that is involved in the development and deployment of the E- commerce application is very high.
4) Some protocols are required to develop some specific E-commerce applications that are not standardized around the world. The deploymentof such applications over the Internet required that these protocols should be available on the client side.
5) The integration of E-commerce infrastructure with the present organizational Information technology system is difficult. The technologies used in the development of an E-commerce application in an organization may be different from that of the presently existing application used in -the organization.
6) There are no common rules and regulations agreed to by all the parties involved in the development and usage of Web resources and applications.
7) On the business side, higher employee training is required for proper management of the process involved in the transactions.

7.Explain the process of EDI system.
Ans:

E-COMMERCE - EDI

EDI stands for Electronic Data Exchange. EDI is an electronic way of transferring business documents in an organization internally, between itsvarious departments or externally with suppliers, customers, or any subsidiaries. In EDI, paper documents are replaced with electronic documents such as word documents, spreadsheets, etc.



EDI Documents:
Following are the few important documents used in EDI −

- Invoices
- Purchase orders
- Shipping Requests
- Acknowledgement
- Business Correspondence letters
- Financial information letters

Steps in an EDI System:
Following are the steps in an EDI System.

- A program generates a file that contains the processed document.
- The document is converted into an agreed standard format.
- The file containing the document is sent electronically on the network.
- The trading partner receives the file.
- An acknowledgement document is generated and sent to the originatingorganization.

Advantages of an EDI System:
Following are the advantages of having an EDI system.

- **Reduction in data entry errors.** − Chances of errors are much less while using a computer for data entry.
- **Shorter processing life cycle** − Orders can be processed as soon asthey are entered into the system. It reduces the processing time of the transfer documents.
- **Electronic form of data** − It is quite easy to transfer or share the data, as it is present in electronic format.
- **Reduction in paperwork** − As a lot of paper documents are replaced with electronic documents, there is a huge reduction in

paperwork.

- **Cost Effective** − As time is saved and orders are processed very effectively, EDI proves to be highly cost effective.
- **Standard Means of communication** − EDI enforces standards on the content of data and its format which leads to clearer communication.

8.How E-commerce Works? List the Major Benefits of E-commerce?

Ans:

E-Commerce: E-Commerce or Electronic Commerce is a methodology of modern business, which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing the speed of delivery.

Steps to use ecommerce website:

- When a consumer wants to buy a certain product, he go to thewebsite and selects the product he wants to buy.
- Once the product is selected, the consumer transaction is moved tothe online transaction server where he places an order.
- The information is exchanged over a secure channel through aprivate gateway to a processing network.
- The networked banks accept or reject the transaction.All this happens in just a matter of seconds.
- ecommerce is a very secure due to the SSL (Secure Socket Layer)technology**.**

The basic steps involved in becoming Commerce Enabled are:

1) Getting an Internet Merchant Bank Account
2) Web Hosting
3) Obtaining a Digital Certificate
4) Finding a Provider of Online Transactions
5) Creating or Purchasing a Shopping Cart Software

E-commerce businesses function:

Online business works on the same principles as an offline/retail store does. On a broader scale, the
whole Ecommerce process can be broken down into three main components or work processes:

Receiving Orders

This is the first step where customers place the order through the Ecommerce platform (website
or an online portal), and the seller makes a note of it.

Processing Order Information

The second step where all the details of the order being processed and completed. It is now ready for delivery.

Shipping

The last step wherein the delivery process is carried out. All the logistics components play a significant role in this step to ensure timely delivery to the customer.

The major benefits of Ecommerce are:

1. Secure - More secure than a cheque.
2. Fast - The transactions take not more than a few seconds
3. Always on - The purchases can be made 24/7
4. Convenient - Ease of purchasing
5. Reduced cost price - Reduction of Marketing and Advertising Costs

Short questions-5marks

1.Explain the features of E-Commerce.

E-Commerce: E-Commerce or Electronic Commerce is a methodology of modern business, which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing the speed of delivery.

Features:

E-Commerce provides the following features −

a. **Non-Cash Payment** − E-Commerce enables the use of credit cards, debit cards, smart cards, electronic fund transfer via bank's website, and other modes of electronics payment.
b. **24x7 Service availability** − E-commerce automates the business of enterprises and the way they provide services to their customers. It is available anytime, anywhere.
c. **Advertising / Marketing** − E-commerce increases the reach ofadvertising of products and services of businesses. It helps in better marketing management of products/services.
d. **Improved Sales** − Using e-commerce, orders for the products can be generated anytime, anywhere without any human intervention. It gives abig boost to existing sales volumes.
e. **Support** − E-commerce provides various ways to provide pre-sales and post-sales assistance to provide better services to customers.
f. **Inventory Management** − E-commerce automates inventory management. Reports get generated instantly when required. Product inventory management becomes very efficient and easy to maintain.
g. **Communication improvement** − E-commerce provides ways for faster, efficient, reliable communication with customers and partners.

2.Write about E-Commerce and the Trade Cycle.

E-Commerce: E-Commerce or Electronic Commerce is a methodology of modern business, which addresses the need of business organizations, vendors and customers to reduce cost

and improve the quality of goods and services while increasing the speed of delivery.

The e-Commerce Trade Cycle:

A trade cycle is the series of exchanges, between a customer and supplier, that take place when a commercial exchange is executed. A general trade cycle consists of:

- Pre-Sales: Finding a supplier and agreeing the terms.
- Execution: Selecting goods and taking delivery.
- Settlement: Invoice (if any) and payment.
- After-Sales: Following up complaints or providing maintenance.

For business-to-business transactions the trade cycle typically involves the provision of credit with execution preceding settlement whereas in consumer-to-business these two steps are typically co-incident. The nature of the trade cycle can indicate the e-Commerce technology mostsuited to the exchange.

Commercial transactions that are repeated on a regular basis, such as supermarkets replenishing their shelves, is one category of trade cycle. EDI is the e-Commerce technology appropriate to these exchanges, see Figure 1.

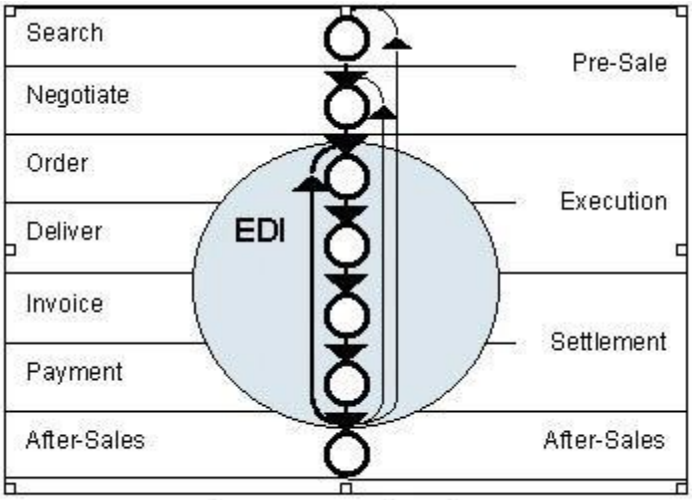


Figure 1: EDI Trade Cycle.

- Consumer transactions tend to be once-off (or at least vary each time) and payment is made at the time of the order.Internet e-Commerce is the technology for these exchanges, see Figure 2.

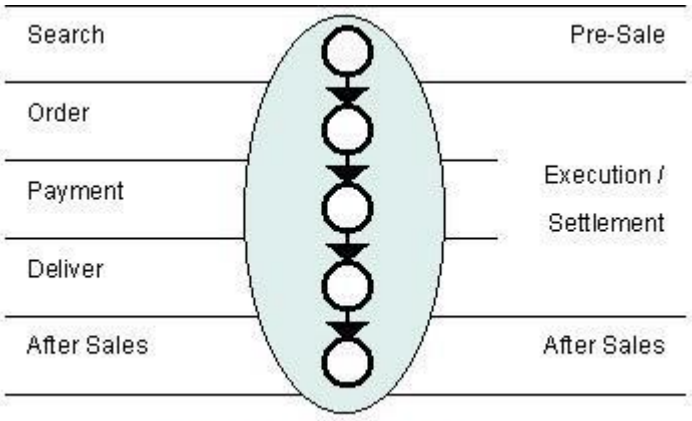


Figure 2 Consumer i-Commerce.

- The third generic trade cycle is the non-repeating commercial trade cycle and Internet e-Commerce or an electronic market is theappropriate e-technology.

3.How to Set Up an Ecommerce System?

E-commerce Web sites are not easy to set up. With complete knowledge of e- commerce solutions in the market, entrepreneurs have to make a few decisions they are

key decisions:

Initial Investment: The entrepreneur has to decide on the initial amount of investment required for an e-commerce Web site,

Volume of Business: He has to decide the volume of business of an e-commerce Web site over the Internet.

Purchase of Softwares: Investment factors and business objectives dictate the type of software, database, or other applications that are required to set up the e-commerce Web site.

Domain name: There are specific elements involved in an e-commerce system. These elements range from domain name for the site

Merchant account: Set up of merchant account for e-commerce transactions.

Rigorous testing: Before launching the e-commerce Web site on the Internet, it requires rigorous testing. Some of the important and common types of testing include security testing, software and hardware reliability, and compatibility between all the elements of the system.

4.Explain about E-marketing.

E-Marketing

Marketing can be defined as the way in which a product is sold to the customers. In other words, marketing includes a set of activities that areconcerned with advertising, distribution, planning, promotion, sales and transportation of goods or services. E-marketing is basically a component of E-commerce.

To advertise: Which includes the use of the Internet to advertise goods and services.

Websites and e-mails as a marketing medium: It uses Websites and e-mails as a marketing medium to inform the customers about a product, solicit their questions and accept their orders directly throughthe Internet.

These types of Websites allow Internet users to bid on the listed items Some of the methods that can be used for E-marketing are as follows:

E-Mail marketing:

It is a direct form of marketing, which uses e-mails as a means of communicating commercial messages to the audience. In this type of E-marketing, advertisements related to specific products or services are added tothe e-mails sent by companies to customers.

Display advertising:

It uses a Web banner or a banner advertisement for the purpose of

marketing on the Web.

The Web banner is displayed when a Web page that references the banner is loaded into a Web browser.

This event is known as impression. When a viewer clicks on the banner, the viewer is directed to the Website advertised in the banner.

Interactive advertising:

It uses interactive media such as the Internet and interactive televisionto promote and influence buying decisions of customers in an on-line or off-line environment.

Very Short questions-1mark

1.Electronic Market E-Marketing (Electronic Marketing) are also known as Internet Marketing, Web Marketing, Digital Marketing, or Online Marketing. E-marketing is the process of marketinga product or service using the Internet. Emarkerting not only includes marketing on the Internet, but also includes marketing done via e-mail and wireless media. It uses a range of technologies to help connect businesses to their customers.

2.Explain some major benefits of E-commerce?

The major benefits of Ecommerce are:

secure - more secure than a cheque.

Fast - the transactions take not more than a few secondsalways on -

the purchases can be made 24/7

convenient - ease of purchasing

reduced cost price - Reduction of Marketing and Advertising Costs

3.What are the possible drawbacks of electronic commerce?

Increased vulnerability to fraud; difficulty protecting intellectual property; risks to confidentiality; problems over taxation; customs requirements; regulations; credit card fraud; security; trust problems, and constant availability.

4.E-Services

An umbrella term for services on the Internet. E-services include e-commerce transaction services for handling online orders, application hosting by applicationservice providers (ASPs) and any processing capability that is obtainable on the Web.

5.Electronic Data Interchange

Electronic data interchange (**EDI**) is the concept of businesses communicating electronically certain information that was traditionally communicated on paper. The two

classic examples of such information are purchase orders and invoices. Standards for EDI exist to facilitate parties transacting such instruments without having to make special arrangements.

6.What are Online Shopping Application and Give Some Examples?

Ans:

Online Shopping Application provides business gateway between Productvendors and Customers.

Ex: Walmart, amazon etc...

7.What is the difference between B2B and B2C Electronic Commerce?

Difference between business-to-business and business-to-consumer e-commerce: Business-to-business electronic commerce is conducted between two separate businesses, such as a large company needing office supplies and an office supplycompany.

Business-to-consumer electronic commerce is between one individual and a company selling goods or services.

8.Network production

E-commerce allows parceling of the production process to the contractors who are geographically separated but are connected through the Internet. This helps in selling of add-on products, services and new systems.

UNIT II

Essay Questions

1.Explain different E-Commerce models.

Ans:

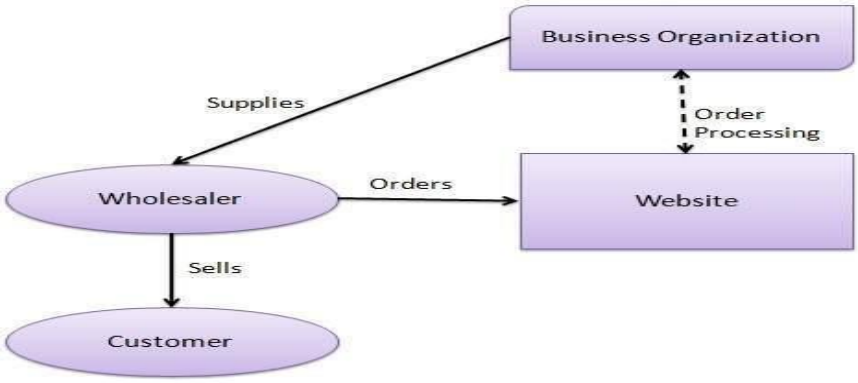
E-COMMERCE - BUSINESS MODELS

E-commerce business models can generally be categorized into the following categories.

- Business - to - Business B2B
- Business - to - Consumer B2C
- Consumer - to - Consumer C2C
- Consumer - to - Business C2B
- Business - to - Government B2G
- Government - to - Business G2B
- Government - to - Citizen G2C

Business - to – Business:

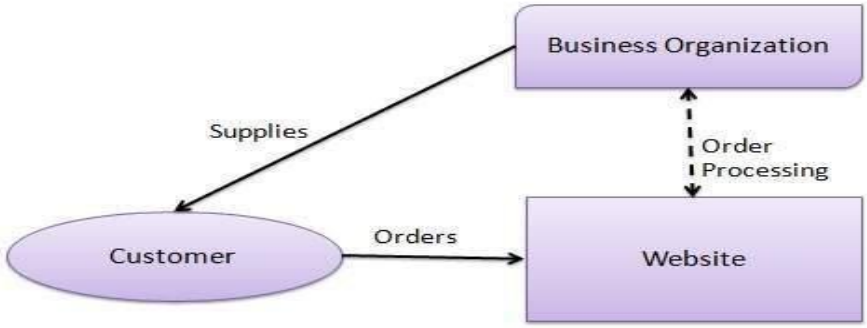
A website following the B2B business model sells its products to an intermediate buyer who then sells the product to the final customer. As an example, a wholesaler places an order from a company's website and after receiving the consignment, sells the endproduct to the final customer who comes to buy the product at one of its retail outlets.



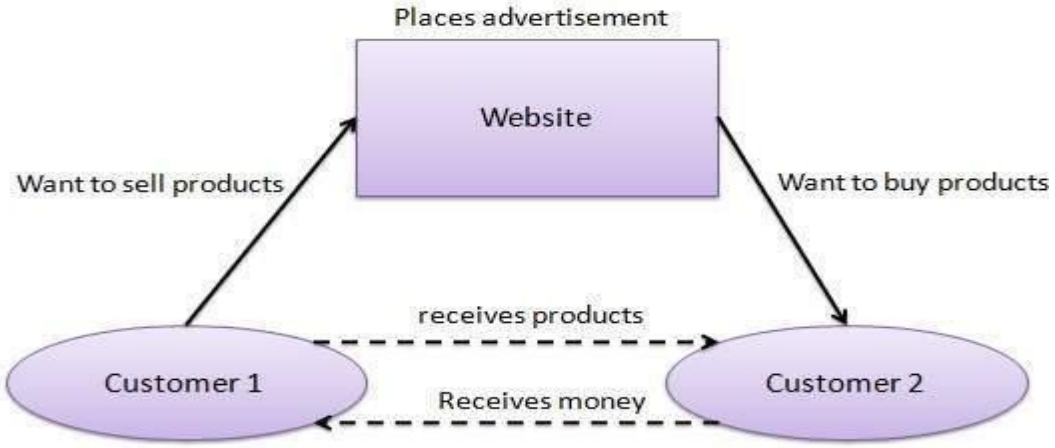
Business - to – Consumer:

A website following the B2C business model sells its products directly to a customer.A customer can view the products shown on the website. The customer can choose a product and order the same.

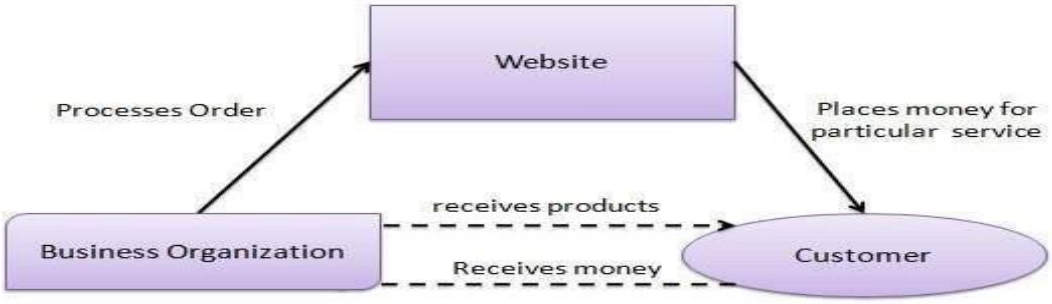
The website will then send a notification to the business organization via email and the organization will dispatch the product/goods to the customer.



Consumer - to – Consumer:
A website following the C2C business model helps consumers to sell their assets like residential property, cars, motorcycles, etc., or rent a room by publishing their information on the website. Website may or may not charge the consumer for its services. Another consumer may opt to buy the product of the first customer by viewing the post/advertisement on the website.



Consumer - to – Business:
In this model, a consumer approaches a website showing multiple business organizations for a particular service. The consumer places an estimate of amount he/she wants to spend for a particular service. For example, the comparison of interest rates of personal loan/car loan provided by various banks via websites. A business organization who fulfills the consumer's requirement within the specifiedbudget, approaches the customer and provides its services.



Business - to – Government:
B2G model is a variant of B2B model. Such websites are used by governments to trade and exchange information with various business organizations. Such websites are accredited by the government and provide a medium to businesses to submit application forms to the government.

Government - to – Business:
Governments use B2G model websites to approach business organizations. Such websites support auctions, tenders, and application submission functionalities.

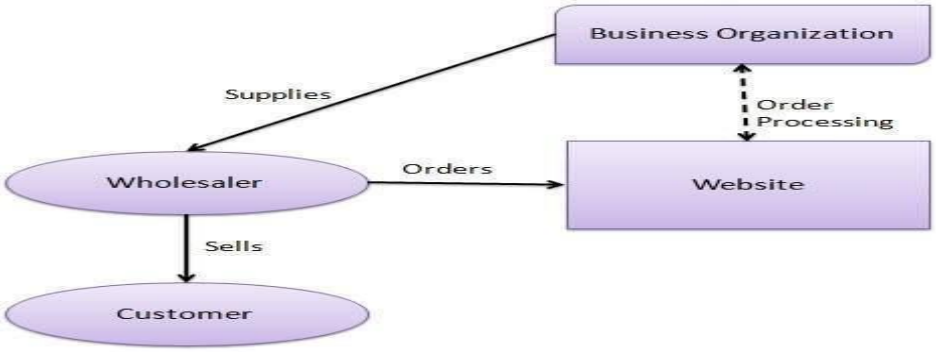
Government - to – Citizen:
Governments use G2C model websites to approach citizen in general. Such websites support auctions of vehicles, machinery, or any other material. Such website also provides services like registration for birth, marriage or death certificates. The main objective of G2C websites is to reduce the average time for fulfilling citizen'srequests for various government services.

2.Discuss about Characteristics B2B E-Commerce.
Ans:

E-COMMERCE - B2B MODEL

A website following the B2B business model sells its products to an intermediate buyer who then sells the products to the final customer. As an example,a wholesaler places an order from a company's website and after receiving theconsignment, it sells the end product to the final customer who comes

to buy the product at the wholesaler's retail outlet.



B2B identifies both the seller as well as the buyer as business entities. B2B coversa large number of applications, which enables business to form relationships with their distributors, re-sellers, suppliers, etc. Following are the leading items in B2B eCommerce.

- Electronics
- Shipping and Warehousing
- Motor Vehicles
- Petrochemicals
- Paper
- Office products
- Food
- Agriculture

Key Technologies:
Following are the key technologies used in B2B e-commerce −

- **Electronic Data Interchange** EDIEDI − EDI is an inter-organizational exchange of business documents in a structured and machine processable format.
- **Internet** − Internet represents the World Wide Web or the network of networks connecting computers across the world.
- **Intranet** − Intranet represents a dedicated network of computers within a single organization.
- **Extranet** − Extranet represents a network where the outside business partners, suppliers, or customers can have a limited access to a portion of enterprise intranet/network.
- **Back-End Information System Integration** − Back-end information systems are database management systems used to manage the business data.

Architectural Models:
Following are the architectural models in B2B e-commerce −

- **Supplier Oriented marketplace** − In this type of model, a common marketplace provided by supplier is used by both individual customers as well as business users. A supplier offers an e-stores for sales

promotion.

- **Buyer Oriented marketplace** − In this type of model, buyer has his/her own market place or e-market. He invites suppliers to bid on product's catalog. A Buyer company opens a bidding site.
- **Intermediary Oriented marketplace** − In this type of model, an intermediary company runs a market place where business buyers and sellers can transact with each other.

3. Discuss about E-Commerce Payment systems.

Ans:

E-COMMERCE - PAYMENT SYSTEMS

E-commerce sites use electronic payment, where electronic payment refers to paperless monetary transactions. Electronic payment has revolutionized the business processing by reducing the paperwork, transaction costs, and labor cost. Being user friendly and less time-consuming than manual processing, it helps business organization to expand its market reach/expansion. Listed below are some of the modes of electronic payments −

- Credit Card
- Debit Card
- Smart Card
- E-Money
- Electronic Fund Transfer EFTEFT

Credit Card

Payment using credit card is one of most common mode of electronic payment. Credit card is small plastic card with a unique number attached with an account. It has also a magnetic strip embedded in it which is used to read credit card via card readers. When a customer purchases a product via credit card, credit card issuer bank pays on behalf of the customer and customer has a certain time period after which he/she can pay the credit card bill. It is usually credit card monthly payment cycle. Following are the actors in the credit card system.

- **The card holder** − Customer
- **The merchant** − seller of product who can accept credit card payments.
- **The card issuer bank** − card holder's bank
- **The acquirer bank** − the merchant's bank
- **The card brand** − for example , visa or Mastercard.

Credit Card Payment Proces

Step	Description

Step 1	Bank issues and activates a credit card to the customer on his/herrequest.
Step 2	The customer presents the credit card information to the merchant site orto the merchant from whom he/she wants to purchase a product/service.
Step 3	Merchant validates the customer's identity by asking for approval fromthe card brand company.
Step 4	Card brand company authenticates the credit card and pays thetransaction by credit. Merchant keeps the sales slip.
Step 5	Merchant submits the sales slip to acquirer banks and gets the servicecharges paid to him/her.
Step 6	Acquirer bank requests the card brand company to clear the creditamount and gets the payment.
Step 7	Now the card brand company asks to clear the amount from the issuerbank and the amount gets transferred to the card brand company.

Debit Card

Debit card, like credit card, is a small plastic card with a unique number

mapped with the bank account number. It is required to have a bank account before getting a debit card from the bank. The major difference between a debit card and a credit card is that in case of payment through debit card, the amount gets deducted from the card's bank account immediately and there should be sufficient balance in the bank account for the transaction to get completed; whereas in case of a credit cardtransaction, there is no such compulsion.

Debit cards free the customer to carry cash and cheques. Even merchants accept a debit card readily. Having a restriction on the amount that can be withdrawn in a day using a debit card helps the customer to keep a check on his/her spending.

Smart Card

Smart card is again similar to a credit card or a debit card in appearance, but it has a small microprocessor chip embedded in it. It has the capacity to store a customer's work-related and/or personal information. Smart cards are also used to store money and the amount gets deducted after every transaction.

4. Write the Credit Card Payment process.

Ans:

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SHORT QUESTIONS

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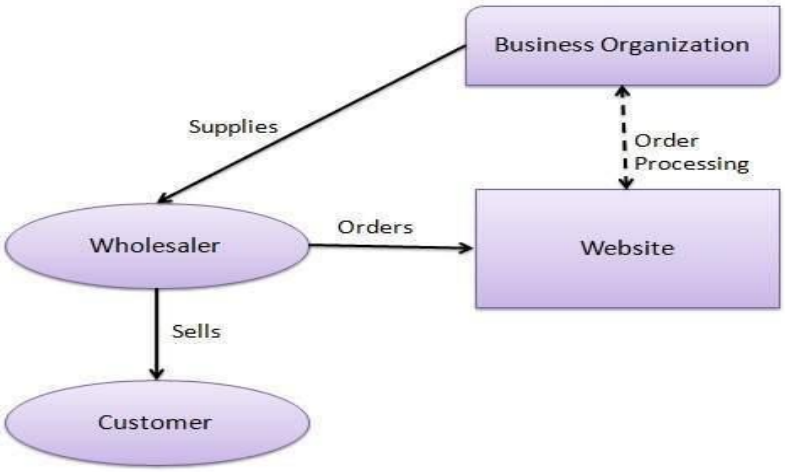

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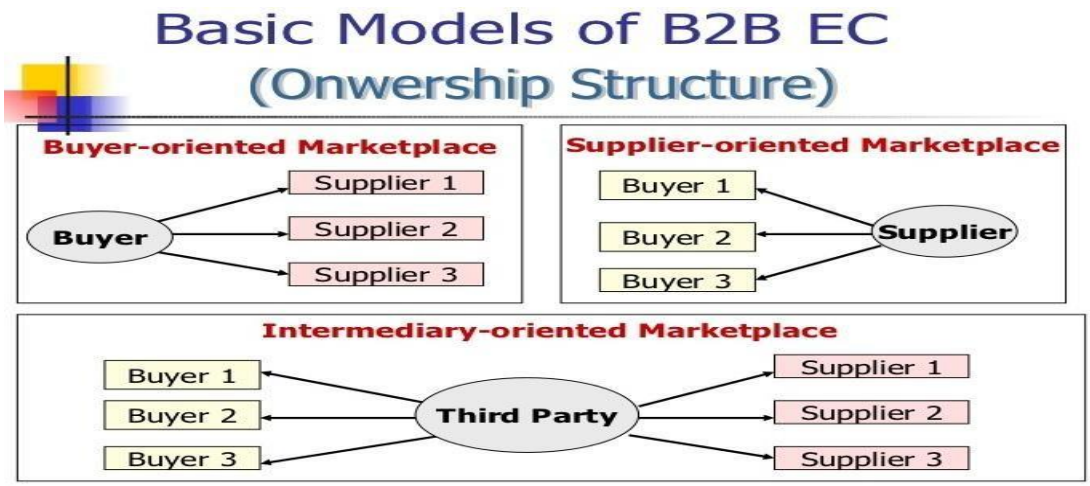
2. Explain the architecture of B2B Model.

Ans:



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3. What are the advantages of EDI System?

Ans:

Electronic data interchange (**EDI**) is the concept of businesses communicating electronically certain information that was traditionally communicated on paper. The two classic examples of such information are purchase orders and invoices. Standards for EDI exist to facilitate parties transacting such instruments without having to make special arrangements.

Advantages of an EDI System

Following are the advantages of having an EDI system.

- **Reduction in data entry errors.** − Chances of errors are much less while using a computer for data entry.
- **Shorter processing life cycle** − Orders can be processed as soon asthey are entered into the system. It reduces the processing time of the transfer documents.

- **Electronic form of data** − It is quite easy to transfer or share the data, as it is present in electronic format.
- **Reduction in paperwork** − As a lot of paper documents are replaced with electronic documents, there is a huge reduction in paperwork.
- **Cost Effective** − As time is saved and orders are processed very effectively, EDI proves to be highly cost effective.
- **Standard Means of communication** − EDI enforces standards on the content of data and its format which leads to clearer communication.

4. What are the Key technologies used in B2B E-Commerce?

Ans:

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VERY SHORT QUESTIONS

1. Auction SalesAns:

It is a public sale in which different willing buyers participate. The goods arefinally sold to the highest bidder, i.e., the one who has quoted the highest price

2. What is C2C (Consumer-to-Consumer)?Ans:

C2C (Consumer-to-Consumer)

These kind of transactions are usually done at an individual level. Payments canbe done with the help of online systems like PayPal.

3. What is C2B (Consumer-to-Business)?Ans:

C2B (Consumer-to-Business):

In this, a consumer places the product on the net. The companies willing to buythis product bid for it. The consumer can then decide, depending upon the bid, which company to sell it to.

4.What Are The Payment Models For Electronic Commerce?

Ans:

The e-cash model, the check model, and the credit model.

III UNIT

Essay questions

1.Explain different Applications of E-Commerce.

Ans:

E-Commerce: E-Commerce or Electronics Commerce is a methodology of modern business, which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing thespeed of delivery.

E-Commerce Applications:

Advantages of using e commerce in business are motivating lot of businesses to use E-Commerce for their business. Various business areas such as retail, wholesale and manufacturing are using E-Commerce.

The most common Applications of E-commerce are as follows:

Retail and wholesale:

E-commerce has a number of applications in retail and wholesale.
e-retailing or on-line retailing is the selling of goods from Business-to- Consumer through electronic stores that are designed using the electronic catalog and shopping cart model.
Cybermall is a single Website that offers different products and services at one Internet location. It attracts the customer and the seller into one virtual space through a Web

Marketing:

Another application e-commerce is Marketing. Data collection about customer behavior, preferences, needs and buying patterns is possible through Web and E-commerce. This helps marketing activities such as price fixation, negotiation, product feature enhancement and relationship withthe customer.

Finance:

Financial companies are using E-commerce to a large extent.
Customers can check the balances of their savings and loan accounts, transfer money to their other account and pay their bill through on-line banking or E-banking.
Another application of E-commerce is on-line stock trading. Many Websites provide access to news, charts, information about company profile and analyst rating on the stocks.

Manufacturing:

E-commerce is also used in the supply chain operations of a company.
Some companies form an electronic exchange by providing together buy and sell goods, trade market information and run back office information such as inventory control.

Companies may not trust their competitors and may fear that they will losetrade secrets if they participate in mass electronic exchanges.

Auctions:

Customer-to-Customer E-commerce is direct selling of goods and services among customers.
It also includes electronic auctions that involve bidding. Bidding is a specialtype of auction that allows prospective buyers to bid for an item.

Accounting

Finance and e-commerce are more intertwined than ever before. Banks and stock exchanges make extensive use of e-commerce in their operations. Balance checks, bill payments, money transfers, and more services are available through online banking. Online stock trading allows users to trade stocks online by providing information about equities such as performance reports, analysis, charts, and so on via websites.

Trade

Applying e-commerce to trade elevates it to a higher level, allowing individuals to participate without regard for geographical borders. This encourages more participation, more bargaining and contributes to the success of the trade.

Advertising

Development and commercialization strategies like pricing, product characterization, and customer relationship can be boosted by utilizing e-commerce. This will give consumers a more enriched and personalized purchasing experience. Digital marketing tactics have grown in importance as a means of promoting enterprises.

Digital Shopping

People's buying habits have shifted dramatically in the previous several years. "Go online" has become a success mantra for all enterprises. Online shopping is easy, pleasant, and, in most cases, inexpensive. The success of online shopping applications like **Flipkart and Amazon** demonstrates this.

Web and mobile applications

Mobile commerce or **m-commerce application** is a subset of retail e-commerce. Mobile or web application development has become a must-have for companies looking to showcase their skills. Purchases are made by the consumer using mobile or web applications that are optimized for the merchant.

Digital Reservations

Travel and tourism is a flourishing sector today, and online booking is a **developing e-commerce application**. Online booking allows customers to buy travel necessities such as train/flight tickets, book hotel rooms, get tourism packages, transportation services, and so on.

Digital Media

E-books and digital periodicals are gradually displacing traditional printed publications. It has numerous advantages, including portability, lightweight, accessibility from anywhere, and so on.

Internet Banking

E-Banking, often known as online banking, is an **e-commerce program** that has streamlined people's time-consuming and complex banking operations. It allows bank customers to do transactions online without having to wait in lengthy lines at banks. To provide virtual banking services to their consumers, most of the banks now have their web applications.

2.What are the basic Applications of Internet?

Internet Applications can be described as the type of applications that use the internet for operating successfully, that is, by using the internet for fetching, sharing and displaying the information from the respective server systems. We can roughly separate internet applications into the following types: onlinemedia, online information search, online communications, online communities, online entertainment, e-business, online finance and other applications.

1. Internet telephony

Internet telephony (e.g. Skype) is another common communications service made possible by the creation of the Internet. VoIP stands for Voice-over-Internet Protocol, referring to the protocol that underlies all Internet communication.

2. Job search

Nowadays, many people search for their jobs online as it is quicker and there is a larger variety of job vacancies present. People can publish resume online for prospective job. Some of the web sites providing this service are naukri.com, monster.com, summerjob.com, recuritmentindia.com etc.

3. Online Shopping

The internet has also facilitated the introduction of a new market concept consisting of virtual shops. They provide information about products or services for sale through www servers. Using the internet services customers can submit specific product queries and request specific sales quotes.

4. Stock market updates

Selling or buying shares sitting on computer through internet. Several websites like ndtvprofit.com, moneypore.com, provide information regarding investment

5. Travel:

One can use internet to gather information about various tourist place .it can be used for booking Holiday tours, hotels, train, bus, flights and cabs. Some of the web sites providing this service are goibibo.com, makemytrip.com, olacabs.com.

6. Research

Research papers are present online which helps in the researcher doing a literature review

7. Video conferencing

It enables direct face-to-face communication across networks via web cameras, microphones, and other communication tools. Video conferencing can enable individuals in distant locations to participate in meetings on short notice, with time and money savings.

8. e–commerce

e–commerce (electronic commerce or EC) is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the Internet. These business transactions occur either business-to-business, business-to-consumer, consumer-to-consumer or consumer-to-business. Largest e-commerce companies in India are Flipkart, Snapdeal, Amazon India, Paytm.

9. Online payments

The rising boom of online payments in India has given way to many new entrants in the industry such as Paytm etc who are majorly wallet driven payment companies. This growth has been driven by rapid adoption led by the increasing use of smart phones, tablets and speedy access to internet through broadband, 4G etc

10. Social Networking

Social networking is the use of internet-based social media programs to make connections with friends, family, classmates, customers and clients. Social networking can be done for social purposes, business purposes or both.

11. Voicemail

Voicemail is a system of sending messages over the phone. Calls are answered by a machine which connects you to the person you want to leave a message for, and they canlisten to their messages later.

12. Chatting

On the Internet, chatting is talking to other people who are using the Internet at the same time you are. Usually, this "talking" is the exchange of typed-in messages and a group of users who take part from anywhere on the Internet. Chats can be ongoing or scheduled for a particular time and duration.

13. e-banking

e-banking (Online banking) , also known as internet banking, it is an electronic payment system that enables customers of a bank or other financial institution to conduct a range of financial transactions through the financial institution's website.

14. e-learning

e-Learning are courses that are specifically delivered via the internet to somewhere other than the classroom where the professor is teaching. It is not a course delivered via a DVD or CD-

ROM, video tape or over a television channel. e-learning is utilizing electronic technologies to access educational curriculum outside of a traditional classroom. It is a program delivered completely online.

15.E-mail

Also known as electronic mail, is the most widely used and successful of Internet applications. Web browsing is the application that had the greatest influence in dramatic expansion of the Internet and its use during the 1990s.

16.Web Browsing:

The web browser is another Internet application of critical importance. Unlike e- mail, which was developed and then standardized in the early, noncommercial daysof the Internet, the web browser was developed in a highly commercialized environment dominated by such corporations as Microsoft and Netscape, and heavilyinfluenced by the World Wide Web Consortium (W3C).

17.Peer-To-Peer Computing:

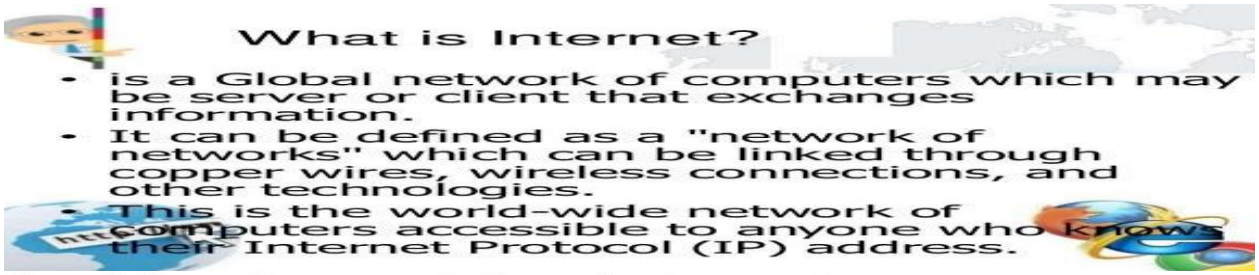
One of the fastest growing, most controversial, and potentially most important areas of Internet applications is peer-to-peer (P2P) networking. Peer-to-peer networking is based on the sharing of physical resources, such as hard drives, processing cycles, and individual files among computers and other intelligent devices.

3.Write about Architecture of Internet

Ans:

Architecture of Internet

Internet architecture is a meta-network, which refers to a congregation of thousands of distinct networks interacting with a common protocol. In simple terms, it is referred as an internetwork that is connected using protocols. Protocol used is TCP/IP.



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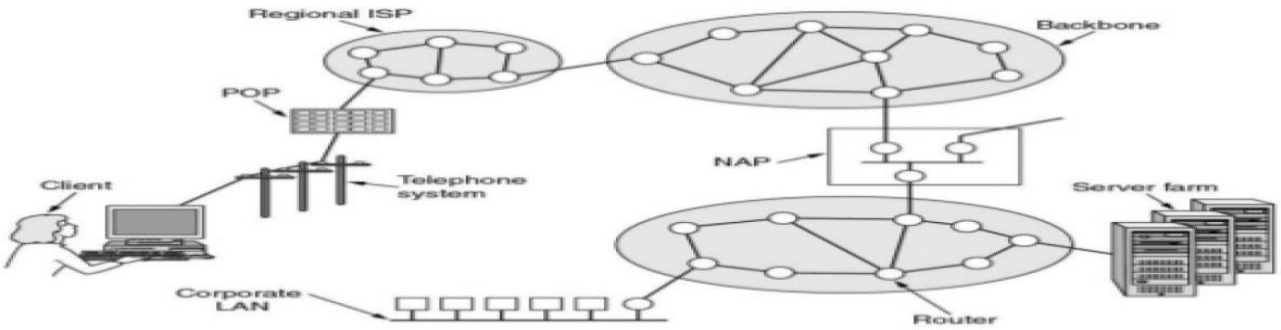
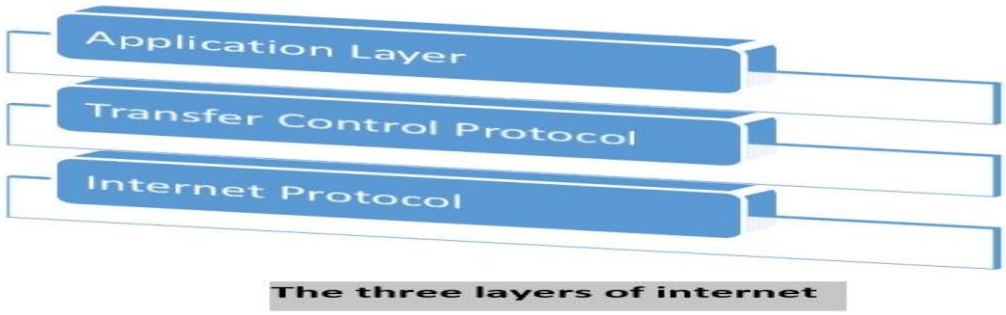


Layers of Internet Architecture

Internet architecture consists of three layers −



The three layers of internet

IP

In order to communicate, we need our data to be encapsulated as Internet Protocol (IP) packets. These IP packets travel across number of hosts in a network through routing to reach the destination. However IP does not support error detection and error recovery, and is incapable of detecting loss of packets.

TCP

TCP stands for "Transmission Control Protocol". It provides end to end transmission of data, i.e., from source to destination. It is a very complex protocol as it supports recovery of lost packets.

Application Protocol

Third layer in internet architecture is the application layer which has different protocols on which the internet services are built. Some of the examples of internet services include email (SMTP facilitates email feature), file transfer (FTP facilitates file transfer feature), etc.

Internet architecture, It is by definition a meta-network, a constantly changing collection of thousands of individual networks intercommunicating with a common protocol.

The Internet's architecture is described in its name, a short from of the compound word "inter-networking". This architecture is based in the very specification of the standard *TCP/IP* protocol, designed to connect any two networks which may be very different in internal hardware, software, and technical design.

Once two networks are interconnected, communication with TCP/IP is enabled end-to-end, so that any node on the Internet has the near magical ability to communicate with any other no matter where they are. This openness of design has enabled the Internet architecture to grow to a global scale.

For example, an individual's access to the Internet is often from home overa modem to a local Internet service provider who connects to a regional network connected to a national network.

At the office, a desktop computer might be connected to a local area network with a company connection to a corporate Intranet connected to several national Internet service providers. In general, small local Internet service providers connect to medium-sized regional networks which connect to large national networks, which then connect to very large bandwidth networks on the Internet *backbone*.

Bandwidth is priced by large Internet service providers by several methods, such as at a fixed rate for constant availability of a certain number of megabits per second, or by a variety of use methods that amount to a cost per gigabyte. Due to economies of scale and efficiencies in management, bandwidth cost drops dramatically at the higher levels of the architecture.

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SHORT QUESTIONS

1.Write the Features of Extranets.

Extranets.:

An extranet is an organization’s private network and its available only for selected users. It’s a way to connect to third parties like vendors, customers, and partners in a secure and controlled way. The users typically have a login mechanism such as username and password to access the network. Extranet in simple terms provides a secure network for an organization to share information with relevant people outside the organization. It is part of an organization’s intranet divided via a firewall.

Examples:

1.An e-commerce site exchanges information with its retailers, a supplier’s through an extranet network.

2. Multinational organizations handle their project information, clients and communicate with another organization over an extranet network.

3. University provides an e-learning platform for their students over the extranet network.

Following are the features of the extranet:

1. **Data security:** Sharing confidential data is of utmost priority and the extranet provides a safe environment for data sharing between the organizations. This decreases the chance of loss of confidential data and increases productivity.
2. **Faster communication:** Extranet allows to connect multiple organizations and escalate the communication between them.
3. **Flexibility:** Extranet provides a flexible and scalable environment to work on for everyone involved, which also increases the productivity of the organization.

4.**Cost:** It may decrease the cost of paperwork and travel to some extent.

5.**Authentication:** It provides authentication mechanisms like username and password. Therefore, only authorized users can access the network.

6.**Use internet technologies:** It uses internet technologies and standards and security systems.

2.Write about E-Commerce Security system.

Ans:

E-COMMERCE - SECURITY SYSTEMS

E-commerce security is the protection of e-commerce assets from unauthorized access, use, alteration, or destruction.

Security is an essential part of any transaction that takes place over the internet. Customers will lose his/her faith in e-business if its security is compromised.

Following are the essential requirements for safe e- payments/transactions −

- **Confidentiality** − Information should not be accessible to an unauthorized person. It should not be intercepted during the transmission.
- **Integrity** − Information should not be altered during its transmission over the network.
- **Availability** − Information should be available wherever and whenever required within a time limit specified.
- **Authenticity** − There should be a mechanism to authenticate a user before giving him/her an access to the required information.
- **Non-Repudiability** − It is the protection against the denial of order or denial of payment. Once a sender sends a message, the sender shouldnot be able to deny sending the message. Similarly, the recipient of message should not be able to deny the receipt.
- **Encryption** − Information should be encrypted and decrypted only by an authorized user.
- **Auditability** − Data should be recorded in such a way that it can be audited for integrity requirements.

3.What are the advantages of B2B E-Commerce?
Ans:

B2B E-Commerce In simple terms, the B2B e-Commerce Business is a form of electronic commerce that deals with the transaction of goods and services between businesses through the internet. In most cases, this transaction is performed through an online portal. The main objective of this business model is to increase the business efficiency and revenue of retailers.

Advantages of B2B e-commerce:

Market Predictability
Compared to the other business strategies, the B2B e-Commerce business model has more market stability. B2B sectors grow gradually and can adapt to various complex market conditions. This helps to strengthen the online presence and business opportunities and get more potential clients and resellers.

Better Sales
An improved supply chain management process along with a collaborative approach increase customer loyalty in the B2B e-Commerce business model. This, in turn, leads to improved sales. **Lower Costs**

Due to an effective supply chain management process, this online business model leads to lower costs for businesses

Data Centric Process
One of the main advantages of the model is that it relies on effective and factual data to streamline the whole process.

The following are the advantages to buyers and sellers.

4.Write the short notes on working of Credit card, Debit card and Smartcard.

Ans:

Credit Card:

Payment using credit card is one of most common mode of electronic payment. Credit card is small plastic card with a unique number attached with an account. It has also a magnetic strip embedded in it which is used to read credit card via card readers. When a customer purchases a product via credit card, credit card issuer bank pays on behalf of the customer and customer hasa certain time period after which he/she can pay the credit card bill. It isusually credit card monthly payment cycle. Following are the actors in the credit card system.

Debit Card:

Debit card, like credit card, is a small plastic card with a unique number mapped with the bank account number. It is required to have a bank account before getting a debit card from the bank.

The major difference between a debit card and a credit card is that in case of payment through debit card, the amount gets deducted from the card's bank account immediately and there should be sufficient balance in the bank account for the transaction to get completed; whereas in case of a credit card transaction, there is no such compulsion.

Smart Card

Smart card is again similar to a credit card or a debit card in appearance, but it has a small microprocessor chip embedded in it. It has the capacity to store a customer's work-related and/or personal information. Smart cards are also used to store money and the amount gets deducted after every transaction.

Smart cards can only be accessed using a PIN that every customer is assigned with. Smart cards are secure, as they store information in encrypted format and are less expensive/provides faster processing. Mondex and Visa Cash cards are examples of smart cards.

5.What are the Applications of Intranets?
Ans:
Intranets
In simple terms, an intranet is a private network to access information. The information is owned by a business or other entity then access is granted to employees. Intranet is cloud-based, user-friendly, and easily accessible by all employees, including remote workers.
The following are the different applications of Intranets.

Sharing business information, company policies, rules and regulations

Access the customer and product information

Launching departmental and personal home pages

Submission of reports

Software distribution

Project management

Paperless information delivery

Company-wide Announcements

A Company Directory.

Instant Messaging Feature.

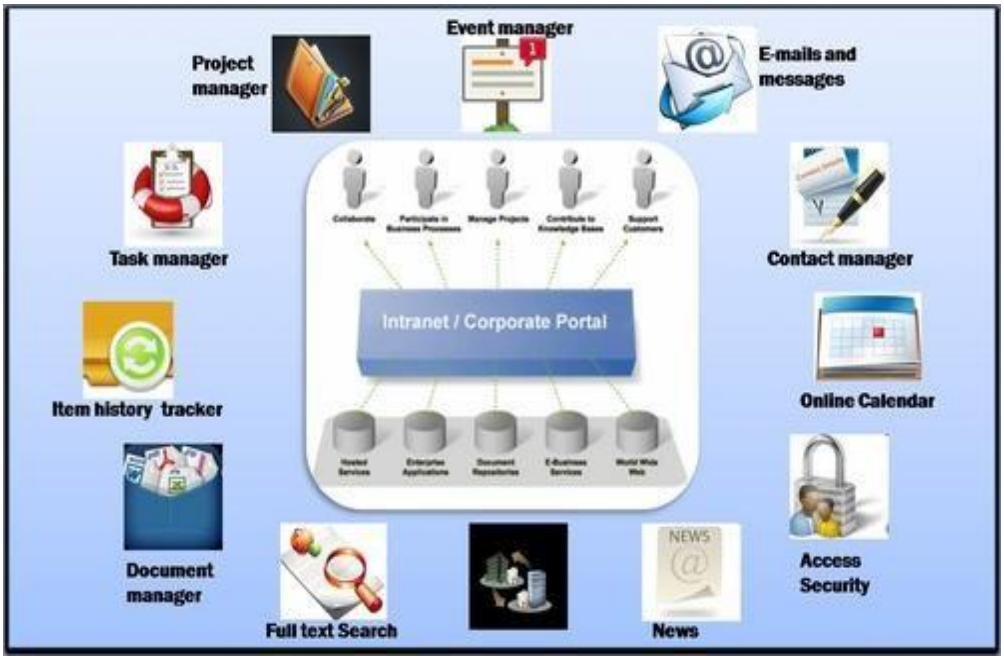
Content Management System.

Automating Forms Capability.

Social Network for Employees.

Event Management.

Workgroup Scheduling and Calendars.



6.Write about Intranets and Extranets

Ans:

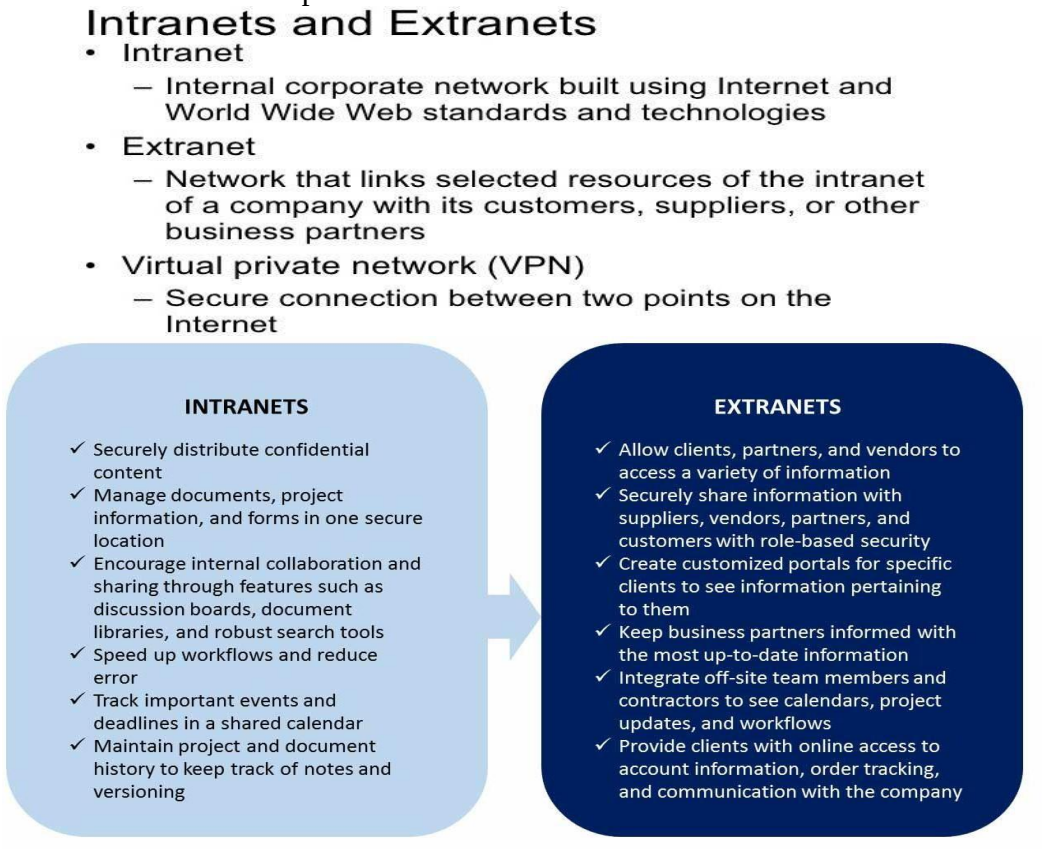
1.Intranet :

Intranet is owned by a single organization and is a tool for sharing information throughout the organization. It is the type of Internet that is used privately. Since, intranet is a private network so no one can use the intranet whose have not valid username and password

2. Extranet :

Extranet is owned by either a single or a many organization. It is managed on a contractual basis between organizations and is a tool for sharing information between the internal members and external members. Like intranet, it is also a private network so only those

have a valid username and password can use the extranet.



etc.

7.Explain about the Security Protocols in Internet.

Ans:

Security Protocols in Internet:

Some of the popular protocols used over the internet to ensure secured online transactions.

Now, let us look at the various **types of Internet Security Protocols** :

1. **SSL Protocol :** Secure Sockets Layer protocol
   - SSL Protocol stands for Secure Sockets Layer protocol, which is an encryption-based Internet security protocol that protects confidentiality and integrity of data.
   - SSL is used to ensure the privacy and authenticity of data over the internet.

   It is the most commonly used protocol and is widely used across the industry. It meets following security requirements −"https://" is to be used for HTTP urls with SSL, where as "http:/" is to be used for HTTP urls without SSL.
2. **SHTTP :** SHTTP stands for Secure HyperText Transfer Protocol

   SHTTP extends the HTTP internet protocol with public key encryption, authentication, and digital signature over the internet. Secure HTTP supports multiple security mechanism, providing security to the end-users. SHTTP works by negotiating encryption scheme types used between the client and the server.
   - which is a collection of security measures like Establishing strong passwords, setting up a firewall, thinking of antivirus protection, and so on designed to secure internet communication.

3. **Set Protocol :** Secure Electronic Transaction

It is a secure protocol developed by MasterCard and Visa in collaboration. Theoretically, it is the best security protocol. It has the following components −

Card Holder's Digital Wallet Software − Digital Wallet allows the card holder to make secure purchases online via point and click interface.

Merchant Software − This software helps merchants to communicate with potential customers and financial institutions in a secure manner.

Payment Gateway Server Software − Payment gateway provides automatic and standard payment process. It supports the process for merchant's certificate request.

Certificate Authority Software − This software is used by financial institutions to issue digital certificates to card holders and merchants, and to enable them to register their account agreements for secure electronic commerce.

4. **PEM Protocol :** privacy-enhanced mail
   - PEM Protocol stands for privacy-enhanced mail and is used for email security over the internet.
   - It is capable of performing cryptographic operations such as encryption, non repudiation, and message integrity
5. **TLS Protocol :** stands for Transport Layer Security
   - Same as SSL, TLS which stands for Transport Layer Security is widely used for the privacy and security of data over the internet.

8.Explain about Electronic Payment Procedure?

An e-payment or Electronic Payment system allows customers to pay for the services via electronic methods. They are also known as online payment systems. Normally e-payment is done via debit, credit cards, direct bank deposits, and e-checks, other alternative e-payment methods like e-wallets, bit coin, crypto currencies, bank transfers are also gaining popularity.

Electronic Payment Procedure

- The merchant submits a credit card transaction to the PaymentGateway on behalf of a customer via secure connection from a Web site, at retail, from a MOTO center or a wireless device.
- Payment Gateway receives the secure transaction information and passes it via a secure connection to the Merchant Bank's Processor.
- The Merchant Bank's Processor submits the transaction to the Credit Card Interchange (a network of financial entities that communicate to manage the processing, clearing, and settlement of credit card transactions).

- The Credit Card Interchange routes the transaction to the customer's Credit Card Issuer.
- The Credit Card Issuer approves or declines the transaction based on the customer's available funds and passes the transaction results, and if approved, the appropriate funds, back through the Credit Card Interchange.
- The Credit Card Interchange relays the transaction results to the Merchant Bank's Processor.
- The Merchant Bank's Processor relays the transaction results to Payment Gateway.
- Payment Gateway stores the transaction results and sends them to the customer and/or the merchant. This communication process averages three seconds or less.
- The Credit Card Interchange passes the appropriate funds for the transaction to the Merchant's Bank, which then deposits funds into the merchant's bank account.
- he funds are typically deposited into your primary bank account within two to four business days.

VERY SHORT QUESTIONS

1. Web server

Ans:

A **web server** is a computer system that processes requests via HTTP, thebasic network protocol used to distribute information on the World Wide Web. The term can refer to the entire system, or specifically to the software that accepts andsupervises the HTTP requests.

2. Extranet

Ans:

An **extranet** is a private network that uses Internet technology and the public telecommunication system to securely share part of a business's information or operations with suppliers, vendors, partners, customers, or other businesses.

3. Explain the Term "web Hosting"?

Ans:

Web hosting is a way to gain a presence on the internet. The web hosting company should be capable of providing you with the level of service that you need to maintain your Web Store.

4. Intranets

Ans:

An **intranet** is a private network accessible only to an organization's staff. Generally a wide range of information and services from the organization's internal IT systems are available that would not be available to the public from the Internet.

A company-wide intranet can constitute an important focal point of internal

communication and collaboration, and provide a single starting point to access internal and external resources.

In its simplest form, an intranet is established with the technologies for local areanetworks (LANs) and wide area networks (WANs).

5. Electronic Payment System

Ans:

An e-payment or Electronic Payment system allows customers to pay for the services via electronic methods.They are also known as online payment systems. Normally e-payment is done via debit, credit cards, direct bank deposits, and e-checks, other alternative e-payment methods like e-wallets, bitcoin, cryptocurrencies, bank transfers are also gaining popularity.

6. Define Digital Marketing?Ans:

Digital marketing is the marketing of products or services using digital technologies, mainly on the Internet, but also including mobile phones, display advertising, and any other digital medium.

7. What Google Adwords?

Ans:

Google AdWords is an online advertising service developed by Google, where advertisers pay to display brief advertising copy, product listings, and video content within the Google ad network to web users. [2] Google AdWords' system is based partly on cookies and partly on keywords determined by advertisers.

8. What is SEO?

Ans:

Search engine optimization (**SEO**) is the process of affecting the online visibility of a website or a web page in a web search engine's unpaid results—often referred to as "natural", "organic", or "earned" results. In general, the earlier (or higher ranked on the search results page), and more frequently a website appears in the search results list, the more visitors it will receive from the search engine's users; these visitors can then be converted into customers

UNIT – IV
ESSAY QUESTIONS

1.Explain the legal issues of protecting Privacy.

Ans:

Protecting privacy and information:

Protecting privacy is about safeguarding your customer relationships.

- Customers will quickly move to competitors who look after their data ifthey don't believe you can protect their personal information.
- Be aware of state and national privacy laws, which govern how yourbusiness should record, store and dispose of information.
- Educating your staff about privacy issues will also ensure a culture ofsecurity throughout your business.
- This guide explains what privacy laws apply to your business and howto increase awareness of privacy issues within your business.

Privacy laws:

New privacy laws commenced 12 March 2014

The new Privacy Amendment (Enhancing Privacy Protection) Act 2012 (Cwlth), Privacy Regulation 2013 (Cwlth) and Credit Reporting Privacy Code havetaken effect on 12 March 2014.

Significant changes have been made to privacy law, including:

- 13 new Australian Privacy Principles that apply to businesses, replacing the Information Privacy Principles (IPP) and National Privacy Principles (NPP)
- comprehensive credit reporting and enhanced privacy protection
- enhanced powers of the Australian Information Commissioner to resolvecomplaints, conduct assessments and seek compliance
- The new mandatory Credit Reporting Privacy Code.

Privacy and small business:

Some small business operators are exempt from the Privacy Act. Checkwhether your small business needs to comply with the Act.

Although you may find your business is exempt, you can still choose to comply. Benefits of complying with the legislation can include increased consumerconfidence and trust in your business and its operations.

Workplace information:

Employee records in the private sector are not covered by the Privacy Act. Anemployer does not have to grant an employee access to their employment records.

Sales and marketing:

How customer information, gathered through market research, is protected,depends on how the data was collected. **In general the following rules apply:**

- Direct marketing (such as telemarketing and advertising via email, SMS or post)is covered by the Privacy Act and the NPPs - read more about protection of direct marketing data.
- Door-to-door sales are covered by the Australian Consumer Law (ACL) - readmore about legal and ethical selling.

Note that some customer information may be covered by both pieces of legislation.

Consumer credit reporting:

The Privacy Act provides safeguards for individuals in relation to consumercredit reporting. The use of customer information is restricted to assessing applications for credit and other activities involving giving credit.

Health service providers:

The Privacy Act provides extra protections for handling individual's healthinformation, and all organisations that provide a health service are covered by theAct.

Legal obligations for online business:

Online businesses need to be aware of additional laws governing such thingssuch as spam, electronic transactions and intellectual property

Queensland Government and privacy:

The Office of the Information Commissioner Queensland, under the *Right to Information Act 2009*, promotes access to government held information and protectsindividual's personal information held by government agencies.

2.Explain about legal issues in E-Commerce.

The vastness of Internet advertising offers a solid platform for Electronic Commerce (or e-commerce) to explode.

E-Commerce has the ability to provide secure shopping transactions coupled withinstant verification and validation of credit card transactions. E-Commerce is not about the technology itself, it is about doing business leveraging

the technology.

A technological innovation is followed by frequent incorporation of ethical standards into law. New forms of E-Commerce that enables new business practices have many advantages but also bring numerous risks.

Legal Issues:

Where are the headlines about consumers defrauding merchants? What about fraud e-commerce websites? Internet fraud and its sophistication have grown even faster than the Internet itself. There is a chance of a crime over the internet when buyers and sellers do not know each other and cannot even see each other. During thefirst few years of e-commerce, the public witnessed many frauds committed over the internet. Let's discuss the legal issues specific to e-commerce.

Fraud on the Internet:

E-commerce fraud popped out with the rapid increase in popularity of websites. It is a hot issue for both cyber and click-and-mortar merchants. The swindlers are active mainly in the area of stocks. The small investors are lured by thepromise of false profits by the stock promoters. Auctions are also conductive to fraud, by both sellers and buyers. The availability of e-mails and pop up ads has paved the way for financial criminals to have access to many people. Other areas of potential fraud include phantom business opportunities and bogus investments.

Copyright:

The copyright laws protect Intellectual property in its various forms, and cannot be used freely. It is very difficult to protect Intellectual property in E-Commerce. For example, if you buy software you have the right to use it and not theright to distribute it. The distribution rights are with the copyright holder. Also, copying contents from the website also violates copy right laws.

Domain Names:

The competition over domain names is another legal issue. Internet addressesare known as domain names and they appear in levels. A top level name
is *qburst.com* or *microsoft.com*. A second level name will be *qburst.com/blog*. Toplevel domain names are assigned by a central non-profit organization which also checks for conflicts or possible infringement of trademarks. Problems arise when several companies having similar names competing over the same domain name.
The problem of domain names was alleviated somewhat in 2001 after several upperlevel names were added to com.

Another issue to look out for is Cyber squatting, which refers to the practice ofregistering domain names with the desire of selling it at higher prices.

Security features such as authentication, non-repudiation and escrow services can protect the sellers in e-commerce.

One needs to be careful while doing e-commerce activities. The need to educate the public about the ethical and legal issues related to e-commerce is highly important from a buyer as well as seller perspective.

3.Explain about Ethical issues in E-Commerce.

The vastness of Internet advertising offers a solid platform for Electronic Commerce (or e-commerce) to explode.

E-Commerce has the ability to provide secure shopping transactions coupled withinstant verification and validation of credit card transactions. E-Commerce is not about the technology itself, it is about doing business leveraging the technology.

A technological innovation is followed by frequent incorporation of ethical standards into law. New forms of E-Commerce that enables new business practices have many advantages but also bring numerous risks.

Ethical Issues:

In general, many ethical and global issues of Information Technology apply to e-business. So, what are the issues particularly related to e-commerce? Let's list some of the ethical issues spawned with the growing field of e-commerce.

Web tracking:

E-businesses draw information on how visitors use a site through log files. Analysis of log file means turning log data into application service or installingsoftware that can pluck relevant information from files in-house.

Companies track individual's movement through tracking software and cookieanalysis. Programs such as cookies raise a batch of privacy concerns.

The tracking history is stored on your PC's hard disk, and any time you revisit a website, the computer knows it. Many smart end users install programs such as Cookie cutters, Spam Butcher, etc which can provide users some control over the cookies.

The battle between computer end users and web trackers is always going on with a range of application programs.

For example, software such as Privacy Guardian, My Privacy, etc can protect user's online privacy by erasing browser's cache, surfing history and cookies.

To detect and remove spyware specially designed programs like Ad-Aware arepresent. A data miner application, Agent collects and combines Internet browsing history of users and sends it to servers. The battle goes on!

Privacy:

Most Electronic Payment Systems knows the identity of the buyer. So it is necessary to protect the identity of a buyer who uses Electronic Payment System.

A privacy issue related to the employees of company is tracking. Monitoring systems are installed in many companies to monitor e-mail and other web activitiesin order to identify employees who extensively use business hours for non-business activities.

The e-commerce activities performed by a buyer can be tracked by organizations. For example, reserving railway tickets for their personal journey purpose can be tracked. Many employees don't want to be under the monitoring system even while at work.

As far as brokers and some of the company employees are concerned, E-

Commerce puts them in danger zone and results in elimination from their jobs.

The manner in which employees are treated may raise ethical issues, such as how to handle displacement and whether to offer retraining programs.

Disintermediation and Reintermediation:

Intermediation is one of the most important and interesting e-commerce issuerelated to loss of jobs. The services provided by intermediaries are

(i) Matching and providing information.

(ii) Value added services such as consulting.

The first type of service (matching and providing information) can be fully automated, and this service is likely to be in e-marketplaces and portals that provide free services.

The value added service requires expertise and this can only be partially automated. The phenomenon by which Intermediaries, who provide mainly matching and providing information services are eliminated is called Disintermediation.

The brokers who provide value added services or who manage electronic intermediation (also known as infomediation), are not only surviving but may actually prosper, this phenomenon is called Reintermediation.

The traditional sales channel will be negatively affected by disintermediation. The services required to support or complement e-commerce are provided by the webas new opportunities for reintermediation.

The factors that should be considered here are the enormous number of participants, extensive information processing, delicate negotiations, etc. They need acomputer mediator to be more predictable.

4.Explain about Security and Privacy issue in E-Commerce.

Since the invention of the World Wide Web (WWW) in 1989, Internet-based electronic commerce has been transformed from a mere idea into reality.

Consumers browse through catalogues, searching for best offers, order goods,and pay them electronically.

Information services can be subscribed online, and many newspapers and scientific journals are even readable via the Internet.

Most financial institutions have some sort of online presence, allowing their customers to access and manage their accounts, make financial transactions, trade stocks, and so forth.

Privacy:

Privacy has become a major concern for consumers with the rise of identity theft and impersonation, and any concern for consumers must be treated as a majorconcern for e-Commerce providers.

Both EU and US legislation at both the federal and state levels mandates certain organizations to inform customers about information uses and disclosures. Such disclosures are typically accomplished through privacy policies, both online and offline.

Trust in turn is linked to increased customer loyalty that can be manifested through increased purchases, openness to trying new products, and willingness to participate in programs that use additional personal information.

Privacy now forms an integral part of any e-commerce strategy and investment in privacy protection has been shown to increase consumer's spend, trustworthiness andloyalty.

Payment Systems Security Issues:

Credit card is one of the primary means of electronic payment on the WWW. Inspite of that a large percentage of users (20%) reported that they had their credit card stolen, there is still a lot of consumer confidence in credit card mode of payment.

Again, this trust should not be betrayed and arrangements should be made toassure those who are reluctant.

Transaction Security

1. Client/Server and Network Issues In many ways the transaction security of a WWW site can be compromised.
2. There are numerous means for an unsavory individual to snoop into what you are sending or receiving from the other end, including, but not limited to, the following:
3. Spoofing. The client can trick your server into believing that the request or post that it's sending is from some other site.
4. This is known as IP and/or DNS spoofing. Your server may respond believing that the client is "trusted", when it isn't.
5. Sniffing. In some cases, it is possible for an unsavory individual to snatch packets as they are being communicated over the network, especially with the newer cellular modems, unsecured phone lines, and so on.
6. Traffic Analysis. Using sampling techniques on the packets or, more commonly, the server log files, an individual can learn about the nature of the transactions that your site processes.
7. This may be used, for instance, in analyzing the competitive level of your site by a site that provides the same services or products.
8. In each of these cases, the risk can be alleviated (or greatly reduced). In thecases of spoofing and sniffing, the preferred technique is to use data encryption, or signed data for the transaction.
9. When the receiving end gets what your server sends them, they must have the appropriate key to decrypt and make use of it. In the case of traffic analysis of the data files, assigning the file permissions on the directory, logs, and the files themselves is the preferred technique.
10. The logs themselves can be encrypted for permanent archival. Nowadays, most commercially available servers and their respective clients implementencrypted transactions via some, usually proprietary, means.
11. In order to gain consumer confidence, nowadays many companies have joined programs to make their privacy administered by third parties and their business practices explicit.

12. Two particularly notable initiatives in that direction are, the WebTrust E- Commerce seal of assurance from the public accounting profession and the TRUSTe "trustmark" program that takes users directly to the privacy statement of a company that has joined a program.

SHORT QUESTIONS

1.Explain about Threats for E-Commerce.

Ans:

E-Commerce has led to a new generation of associated security threats,

Threats for e commerce:

There are several threats that badly effect on e-commerce. Due to these reasons business through the internet becomes difficult. But

Access and Connectivity:

With the tremendous growth of Internet and e-commerce activities, there is urgent need for access, connectivity and local hosting. In many countries, operational speed and pace of downloads are regarded as slow.

Authentication and Standardization:

E-commerce growth in the B2B and B2C segments will be strongly dependenton wide availability of the appropriate security authentication infrastructure, aswell as on standards for goods sold over the Net. These would help remove security concerns and boost confidence in e-commerce transactions.

Cyber Laws:

The streamlining of cyber laws related to taxation, protection of intellectual property rights and cyber crimes would help cross-border e-commerce. Fraud and morality issues still dominate most people's fears about the Internet and ecommerce.

Technology:

E-commerce growth will be centered on new technologies. The use of mobile phones in e-commerce, for example, would extensively depend on WAP authentication protocols. The introduction of WAP mobile phones will widen access to the Internet.

1. DoS and DDoS attacks

Several online stireshave incurred losses due to disruptions in their sites and sales because of DoS and DDoS attacks. Your online receives an overwhelming amount of requests from several untraceable IP addresses, which makes it crash, making it unavailable to site visitors.

2. Phishing

Phishing is one of the main ways that hackers use to compromise eCommerce stores. This type of social engineering entails stealing login and password details by sending out spam emails under the disguise of a well-known person or organization. They can even create a phishing profile that resembles the login page of your payment processor or e-commerce site and send you a message to log in to fix an error. Once you fall for this and try to log in, they capture your login details and use them to log into the real e-commerce or payment processor sites.

3. SQL injections

E-commerce sites that use an SQL database are at a high risk of an SQL attack. The hackers inject malicious SQL commands into the sites' scripts, which changes how your site reads data, allowing the hackers access to certain commands on your site.

SQL injections target query submission forms as their way of penetrating your website database. They then inject malicious codes on your site, allowing them to add, collect, change, or delete data on your website at will.

4. Malware

Malware results in revenue loss to the eCommerce business. Hackers may target the site server or computers of key people with advanced level access to the site using malware. The malware allows the hackers to control the server and execute commands on the eCommerce site. It allows hackers access to data in the server and access to hijack traffic to your site.

5. Spam emails

Spam email is a major way through which some cyberattacks like malware and phishing are carried out. The spammers usually hack individual or organizational email accounts that you know to send spam emails to make you believe the spam email is legitimate. The emails are linked to infected and phishing sites that compromise the computer's security and compromise the store.

6. Credit and debit card fraud

Identity theft fraud through credit and debit cards fraud is a serious threat, with an estimated loss of $24 billion annually. This happens when someone steals credit or debit card details from unsuspecting victims and then uses those details to make purchases from e-commerce stores. The store goes ahead and processes the order, not knowing the card details are stolen, resulting in lost revenue from a chargeback.

2021 has seen most businesses transition from offline to online operation modes, which translates to increased safety issues. An online business is only as safe as its cybersecurity strategy is. Invest in robust and premium cyber security assistance that fits your needs and budget.
ADVICE & TIPSMONEY & PAYMENTSMOST RECENT

2.Explain about Technical Attacks in E-Commerce.

Technical Attacks

Technical attacks are one of the most challenging types of security compromise an e-commerce provider must face. Perpetrators of technical attacks, and in particular Denial-of-Service attacks, typically target sites or services hosted on high-profile web servers such as banks, credit card paymentgateways, large online retailers and popular social networking sites.

Denial of Service Attacks:

Denial of Service (DoS) attacks consist of overwhelming a server, a network or a website in order to paralyze its normal activity. Defending against DoS attacks is one of the most challenging security problems on the Internet today. A major difficulty in preventing these attacks is to trace the source of the attack, as they often use incorrect or spoofed IP source addressesto disguise the true origin of the attack.

1) Symptoms of denial-of-service attacks to include:
2) Unusually slow network performance
3) Unavailability of a particular web site
4) Inability to access any web site
5) Dramatic increase in the number of spam emails received
6) DoS attacks can be executed in a number of different ways including:
7) ICMP Flood (Smurf Attack)
8) Teardrop Attack
9) Phlashing
10) Distributed Denial-of-Service Attacks

Distributed Denial of Service (DDoS) attacks are one of the greatest security fear for IT managers. In a matter of minutes, thousands of vulnerable computers can flood the victim website by choking legitimate traffic.

A distributed denial of service attack (DDoS) occurs when multiple compromised systems flood the bandwidth or resources of a targeted system, usually one or more web servers.

The most famous DDoS attacks occurred in February 2000 where websites including Yahoo, Buy.com, eBay, Amazon and CNN were attacked and left unreachable for several hours each.

3.Explain the Consumer Protection Policies in E-Commerce.

Ans:

The concept and implementation of e-commerce came to the forein 1999 when the OECD organization adopted the first International Instrument for Consumer Protection for economic cooperation and development Council in the context of electronic commerce.

Consumer Protection

A report by the Internet and Mobile Association of India has revealed that India's e-commerce market reached USD 20 billion. The e- commerce has made a huge impact on most of the industries in India, the travel industry in particular. The other notable ones being the telecommunication industry, the online trading industry, etc.

The government here has promoted e-commerce extensively, which is, in fact, a promotion of the e-consumer activities, mainly focusing on the delivery of services. However, the legal control still has to catch up with supply.

The Consumer Protection Act specifically excludes from its ambit any service that is free of charge. Depending upon who is selling the actual goods to the consumers, liability triggers. Also, distribution of goods comes within the purview of consumer protection act. Some of the various protections under the consumer protection act on e-commerce can be listed below

- Removal of defects.
- Replacement of goods.
- Return of price in case of discrepancy.
- Discontinue any form of restrictive trade practice.

4.**What are the different types of issues to be considered in E-commerce?Ans:**

Issues of E-commerce

Different issues of E-Commerce

Before designing an Internet-based E-commerce application, a developer must consider the various issues that will arise if the problems are not handled on time.

Other than E-commerce security, there are some other issues, Which are as follows:

1. Security issues
2. General issues
3. Legal issues

Security Issues:

Security on the Internet means protection of unauthorized access of different users using the common E-commerce applications. Extra efforts mustbe made to develop an application that is designed in such a way that the userscan perform only those actions that are allowed to them.

The various aspects of security that must be given special importance are as follows:

• Privacy is the most important feature required by a Web-based ""E-commerce system and is handled by encryption of data

• Digital signatures and certificates are used to verify buyers and E-merchants.

• Secure Socket Layers (SSL) uses the above two methods to ensure privacy and authentication. For this purpose, WWW uses different protocols to transferthe data in the form of packets by different routes

• Peripheral Component Interconnect (PCI), Secure Electronic Transaction TSET), firewalls and Kerberos protocols are used to protect the information from hackers and outsiders

General issues:

There are some general issues that should be considered for Web-based E-commerce systems. These issues are as follows:

• Inventory control is used to track the quantity of items in the stock and maintain the files of the stock.

• Payment process should be done using special services such as PayPal and 2CheckOut. These services provide the whole information except the payment information to the buyer.

• Shipping cost can also affect WWW/Internet-based E-commerce, so there should be effective policies for delivering goods.

Legal issues:

For the Web-based E-commerce system, the legal issues must be considered while taking decisions to handle risks. The legal issues are as follows:

• Trademark is used to identify a corporation or a company. Any word, sentence, symbol or design is used as a trademark

• Copyright is used to protect the content published on Websites. Copyright includes some special rights of the copyright owner such as the exclusive right to modify a copy of the published content ,

VERY SHORT QUESTIONS

1.Technology

Ans:

E-commerce growth will be centered on new technologies. The use of mobile phones in e-commerce, for example, would extensively depend on WAP authentication protocols. The introduction of WAP mobile phones will widen access to the Internet.

2.Cyber Laws

Ans:

The streamlining of cyber laws related to taxation, protection of

intellectual property rights and cyber crimes would help cross-border e-commerce. Fraud and morality issues still dominate most people's fears about the Internet and ecommerce.

3.Copyright

Ans:

A copyright gives the creator of an original work exclusive rights to it, usually for a limited time. Copyright may apply to a wide range of creative, intellectual, or artistic forms, or "works".

Copyright does not cover ideas and information themselves, only the form or manner in which they are expressed.

4.Intellectual Property issues

Ans:

Intellectual property (or "IP") is a category of property that includes intangible creations of the human intellect, and primarily encompasses copyrights, patents, and trademarks. It also includes other types of rights, such as trade secrets, publicity rights, moral rights, and rights against unfair competition.

The WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), negotiated in the 1986–94 Uruguay Round, introduced intellectual property rules into the multilateral trading system for the first time. It's one of the three main areas of work in the WTO, alongside trade in goods and services**.**

UNIT - V
ESSAY QUESTIONS

1. Explain about the Web-based E-commerce architecture?

Ans:

E-commerce Architecture:

E-commerce is based on the client-server architecture.

- A client can be an application, which uses a Graphical User Interface (GUI) that sends request to a server for certain services.

The server is the provider of the services requested by the client.

- In E-commerce, a client refers to a customer who requests for certain services and the server refers to the business application through which the services areprovided.
- The business application that provides services is deployed on a Web' server.

The E - Commerce Web server is a computer program that provides services to "other computer programs and serves requested Hyper Text Mark-up Language (HTML) pages or files.

- In client-server architecture, a machine can be both a client as well as a server. There are two types of client server architecture that E-commerce follows:

two-tier and three-tier.

E- Commerce System Architecture: Two-tier architecture:

In two-tier client-server architecture the user interface runs on the client andthe database is stored on the server.

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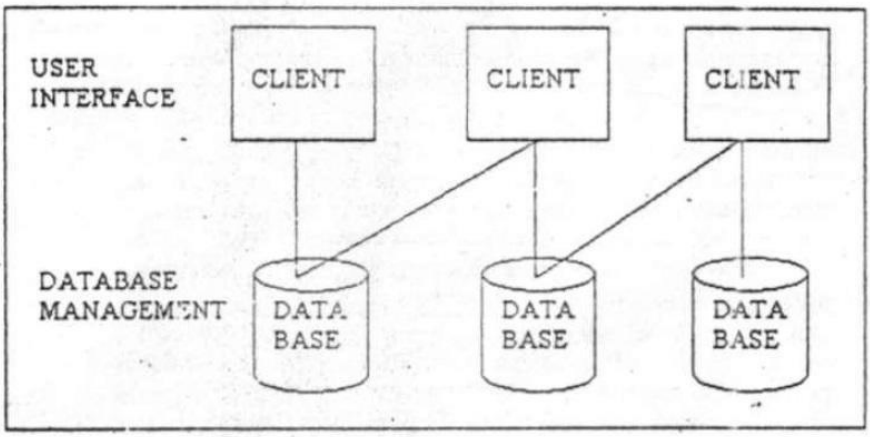
It allows the client processes to run separately from the server processes on different computers.

The client processes provide an interface for the customer that gather andpresent the data on the computer of the customer.

This part of the application is known as presentation layer. The server processes provide an interface with the data store of the business.

This part of the application is known as data layer. The business logic, which validates data, monitors security and permissions and performs other business rules, can be kept either on the client or the server.

The following Figure shows the e commerce system two-tier architecture diagram.



E- Commerce System Architecture: Three-tier architecture:

The three-tier architecture emerged in the 1990s to overcome the limitations ofthe two-tier architecture. In three-tier architecture, the user interface and the business application logic, also known as business rules and data storage and access, are developed and maintained as independent modules.

The three-tier architecture includes three tiers: top tier, middle tier and third tier.

The top tier includes a user interface where user services such as session, text input, and dialog and display management reside.

The middle tier provides process management services such as process development, process monitoring and process resourcing that are shared by the multiple applications.

The third tier provides database management functionality. The data management component ensures that the data is consistent throughout the distributed environment, the centralized process logic in this architecture, which makes administration easier by localizing the system functionality, is placed on the middle tier.

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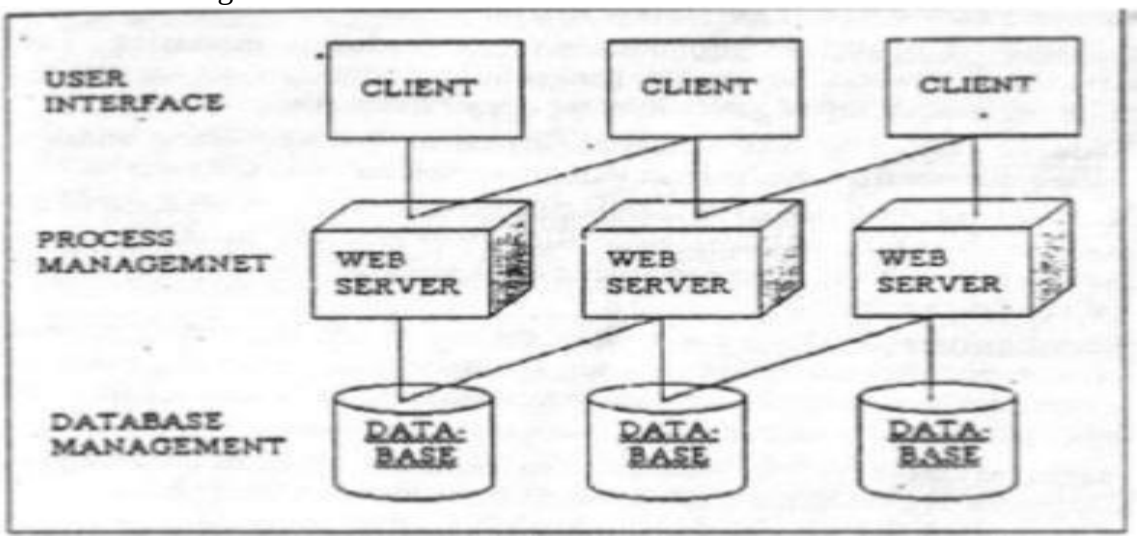

The client server architecture advantages:

The client-server architecture provides standardized, abstract interfaces to establish communication between multiple modules. When these modules are combined, they become an integrated business application. Each module is a shareable and reusable object that can be included in another business application.

In the client-server architecture, the functions of a business application are isolated within the smaller business application objects and so application logic can be modified easily.

This reduces the network traffic. In the client-server architecture, a programmer can develop presentation components without knowing the business application logic.

2. Explain the Architecture of E-Commerce.

Ans:

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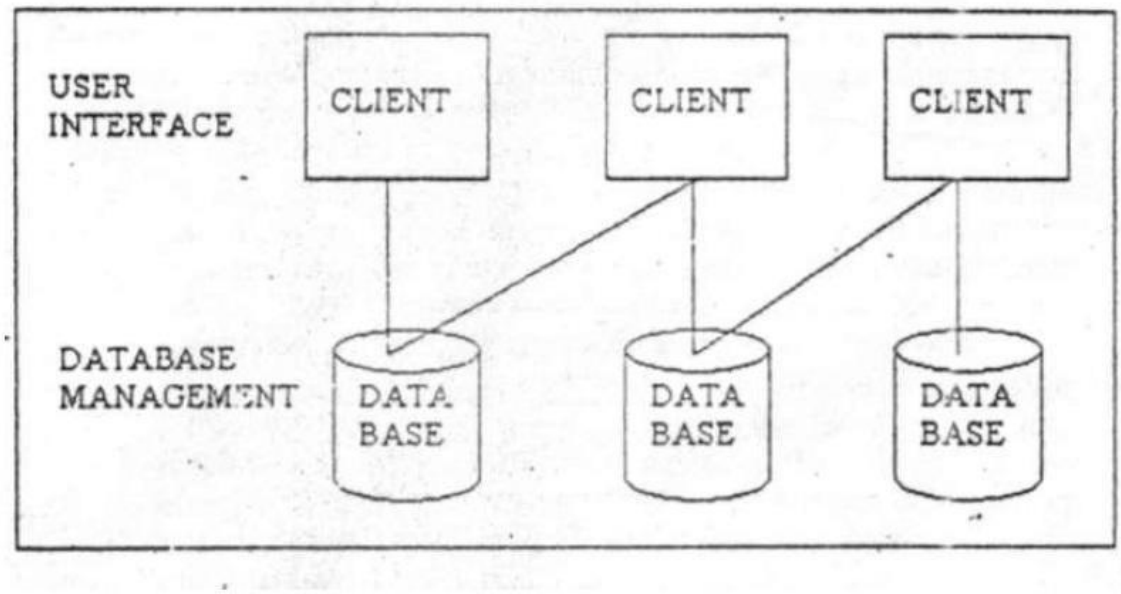

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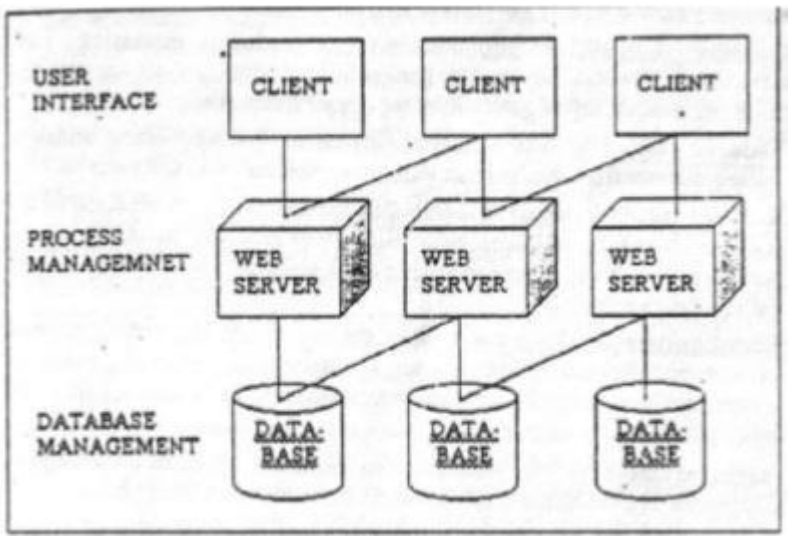

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This reduces the network traffic. In the client-server architecture, a programmer can develop presentation components without knowing the business application logic.

3. Write about various Internet Protocols.

Ans:

Internet Protocol:

The Internet Protocol (IP) is the method or protocol by which data is sent from one computer to another on the Internet. Each computer (known as a host) on the Internet has at least one IP address that uniquely identifies it from all other computers on the Internet.

The Web is one of several ways to retrieve information from the Internet. These different types of Internet connections are known as protocols.

We could use separate software applications to access the Internet with each ofthese protocols, though we probably wouldn't need to.

Many Internet Web browsers allow users to access files using most of the protocols. Following are three categories of Internet services and examples of

typesof services in each category.

File retrieval protocols:

This type of service was one of the earliest ways of retrieving informationfrom computers connected to the Internet.

We could view the names of the files stored on the serving computer, but wedidn't have any type of graphics and sometimes no description of a file's content.

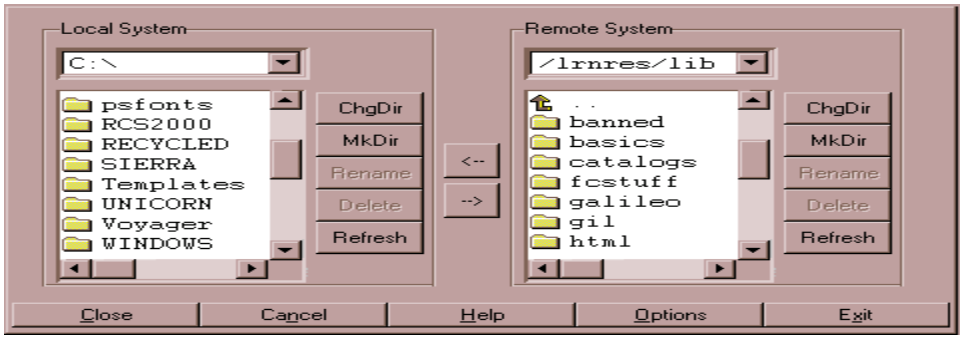
FTP (File Transfer Protocol):

This was one of the first Internet services developed and it allows users to move files from one computer to another. Using the FTP program, a user can logon to a remote computer, browse through its files, and either download or upload files (ifthe remote computer allows).

We might encounter the FTP protocol if we try to download any software applications from the World Wide Web.

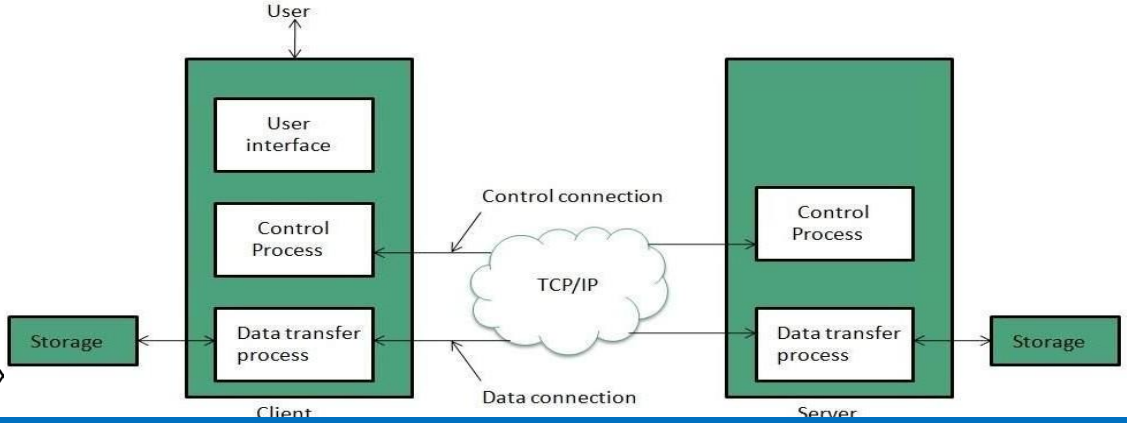
Many sites that offer downloadable applications use the FTP protocol.

An example of a FTP Protocol Window:



FTP is used to copy files from one host to another. FTP offers themechanism for the same in following manner:

- FTP creates two processes such as Control Process and Data Transfer Process atboth ends i.e. at client as well as at server.
- FTP establishes two different connections: one is for data transfer and other isfor control information.



***Gopher*:**

Gopher offers downloadable files with some content description to make iteasier to find the file we need.

The files are arranged on the remote computer in a hierarchical manner, muchlike the files on we computer's hard drive are arranged.

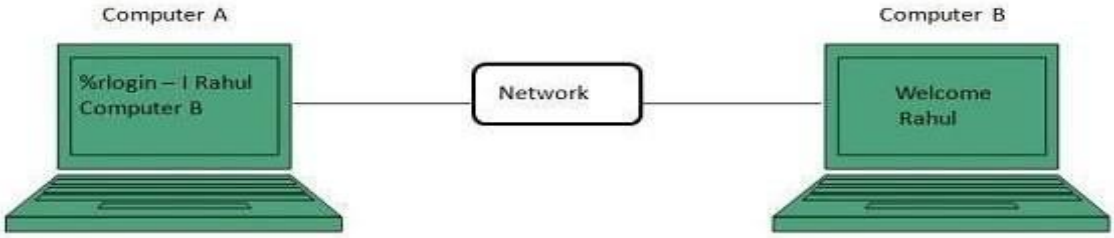
This protocol isn't widely used anymore, but we can still find some operationalgopher sites.

An example of a Gopher Window:

Telnet:

We can connect to and use a remote computer program by using the telnet protocol. Generally we would telnet into a specific application housed on a serving computer that would allow we to use that application as if it wee on we own computer. Again, using this protocol requires special software.

Telnet is a protocol used to log in to remote computer on the internet. There are a number of Telnet clients having user friendly user interface. The following diagram shows a person is logged in to computer A, and from there, he remote logged into computer B.



4. What are the requirements of Web-based E-commerce?
Ans:

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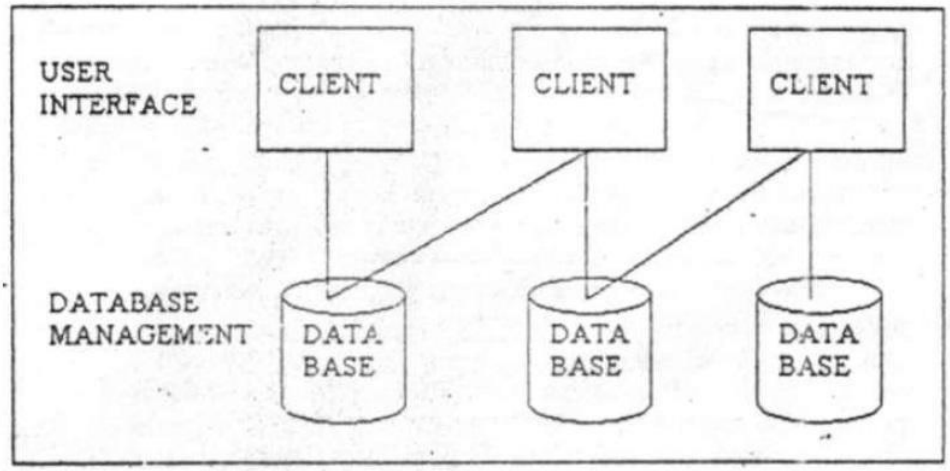

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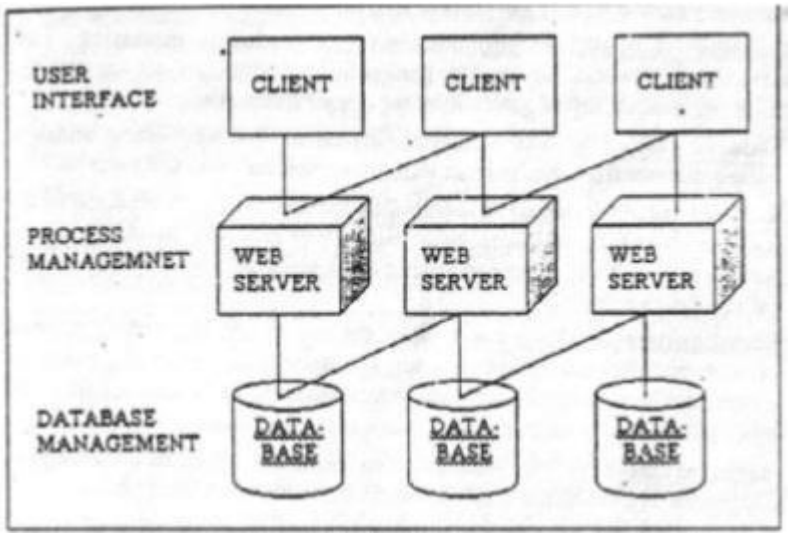


SHORT QUESTIONS

1. Write about Internet Security Features.

Ans:

Internet security is a branch of computer security specifically related to the Internet, often involving browser security but also network security on a more general level, as it applies to other applications or operating systems as a whole.

The Internet represents an insecure channel for exchanging information leading to a high risk of intrusion or fraud, such as phishing, online viruses, trojans, worms and more.

Many methods are used to protect the transfer of data, including encryption and from-the-ground-up engineering. The current focus is on prevention as much as on real time protection against well known and new threats.

1) Remote Management: Lets you manage your network and devices remotely from a single location.
2) File Server Security: Protects Microsoft File Servers and Windows Share point Servers.
3) Smart Scanner: Faster and even more vigilant, smart scanning lets you focus on driving your business forward.
4) Network Antivirus: Detects and removes malware and viruses from your PCs and laptops.
5) Advanced Detection: Leveraging crowd intelligence to detect threats faster than ever.
6) Privacy Protection: Helps protect your company confidential files and from rogue wifi networks.
7) Firewall: Helps stop spam, viruses, hackers and malware at the front door.
8) Online Protection: Protects your employees and devices from online threats.
9) Email Protection: Scans and checks your email for suspicious attachments and links.
10) Spam Protection: Helps keep your inbox free of spam & scams.
11) Remote installation: easily install AVG on all stations in the local network. This remote installation is secured by the AVG Network Installer Wizard – a program for direct remote installation and/or creation of an installation script that makes it possible to run the Setup installation program on all remote network stations.
12) Centrally controlled updates: All AVG stations in the network can be updated centrally using the AVG Admin Console.
13) Server roles: AVG Internet Security Business Edition can now act in multiple roles, where each role can be deployed separately (Data Center role used for remote stations management, Update Proxy role for managing updates), which allows the user to divide the load among multiple physical servers.
14) Secured communication: Network communication between AVG Admin (AVG Admin Server) and stations is completely encrypted.

2. What is System Assurance in E-Commerce?
Ans:

The main purpose of system assurance is to deliver a quality product. Conformance to requirements increases the organization's confidence in the system.

An e-commerce system deals with three parties: the bank, the transaction clearinghouse, and the customer.

The interdependency of these three parties makes the process of buying and selling over the Internet more critical than in real life.

If the faith of any of these parties dwindles in the e-commerce site, the entrepreneurs can lose a lot of money, as well as their reputation.

For example, in the case of a faulty e-commerce system, the credit card of the customer may be billed immediately for the complete order, when only a partial order has been filled. Testing must assure that partial order fulfillment and billing are done correctly.

3. How to Set Up an E-Commerce System?

Ans:

E-commerce Web sites are not easy to set up. With a plethora of e-commerce solutions in the market, entrepreneurs have to make a few key decisions:

1) The entrepreneur has to decide on the initial amount of investment required for an e-commerce Web site, as well as the volume of business of an e-commerce Web site over the Internet. Investment factors and business objectives dictate the type of software, database, or other applications that are required to set up the e-commerce Web site.

2) There are specific elements involved in an e-commerce system. These elements range from domain name for the site to the merchant account for e-commerce transactions. Each of these elements requires a certain amount of scrutiny before setting up an e-commerce Web site.

3) Before launching the e-commerce Web site on the Internet, it requires rigorous testing. Some of the important and common types of testing include security testing, software and hardware reliability, andcompatibility between all the elements of the system.

4. Explain the components of E-Commerce.

Ans:

Components of E-Commerce:

Different Components of E-commerce:

The technology and infrastructure used to develop the E-commerce application is the key to its success.

The hardware and software must be selected in such a way that they can fulfill the needs of the E-commerce application.

The following figure shows the components involved in E-commerce infrastructure.

1. *Hardware:*

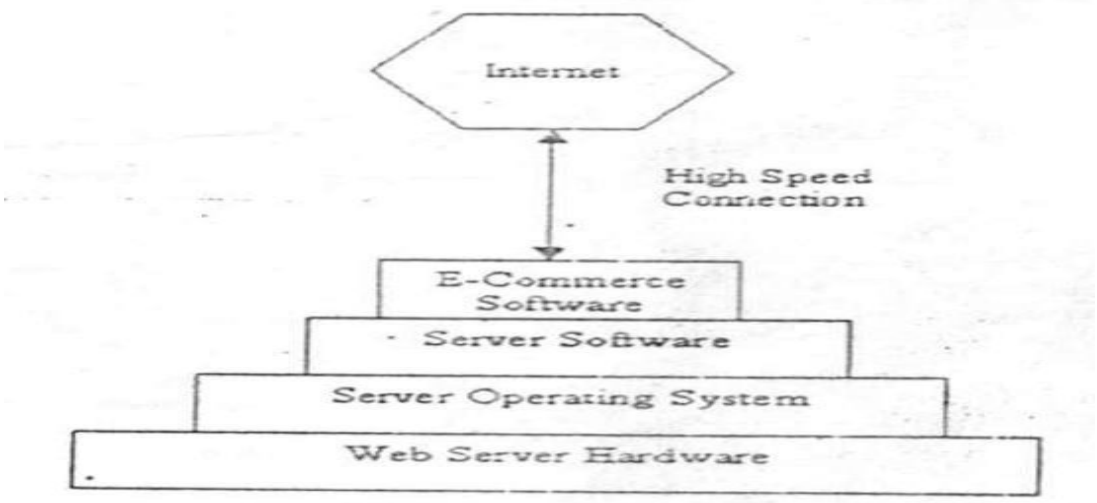
A Web server hardware platform is one of the major components of the Ecommerce infrastructure on which the performance of the whole E- commerce

application depends.

While selecting Web server hardware, the software that will run on the server of the E-commerce transactions to be processed must be considered.

The amount of the storage capacity and the computing power required depend on the volume of the E-commerce transaction to be processed.

If the exact requirements are not known in advance, then the hardware configuration should be highly scalable so that they can be upgraded to meetthe requirements.



2. E - Commerce Software's:

Software is the main component that implements the E-commerce services and functionality. Software for E-commerce can be categorized in the following two types

Web server software:

Web server software is required in addition to the Web server operating system software.

It is used to implement some extra functionality such as security and identification and retrieval and sending of Web pages.

E-commerce softwares:

With the growth of E-commerce, many applications have emerged—for example, the electronic shopping cart that tracks the items selected for purchase and their costs.

A typical E-commerce software must support the following processes:

Catalog management:

It is required to deliver the customized content to the screen or the GUI used by the customer.

The software used for catalog management combines the different product data formats into a standard format for viewing, aggregating and interacting catalog data into a central store.

Product configuration:

The Web-based product configuration software allows the user to buildthe product to their specifications without the intervention of the salespeople.

For example, Dell Computers and CISCO systems use configuration software to sell build-to-order and network processes to their customers overthe Internet.

Shopping cart:

A model known as shopping cart is used by Ecommerce sites to track the items that are selected for purchase; the shopping cart allows customers toview all the items selected by them.

Transaction processing:

E-commerce transaction processing is used to process the data received from the. Shopping cart and to calculate the total cost of the purchase.

VERY SHORT QUESTIONS

1. Multimedia

Ans:

Multimedia is content that uses a combination of different content forms such astext, audio, images, animations, video and interactive content. Multimedia contrasts with media that use only rudimentary computer displays such as text-only or traditional forms of printed or hand-produced material.

2. Patents

Ans:

A patent is a form of right granted by the government to an inventor, giving the owner the right to exclude others from making, using, selling, offering to sell, and importing an invention for a limited period of time, in exchange for the public disclosureof the invention.

3.Trademarks

Ans:

A trademark is a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises. Trademarks are protected by intellectual property rights.

4.What Is Software Reliability In Ecommerce?

Ans:

E-commerce requires software that performs critical tasks, such as creating storefront and a shopping cart, collecting customer data, and providing the payment gateway. This software needs to function correctly. Testing assures the organization of the quality and integrity of the e-commerce solution.