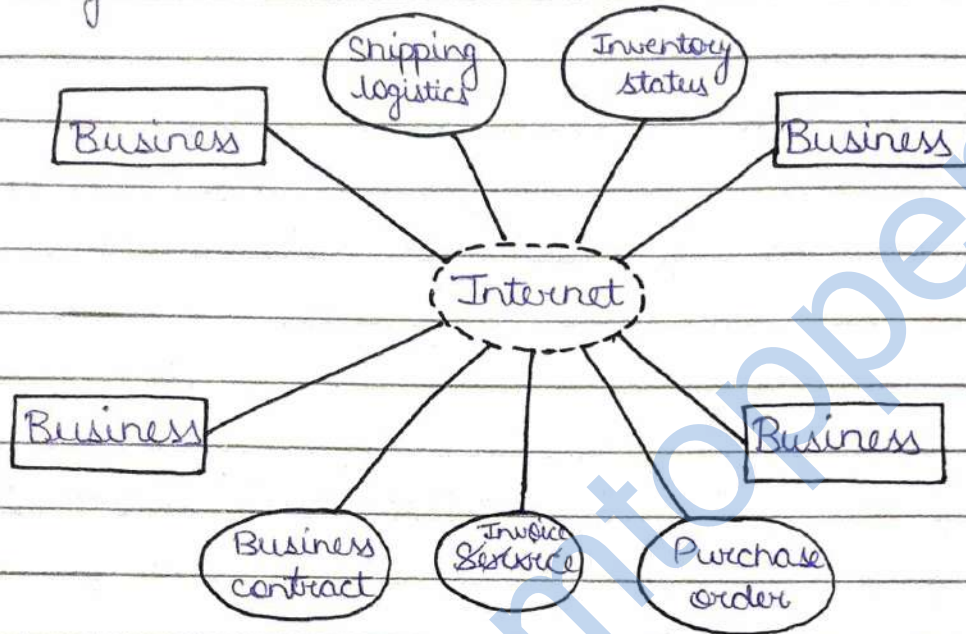


UNIT - 2

Business to Business E-Commerce

Business to business e-commerce holds transactions among to between businesses.



• Characteristics of B2B E-Commerce :-

1- Parties of the transaction:- B2B e-commerce can be conducted directly between the buyer and seller through an online intermediary channel. The intermediary channel is an online third party that broke the transaction between the buyer and the seller.

*2- Types of transactions:-

i) Spot buying - It refers to the purchasing of goods and services as they are needed usually at the market price which are determined dynamically depend on the supply or demand.

For example - oil, sugar etc.

- (ii) Strategic sourcing - This involve purchases bases on long term contracts. Strategic purchases can be supported more effectively and efficiently through direct buyer seller online negotiation.

decision disagree

3- Types of material :-

- (i) Direct material - These materials are materials used in making the products such as - steel for a car and paper for a book.

- (ii) Indirect material - These are items such as - office supplies or light bulbs that support production. They are usually used in maintenance, repair and operation activities.

4- Direction of trade :-

- (i) Vertical market place - They deals with one or more industry segment.
- (ii) Horizontal market place - These market place concentrate on a service or a product that is used in all types of industries.

* Models of B2B E-Commerce :-

B2B e-commerce models are determined by seller, buyer and third party who controls the market place.

There are four models of B2B e-commerce -

1. Seller oriented Marketplace
2. Buyer - oriented Marketplace
3. Third party exchange Marketplace
4. Trading partners agreements

1- Seller-oriented marketplace - This is the most popular type of B2B model for both consumer and businesses. In this model, the sellers who have fragmented markets comes together to generate a common market place for the buyer.

In the sell side marketplace model, organisations attempt to sell their products or services to other organisations electronically. This model is similar to B2C model in which the buyer is expected to come to seller's site, view catalogues and place an order.

2- Buyer-oriented marketplace - This model is used by large companies with satisfy buying power of several small companies. In this model, a buyer or group of buyers opens an electronic marketplace and invites seller to bid on the announced product or request for cotation.

3- Third party exchange marketplace - A third party marketplace model is controlled by a third party not by a buyer or seller. A third party marketplace model offers for supplier to giving direct channel of communication to buyer through online or internet.

The inter-active procedures within the marketplace contains features like - product catalogue

request for information, broker contacts, product sample request.

- 4- Trading partners agreement - The main objective of trading partner agreement B2B business model are to (automate the process for negotiating) and enforcing contracts between participating businesses. This relatively new model is gaining popularity.

* Benefits of B2B E-Commerce :-

- 1- 24 x 7 x 365
 - 2- Breaking geographical barriers
 - 3- Online tenders
 - 4- Lower cost
 - 5- Perfect competition
 - 6- Eliminating weak middle-man
- Reduced errors
Reduced cycle time

Purchasing

* Procurement Management :-

A procurement management is a process by which items are purchased from external suppliers. The procurement management process involves manage the order, receipt, review and approval of items from suppliers.

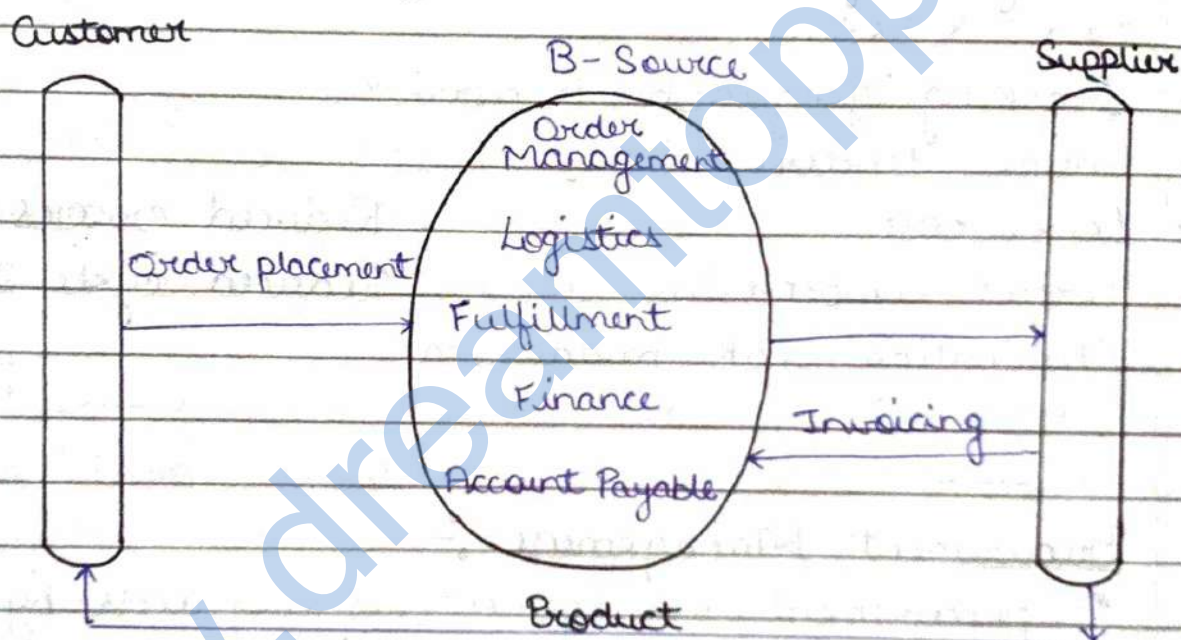
- E-Procurement - Procurement refers to the manage activity that goes beyond the simple act of buying and include the planning and policy activities etc. Thus procurement is buying material/ services of the right quality, at the right time, at the right price from the

right source with delivery at right place.

E-procurement concept depends on the following facts -

- 1- Analysis
- 2- Plan
- 3- Source
- 4- Buy
- 5- Monitor
- 6- Process control

• E-Procurement Cycle :-



This figure illustrates the different steps associated with the procurement cycle from the order placement to the account payable in steps through a web based e-commerce network. It includes customer's inventory and supplier information at any time and anywhere.

E-procurement allows two-way communication of real time financial and purchasing information.

• Types of E-Procurement :-

- 1- Web-based ERP (Electronic Resource Planning) - ERP software packages are designed to optimise the resource planning of an enterprises.
- 2- EMRO (Maintenance, Repair, Overhaul) - This is same as webbased ERP except that the goods and services ordered are non-product related maintenance, repair and overhaul supplies.
EMRO orders are of greatest benefit to automated production lines using numerical control machine tools.
- 3- E-Sourcing - E-Sourcing is the use of the internet for the identification of new suppliers for a category of purchasing requirement.
- 4- E-Tendering - E-tendering is the use of sending request for information and prices to suppliers and receiving the response of supplier using internet technology.
- 5- E-Information - E-procurement can be used for the simple job of exchanging purchasing information between buyer and supplier.

• Benefits of E-Procurement :-

1. Reduce purchasing cycle time and cost.
2. Enhance budget control.
3. Elimination of administrative error.

4. Increase buyer productivity
5. Lower prices through product of buyers
6. Improve information management
7. Improving the payment process

★ Just In Time Delivery (JIT) :-

Just in time is a production strategy that improve a business return on investment by reducing in-process inventory and ^{associated} carry cost.

Just in time reduces carry and inventory cost between business to business entities.

A main principle of JIT is to keep inventory low and reduce overheads and carrying cost.

• Benefits of JIT -

- 1- Reduced setup time :- JIT allows the company to reduce or eliminate inventory for change over time.
- 2 Employees with multiple skills are used more efficiently.
- 3 Production scheduling and work hours consistency synchronised with demand.
- 4- Increased emphasis on supplier relationship.

★ Other B2B Models :-

E-Distributor - E-distributor is one type of intermediary in B2B E-Commerce. These intermediaries are connect manufacturers with buyers such as retailers.

Companies that supply products and services directly to individual businesses are known as E-distributer.

The main advantage of E-distributer are -

- 1- Purchase request of the buyer can be fulfilled at any time.
- 2- Procedure has direct customer contact.
- 3- Shortages leads time are eliminated.
- 4- Reduced production shortage and distribution cost.

Auction :-

An auction is a market mechanism by which sellers place offers and buyers make sequential bids. The primary characteristics of auction is that prices are defined dynamically by competitive bidding.

- Types of Auction :- There are two major types of auction -

1. Forward Auction - The seller use^{it} as a selling channels to many wires. Usually items are placed at site for auction and buyers will bid continuously for the item.

Example - Site Ebay.com is the most popular forward auction.

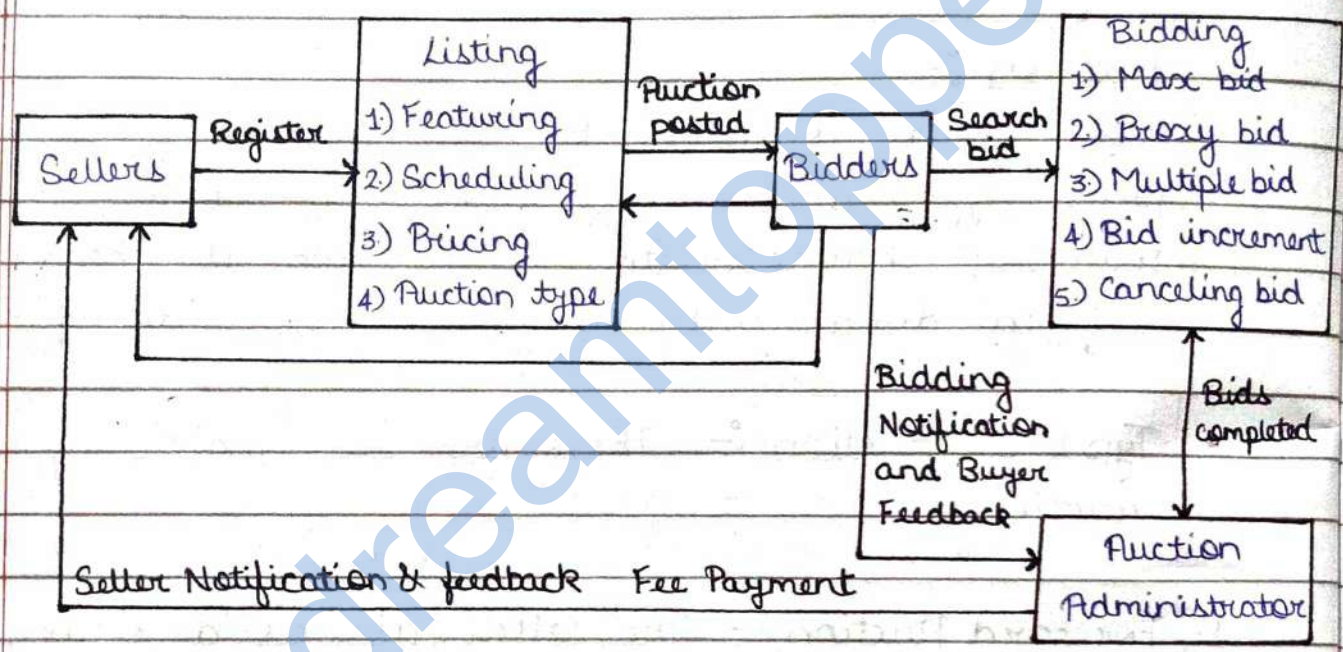
2. Reverse Auction - In reverse auction, there is only one buyer which want to buy a product or service. Suppliers are invited to submit bids. The reverse auction is the most common auction model for large purchases.

For example - Government and large corporations are

using this approach.

• **Process of Auction :-** In an auction, sellers and buyers usually complete a four phase process.

- Phase 1- Searching and comparing
- Phase 2- Getting started at an auction.
- Phase 3- Bidding
- Phase 4- Post auction activities



• **Advantages of Auction -** Electronic auction provides the following benefits to seller -

- 1- Increase revenue
- 2- Optimal price
- 3- Removal of expensive intermediaries
- 4- Better customer relationship
- 5- Lower transaction costs
- 6- Lower administrative costs.

Electronic auction provide the following benefits to buyer -

- 1- Opportunities to find unique items.

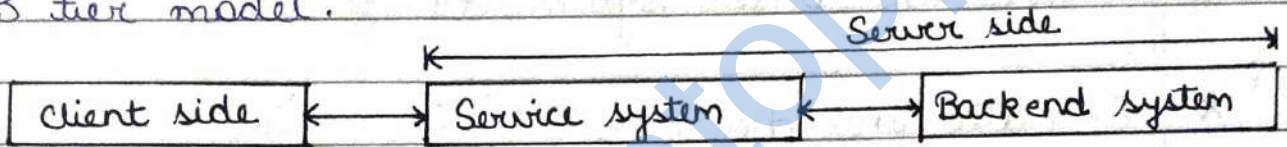
- 2- Lower prices
- 3- Entertainment
- 4- Convenience

• Disadvantages of Auction -

- 1- Possibility of fraud
- 2- Limited participation
- 3- Security
- 4- Long cycle time
- 5- Monitoring time
- 6- Equipment for buyer.

★ Integration with backend information system :-

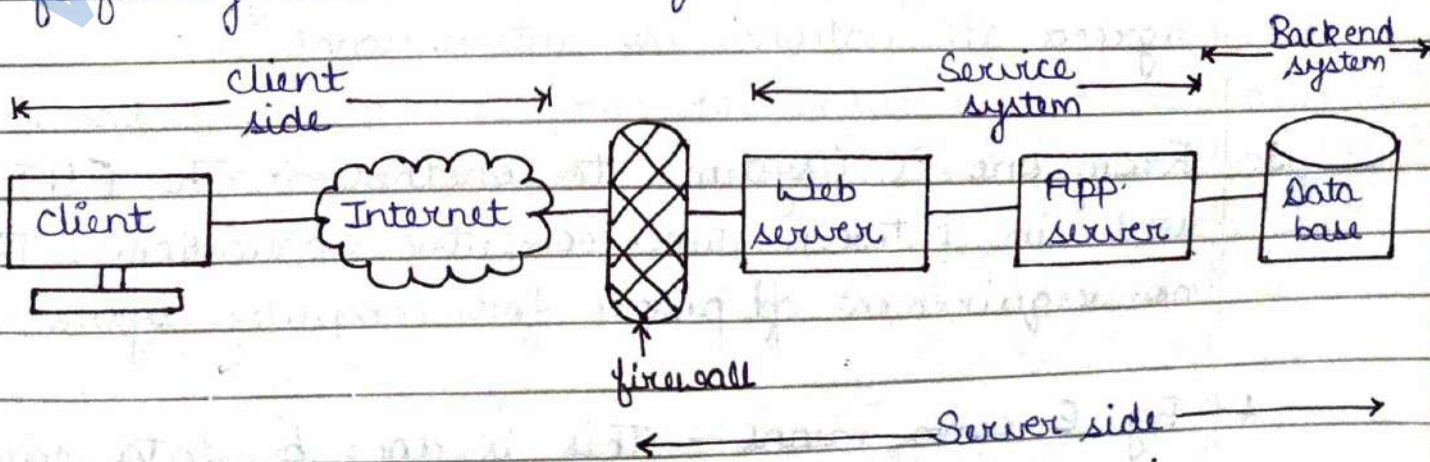
In general, e-commerce system can be represented by 3 tier model.



This 3 tier model has mainly three components -

- 1- Client side
- 2- Server system
- 3- Backend system

The service system and back end system are called server side. This 3 tier model is a client-server based computing system. The client side connect user to the system, the service system serve the users requests and the backend system support the service system in fulfilling the users request.



* Software agents :- Software agents are effective tools for virtual organisation because they provide mechanism to automate several activities. Software agent finds application in a variety of domain including B2B E-commerce, internet based information system, robotics etc.

• Needs of software agent -

1. Manage the information
2. Decision support
3. Repetitive task
4. Knowledge based system

* E-data interchange [EDI] :-

It is a communication standard that enable the E-transfer of routine document such as purchased orders.

The definition of EDI having four components -

- 1- Structured data - EDI transaction are composed of codes, value and short piece of text.
- 2- Message standard - EDI transaction having a standard format. The standard is not just agreed between the trading partner but it is a general standard agreed at national or international.
- 3- From one PC (system) to another - The EDI message sent in between two computer applications. There is no requirement of people for computer system.
- 4- By E-comm means - This is done by data communication

but the physical transfer of magnetic tape or data would be within the definition EDI.

* Characteristics of EDI :-

- 1- Business transactions message - EDI is used primarily to electronically transfer repetitive business transactions. For example - purchase order, invoice, shipping notice and so on.
- 2- Data formatting standard - Since EDI messages are repetitive, it is sensible to use some formatting standards. Standards (rules) can short the length of the message and eliminate data entry error.
- 3- EDI translator - An EDI translator converts data into standard EDI format.
- 4- Private lines - EDI run on value added networks, these networks provide a high level of security.

• Advantages of EDI -

- 1- Cost cutting
- 2- Elimination of errors
- 3- Fast response
- 4- Accurate invoice
- 5- Electronic payments
- 6- Reduced stock
- 7- Business opportunities

• Disadvantages of EDI -

- 1- Operating procedure - EDI is a structured way of working so companies usually change operating procedure.
- 2- Production and purchasing decision
- 3- Transparent - less transparent than paper based system.
- 4- Flexibility - EDI systems are highly flexible.
- 5- High cost - EDI applications are highly cost to develop and operate.
- 6- Limited accessibility - It does not allow consumers to communicate with vendors in an easy way.
- 7- Trading partner involvement - It involve high dependence on the participation of trading partners.
- 8- Data processing and communication error -
Errors in computer processing may results in the transmission of incorrect information or inaccurate information.

* Internet Based EDI :- Internet based EDI is generally used to describe EDI systems that can be accessed and used via a web-browser.

These system are based on "Software as a service" principle where the user will pay a fees in exchange for access to the internet based EDI system.

• Reasons of using Internet based EDI :-

- 1- Accessibility - The internet is a publically accessible network.
- 2- Global reach
- 3- Low cost
- 4- Use of web technology
- 5- Easy to use

• Factors of internet based EDI -

1. Flat pricing - Flat pricing that is not dependent on the amount of information transferred.
2. Cheap access
3. Common mail standards
4. Security - Encryption are used for security.

* Comparision between traditional v/s internet based EDI:

Traditional EDI	Internet Based EDI
1- Dedicated network	Open network
2- Machine readable data or highly structured data.	Highly secure data. ex - email

3-	High cost	Low cost
4-	Must be very high transaction volume.	Large or small transaction value.
5-	High possibility of clerical error during data entry.	Clerical error could be reduced.
6-	Requires high and specific skills.	User friendly.

* EDI nuts and bolts :-

EDI model required for sending and receiving EDI messages. EDI is defined by its technology. The technical elements of EDI system are -

1. EDI standard
2. EDI software
3. EDI network
4. EDI agreement

1. **EDI Standard** - Using EDI ^{a business} application on the computer of one organisation can communicate directly with the business application. EDI provide an electronic linking between two trading partner. Business transactions are output from the sending computer system and transmitted in electronic format and input into the second receiving computer system.

2. **EDI Software** - EDI software consist of computer instructions that translate the information from a unstructured format to structured format.

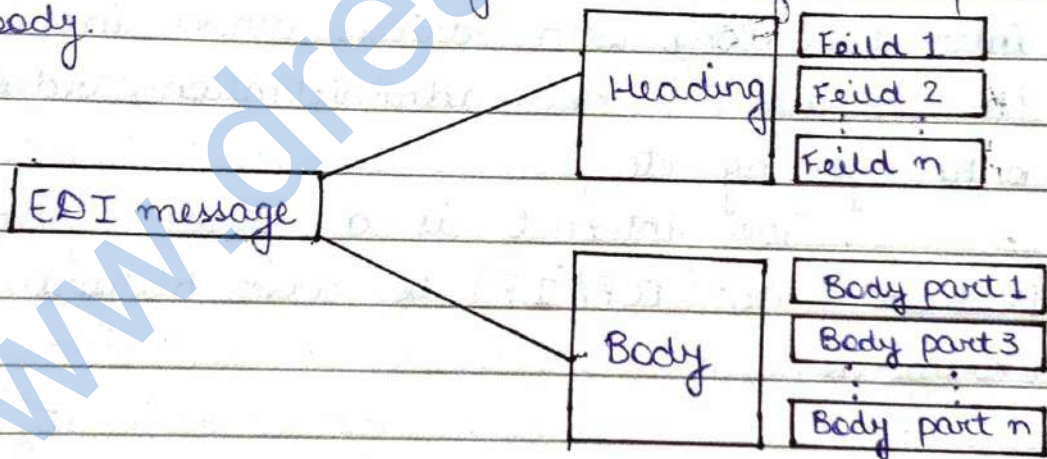
and then communicate the EDI message from sender to receiver.

EDI software also receive the messages and translate from standard format to company specific format. The requirement of EDI are -

- (a) A computer
- (b) A communication interface
- (c) Appropriate software

3. **EDI Network** - EDI documents are electronically exchanged over communication networks which connect business partners to one another. These documents are stored in the EDI server from where they can be downloaded or uploaded. Value added network are the third party communication network established for exchanging EDI traffic documents.

EDI message consist of two parts - heading and body.



- **EDI message:** Heading - A set of heading field each one of them is an information item giving a characteristic to the EDI message.
- **Body** - A sequence of one or more body parts of the message.

Assignment

Internet, Intranet & Extranet

INTERNET :-

Internet is a worldwide, publicly accessible computer network of interconnected computer networks that transmit data using the standard Internet Protocol (IP). Largest internetwork in the world is Internet.

The internet is a collection of interconnected computer networks, linked by copper wires, fibre-optic cables, wireless connections etc. The World Wide Web is one of the services accessible via the internet, along with various others including email, file sharing, remote administration, video streaming, online gaming etc.

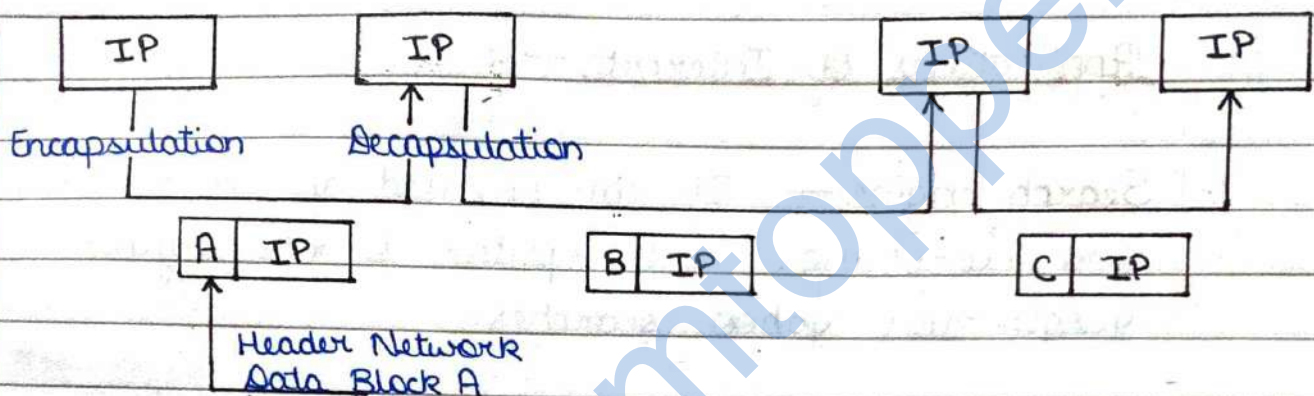
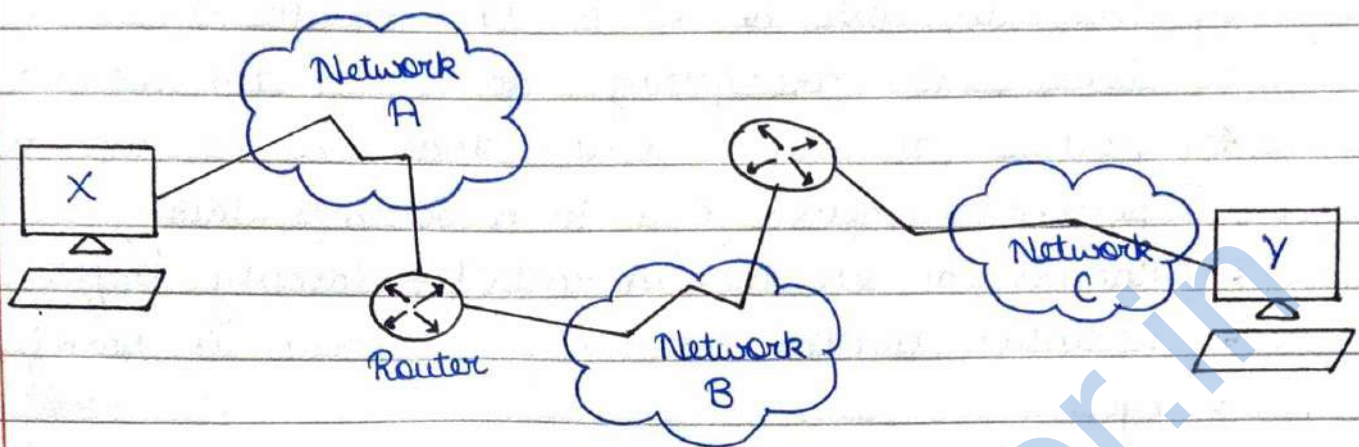
The internet is a global system of Internet Protocol Suite (TCP/IP) to serve billions of users worldwide.

Structure of Internet -

The internet structure is based on a simple idea - ask all networks want to be part of carrying a single packet type, a specific format the IP protocol.

In addition, this IP packet must carry an address defined with sufficient generality in order to identify each computer and terminals scattered

throughout the world.



Internet Structure

The user who wishes to make on this internetwork must store its data in IP packets that are delivered to the first network to cross.

Advantages

1. Information on almost every subject imaginable. Powerful search engines.
2. Ability to do research from your home versus research libraries.
3. Information at various levels of study.
4. The internet provides the ability of emails.
5. Platform for products like SKYPE, which allow for holding a video conference with anyone in the world who also has access.
6. All kinds of news is available ~~instantaneously~~.

Disadvantages —

1. There is a lot of wrong information on the internet.
2. Easy to waste a lot of time on the internet.
3. Some people are getting addicted to the internet.
4. Hackers can create viruses that can get into your personal computer and ruin valuable data.
5. Hackers can use the internet for identity theft.
6. Radiation emitted by computer's screen is harmful to eyes.

Applications of Internet —

- 1- Search engine — It can be used to search anything and everything. Most popular search engines are google and yahoo searches.
- 2- Communication — It helps people to communicate either with the use of social networking websites or through e mails.
- 3- Shopping — Shopping has become easier with the advent of internet. You can buy or sell online.
- 4- Research — Research papers are present online which helps in the researcher doing a literature review.
- 5- Job search — Nowadays, many people search for their jobs online as it is quicker and there is a large variety of job vacancies present.
- 6- Studying — The online educational books have reduced the need for a library.

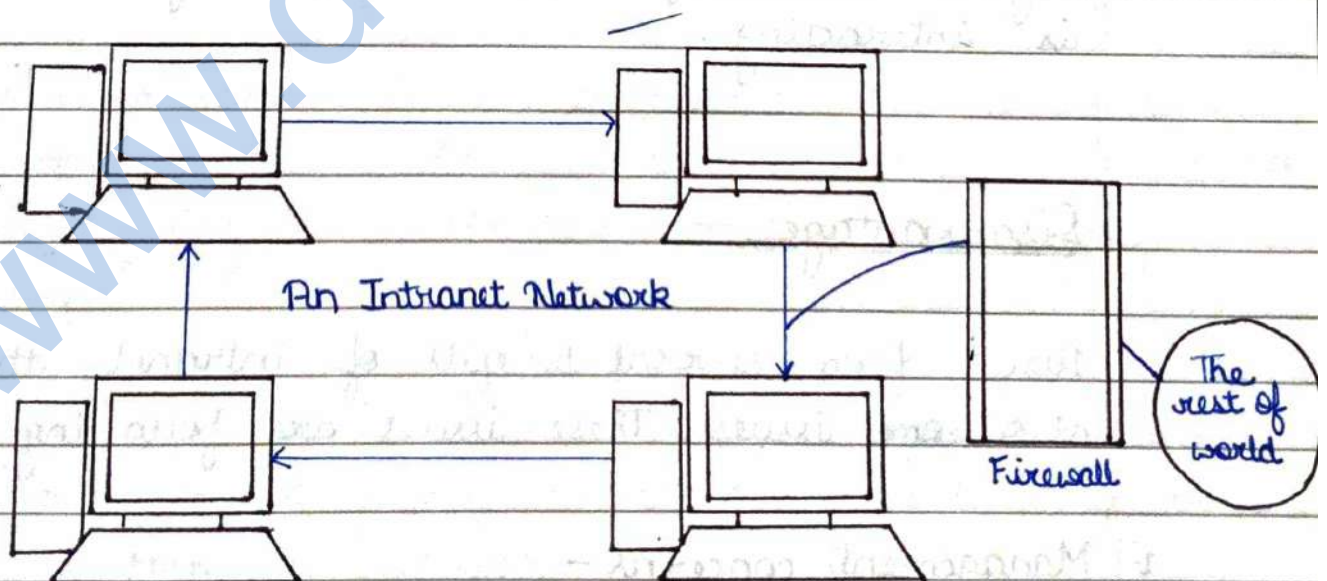
INTRANET :-

Intranet is defined as private network of computers within its own server and firewall. Intranet is a system in which multiple PCs are networked to be connected to each other. PCs in intranet are not available to the world outside of the intranet.

Usually each company or organisation has their own intranet network and employees of that company can access the computers in their intranet. Every computer in intranet is identified by a unique IP address. An intranet can also be used to facilitate working in groups and teleconferences.

Structure of Intranet -

An intranet is company-specific network that uses software programs based on the internet TCP/IP protocol and common internet user interfaces such as web browser.



The intranet environment is completely owned by the enterprise.

Advantages -

1. Intranet offers easy and cheap communication within an organisation. Employees can communicate using e-mails, or blogs.
2. Information on intranet is shared in real time.
3. Information is distributed among the employees as according to requirement.
4. Data is available at every time and can be accessed using company workstation. This helps the employees work faster.
5. It is also possible to deploy applications that support business operations.
6. Since information shared on internet can only be accessed within an organisation, therefore there is almost no chance of being theft.
7. Any changes made to information are reflected immediately to all the users.
8. Intranet targets only specific users within an organisation therefore, one can exactly know whom he is interacting.

Disadvantages -

Apart from several benefits of intranet, there exist also some issues. These issues are following -

1. Management concerns -
 - Loss of control
 - Hidden complexity
 - Potential for chaos

EXTRANET :-

Extranet refers to network within an organisation, using internet to connect to the outsiders in controlled manner. It helps to connect businesses with their customers and suppliers and therefore allows working in a collaborative manner.

An extranet is a controlled private network allowing customers, partners, vendors, suppliers and other businesses to gain information, typically about a specific company or educational institution, and do so without granting access to the organisation's entire network. It is restricted to select users through user IDs, passwords and other authentication mechanisms on a login page.

Structure of Extranet :-

Extranet is implemented as a Virtual Private Networks (VPN) because it uses internet to connect to corporate organisation, and there is always a threat to information security.

