SOPHITORIUM INSTITUTE OF TECHNOLOGY
&
LIFESKILLS

BRANCH-BBA
SEMESTER-6TH
SUBJECT-E-BUSINESS

UNIT-1

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WHAT IS E-BUSINESS?

- **INTRODUCTION**

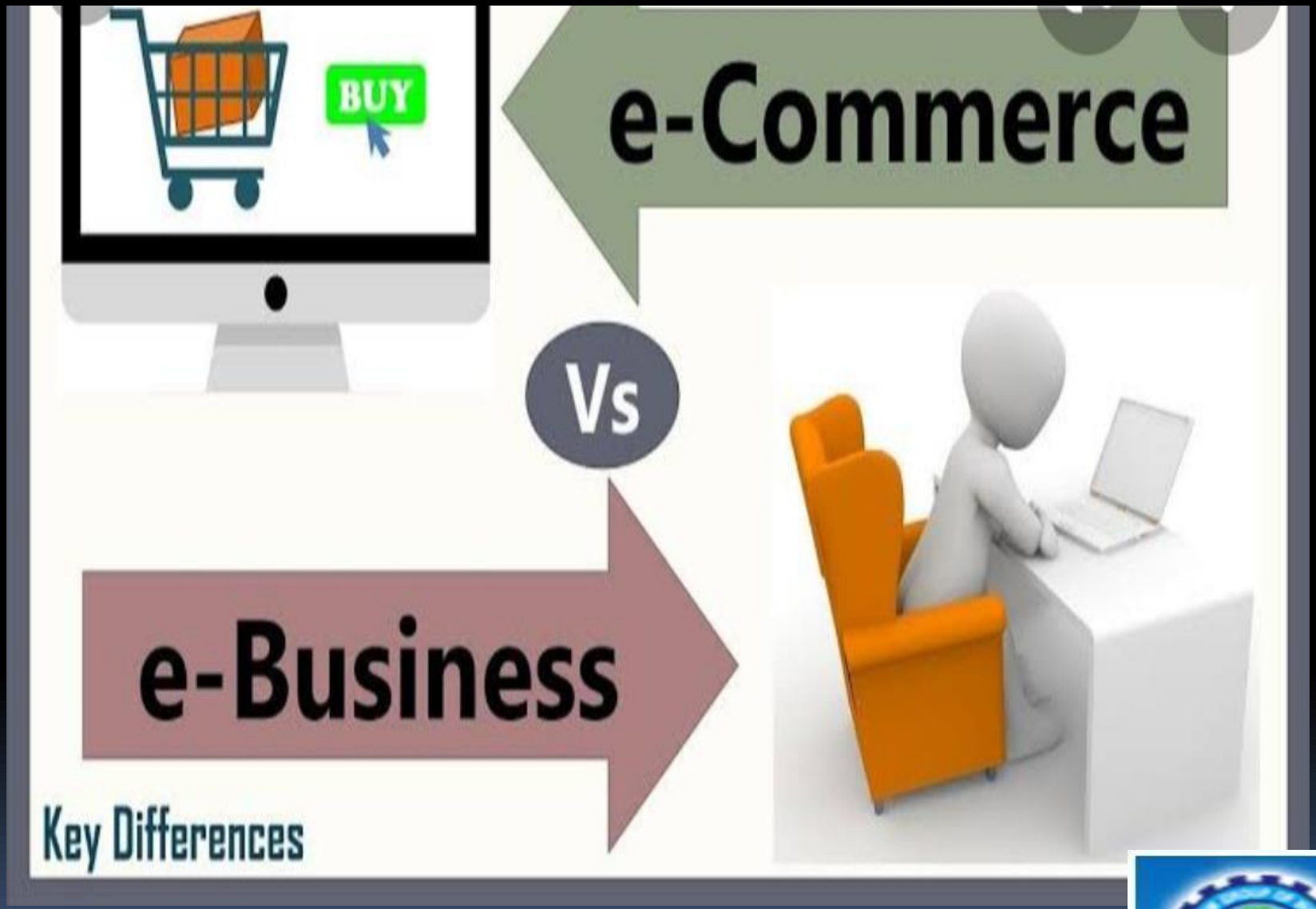
E-Commerce or Electronics Commerce is a methodology of modern business, which addresses the requirements of business organizations. It can be broadly defined as the process of buying or selling of goods or services using an electronic medium such as the Internet.

E-business applications turn into e-commerce precisely, when an exchange of value occurs. Digitally enabled transactions include all transactions mediated by digital technology and platform; that is, transactions that occur over the Internet and the web.

WHAT IS PHYSICAL COMMERCE?

- **INTRODUCTION**

- **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. Now a days people are not preferring this as it is time taking and needs physical way of doing business.
- **Example** includes physical market.


BUY
e-Commerce
Vs
e-Business
Key Differences

DIFFERENCE BETWEEN TRADITIONAL BUSINESS AND E-BUSINESS

TRADITIONAL BUSINESS	E-BUSINESS
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.
In traditional commerce it is difficult to establish and maintain standard practices.	In traditional commerce it is easy to establish and maintain standard practices.
In traditional commerce direct interaction through seller and buyer is present.	In traditional commerce indirect interaction through seller and buyer occurs using electronic medium and internet.
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.
In traditional commerce processing of transaction is manual.	In e-commerce processing of transaction is automatic.

HISTORY OF E-BUSINESS

- The history of E-commerce begins with the invention of the telephone at the end of last century. EDI (Electronic Data Interchange) is widely viewed as the beginning of ecommerce if we consider ecommerce as the networking of business communities and digitalization of business information. Large organizations have been investing in development of EDI since sixties. It has not gained reasonable acceptance until eighties. The meaning of electronic commerce has changed over the last 30 years.
- Originally, electronic commerce meant the facilitation of commercial transactions electronically, using technology such as Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT). These were both introduced in the late 1970s, allowing businesses to send commercial documents like purchase orders or invoices electronically. The growth and acceptance of credit cards, automated teller machines (ATM) and telephone banking in the 1980s were also forms of electronic commerce. Another form of E-commerce was the airline and railway reservation system.

objectives of the e-commerce

- **The various objectives of the e-commerce can be laid down as follows:**
- **1. Development of Business-Relationship:**
- The business development can be done through the e-commerce being the primary and the basic object. As their direct contact in between the company and the consumer, their business relationship will be enhanced. Hence the area of the market can be increased.
- **2. Better-Customer Service:**
- As it is done round the clock, the customer will always have online help regarding the products. As all the information is furnished to the customer, it becomes easy to him to choose the best product among all other alternatives. As even the service can also be done through the net immediately, the customer service will be ballooned. By highlighting the customer service, the companies are trying to subjugate a lion-share in the market.
- **3. Getting more Customers:**
- In these days it becomes the mandate of the companies to double its customers, and this can be done by rendering the value add service and maintaining the quality. Hence, it is also one of the primary objectives of the companies which supply impetus for the robust growth in sales and overall profit.

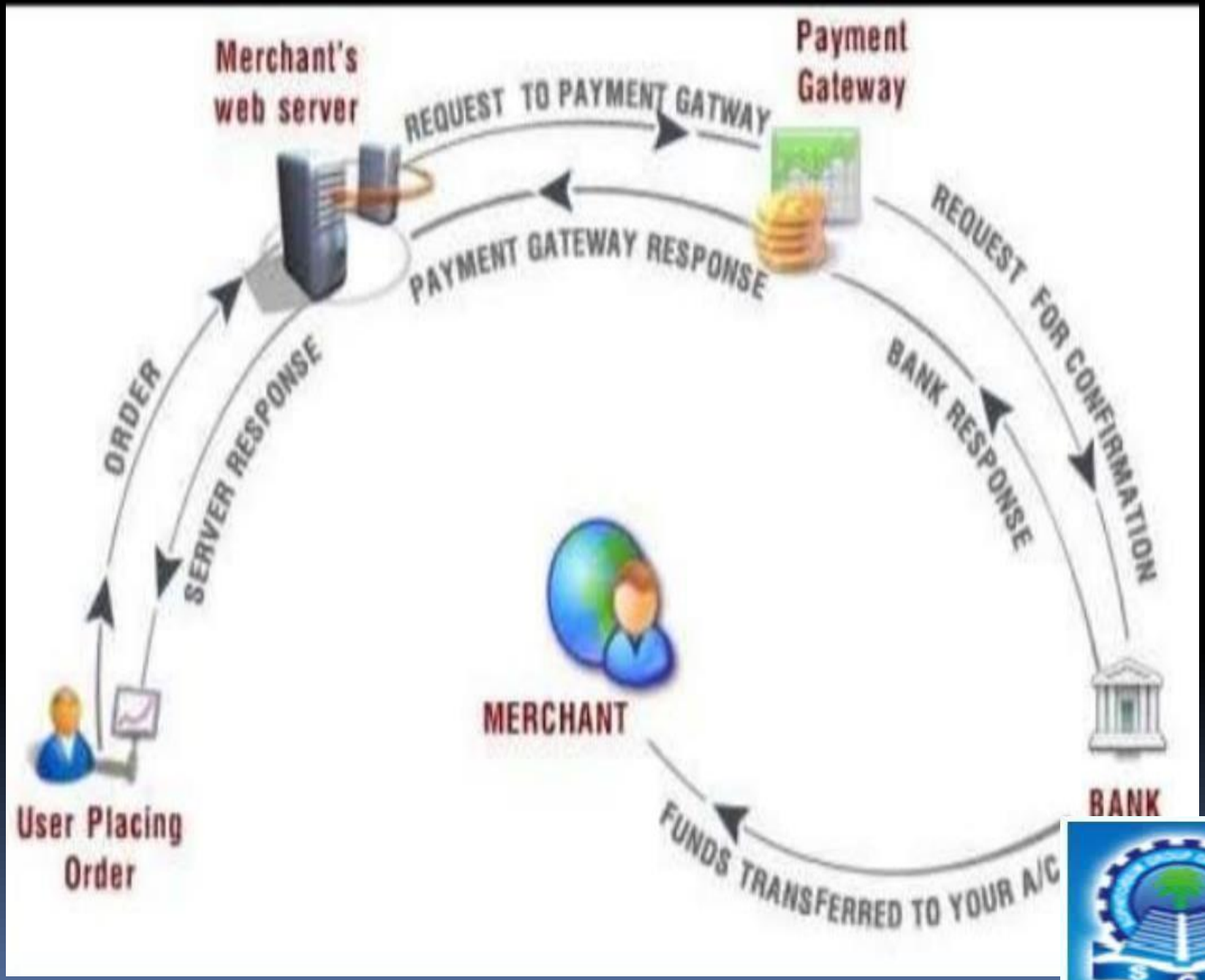
Different types of E-Commerce

- **The major different types of E-Commerce are:**
- I. Business-to-Business (B2B);
- II. Business-to-Consumer (B2C);
- III. Business-to-Government (B2G);
- IV. Consumer-to-Consumer (C2C);
- V. Mobile Commerce (M-Commerce).
- **Type # I. Business to Business (B2B):**
- 1. Business to Business or B2B refers to E-Commerce activities between businesses.
- 2. In E-Commerce B2B, transactions are usually carried out through Electronic Data Interchange or EDI. EDI is an automated format of exchanging information between businesses over private networks.

- 3 For Example- Manufacturers and wholesalers are B2B companies.
- **Type # II. Business to Customer (B2C):**
- 1. Business to Customer or B2C refers to E-Commerce activities that are focused on consumers rather than on businesses.
- 2. For instance, a book retailer would be a B2C company such as Amazon.com.
- **Type # III. Customer to Business (C2B):**
- 1. Customer to Business or C2B refers to E-Commerce activities, which use reverse pricing models where the customer determines the price of the product or services.
- 2. For example – tele workers and online auctions are C2B processes.
- **Type # IV. Customer to Customer (C2C):**
- 1. Customer to Customer or C2C refers to E-Commerce activities, which uses an auction style model.
- 2. Customers are also the business and C2C enables customers to directly deal with each other. An example of this is peer auction giant, E Bay.
- **Type # V. M-Commerce (Mobile Commerce):**
- 1. M-commerce (mobile commerce) is the buying and selling of goods and services through wireless technology i.e., handheld devices such as cellular telephones and personal digital assistants. Japan is seen as a global leader in m-commerce.
- 2. As content delivery over wireless devices becomes faster, more secure and scalable, some believe that m-commerce will surpass wire line e-commerce as the method of choice for digital commerce transactions. This may well be true for the Asia-Pacific where there are more mobile phone users than there are Internet users.

E-business scenarios

- E- business doesn't achieve success overnight. Generally a website will have several growth spurts during its lifetime, each requiring a different push to get to the next level. The exact process will vary across industries and product-types, but there are essentially 3 macro-stages:
- No existing website
- Existing website, low traffic
- Existing website, high traffic


Merchant's web server
Payment Gateway
REQUEST TO PAYMENT GATWAY
PAYMENT GATEWAY RESPONSE
REQUEST FOR CONFIRMATION
BANK RESPONSE
ORDER
SERVER RESPONSE
MERCHANT
User Placing Order
BANK
FUNDS TRANSFERRED TO YOUR A/C

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 enterprises and 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 management of 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 management becomes very efficient and easy to maintain.

ADVANTAGES OF E-BUSINESS

- E-Commerce advantages can be broadly classified in three major categories –
- Advantages to Organizations
- Advantages to Consumers
- Advantages to Society

- Advantages to Organizations

- 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.

- 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.

- Advantages to Society

- Customers need not travel to shop a product, thus less traffic on road and 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.

DISADVANTAGES OF E-BUSINESS

- The disadvantages of e-commerce can be broadly classified into two major categories –
- Technical disadvantages
- Non-Technical disadvantages

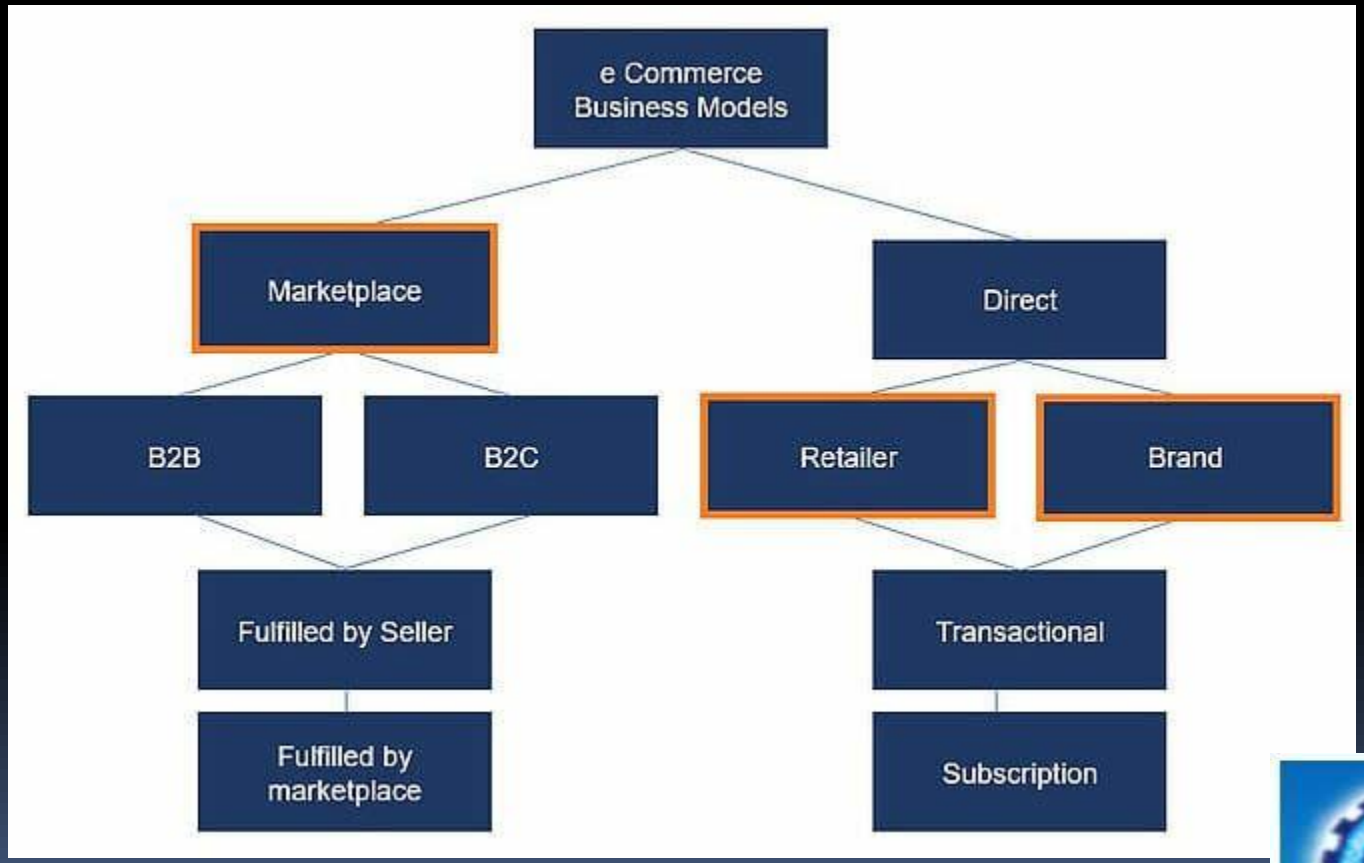
  - Technical Disadvantages

- There can be lack of system security, reliability or standards owing to poor implementation of e-commerce.
- The software development industry is still evolving and keeps changing rapidly.
- In many countries, network bandwidth might cause an issue.

  - Non-Technical Disadvantages

- **Initial cost** – The cost of creating/building an e-commerce application in-house may be very high. There could be delays in launching an e-Commerce application due to mistakes, and lack of experience.
- **User resistance** – Users may not trust the site being an unknown faceless seller. Such mistrust makes it difficult to convince traditional users to switch from physical stores to online/virtual stores.
- **Security/ Privacy** – It is difficult to ensure the security or privacy on online transactions.

BUSINESS MODELS



UNIT-2

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- **Internet :**

The internet is a globally connected network system facilitating worldwide communication and access to data resources through a huge collection of personal, public, business, academic and government networks. it's governed by agencies just like Internet Assigned Numbers Authority (or IANA) that establish universal protocols.

- **2. World Wide Web (WWW) :**

World Wide Web (WWW), byname Web, is leading information retrieval service of web (the worldwide computer network). Online gives users access to a huge array of documents that are connected to every other by means of hypertext or hypermedia links—i.e., hyperlinks, electronic connections that link related pieces of data so as to permit a user quick access to them. Hypertext allows the user to pick a word or phrase from text and thereby access other documents that contain additional information concerning that word or phrase.

-

DIFFERENCE BETWEEN INTERNET & WWW

INTERNET	WWW
Internet is a global network of networks.	WWW stands for World wide Web.
Internet is a means of connecting a computer to any other computer anywhere in the world.	World Wide Web which is a collection of information which is accessed via the Internet
Internet is infrastructure.	WWW is service on top of that infrastructure.
Internet can be viewed as a big book-store.	Web can be viewed as collection of books on that store.
At some advanced level, to understand we can think of the Internet as hardware.	At some advanced level, to understand we can think of the WWW as software.
Internet is primarily hardware-based.	WWW is more software-oriented as compared to the Internet.
It is originated sometimes in late	English scientist Tim Berners-Lee

Network Architecture

- Computer Network Architecture is defined as the physical and logical design of the software, hardware, protocols, and media of the transmission of data. Simply we can say that how computers are organized and how tasks are allocated to the computer.
- **The two types of network architectures are used:**
- Peer-To-Peer network
- Client/Server network

PEER TO PEER

- Peer-To-Peer network
- Peer-To-Peer network is a network in which all the computers are linked together with equal privilege and responsibilities for processing the data.
- Peer-To-Peer network is useful for small environments, usually up to 10 computers.
- Peer-To-Peer network has no dedicated server.
- Special permissions are assigned to each computer for sharing the resources, but this can lead to a problem if the computer with the resource is down.
- Advantages Of Peer-To-Peer Network:
- It is less costly as it does not contain any dedicated server.
- If one computer stops working but, other computers will not stop working.
- It is easy to set up and maintain as each computer manages itself.
- Disadvantages Of Peer-To-Peer Network:
- In the case of Peer-To-Peer network, it does not contain the centralized system . Therefore, it cannot back up the data as the data is different in different locations.
- It has a security issue as the device is managed itself.

Client/Server network

- Client/Server network is a network model designed for the end users called clients, to access the resources such as songs, video, etc. from a central computer known as Server.
- The central controller is known as a **server** while all other computers in the network are called **clients**.
- A server performs all the major operations such as security and network management.
- A server is responsible for managing all the resources such as files, directories, printer, All the clients communicate with each other through a server. For example, if client1 wants to send some data to client 2, then it first sends the request to the server for the permission. The server sends the response to the client 1 to initiate its communication with the client 2.

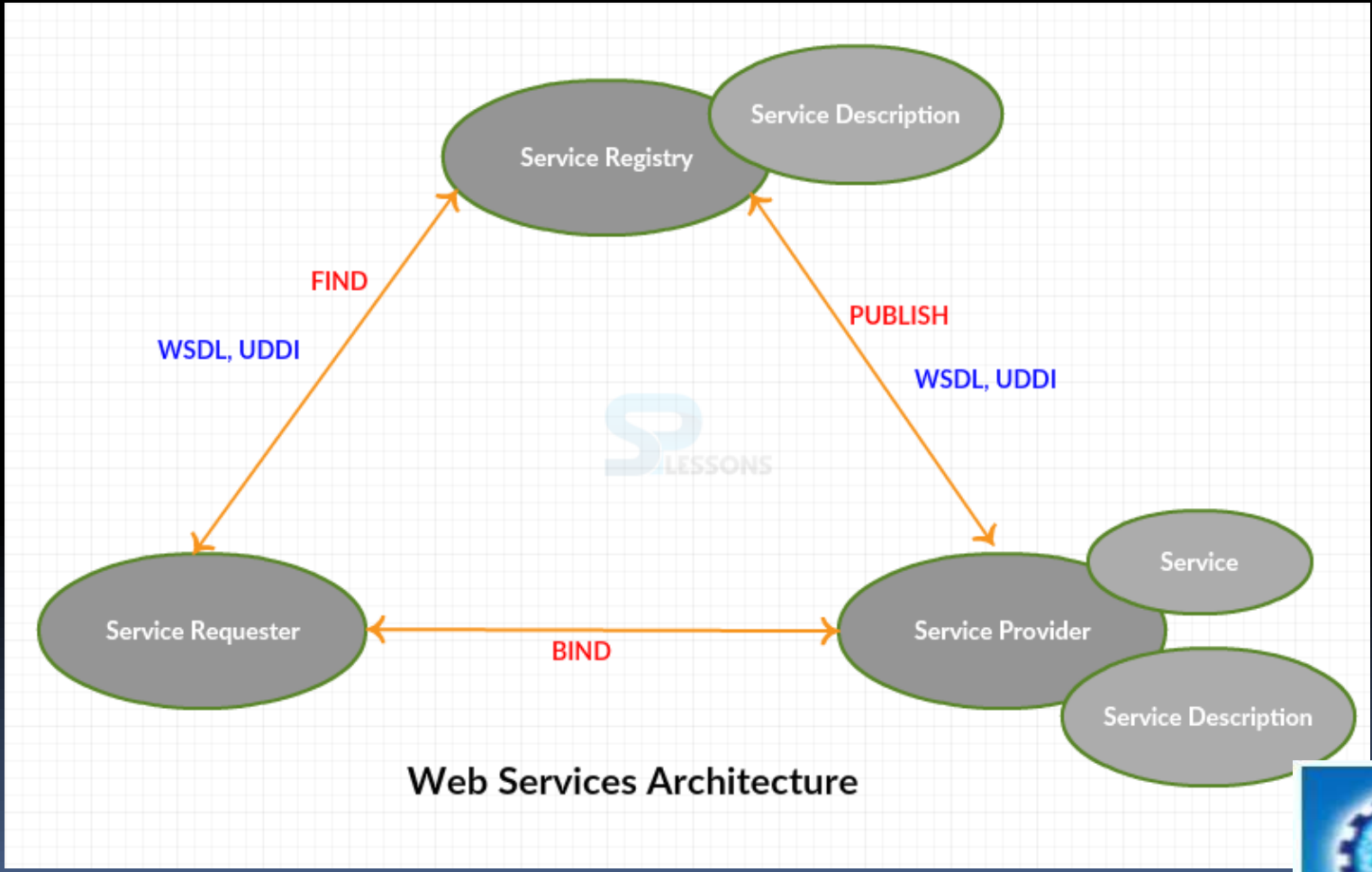
Advantages Of Client/Server network:

- A Client/Server network contains the centralized system. Therefore we can back up the data easily.
- A Client/Server network has a dedicated server that improves the overall performance of the whole system.

Disadvantages Of Client/Server network:

- Client/Server network is expensive as it requires the server with large memory.
- A server has a Network Operating System(NOS) to provide the resources to the clients, but the cost of NOS is very high.

WEB SYSTEM ARCHITECTURE



World Wide Web

- The Web is a only way to access information through the Internet. It's a system of Internet servers that support specially formatted documents. The documents are formatted in a markup language called **HTML**, or "HyperText Markup Language", which supports a number of features including links and multimedia. These documents are interlinked using hypertext links and are accessible via the Internet.
- To link hypertext to the Internet, we need:-
- The markup language, i.e., HTML.
- The transfer protocol, e.g., HTTP.
- Uniform Resource Locator (URL), the address of the resource.
- We access the Web using **Web browsers**.

URI

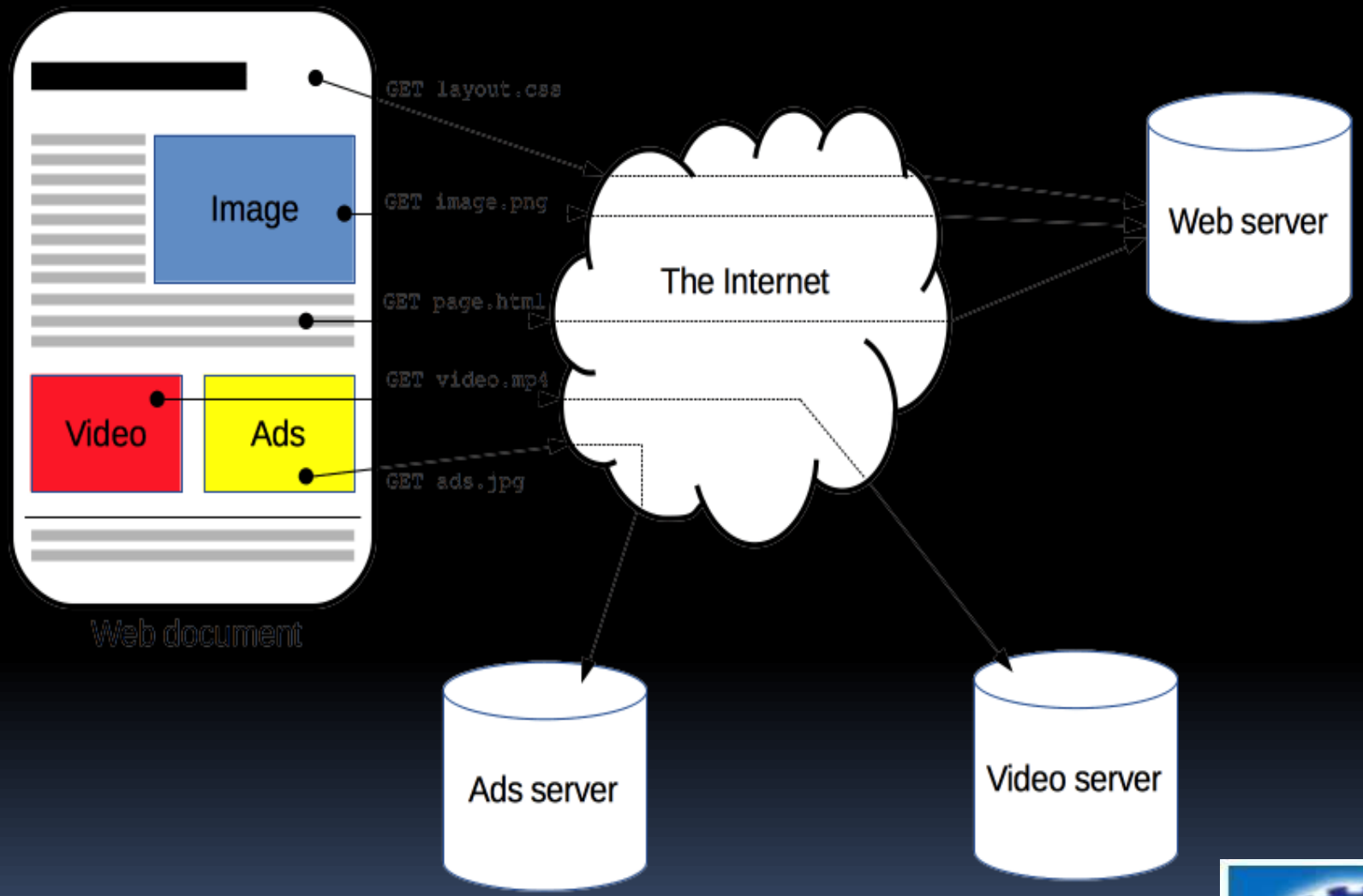
- **URI:**
  URI stands for **'Uniform Resource Identifier'** . A URI can be a name, locator, or both for an online resource whereas a URL is just the locator. URLs are a subset of URIs. A URL is human-readable text that was designed to replace the numbers (IP addresses) that computers use to communicate with servers.
- A URL consists of a protocol, domain name, and path (which includes the specific subfolder structure where a page is located) like-
- protocol://WebSiteName.topLevelDomain/path
- Protocol – Http or Https.
- WebSiteName – geeksforgeeks, google etc.
- topLevelDomain- .com, .edu, .in etc.
- path- specific folders and/or subfolders that are on a given website.

URL

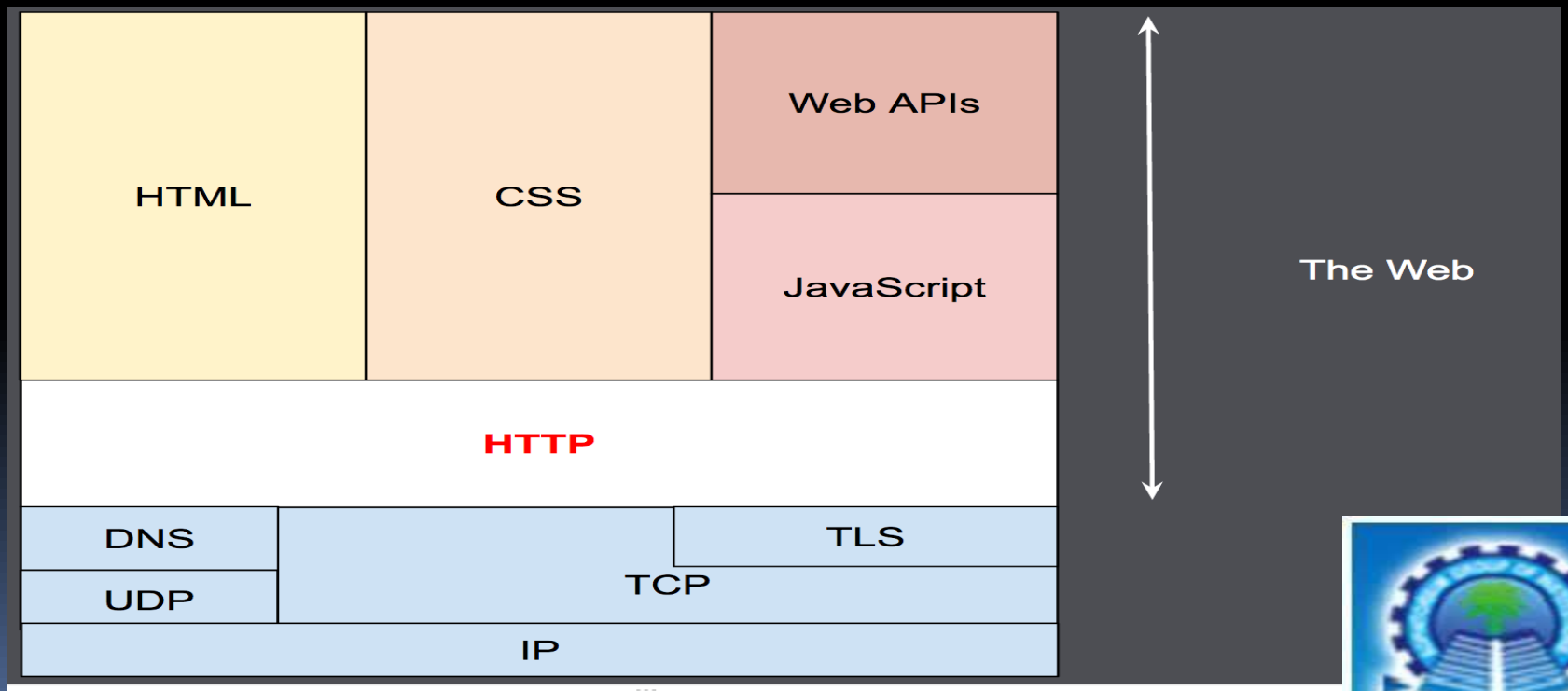
- URL stands for *Uniform Resource Locator*. A URL is nothing more than the address of a given unique resource on the Web. In theory, each valid URL points to a unique resource. Such resources can be an HTML page, a CSS document, an image, etc. In practice, there are some exceptions, the most common being a URL pointing to a resource that no longer exists or that has moved. As the resource represented by the URL and the URL itself are handled by the Web server, it is up to the owner of the web server to carefully manage that resource and its associated URL.
  - **anatomy of a URL**
- Here are some examples of URLs:
- https://developer.mozilla.org
  https://developer.mozilla.org/en-US/docs/Learn/
  https://developer.mozilla.org/en-US/search?q=URL

An overview of HTTP

- **HTTP** is a protocol which allows the fetching of resources, such as HTML documents. It is the foundation of any data exchange on the Web and it is a client-server protocol, which means requests are initiated by the recipient, usually the Web browser. A complete document is reconstructed from the different sub-documents fetched, for instance text, layout description, images, videos, scripts, and more.


GET layout.css
GET image.png
GET page.html
GET video.mp4
GET ads.jpg
Image
Video
Ads
Web document
The Internet
Web server
Ads server
Video server

- Clients and servers communicate by exchanging individual messages (as opposed to a stream of data). The messages sent by the client, usually a Web browser, are called *requests* and the messages sent by the server as an answer are called *responses*.



HTTP

- HTTP is a client-server protocol: requests are sent by one entity, the user-agent (or a proxy on behalf of it). Most of the time the user-agent is a Web browser, but it can be anything, for example a robot that crawls the Web to populate and maintain a search engine index.
- Each individual request is sent to a server, which handles it and provides an answer, called the *response*. Between the client and the server there are numerous entities, collectively called proxies, which perform different operations and act as gateways or caches, for example.
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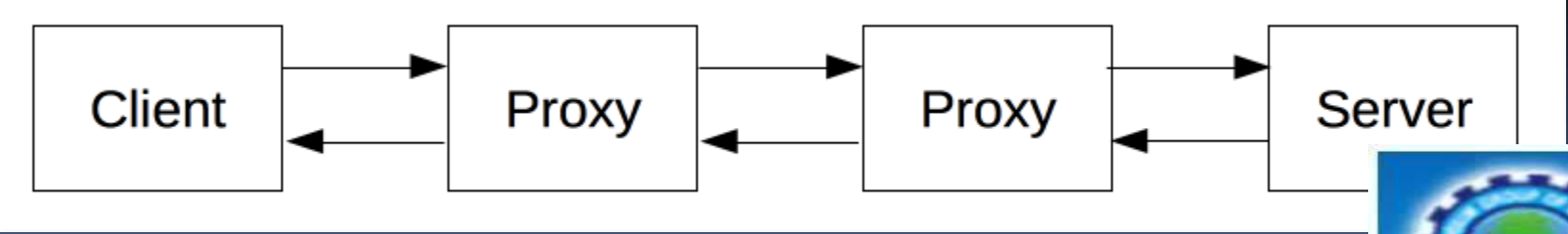

- In reality, there are more computers between a browser and the server handling the request: there are routers, modems, and more. Thanks to the layered design of the Web, these are hidden in the network and transport layers. HTTP is on top, at the application layer. Although important to diagnose network problems, the underlying layers are mostly irrelevant to the description of HTTP.

WEB PAGE DESIGNING USING HTML

```
<!DOCTYPE html>

<html>

<head>
    <title>
        Simple web Development Template
    </title>
</head>

<body>
    <nav class="navbar background">
```

UNIT 3


MARKETING
RAW MATERIALS
BUSINESS
SALES
B2B
Business to Business
MARKET
SUPPLY CHAIN
TRANSACTION
SUB COMPONENTS

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What is B2B Ecommerce?

- B2B ecommerce, or business-to-business electronic commerce, describes online order transactions between businesses.

- Because orders are processed digitally, buying efficiency is improved for wholesalers, manufacturers, distributors and other types of B2B sellers

CHARACTERISTICS OF B2B E-COMMERCE

- **Multiple decision-makers.** In B2B, there are often four or more decision-makers involved in the purchase process. In practice, this may require multiple user roles in the checkout /cart process with multiple stages taking many days (or weeks).
- **Longer decision cycle.** The B2B buying cycle is much longer than for B2C – so the lead time between initial contact and receiving any payment are longer. But also, customer expectation is different - wanting to change exact details of the order through the process.
- **Customer-specific discounts.** In B2B, the variations in price lists, discounts, and even available products are generally more complex than for B2C. This is historical. Whether necessary is not the appropriate question when building a B2B eCommerce solution as this is usually a fixed requirement in all but the smallest businesses.
- **Conflict with direct sales channels**
- **International markets.** B2B eCommerce is often used as a way of reaching international markets, maybe in small numbers

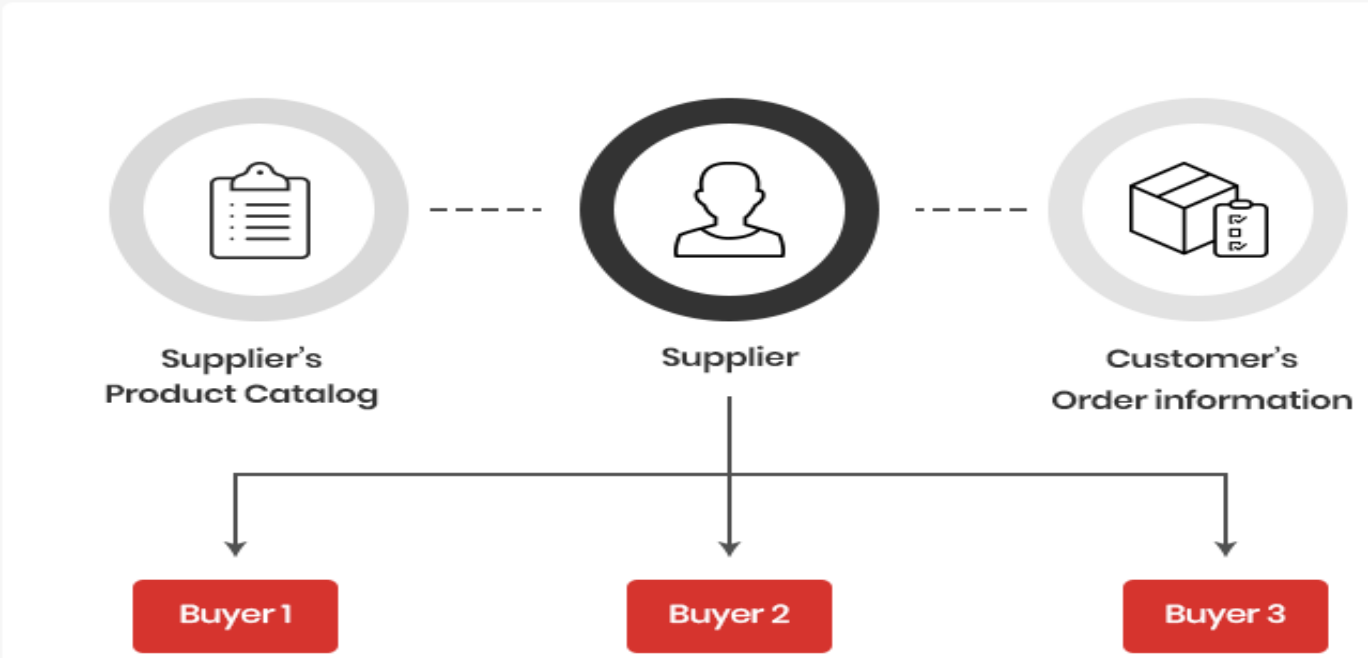
Models in B2B e-commerce

- 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.

supplier oriented marketplace

- A supplier oriented model is a model wherein a number of suppliers set-up an online marketplace to establish an efficient channel to sell to a large number of businesses. The supplier has the prerogative to set his/her own price based on the needs of the buyers. Suppliers are usually searchable by the products or services they offer. The loyalty of businesses and goodwill in the market is crucial to have success in this business model.

Supplier-Oriented Marketplace



- Manufacturer-driven Electronic Stores
- Same Store as used by individual consumers and business corporations. (B2C, B2B)
- May involve auctions run by the Supplier.

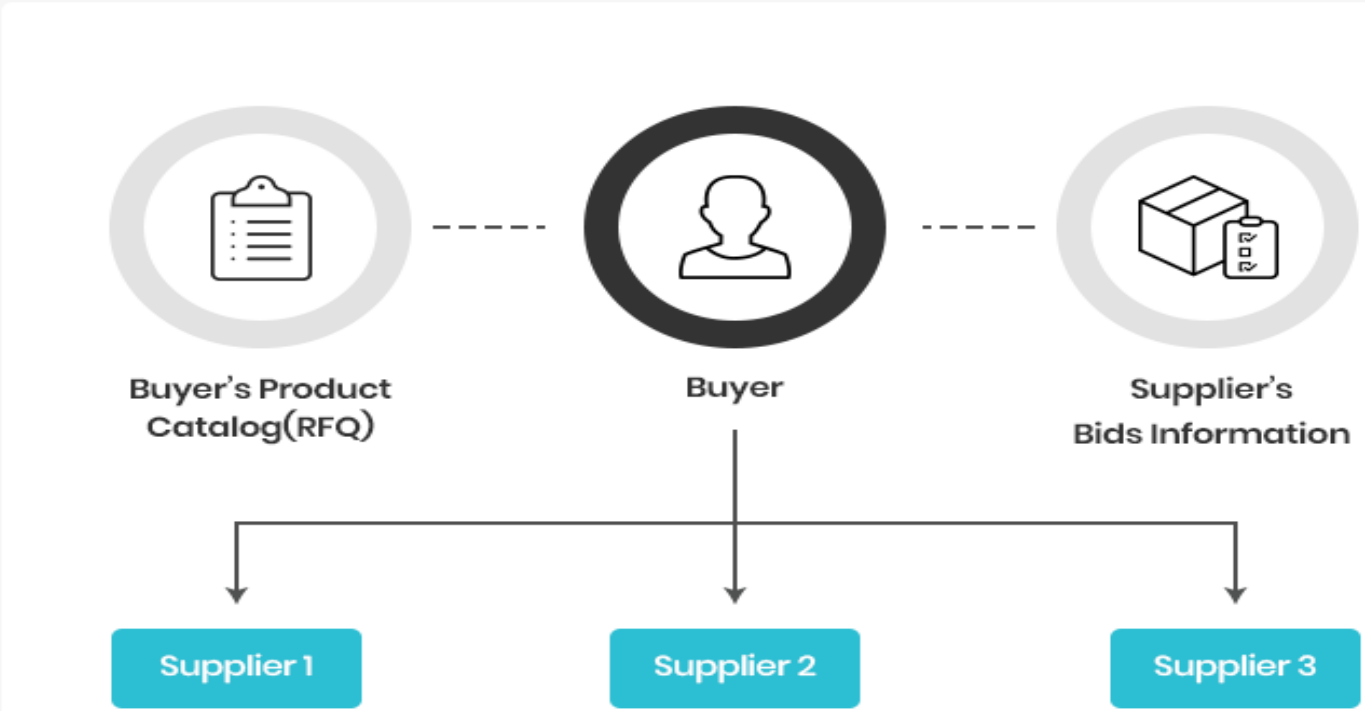
Examples:

- Cisco Connection Online: Networking equipment
- Dell: PC and high-end servers

Buyer-oriented marketplace

- A buyer-oriented model revolves around the demands of individual buyers. This business model is most popular among big corporations with greater purchasing power and high volume purchases. The buying business sets up an online portal to accept quotations from various different sellers. The quotes start to flow in and after careful analysis, the buyer can decide which seller to transact with. That way, this model allows buyers to bring down their administrative costs and also get the best price from the suppliers.

Buyer-Oriented Marketplace



- Buyer Opens a Market on its server.
- Invites potential suppliers to bid on the RFQ (Request for quotes).
- The number of such sites increase: Software agent is needed.

Examples:

- GE Lightning's TPN (Trading Process Netwok) tpn.geis.com

What is Just in Time (JIT) inventory?

- JIT is a method of e commerce supply chain management that is designed to cut costs, increase efficiency, and decrease waste by receiving goods when they are needed. It effectively means having enough inventory available to meet customer demand but no more than just enough, so you need to stockpile the remainder pretty quickly thereafter.
- While implementing JIT inventory for an ecommerce business can be difficult, the good news is shipbob offers the next best solution – making sure warehousing costs and shipping costs are as low as possible.

Pros of JIT inventory

- JIT has several benefits to a company's production process, including:
- **Reduced storage costs**: Due to the fact that inventory is produced or purchased at such short notice, there is no need to have extra or unsold inventory that takes up valuable inventory storage space. Warehouse space is expensive, which can also lead to high inventory carrying costs.
- **Improved communication**: JIT systems are only effective when communication is clear. To ensure problems don't occur and the inventory system runs smoothly, teams need to communicate regularly.
- **Less waste**: Since JIT systems rely on customer demand and only manufacture what has been recently purchased, it eliminates the volume of waste and unnecessary stock.

Cons of JIT inventory

- While JIT can have many advantages, there are also some downsides, which include:
- **Hard to implement**: Companies that implement a JIT inventory system will quickly understand there is little room for error, and so there is a chance they'll experience difficulties and setbacks before they get it right. Inventory control is difficult to manage, especially for fast-growing businesses.
- **Greater risk of supply chain failure**: A delay in receiving stock or a breakdown in machinery could be detrimental to a company's supply chain and cause significant problems.
- **More planning**: In order to do JIT right, companies must have accurate demand forecasts as well as real-time inventory tracking and customer buying insights. A small miscalculation could have a large impact on operations.

Types of B2B Businesses

- Customer-Centric Model

- This is a type of model that refers to a particular business type where the customers have equal value even after the sale has taken place.

- Buyer Centric Model

- This model is mainly used among the big corporate companies as they have a higher rate of purchases. Here the buyer sets a portal where the sellers and providers quote their ways.

- Intermediary Centric Model

- This is one of the popular B2B model, which provides a common platform for both the sellers and buyers to interact and transact with one another. This common platform is formed by the intermediaries. In return, the intermediaries get their fair share as commission from the parties that are involved.

What is b2b auction & services?

- Intermediate transactions in business-to-business (**B2B**) markets.
  Online **auctions** connect buyers and sellers together. in ways that were previously not possible.
- **B2B services- B2B services**, or business-to-business **services**, involve the transaction of **services** from one business to another, instead of from business to end consumers. When compared to B2C **services**, **B2B** sales deals often have higher dollar values and longer sales cycles.

What are Software Agents?

- Software Agents :

- : Although the theory of agents stated that agent is given a very famous with the growth of internet. Software agents are a piece of software which works for the user. However software agent is not just a program. An agent is a system situated within and a part of an environment that senses that environment and acts on it. Over time in pursuit of its own agenda and so as to effect what it senses in the future ? Important use of agent concept is, as the tool for analysis not as dosage. As the system changes on can understand it.

- **Characteristics of Software agents:**

- Software agents are like guards and locomotives of most E-Commerce. The following are very few characteristics:
- Software agents can do their task without any outsource intervention. Social interaction with other software agents and human.
- Software agents are specific in their goals.
- Good software agent is the one which has the attitude to receive and adopt changes . The agent must be programmed in a powerful language so as to express the rules.
- Safety of the information must be promised by the agent. Effective usage of the existing resources. Agent must be a good sailor Agents must be very careful in handling unauthorized users. The same information must be accessed
- by the user to which they have right.

Role of Software Agents In E-Commerce

- This part focus on the basic fundamentals including, the terms used in E-Commerce with respect to software agents and different examples which explains the role.
- * Software Agents enabling the formation of virtual organization: -
- Virtual systems are the decentralized business networks which work in flexible. To have efficient operation and productivity virtual organizations must be able to communicate, Co-operate and Co-ordinate (the 3Cs of business) with each other. Software agents are effective tool to virtual organizations since they provide mechanisms to automate several activities like, gathering data, refining information, negotiate business deals and also intelligent agents work like human beings in supplying and buying goods having the artificial machine knowledge. Software have variety of applications which includes, B2B E-Commerce, Internet based info systems, robotics, smart systems, DSS, data mining and Knowledge discovery. Agent technology helps in finding intranet or internet, Customer relation management, supply chain management and market pricing.

*The reason behind the use of Software Agents: The software agents are used due to the effect of following reasons: [1] Software Agents and Mobility: Mobile agents are a kind of software agent that represent a revolution in how programs are distributed, run and server resources shared and how computer users interact with online services.. They can act on behalf of their principals autonomously while performing their actions in some level of pro-activity and reactivity.

A software agent is a software entity that acts with autonomy to accomplish tasks on behalf of its users. They function continuously and autonomously in a particular environment, often inhabited by other agents of processes . The idea here is the use of software agents for collaboration.

*Technology behind Software Agents-Software agents offer great promise to build loosely-coupled, dynamically adaptive systems on increasingly pervasive message-based middleware, P2P and component technology, Java, XML, SOAP, HTML, HTTP and CGI etc. It can be seen that the knowledge of software engineering and enterprise modeling is also required for software agents.

Examples of Software Agents:-

User agents .
Surveillance agents.
Data-mining agents.

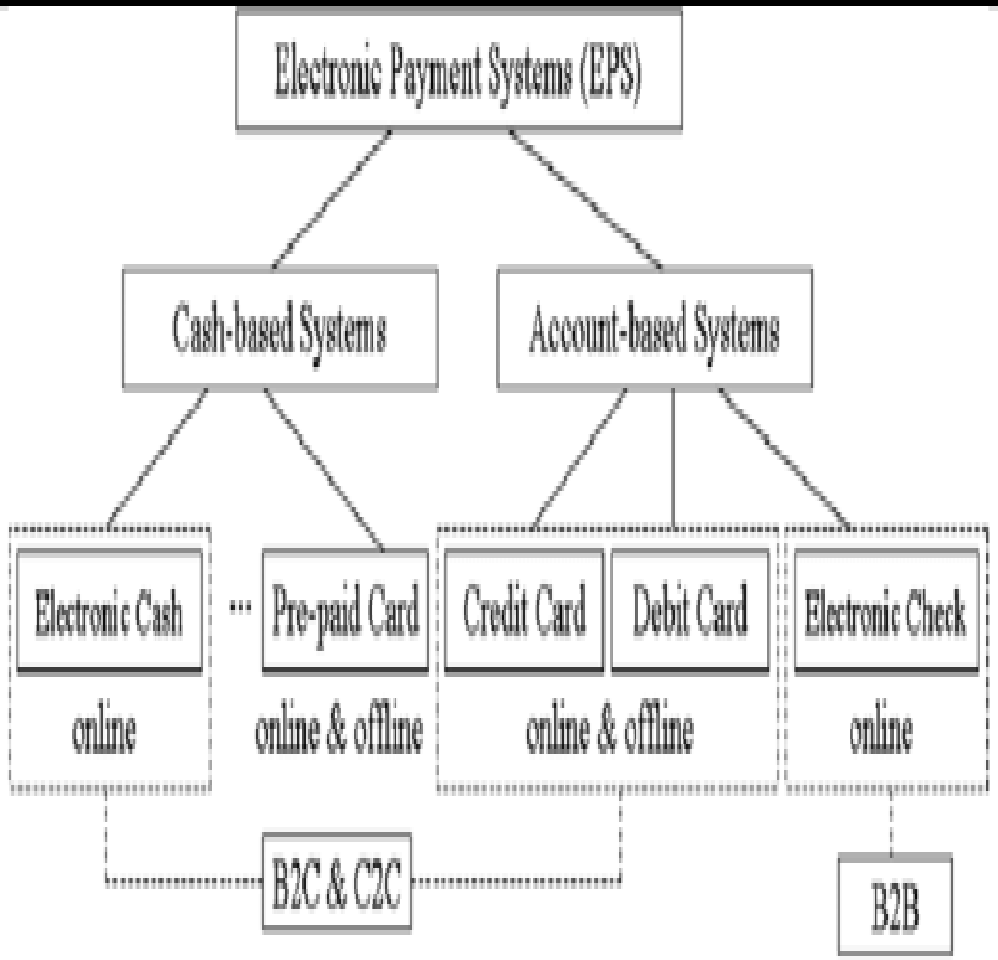
E-MARKETING IN B2B

- B2B online marketing, just like regular online marketing, is a form of marketing in which online resources are used with the aim of promoting products and services. This involves collecting contact details, generating leads and selling products through online channels. As 'B2B' already indicates, B2B online marketing is aimed at companies that do business with companies.
    - What does online marketing include?
- Online marketing is an interactive and dynamic process and consists of several parts that are interconnected. Below you will find activities that are important for B2B online marketing. It must be said that every company is different, and hence the online marketing activities that fit the company also differ. We will always be happy to advice you.
- **1.1. Analysis**
  Analysis is, as many parts of the company, a very important component of B2B online marketing. There is a lot of activity on your website every day. Visitors come to your website and they leave your website. When do visitors quit? What do they often click on? Do visitors get stuck?
- B2B content marketing
- B2B SEA
- B2B video marketing
- **Conversion optimalisation**

Management issues in B2B model.

- some of the most common challenges managers face and how to overcome them:---------
- 1.Decreased performance levels
- 2.Being understaffed
- 3.Lack of communication
- 4.Poor teamwork
- 5.Pressure to perform
- 6.Absence of structure
- 7.Time management
- 8.Inadequate support
- 9.Skepticism
- 10.Difficult employees
- 11.Transition from coworker to manager
- 12.Weak workplace culture

UNIT-IV


Electronic Payment Systems (EPS)
Cash-based Systems
Account-based Systems
Electronic Cash
Pre-paid Card
Credit Card
Debit Card
Electronic Check
online
online & offline
online & offline
online
B2C & C2C
B2B

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ELECTRONIC 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 (EFT)

- Credit Card-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.
- 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.

Cont…

- E-Money
- E-Money transactions refer to situation where payment is done over the network and the amount gets transferred from one financial body to another financial body without any involvement of a middleman. E-money transactions are faster, convenient, and saves a lot of time.
- Electronic Fund Transfer
- It is a very popular electronic payment method to transfer money from one bank account to another bank account. Accounts can be in the same bank or different banks. Fund transfer can be done using ATM (Automated Teller Machine) or using a computer.

SSL & SET PROTOCOLS

- **Secure Socket Layer (SSL)** is that the normal security technology for establishing associate encrypted link between an internet server and a browser. This link ensures that each one knowledge passed between the online server and browsers stay personal and integral.
- SSL is associate trade normal and is employed by numerous websites within the protection of their on-line transactions with their customers. SSL permits counselling like Social Security numbers, mastercard numbers, or login credentials to be transmitted firmly..
- **Secure Electronic dealings (SET)** could be a system for making certain the safety of economic transactions on the web. it absolutely was supported at the start by Mastercard, Visa, Microsoft, Netscape, and others. With SET, a user is given associate degree electronic case (digital certificate) and a dealings is conducted and verified employing a combination of digital certificates and digital signatures among the client, a merchant, and also the purchaser's bank during a means that ensures privacy and confidentiality.
- SET makes use of Netscape's Secure Sockets Layer (SSL), Microsoft's Secure dealings Technology (STT), and Terisa System's Secure machine-readable text Transfer Protocol (S-HTTP). SET uses some however not all aspects of a public key infrastructure (PKI).

Security schemes in e-payment systems-

- 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 should not 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.

- Measures to ensure Security
- Major security measures are following –
- **Encryption** – It is a very effective and practical way to safeguard the data being transmitted over the network. Sender of the information encrypts the data using a secret code and only the specified receiver can decrypt the data using the same or a different secret code.
- **Digital Signature** – Digital signature ensures the authenticity of the information. A digital signature is an e-signature authenticated through encryption and password.
- **Security Certificates** – Security certificate is a unique digital id used to verify the identity of an individual website or user.

Cryptography in E-Commerce

- The word cryptology is made up of two components: "kryptos", which means hidden and "logos" which means word. Cryptology is as old as writing itself, and has been used for thousands of years to safeguard military and diplomatic communications.
  - Cryptographic services
- The main goals of modern cryptography can be seen as: user authentication, data authentication (data integrity and data origin authentication), non-repudiation of origin, and data confidentiality.
- user authentication -If you log to a computer system there must (or at least should) be some way that you can convince it of your identity. Once it knows your identity, it can verify whether you are entitled to enter the system. Cont..

- ***Data authentication***
- Data authentication consists of two components: the fact that data has not been modified (data integrity) and the fact that you know who the sender is (data origin authentication).
- ***Data integrity***
- A data integrity service guarantees that the content of the message, that was sent, has not been tampered with.
- ***Data origin authentication***
- Here one wants to make sure that the person who is claiming to be the sender of the message really is the one from whom it originates. I
- ***Non-repudiation of origin***
- Non-repudiation protects against denial by one of the entities involved in a communication of having participated in all or part of the communication.

Managerial issues in e-payment system-

- Lack of Usability Electronic payment system requires large amount of information from end users or make transactions more difficult by using complex elaborated websites interfaces. For example credit card payments through a website are not easiest way to pay as this system requires large amount of personal data and contact details in web form.
- Lack of Security Online payment systems for the internet are an easy target for stealing money and personal information. Customers have to provide credit card and payment account details and other personal information online. This data is sometimes transmitted in an un-secured way.
- 3 Issues with e-Cash The main problem of e-cash is that it is not universally accepted because it is necessary that the commercial establishment accept it as payment method.
- Lack of Trust Electronic payments have a long history of fraud, misuse and low reliability as well as it is new system without established positive reputation.

UNIT-V

Economics, Global, and Other Issues in Electronic Commerce

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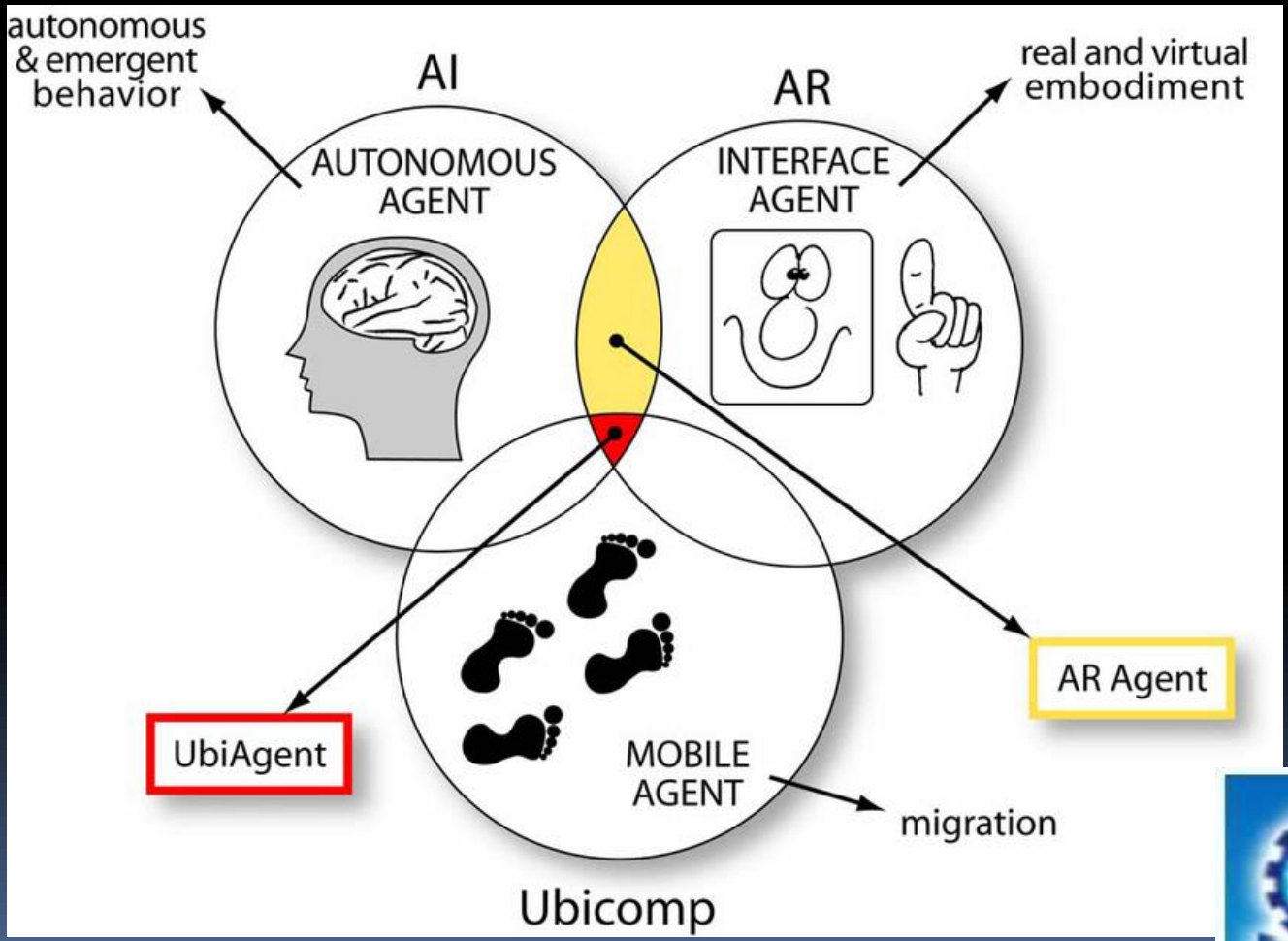
- 1)Issues relating to Access: Access issues include access to infrastructure,
- access to content, universal access.
- 2)Issues relating to Trust: The various trust related issues are privacy, security, consumer protection and content regulation.
- 3)Issues relating to Ground Rules: Issues relating to ground rules are issues of taxation, intellectual property rights, commercial laws including contract law, international trade and standards are categorized as ground rules-related issues.

Barriers to Global Electronic Commerce

- Legal Issues
  - Uncoordinated actions must be avoided and an international policy of cooperation should be encouraged
- Market Access Issues
  - Companies starting e-commerce need to evaluate bandwidth needs by analyzing the data required, time constraints, access demands, and user technology limitations
- Financial Issues
  - Customs and taxation
  - electronic payment systems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MOBILE
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migration
Ubicomp

THANK YOU