16BECS8E02 **E-COMMERCE** **L T P C**

3 0 0 3

COURSE OBJECTIVE:

- To understand the practices and technology to start an online business

LEARNING OUTCOME:

- To know how to build and manage an e-business

UNIT I INTRODUCTION (9)

Traditional commerce and E commerce – Internet and WWW – role of WWW – value chains – strategic business and Industry value chains – role of E commerce.

UNIT II INFRASTRUCTURE FOR E COMMERCE (9)

Packet switched networks – TCP/IP protocol script – Internet utility programmes – SGML, HTML and XML – web client and servers – Web client/server architecture – intranet and extranets.

UNIT III WEB BASED TOOLS FOR E COMMERCE (9)

Web server – performance evaluation - web server software feature sets – web server software and tools – web protocol – search engines – intelligent agents –EC software – web hosting – cost analysis

UNIT IV SECURITY (9)

Computer security classification – copy right and Intellectual property – electronic commerce threats – protecting client computers – electronic payment systems – electronic cash – strategies for marketing – sales and promotion – cryptography – authentication.

UNIT V INTELLIGENT AGENTS (9)

Definition and capabilities – limitation of agents – security – web based marketing – search engines and Directory registration – online advertisements – Portables and info mechanics – website design issues.

Total Hours - 45

TEXT BOOKS:

1. Ravi Kalakota, " Electronic Commerce", Pearson Education,
2. Gary P Schneider "Electronic commerce", Thomson learning & James T Peny Cambridge USA, 2001.
3. Manlyn Greenstein and Miklos "Electronic commerce" McGraw-Hill, 2002.

REFERENCES:

1. Efraim Turvan J.Lee, David kug and chung, "Electronic commerce" Pearson Education Asia 2001.
2. Brenda Kienew E commerce Business Prentice Hall, 2001.

KARPAGAM ACADEMY OF HIGHER EDUCATION

Faculty of Engineering

Department of Computer Science and Engineering

Lecture Plan

Subject Name: E-COMMERCE **Subject Code: 16BECS8E02**

S.No	Topic Name	No.of Periods	Supporting Materials	Teaching Aids
	UNIT- I INTRODUCTION			
1	Traditional commerce and E commerce	1	R[1]-1	BB
2	Internet and WWW	2	R[1]-1	BB
3	Role of WWW	2	R[1]-5	PPT
4	value chains	1	R[1]-6	PPT
5	strategic business and Industry value chains	2	R[1]-6	PPT
6	Role of E commerce.	2	R[1]-45	PPT
Total		**11**		
	UNIT- II INFRASTRUCTURE FOR E COMMERCE			
7	Packet switched networks	1	R[1]-156	PPT
8	TCP/IP protocol script	1	Web	PPT
9	Internet utility programmes	2	R[1] 201	BB
10	SGML, HTML and XML	1	R[2]101	PPT
11	Web client and servers	1	R[1]214	PPT
12	Web client/server architecture	2	R[2]135	PPT
13	Intranet and extranets.	2	R[1]218	PPT
Total		**10**		

	UNIT- III WEB BASED TOOLS FOR E COMMERCE			
14	Web server	1	Web	PPT
15	performance evaluation	1	Web	PPT
16	web server software feature sets	1	Web	PPT
17	web server software and tools	1	T[1]-245	BB
18	web protocol	1	T[1]-193	PPT
19	search engines	1	T[2]-205	BB
20	intelligent agents	1	T[1]-305	PPT
21	EC software	1	T[2]-300	BB
22	web hosting	1	Web	PPT
23	cost analysis	1	Web	PPT
Total		**10**		
	UNIT- IV SECURITY			
24	Computer security classification	1	R[1]-140	PPT
25	copy right and Intellectual property	1	R[1]-160	PPT
26	electronic commerce threats.	1	T[1]-140	PPT
27	protecting client computers	1	R[1]-162	BB
28	electronic payment systems	1	R[1]-159	PPT
29	electronic cash	1	R[1]-125	BB
30	strategies for marketing	1	R[1]-163	PPT
31	sales and promotion	1	R[1]-133	PPT
32	cryptography	1	Web	PPT
33	Authentication	1	R[1]-133	BB
Total		**10**		
	UNIT- V INTELLIGENT AGENTS			
34	Definition and capabilities	1	R[1]-248	PPT
35	limitation of agents	1	R[1]-465	BB
36	security	1	R[1]-465	BB
37	web based marketing	1	R[1]-255	PPT
38	search engines and Directory registration	1	R[1]-248	PPT
39	online advertisements	1	T[1]-1087	PPT
40	Portables and info mechanics	1	T[1]-1087	PPT
41	website design issues.	1	T[1]-690	BB
	Discussion on Previous University Question Papers			
Total		**10**		

	Total Hours	**52**		

TEXT BOOKS:

1. Ravi Kalakota, " Electronic Commerce", Pearson Education,
2. Gary P Schneider "Electronic commerce", Thomson learning & James T Peny Cambridge USA, 2001.
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1. Efraim Turvan J.Lee, David kug and chung, "Electronic commerce" Pearson Education Asia 2001.
2. Brenda Kienew E commerce Business Prentice Hall, 2001.

ELECTRONIC COMMERCE

UNIT – 1 INTRODUCTION

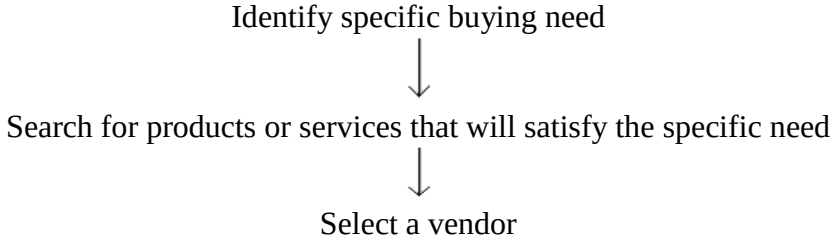
Traditional Commerce and E-Commerce:

Traditional Commerce:

Traditional commerce perhaps started before recorded history when our ancestors first decided to specialise their everyday activities. Instead of each family unit having to grow crops, search for food, and make tools, families developed skills in one of these areas and traded some of their production for other needs. It started with **bartering**, which eventually gave way to the use of currency, making transactions easier to settle. However, the basic mechanisms of trade were the same. Some body created a product or provided a service, which somebody else found valuable, and therefore was willing to 'pay' for it in exchange. Thus, **commerce**, or doing business, is a negotiated exchange of valuable products or services between at least two parties and includes all activities that each of the parties undertakes to complete the commercial transaction.

Any commercial transaction can be examined from either the buyer's or the seller's viewpoint. These two sides of a commercial transaction are shown in the diagram given below.

(a) **Buyer's Side of Traditional Commerce**



Negotiate a purchase transaction, including delivery, logistics, inspection, testing and acceptance

Receive product/ service and make payment

Perform regular product maintenance and make warranty claims.

(b) **Seller's Side of Traditional Commerce**

Conduct market research to identify customer needs

Create product or service that will meet customers' needs

Advertise and promote product or service

Negotiate a sale transaction including delivery logistics, inspection, testing, and acceptance

Dispatch goods and invoice customer

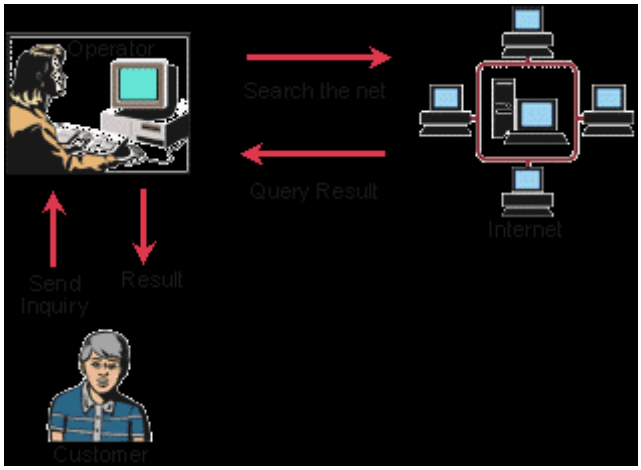
Receive and process customer payments

Provide after-sale support, maintenance, and warranty services.

Electronic Commerce:
It can be loosely defined as 'doing business electronically'. More rigorously, e-commerce is buying and selling over digital media. It includes electronic trading of physical goods and of intangibles such as information. This encompasses all the trading steps such as online marketing, ordering, payment, and support for delivery. It includes the electronic provision of services, such as after-sales support, as well as electronic support for collaboration between companies, such as collaborative design.

A further definition of e-commerce is provided by the European Union website; which defines 'Electronic commerce as a general concept covering any form of business transactions of information exchange executed using information and communication technology, between

companies, between companies and their customers, or between companies and public administrations. … Electronic commerce includes electronic trading of goods, services and electronic material'.



A Typical Customer Query Interaction in an E-commerce Activity

Some people use the term *Internet commerce* to mean electronic commerce that specifically uses the Internet as its data transmission medium.

E-commerce did not just happen in the last five years. Automobile companies and supermarkets in the western countries have been doing e-commerce for many years; their e-commerce technology is called *electronic data interchange* (EDI). Airline seats have also been sold using e-commerce systems; and the French have also been using e-commerce since 1983, but they do it in French with a system called Télétel.

How do you know which products can be sold more effectively using traditional commerce, and which using electronic commerce? Products that buyers prefer to touch, smell, or examine closely are difficult to sell using e-commerce. For example, customers might be reluctant to buy high fashion garments and perishable food products, if they cannot examine the products closely before agreeing to purchase them. Retail merchants may have long traditional commerce experience in creating store environments that help convince customers to buy. This combination of store design, layout, and product display knowledge is called *merchandising*. Many salespersons have developed skills that allow them to identify customer needs and find products or services that meet those needs. The art of merchandising and personal selling can be difficult to practice over an electronic link.

However, branded merchandise and products, such as books or music CDs, can be easily sold using e-commerce. Customers are willing to order a book title without examining the specific copy they will receive, because one copy of a new book is identical to other copies of the same book, and because the customer is not concerned about its other qualities such as freshness, or smell. Furthermore, e-commerce also offers the advantage of providing the ability to offer a wider selection of book titles than even the largest physical bookstore; which outweighs the advantage of a traditional bookstore, such as the customer's ability to browse the book.

Internet and WWW:

What is the Internet and World Wide Web?

The Internet is a worldwide network of computers that use common communication standards and interfaces to provide the physical backbone for a number of interesting applications.

One of the most utilized of these Internet applications is the World Wide Web. What sets the Web apart is an easy-to-use interface to a complex network of computers and data.

WWW Basics:

Browsers

A browser is an application which provides a window to the Web. All browsers are designed to display the pages of information located at Web sites around the world. The most popular browsers on the market today include Microsoft's Internet Explorer and Netscape Navigator.

Web Sites

Information on the Web is displayed in pages. These pages are written in a standard language called HTML (HyperText Markup Language) which describes how the information should be displayed regardless of the browser used or the type of computer. Pages also include hypertext links which allow users to jump to other related information. Hypertext is usually underlined and in a different color and can include individual words, sentences, or even graphics. A Web site is a collection of related Web pages with a common Web address.

Web Addresses

Web sites and the pages they contain each have a unique worldwide address. This address (or Uniform Resource Locator, URL, in Internet jargon). The address for Microsoft is www.microsoft.com. For most sites, this is all you need to specify and it defaults to the main page (or home page) for the site. In some cases, you may also need or want to specify the path and file name such as www.microsoft.com/office97.

Note the extension .com after microsoft. There are six of extensions that help to divide the computers on the Internet into understandable groups or domains. These six domains include: .com = commercial, .gov = government, .edu = education, .org = organizations, .net = networks, .mil = military. There are also extensions for sites outside of the U.S. including: .jp = Japan, .uk = United Kingdom, .fr = France, and so on.

Browser Extensions

Both Netscape Navigator and Microsoft Internet Explorer browsers provide the ability to extend the functionality of your browser by downloading additional programs that work within the browser.

Navigator calls such programs "Plug-Ins" and you can find a collection of these at www.netscape.com/plugins. Microsoft calls them "ActiveX Controls" and can be found at www.activex.com.

Web Multimedia

The Web is rapidly evolving from primarily text-based documents to multimedia experience of sight, sound and motion which rival CD-ROM titles. There are a number of new multimedia technologies and browser add-ins that can enhance your Web surfing.

Audio

Hear live broadcasts, sample songs from your favorite bands, or even use the Web to have two-way "web phone" conversations. Some good sites to start include:

Real Audio at www.realaudio.com
Web Phone at www.webphone.com

Video

Participate in a live video-conference or see the latest movie clips.

RealVideo at www.realnetworks.com
CU-SeeMe at www.whitepine.com

3D

Manipulate three dimensional objects and experience virtual reality on the Web.

VRML at www.vrml.sgi.com

Animation

Interact with some of the most engaging and entertaining sites on the web.

Macromedia Shockwave at www.macromedia.com
Narrative Enliven at www.narrative.com

Other Internet Applications

Electronic Mail

One of the most widely used applications in business, electronic mail (or e-mail) provides very fast delivery of messages to any enabled site on the Internet. Users must have an e-mail account

established with their Internet service provider and a unique e-mail address (such as santa@northpole.com). Most browsers include integrated e-mail software.

UseNet and Newsgroups

One of the most popular applications for non-business use on the Internet is the UseNet. UseNet is a very large public bulletin board where individuals can engage in a wide range of activities including: publish ideas, ask questions, sell items, etc. E-mail is the primary method of posting to a newsgroup. Most browsers include an integrated "News Reader" to read and post to Newsgroups.

UseNet topics are organized into Newsgroups which start with prefixes such as rec. and alt. There is a whole culture of jargon and net etiquette (or netiquette) associated with the UseNet.

FTP

FTP, or File Transfer Protocol, is used primarily as a tool to efficiently uploading and downloading files on the Internet. It is often used transparently on Web sites where there are a large number of downloads.

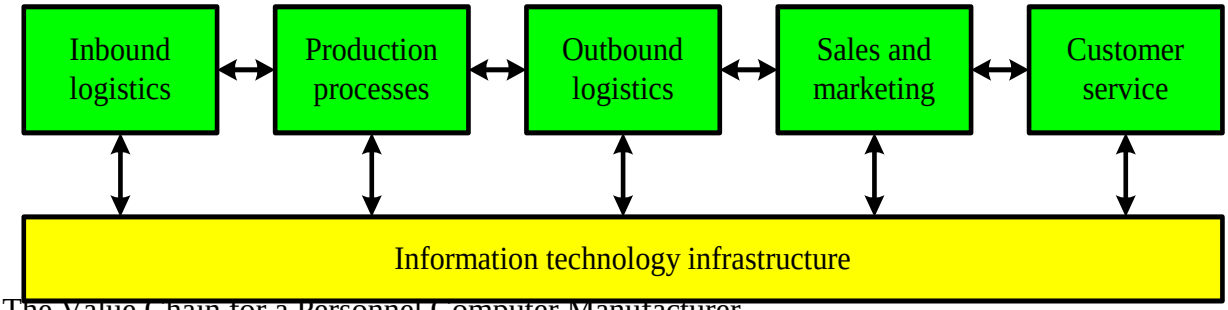
Role of WWW:

The **World Wide Web** (abbreviated as **WWW** or **W3** and commonly known as **the Web**), is a system of interlinked hypertext documents accessed via the Internet. With a web browser, one can view web pages that may contain text, images, videos, and other multimedia and navigate between them via hyperlinks.

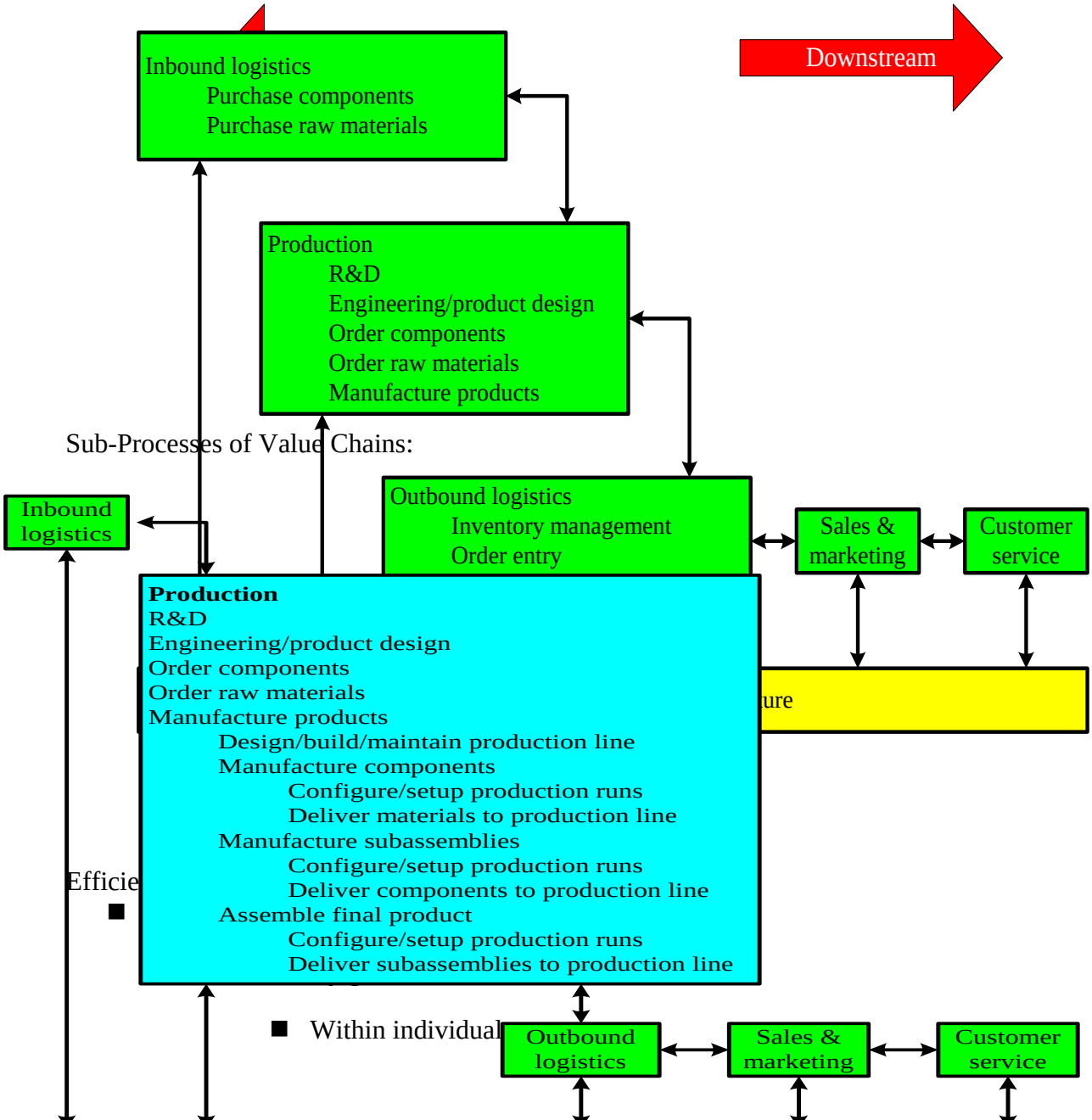
- Recommendations for markup languages, especially HTML and XHTML, from the W3C. These define the structure and interpretation of hypertext documents.
- Recommendations for stylesheets, especially CSS, from the W3C.
- Standards for ECMAScript (usually in the form of JavaScript), from Ecma International.
- Recommendations for the Document Object Model, from W3C.
- *Uniform Resource Identifier* (URI), which is a universal system for referencing resources on the Internet, such as hypertext documents and images. URIs, often called URLs, are defined by the IETF's RFC 3986 / STD 66: *Uniform Resource Identifier (URI): Generic Syntax*, as well as its predecessors and numerous URI scheme-defining RFCs;
- *HyperText Transfer Protocol (HTTP)*, especially as defined by RFC 2616: *HTTP/1.1* and RFC 2617: *HTTP Authentication*, which specify how the browser and server authenticate each other.

Value Chains:

The key to intra-business e-commerce is improving value chain efficiency.



The Value Chain for a Personnel Computer Manufacturer



Sub-Processes of Value Chains:

Efficie

- Within individual

- Across the value chain

- Efficiency-based competitive advantage
  - Hidden from public view
  - Relatively easy to sustain

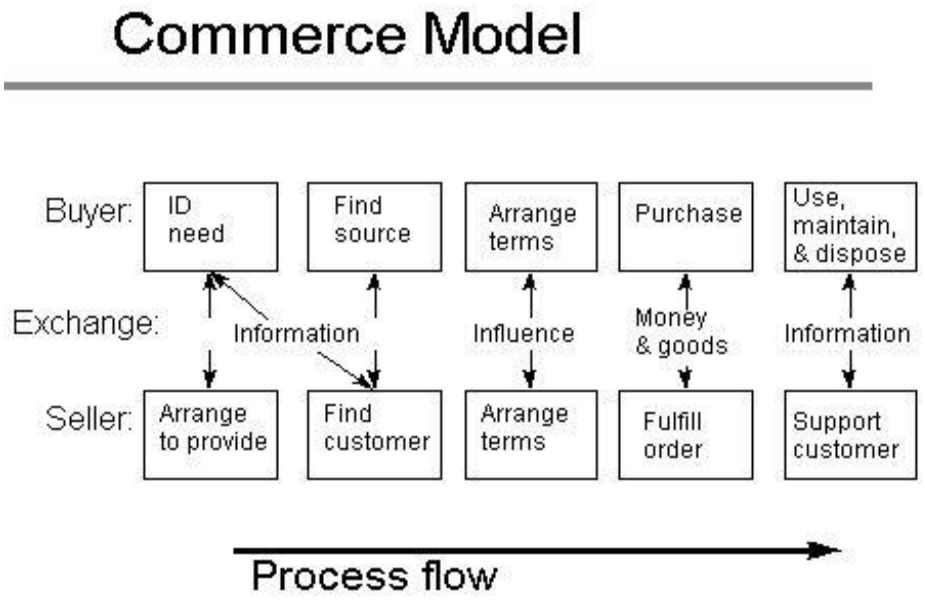
Strategic Business and Industrial Value Chain:

E-commerce Role in Bussiness

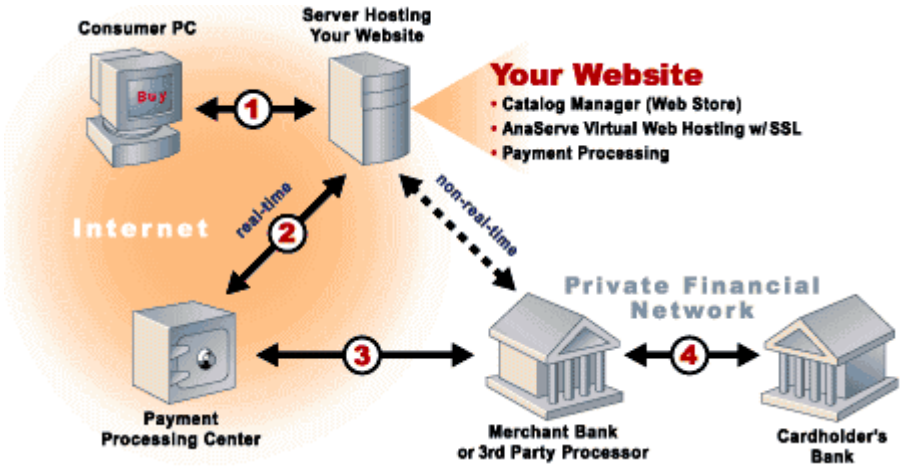
Commerce includes two words trading and aids to trade. Trading means buying and selling goods, service, and aid to trade means the ways by which trading has done. The main purpose of business concern is to earn profit. To make profit it is necessary to buying and selling. Buying and selling is an integral part of commerce.

Commerce includes two words trading and aids to trade. Trading means buying and selling goods, service, and aid to trade means the ways by which trading has done. The main purpose of business concern is to earn profit. To make profit it is necessary to buying and selling. Buying and selling is an integral part of commerce. Thus, business and commerce cannot separate from each other. For business, it is very necessary to include commencing the goods and services.

Commerce is an important word, which has related to business. Now the concept of E-Commerce has come which is very popular. E- Commerce is an important word, which is connecting to business. That concern to sell or buy goods and services in large scale to explore business, for the transferring of goods and services from one place to another and receiving payment for all this, this has done on net which provide business concern a wider market than manual market, E-Commerce brings a new revaluation in the business world.



It provides global market to all the business concern which helpful for them to sell or buy the goods and services to large number of people. It helps them to make more and more profit. Because profit is the key of any type of commercial business, for becoming commercial it is necessary to do selling and buying of goods and services. Commerce or E-Commerce and business are two spheres of a coin, which could not separate. Without commencing of goods and services none business can achieve his target to earn profit.



Commerce and E-Commerce provides true and fair record of all the transactions of business, without commerce or E-Commerce the records of business transaction cannot maintain, commerce or E-Commerce saves the money of business providing systematic records of business transactions, it provides accuracy, speedy and cheaply way to do business. Thus, in end we can say

business is incomplete without commerce or E-Commerce.

New Roles for E-Commerce

These integration efforts are likely to continue in the future. "You're getting to the point where consumers are more and more expecting Web sites to help them do their retail buying," GartnerG2 research director David Schehr told the E-Commerce Times. "They may not necessarily be looking for the click to order, but they're looking for ... store-locator information, to help plan a project."

Also, more companies will start to offer post-product support that, in effect, serves as brand enhancement for the next sale. Through all of these tactics, the Web will become an integral part of the "360 degrees of the sales cycle," Schehr said.

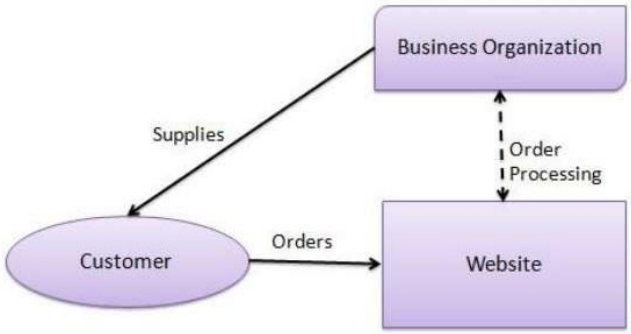
And as businesses increasingly embrace e-commerce, consumers' level of comfort and familiarity with online transactions also will keep rising steadily. With more consumers turning to the Internet to shop and interact with the same brands they see in the real world, the importance of the online channel will keep growing. This growth should prompt even more retailers to set up shop on the Web, perpetuating a cycle that will boost e-commerce revenue to record levels again and again in coming years.

Business models of e-commerce:

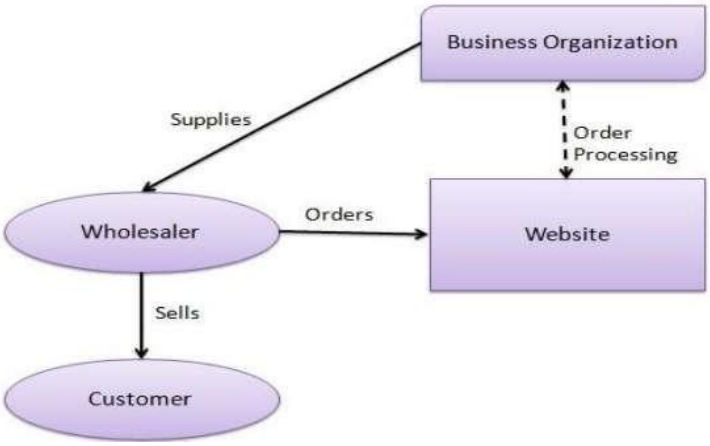
There are mainly 4 types of business models based on transaction party.

Business-to-Consumer (B2C) In a Business-to-Consumer E-commerce environment,

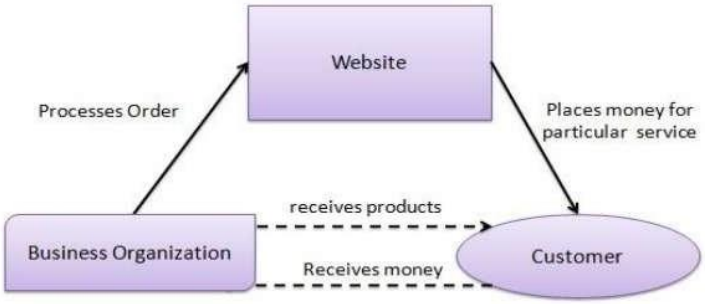
companies sell their online goods to consumers who are the end users of their products or services. Usually, B2C E-commerce web shops have an open access for any visitor, meaning that there is no need for a person to login in order to make any product related inquiry.



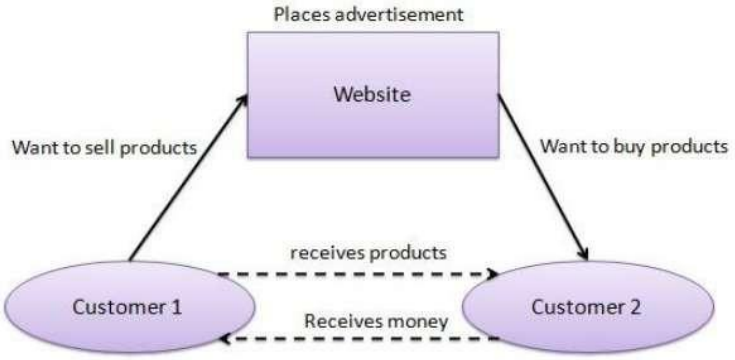
Business-to-Business (B2B) In a Business-to-Business E-commerce environment, companies sell their online goods to other companies without being engaged in sales to consumers. In most B2B E-commerce environments entering the web shop will require a log in. B2B web shop usually contains customer-specific pricing, customer-specific assortments and customer-specific discounts.



Consumer-to-Business (C2B) In a Consumer-to-Business E-commerce environment, consumers usually post their products or services online on which companies can post their bids. A consumer reviews the bids and selects the company that meets his price expectations.



Consumer-to-Consumer (C2C) In a Consumer-to-Consumer E-commerce environment consumers sell their online goods to other consumers. A well- known example is eBay.



UNIT – II INFRASTRCTURE FOR ECOMMERCE

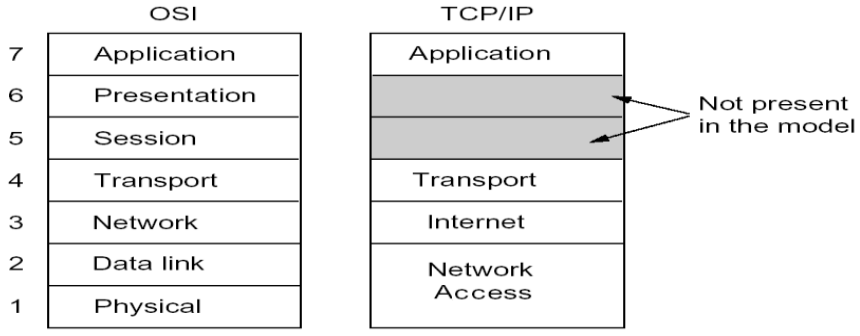
Packet Switched Networks:

A **packet-switched network** is a digital communications network that groups all transmitted data, irrespective of content, type, or structure into suitably sized blocks, called *packets*. The network over which packets are transmitted is a shared network which routes each packet independently from all others and allocates transmission resources as needed.

The principal goals of packet switching are to optimize utilization of available link capacity, minimize response times and increase the robustness of communication. When traversing network adapters, switches and other network nodes, packets are buffered and queued, resulting in variable delay and throughput, depending on the traffic load in the network.

The history of such networks can be divided into three eras: early networks before the introduction of X.25 and the OSI model, the X.25 era when many postal, telephone and telegraph (PTT) companies introduced networks with X.25 interfaces, and the Internet era when restrictions on connection to the Internet were removed.

TCP/IP Protocol Script:



The TCP/IP protocol suite, also referred to as the Internet protocol suite, is the set of communications protocols that implements the protocol stack on which the Internet and most commercial networks run. It is named after the two most important protocols in the suite: the Transmission Control Protocol (TCP) and the Internet Protocol (IP). The TCP/IP protocol suite—like the OSI reference model—is defined as a set of layers. Upper layers are logically closer to the user and deal with more abstract data, relying on lower layer protocols to translate data into forms that are transmitted physically over the network.

TCP/IP Model and the OSI Reference Model

The TCP/IP protocol suite was developed before the OSI reference model. As such, it does not directly map to the 7-layer OSI reference model. The TCP/IP protocol stack has only layers that can be loosely mapped to the OSI protocol stack, as shown in Figure 1-2.

Application Layer

The application layer of the TCP/IP model corresponds to the application layer of the OSI reference model. Some well known examples of application level entities within the

TCP/IP domain are:

• FTP/Telnet/SSH
• HTTP/Secure HTTP (SHTTP)
• POP3/SMTP
•SNMP

Transport Layer

The transport layer of the TCP/IP model maps fairly closely to the transport layer of the OSI model. Two commonly used transport layer entities are TCP and User Datagram Protocol (UDP)

Internet Layer

The Internet layer of the TCP/IP model maps to the network layer of the OSI model. Consequently, the Internet layer is sometimes referred to as the network layer. The primary component of the Internet layer is the Internet Protocol (IP).Many of the TCP/IP routing protocols are also classified as part of the Internet layer.

Network Access Layer

The lowest layer of the TCP/IP protocol stack is the network access layer. The network access layer contains two sublayers, the media access control (MAC) sublayer and the physical sublayer. The MAC sublayer aligns closely with the data link layer of the OSI model, and is sometimes referred to by that name. The physical sublayer aligns with the physical layer of the OSI model.

Note: *Some references divide the TCP/IP model into 5 layers, with the MAC and physical layers occupying the lowest two layers.*

Examples of the network access layer that will be discussed in this tutorial include:

• Ethernet
• Wireless Fidelity (Wi-FI)/WiMAX
• PPP, PPP over Ethernet (PPPoE)
• ATM/Frame Relay

Internet Utility Programmes:

SGML:

The **Standard Generalized Markup Language** (**ISO 8879:1986 SGML**) is an ISO-standard technology for defining generalized markup languages for documents. ISO 8879 Annex A.1 defines generalized markup:

Generalized markup is based on two novel postulates:

- Markup should describe a document's structure and other attributes, rather than specify the processing to be performed on it, as descriptive markup needs to be done only once, and will suffice for future processing.

Markup should be rigorous so that the techniques available for processing rigorously-defined objects like programs and databases can be used for processing SGML is used widely to manage large documents that are subject to frequent revisions and need to be printed in different formats. Because it is a large and complex system, it is not yet widely used on personal computers. However, the growth of Internet, and especially the

World Wide Web, is creating renewed interest in SGML because the World Wide Web uses HTML, which is one way of defining and interpreting tags according to SGML rules.

SGML Applications:

Document markup languages defined using SGML are called "applications" by the standard; many pre-XML SGML applications were proprietary property of the organizations which developed them, and thus unavailable in the World Wide Web. The following list is of pre-XML SGML applications.

- TEI (Text Encoding Initiative) is an academic consortium that designs, maintains, and develops technical standards for digital-format textual representation applications.
- DocBook is a markup language originally created as an SGML application, designed for authoring technical documentation; DocBook currently is an XML application.
- CALS (Continuous Acquisition and Life-cycle Support) is a US Department of Defense (DoD) initiative for electronically capturing military documents and for linking related data and information.
- EDGAR (Electronic Data-Gathering, Analysis, and Retrieval) system effects automated collection, validation, indexing, acceptance, and forwarding of submissions, by companies and others, who are legally required to file data and information forms with the US Securities and Exchange Commission (SEC).
- LinuxDoc. Documentation for Linux packages has used the LinuxDoc SGML DTD and Docbook XML DTD.

HTML:
HTML is a language for describing web pages.

- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- HTML is not a programming language, it is a **markup language**
- A markup language is a set of **markup tags**
- HTML uses **markup tags** to describe web pages

The purpose of a web browser is to read HTML documents and compose them into visual or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.

HTML Tags

HTML markup tags are usually called HTML tags

- HTML tags are keywords surrounded by **angle brackets** like <html>
- HTML tags normally **come in pairs** like and
- The first tag in a pair is the **start tag,** the second tag is the **end tag**
- Start and end tags are also called **opening tags** and **closing tags**

HTML Documents = Web Pages

- HTML documents **describe web pages**
- HTML documents **contain HTML tags** and plain text
- HTML documents are also **called web pages**

XML:

- **Extensible Markup Language** (**XML**) is a set of rules for encoding documents in machine-readable form. It is defined in the XML 1.0 Specification produced by the W3C, and several other related specifications, all gratis open standards.
- The design goals of XML emphasize simplicity, generality, and usability over the Internet. It is a textual data format with strong support via Unicode for the languages of the world. Although the design of XML focuses on documents, it is widely used for the representation of arbitrary data structures, for example in web services.
- XML stands for EXtensible Markup Language
- XML is a markup language much like HTML
- XML was designed to carry data, not to display data
- XML tags are not predefined. You must define your own tags
- XML is designed to be self-descriptive
- XML is a W3C Recommendation

Web Clients and Server:

Web Servers

Apache is the most popular UNIX web server today. Apache was originally based on code and ideas found in the most popular HTTP server of the time, NCSA httpd 1.3 (early 1995). It has since evolved into a far superior system which can rival (and probably surpass) almost any other UNIX based HTTP server in terms of functionality, efficiency and speed. Take a look at the web server feature chart to see how Apache ranks among the competition.

Open Market provides software products that are used to develop the infrastructure for Internet commerce. They pride themselves on scalability, content flexibility, lower entry and maintenance costs, and enhanced security.

Netscape sells several web server software packages. The Netscape Enterprise Server offers built in advanced services such as Internet-based access controls, automatic link management, and revision control. The FastTrack Server is an easy-to-use entry-level Web server designed to let novices create and manage a Web site.

IBM's Secure Server is provided for AIX, HP-UX, and Solaris, as well as NT and OS/2. Version 4.2 servers include enhanced scalability, browser-specific response capability, enhanced CGI support, PICS support, and HTTP Version 1.1 compliance. The IB servers have consistent configuration, management, and API interfaces across all of their supported platforms.

Jigsaw is W3C's sample implementation of HTTP, a full blown HTTP server entirely written in Java. Its design goals were: will run on any machine running Java, can be extended by writing new resource objects (a replacement for CGI), minimization of file system accesses.

WebSTAR is a Mac HTTP server which performs dynamic web server file caching, has the ability to run server side Java applets, contains an administration plug-in that lets one administer essential server functions from any web browser on the Internet, honors keep-alive requests, supports a 20,000 username/passwd database, has integrated support for image maps, supports common log format, supports cgi-bin folder, does on the fly bin-hexing of Mac files, and supports an expanded command set for server-side includes.

Microsoft IIS is tightly integrated with NT and includes native support for ActiveX, VBScript and JScript. The index server includes built-in support for HTML, text, and Microsoft Office documents, and NetShow provides streaming audio and video support for IIS. Crystal Reports is the visual reporting tool for IIS that lets you create presentation quality reports and integrate them into database applications.

Web Clients

Arena, now developed by Yggdrasil Computing, was a graphical web browser created at the World Wide Web Consortium as a testbed browser for HTML3.0 and CSS1. Yggdrasil Computing and the free software community are turning Arena into a full-featured free alternative to proprietary browsers.

Chimera is a browser for UNIX-based computers running the X Window System. The alpha version supports some HTML 3.2 features, and the bookmark file is an HTML-ish file that can organize bookmarks under groups. The resource file format is the same as the X resource format (Xrm functions are used) but are completely separate. It is recommended that you not use X resource files at all unless you really want to change the attributes of the Athena widgets (e.g. color, fonts, add hidden buttons, etc.). Each group starts with a string delimited by 'h3' tags. Each bookmark is delimited by 'a' tags.

HotJava is Sun's highly customizable, extensible web browser, written entirely in Java. The HotJava Browser conforms to Web standards and standard practice. It is designed to be highly scalable and customizable, enabling end-users, service providers and intranet providers to easily tailor it to meet their specific requirements. Like Web pages themselves, the user interface of the HotJava Browser is implemented using HTML and applets, and its behavior can be modified by an ASCII-based properties file.

Lynx is a text based browser for both UNIX and VMS platforms with more platform development in the works. Lynx is a product of the Distributed Computing Group within Academic Computing Services of The University of Kansas. Lynx was originally developed by Lou Montulli, Michael Grobe, and Charles Rezac. Garrett Blythe created DosLynx and later joined the Lynx effort as well. Currently it is being maintained by members of the Internet community coordinated by Foteos Macrides of the Worcester Foundation for Biological Research.

Internet Explorer from Microsoft is available for Win3, Win95, WinNT, and MacOS. MSIE is tightly bundled with the Microsoft Operating environments.

NCSA Mosaic is no longer in development, but is still distributing software for the X, MS, and Mac environments.

Netscape sells several browsers to the end user and corporate environments. Netscape is the most popular web browser to date and supports the latest HTML version along with other proprietary tags. Netscape browsers are forms, Java, and Java script compliant

Web Client/Server Architecture:

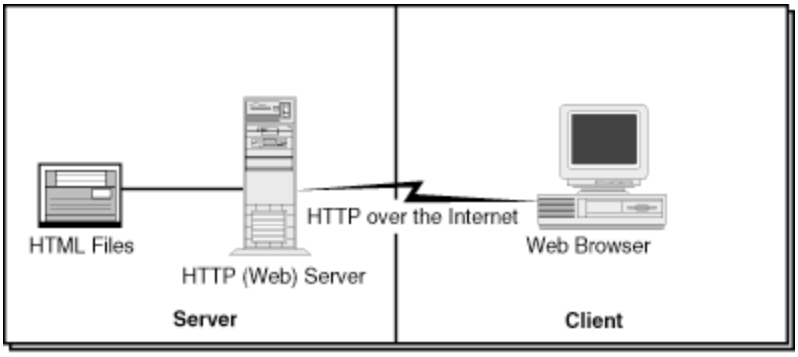
This is what's displayed through your web browser.

The most basic form of the client/server architecture involves two computers: one computer, the server, is responsible for storing some sort of data and handing it to the other computer, the client, for user interaction. The user can modify that data and save it back to the server. The Web implements this simple form of client/server architecture for multiple client machines. Your computer, the client, uses a Web browser to display HTML documents stored across the Internet on a Web server.

There are four software components to the Web system:

- A browser such as Netscape that displays HTML documents on a client machine.
- A server program running on the server that hands HTML documents to client browsers.
- The HTML documents stored on the server machine.
- The communications protocol that handles the communication of data between the client and server.

The diagram shows how this architecture fits together.



Client/Server Communication

Internet applications communicate using Internet Protocol (IP) sockets. IP is a basic networking protocol on top of which other protocols exist to serve varying purposes. The details of how IP works are very boring and, outside of addressing, are fortunately unimportant to anyone who wants to write network applications.

Each computer in an IP network has an *IP address*, which is a 32-bit number usually broken into four 8-bit quads. An IP address looks like this: `206.11.201.18`. The first two numbers (the high-order bits) form the network address. The low-order bits specify which computer on that network the address is for. Using this multinetwork addressing scheme, computers on different networks can communicate with each other.

When I want to send some information from my machine to yours, my application uses your machine's IP address to send that data to your machine. If your machine has the address 199.199.181.120, for example, my machine first checks whether it knows where that specific IP address is. Because my machine is a simple client on the 206.11 network, it is very unlikely that it has any idea where your machine is. But it *does* know of a *default gateway* machine to which it sends data for all unknown computers.

When a gateway receives data addressed for a specific IP, it in turn checks to see whether it knows about the specific computer in question. In this case, my default gateway is likely a router for my local network. It probably knows about the existence of machines only on the local network. It thus forwards my data onto its default gateway, which is responsible for knowing about a lot of networks. Although this router also does not know where the 199.199.181.120 machine is, it does have a specific gateway for the 199.199 network. It therefore forwards the data to that gateway. After traveling through a series of gateways, the data eventually reaches a machine that knows exactly where your machine can be found.

UNIT III: WEB Hosting

Web hosting is a service that allows organizations and individuals to post a website or web page onto the Internet

A web host, or web hosting service provider, is a business that provides the technologies and services needed for the website or webpage to be viewed in the Internet. Websites are hosted, or stored, on special computers called servers.

Web Hosting and

Domain Registration are two elements of running a website.

But it's important to understand the difference and use cases.

Web Hosting is an account on a computer (server) that can store and serve website files via the Internet. ...

As an analogy, a domain is an “address” on the Internet.

A web hosting service is a type of Internet hosting service that allows individuals and organizations to make their website accessible via the World Wide Web. Web hosts are companies that provide space on a server owned or leased for use by clients, as well as providing Internet connectivity, typically in a data center. Web hosts can also provide data center space and connectivity to the Internet for other servers located in their data center, called colocation, also known as Housing

Popular Types of Web Hosting Services

- Shared Web Hosting.
- Reseller Web Hosting
- Cloud Based Web Hosting
- Virtual Private Server (VPS)
- Dedicated Web Server
- Colocation Web Hosting
- Self Service Web Hosting
- Managed WordPress Hosting.

Shared Web Hosting.

Shared web hosting service refers to a web hosting service where many websites reside on one web server connected to the Internet.

This is generally the most economical option for hosting, as the overall cost of server maintenance is amortized over many customers.

By choosing shared hosting, the website will share a physical server with one or different other websites. With shared hosting, a server will store different other files and would be responsible for serving up the information about them.

Reseller hosting is a form of web hosting wherein the account owner has the ability to use his or her allotted hard drive space and bandwidth to host websites on behalf of third parties.

The reseller purchases the host's services wholesale and then sells them to customers, possibly for a profit.

A certain portion of hard drive space and bandwidth is allocated to the reseller account.

The reseller may rent a dedicated server from a hosting company, or resell shared hosting services.

In the latter case, the reseller is simply given the permission to sell a certain amount of disk space and bandwidth to their own customers without renting a server from a web hosting company they signed for a reseller account with.

Cloud Based Web Hosting

This is a new type of hosting platform that allows customers powerful, scalable and reliable hosting based on clustered load-balanced servers and utility billing. A cloud hosted website may be more reliable than alternatives since other computers in the cloud can compensate when a single piece of hardware goes down. Also, local power disruptions or even natural disasters are less problematic for cloud hosted sites, as cloud hosting is decentralized. Cloud hosting also allows providers to charge users only for resources consumed by the user, rather than a flat fee for the amount the user expects they will use, or a fixed cost upfront hardware investment. Alternatively, the lack of centralization may give users less control on where their data is located which could be a problem for users with data security or privacy concerns.

Virtual Private Server (VPS)

Also known as a Virtual Dedicated Server (VPS/VDS), divides server resources into virtual servers, where resources can be allocated in a way that does not directly reflect the underlying hardware.

VPS will often be allocated resources based on a one server to many VPSs relationship, however virtualisation may be done for a number of reasons, including the ability to move a VPS container between servers.

The users may have root access to their own virtual space. Customers are sometimes responsible for patching and maintaining the server (unmanaged server) or the VPS provider may provide server admin tasks for the customer (managed server).

Dedicated Web Server hosting

A dedicated hosting service, dedicated server, or managed hosting service is a type of Internet hosting in which the client leases an entire server not shared with anyone else.

This is more flexible than shared hosting, as organizations have full control over the server(s), including choice of operating system, hardware, etc.

There is also another level of dedicated or managed hosting commonly referred to as complex managed hosting. Complex Managed Hosting applies to both physical dedicated servers, Hybrid server and virtual servers, with many companies choosing a hybrid (combination of physical and virtual) hosting solution.

Dedicated servers are hosted in data centers, often providing redundant power sources and HVAC systems.

In contrast to colocation, the server hardware is owned by the provider and in some cases they will provide support for operating systems or applications

Colocation Web Hosting

A colocation centre (also spelled co-location, or colo) or "carrier hotel", is a type of data centre where equipment, space, and bandwidth are available for rental to retail customers.

Colocation facilities provide space, power, cooling, and physical security for the server, storage, and networking equipment of other firms and also connect them to a variety of telecommunications and network service providers with a minimum of cost and complexity.

Similar to the dedicated web hosting service, but the user owns the colo server; the hosting company provides physical space that the server takes up and takes care of the server.

This is the most powerful and expensive type of web hosting service.

Many colocation providers sell to a wide range of customers, ranging from large enterprises to small companies. Typically, the customer owns the IT equipment and the facility provides power and cooling. Customers retain control over the design and usage of their equipment, but daily management of the data center and facility are overseen by the multi-tenant colocation provider

Self Service Web Hosting

Self-service web hosting is done completely on your own.

This is the most advanced web hosting. You need to have a place to rent that stores your server. Then you're responsible for the cooling, power, bandwidth, hardware, system administrator, backups, etc.

Managed WordPress Hosting

The user gets his or her own Web server but is not allowed full control over it (user is denied root access for Linux/administrator access for Windows); however, they are allowed to manage their data via FTP or other remote management tools. The user is disallowed full control so that the provider can guarantee quality of service by not allowing the user to modify the server or potentially create configuration problems. The user typically does not own the server. The server is leased to the client.

Managed WordPress web hosting is for WordPress users only

UNIT IV:

E payment

An e-commerce payment system (or an electronic payment system) facilitates the acceptance of electronic payment for online transactions.

E-commerce sites use electronic payment, where electronic payment refers to paperless monetary transactions.

Electronic Payment is a financial exchange that takes place online between buyers and sellers.

Listed below are some of the modes of electronic payments −

- Credit Card
- Debit Card
- Smart Card
- E-Money
- Electronic Fund Transfer (EFT)
- Mobile Payments
- PayPal

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/her request.

Step 2 The customer presents the credit card information to the merchant site or to the merchant from whom he/she wants to purchase a product/service.

Step 3 Merchant validates the customer's identity by asking for approval from the card brand company.

Step 4 Card brand company authenticates the credit card and pays the transaction by credit. Merchant keeps the sales slip.

Step 5 Merchant submits the sales slip to acquirer banks and gets the service charges paid to him/her.

Step 6 Acquirer bank requests the card brand company to clear the credit amount and gets the payment.

Step 6 Now the card brand company asks to clear the amount from the issuer bank 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 card transaction, 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.

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.

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.

Online payments done via credit cards, debit cards, or smart cards are examples of emoney transactions. Another popular example is e-cash. In case of e-cash, both customer and merchant have to sign up with the bank or company issuing e-cash.

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.

Nowadays, internet-based EFT is getting popular. In this case, a customer uses the website provided by the bank, logs in to the bank's website and registers another bank account. He/she then places a request to transfer certain amount to that account. Customer's bank transfers the amount to other account if it is in the same bank, otherwise the transfer request is forwarded to an ACH (Automated Clearing House) to transfer the amount to other account and the amount is deducted from the customer's account. Once the amount is transferred to other account, the customer is notified of the fund transfer by the bank.

E-CASH

E Cash, also known as electronic cash, it is a digital money product that provides a way to pay for products and services without resorting to paper or coin currency.

An e-commerce system that uses e-cash refers to a system in which money is only exchanged electronically.

To use e-cash, link your personal bank account to other payee accounts or set up an e-cash account using a centralized system, such as PayPal, and link it to your personal bank account.

To fund your e-cash account, you can debit from your personal bank account or credit card.

To make payments using your e-cash account, you can make a deposit to the other person's e-cash account if you have their banking information, or request a transfer to their bank account.

*ADVANTAGES AND DISADVANTAGES OF ELECTRONIC CASH

- ADVANTAGES
- More efficient, eventually meaning lower prices
- Lower transaction costs
- Anybody can use it, unlike credit cards, and does not require special authorization
- DISADVANTAGES
- Susceptible to forgery

What is intellectual property?

Intellectual property refers to any intellectual creation, such as literary works, artistic works, inventions, designs, symbols, names, images, computer code, etc.

Intellectual property law exists in order to protect the creators and covers areas of copyright, trademark law, and patents.

Thus, intellectual property is an umbrella term encompassing both copyright and industrial property, such as trademarks, patents, and inventions.

What are the 4 types of intellectual property?

four main types of IP

- Patents
- Trademarks
- Trade Secrets
- Copyrights.

Four Types of IP Protection for Businesses

You'll find four main types of IP protection for your business:

1. Patents

A patent grants property rights on an invention, allowing the patent holder to exclude others from making, selling, or using the invention.

Inventions allow many businesses to be successful because they develop new or better processes or products that offer competitive advantage on the marketplace.

You get a patent by filing a patent application with the authorities.

You'll discover three types of patents:

- Utility
- Design
- Plant

A utility patent is the most common type, covering any process, machine, article of manufacture, or composition of matter, or any new and useful improvements thereof.

To qualify for a utility patent, the invention must be novel, non obvious, and have some usefulness. Novel means new and not known by anyone else, while non obvious means that it can't be immediately obvious to someone having ordinary skills in the industry. A design patent covers any new, original, and ornamental design for an article of manufacture, while a plant patent covers any new variety of asexually produced plant

With patent protection, the patent holder can take legal action against anyone who copies the patented invention, design, or discovery. Without this legal protection, anyone can use similar designs, products, and processes without risk. In fact, if you don't file for patent protection on your invention within 12 months of releasing it in a public setting, the opportunity to patent it will be gone.

Before filing for a patent, you should determine who will own the idea. Some companies file for patents on their protected inventions, but if an employee came up with the idea, the individual may be granted holder of the patent. If your business owns the patent, you must protect the patent with the company by having employees involved in the invention process sign an agreement stating that the idea belongs to the company.

2. Trademarks

A trademark is a word, phrase, symbol, or design that distinguishes the source of products (trademarks) or services (service marks) of one business from its competitors. In order to qualify for patent protection, the mark must be distinctive. For example, the Nike "swoosh" design identifies athletic footware made by Nike.

Before registering your trademark, conduct a search of federal and state databases to make sure a similar trademark doesn't already exist. This trademark search can help you reduce the amount of time and money you could spend on using a mark that is already registered and trademarked.

To apply, you must have a clear representation of the mark, as well as an identification of the class of goods or services to which the mark will apply. You can submit an online application, and filing fees vary according to several factors, including the form type and the number of classes of goods or services. Trademarks expire after 10 years, and renewal terms are 10 years.

Before receiving approval from the USPTO, companies and people can use the TM symbol to indicate ownership of the mark. Upon approval, you can legally add the registered trademark symbol (®) to your mark. The TM symbol doesn't hold any legal weight, but it can indicate to other businesses or people in your industry that you intend to claim the mark.

To register a trademark, you can:

1. File a "use" application after using the mark.

2. File an "intent to use" application before using the mark .

If a foreign application exists, a trademark holder might be able to rely on that application for use in the United States. Filing an application is complex, so most applicants hire an attorney who specializes in trademarks.

3. Trade Secrets

A trade secret is a formula, process, device, or other business information that companies keep private to give them a business advantage over their competitors. Examples of trade secrets include:

- Soda formulas
- Customer lists
- Survey results
- Computer algorithms

Unlike the other types of intellectual property, you can't obtain protection by registering your trade secret. Instead, protection lasts only as long as you take the necessary steps to control disclosure and use of the information.

Businesses use nondisclosure agreements, restricted access to confidential information, post-employment restrictive covenants, and other security practices to maintain trade secrets.

When protecting intellectual property, look at competitors and others in the industry as if they are in competition for your ideas. Protecting yourself and your company is the best way to make sure that no one else can use your distinctive inventions, works, marks, or other ideas. Meet often with employees to keep them aware of what must stay out of public discussion and away from competitors. Physical and digital protection of ideas is also necessary, so track who has access and limit who can get into important databases.

Looking at the risk and cost-benefit analysis can also help you decide what's worth protecting. Protection of intellectual property often comes at a high cost and takes much time, so make sure your time and money is worth the investment.

4. Copyrights

Copyrights protect original works of authorship, such as literary works, music, dramatic works, pantomimes

and choreographic works, sculptural, pictorial, and graphic works, sound recordings, artistic works, architectural works, and computer software. With copyright protection, the holder has the exclusive rights to modify, distribute, perform, create, display, and copy the work.

In order to qualify under copyright laws, the work must be fixed in a tangible medium of expression, such as words on a piece of paper or music notes written on a sheet. A copyright exists from the moment the work gets created, so registration is voluntary.

UNIT V:

WEB MARKETING

Web marketing is the process of using the Internet to market your business. It includes the use of social media, search engines, blogging, videos, and email. Promoting a business takes effort.

What are the different types of web marketing?

Using the internet to connect with and engage buyers is a smart move. But where do you begin? The options are overwhelming, and few companies jump into all of them at once. Here's a brief overview of your possibilities.

Email marketing

Creating emails about your product or service and then sending them to a base of prospects is one of the most widely used forms of web marketing. Email marketing is inexpensive and can be highly targeted. For every $1 spent, email marketing generates $38 in ROI.

The downside is that consumers get tons of emails in their inboxes everyday, so, unless you nail your message, it may end up in the trash folder, unread and neglected.

Social media marketing

Creating a company profile and engaging on social media has developed many small companies into thriving powerhouses. As with email marketing, this form of web marketing is inexpensive and getting into it is simple. However, throwing up posts every now and then without a set calendar won't set you up for a rousing success.

Content marketing

You have probably heard the phrase "content is king". Content marketing is exploding as an effective web marketing tool. Companies that post blogs on a regular basis see four times the website traffic as the companies that don't.

The reason is simple.

People search for answers on the internet. The company that doles out helpful, easy-to-understand answers that are relevant to their questions win the grand prize of loyalty and trust. In fact based on a recent survey, 96% of online advertisers state that content marketing is indeed effective for their businesses. A steady stream of high-quality content strategically distributed can double, triple, and quadruple a company's sales!

If this sounds like the best type of web marketing for you, then check out our content marketing services.

Search engine optimization

Keywords, links, Oh My! Companies aiming to get more business from their online efforts will need to sink their teeth into search engine optimization, or SEO. Mastering this technique helps your content get ranked higher in those all-important search engine searches, drives more traffic to your website, and increases the chances of capturing more sales dollars.

E-marketing is a process of planning and executing the conception, distribution, promotion, and pricing of products and services in a computerized, networked environment, such as the Internet and the World Wide Web, to facilitate exchanges and satisfy customer demands

Internet marketing, also referred to as web marketing, online marketing, or eMarketing, is the marketing of products or services over the Internet.

Search Engine Marketing (SEM)

This is a type of marketing that seeks to promote websites by increasing their visibility in Search Engine Result Pages. This

is done through the use of paid inclusion, contextual advertising, and paid placement, and search engine optimization.

Blog Marketing

Blog marketing is internet marketing by way of web logs (blogs). Blogs are dierent than corporate websites because they

contain daily or weekly postings, many times around a single subject. Many corporations use blogs to foster a dialog

with customers so that they can explain the features of their products and services.

Email Marketing

This is a type of direct marketing that uses Email to communicate commercial or fundraising messages to an audience.

Emails are sent with the purpose of:

• Strengthening the relationship of the business person with his/her previous and current clients to create customer loyalty

• Acquiring new clients or convincing existing clients to purchase something

Top emarketing strategies include:

- Search engine optimization (SEO)

- Content marketing.
- Pay-per-click (PPC) advertising.
- Business branding.
- Social media marketing.
- Conversion rate optimization.
- Website design.
- Emarketing analytics.

KARPAGAM ACADEMY OF HIGHER EDUCATION

COIMBATORE-21

Faculty of Engineering

Department of Computer Science and Engineering

ONLINE EXAM

Subject Code	**: 16BECS8E02**	
Name of the Course	**: III B.E CSE**	**Time : 1 hr - 10.00 to 12.00 am**
Title of the paper	**: E-Commerce**	**Max Marks : 60**
Semester	**: VIII**	**Date :**

Instructions

1. **The answers to be written in a plain paper scanned and posted in Google Classroom Assignment**
2. **Answers should be handwritten only.**
3. **The Time for answering is 10.00 am to 12.00 am.**
4. **After completing ,the answers to be scanned and to be uploaded within 12.30am**
5. **The Name and Roll no of the student to be written in each paper at the right hand corner of the EACH Paper.**
6. **The Answer scripts are to be shown when you come to the college for validation.**

Part-A

Answer All Questions (9*2=18)

1. Define cryptography.
2. What is a digital signature?
3. What is meant by Intellectual Property?
4. What is the need of security in E-commerce?
5. Advantages & Disadvantages of E-Cash
6. Give any two limitations of intelligent agent.
7. What is the Advantages of Online advertisement?
8. What are Search Engines?
9. List the issues in web Design

Part-B

Answer ALL Questions (3*14=42)

10. a. Explain in detail about Copy right & Intellectual Property

OR

b. Discuss various modes of E-Payment System

11. a. Classify the threats and Security in E-Commerce

OR

b. Explain the Functionalities of E- CASH

12. a. Illustrate the various Issues in Web Site Design

OR

b. Discuss about Various Mechanisms in On-line advertisement & Search Engines

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KARPAGAM ACADEMY OF HIGHER EDUCATION

COIMBATORE-21

Faculty of Engineering

Department of Computer Science and Engineering

ONLINE EXAM

Subject Code	**: 16BECS8E02**		
Name of the Course	**: IV B.E CSE**	**Time**	**: 1 hr - 10.00 to 11.00 am**
Title of the paper	**: E-Commerce**	**Max Marks**	**: 60**
Semester	**: VIII**	**Date**	**: 21/04/2020**

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ANSWER all the Questions

1. **i) Discuss briefly about the Computer System security classifications (5)**
   ii) What is E-cash? Discuss Briefly. (5)

2. **Explain the issues in web site Design (10)**

ONLINE 1 MARK QUESTIONS

1) World Wide Web (WWW) was introduced in the year ……

(a) 1994
(b) 1996
(c) 1992
(d) 1990

2) ……is an early form of E-commerce

(a) SCM
(b) EDI
(c) Both of these
(d) None of these

3) ……..is concerned with the buying and selling information, products and services over computer communication networks

(a) Commerce
(b) E-Commerce
(c) E-Business
(d) None of these

4) ……..is a set of standards developed in the 1960s to exchange business information and to do electronic transactions

(a) EDI
(b) Protocols
(c) TCP/IP
(d) None of these

5) Which among the following product is suitable for E-Commerce ?

(a) Books
(b) Vegetables
(c) All of these
(d) None of these

6) ……allows a business application on the computer of one organization to communicate directly with the business application on the computer of another company.

(a) EDI
(b) Protocols
(c) Standards
(d) Business applications

7) Electronic Exchange of business documents in a standard format is known as ……

(a) E-commerce
(b) E-Business
(c) EDI
(d) None of these

8) ……. is essentially a business process that connects manufacturers, retailers, customers and suppliers in the form of a chain to develop and deliver products.

(a) E-commerce
(b) EDI
(c) Networking
(d) SCM

9) Which of the following is not a party of SCM ?

(a) Suppliers
(b) Manufacturers
(c) Distributors
(d) Customers

10) ……is a commercial process that includes production, distribution, sales or delivery of goods and services through electronic means

(a) E-commerce
(b) SCM
(c) EDI
(d) None of these

11. Among the alternate models of B2B e-commerce,……is the best means to obtain a competitive advantage in the Market place.

(a) Process based
(b) strategic relationship based
(c) transaction based
(d) any of these

12 ……..focus on producing a highly integrated value proposition through a managed process.

(a) hubs
(b) community

(c) contents
(d) none of these

13 ……is basically a concept of online marketing and distributing of products and services over the internet

(a) B2G
(b) B2E
(c) B2C
(d) B2B

14 ……..e-commerce consists of the sale of products or services from a business to the general public

(a) B2G
(b) B2E
(c) B2B
(d) B2C

15. Which of the following is not suitable for a B2C transaction ?

(a) clothes
(b) flowers
(c) airline reservation
(d) none

16 ……..e-commerce transaction has the advantage of eliminating middlemen.

(a) B2G
(b) B2C
(c) B2B
(d) B2E

17…….e-commerce involves customers gathering information, purchasing and receiving products over an electronic network

(a) B2G
(b) B2E
(c) B2B
(d) B2C

18. Which among the following is not an user of B2C e-commerce ?

(a) manufacturers
(b) distributors
(c) Publishers
(d) none

19 …….e-commerce involves the electronic facilitation of transaction between customers through some third party.

(a) C2C
(b) B2E
(c) B2B
(d) B2G

20. Which among the following is an example of C2C ?

(a) e-Bay
(b) Amazon.com
(c) Rentalic.com
(d) all of these