**FUNDAMENTAL OF E-COMMERCE**

**UNIT-2**

**BBA- N (606)**

**INTERNET & ITS USES AND TERMINOLOGY OF INTERNET**

**Internet & its Uses**

The internet has intruded globally into everything than we could imagine. There are hardly people who do not rely on the internet for their daily life. Internet has emerged in such a way that we happen to use it to run our daily life in some way. The uses of Internet are endless; a few of them are as follows:

**Education:** Internet is a valuable source for a lot of information. Data and information related all fields are updated in the internet. Students can spend a few minutes over the internet to read their relevant study materials. Many students use internet for intense research on their projects.

**Communication:** With internet, communication has become better and easier. One can call and talk to someone over the internet. Video calls are an interesting option with communication through internet. Mailing is one another form of communication, which is widely used in daily corporate life.

**Current Updates:** Daily updates and current happenings are made available in the internet instantly. Internet is considered the real time hub for all updates about politics, sports, entertainment, science, business and many other fields.

**Corporate Base:** The corporate world relies on internet for file sharing, data transfer, internal communication and external communication; and many other purposes. In simple words, internet forms the base of the corporate today.

**E-Commerce:** Other than using internet for business purposes, a business itself can be started and accomplished through the internet. E-Commerce has lot of advantages like reaching the customers easily, giving a lot of information about the business, clearing customer queries instantly and making the payment also possible over the internet.

**Terminology of Internet**

**World Wide Web (WWW)**: The World Wide Web (“WWW” or simply the “web”) is a collection of electronic documents (called web pages) that are linked together like a spider web. These documents are stored on computers called servers located around the world.

**Web Server:** A Web Server is a computer that stores web pages. It is responsible for accepting request(s) from users and serves them with web pages. Two important web server programs are:**IIS** (Internet Information server) and Apache, etc. Web servers are connected to the Internet 24 hours a day, seven days a week.
**Hyperlink:** It is an element in an electronic document that links to another place in the same document or to an entirely different document or other resource. Hyperlinks usually appear as underlined text and in a different color, but they may also appear as graphics, such as buttons to click. Hyperlinks may be used
to link another place in the same page, or another page, to play an audio or video file, to download a file, to set up a message to an e-mail address, and to link to other Internet resources.
**HTML (Hypertext Mark-up Language):** It is a language that consists of certain key words called ‘**Tags’**, used for writing the documents on the web.

**Web Page:** A web page (such as the one you are looking at now) is an electronic document written in a computer language called **HTML**(Hypertext Mark-up Language).Web pages can contain text, graphics, video, animation, and sound, as well as**interactive** **features,** such as data entry forms. Each page has a unique address known as a **URL** (Uniform Resource Locator) that identifies its location on the server. Web pages usually contain hyperlinks to other web pages.

**Website:** A website (often shortened to just **site**) is one or more web pages, belonging to a particular company, institute, government or an individual. The first page is called the home page, which acts like an index, indicating the content on the site. 248 :: Data Entry Operations By default the home page is named as**index.htm.** From the home page, you can click hyperlinks to access other web pages.
**URL** (Uniform Resource Locator): Every page on the web has a unique address, called Uniform Resource Locator, URL. A URL indicates where the web page is stored on the Internet. A sample

**IP (Internet Protocol) Address:** Computers do not understand letters or symbols that humans use to communicate effectively. Computers understand numbers-specifically, 1s and 0s. Thus every host (a computer linked to the Internet) on the Internet has a unique host number. This number is called the Internet Protocol address, or IP address. The IP address is a unique address, generally written in the format xxx.xxx.xxx.xxx, where xxx represents a 3 digit number that varies between 0 and 255. For Example: 192.100.8.56
**DNS (Domain Name System):**Every host (computer linked to Internet) has a unique host number called IP address. You can connect to any host through IP address only, but it is difficult to remember the 4-digit number of hosts. To resolve this, domain name is the only solution. Domain name, a unique name of the individual host computer on the Internet. Every computer on the Internet now has both a domain name and an IP address. To connect to any host through domain name requires some mechanism that will convert the domain name IP address. DNS, Domain Name System is the standard for resolving names to addresses. It is used mostly to translate between domain names and IP addresses.

# Characteristics of Internet:

# email

Now a day, the mail client comes with enhanced features such as attachment, address book, and MIME support. Here in this chapter we will discuss all of these features which will give you a better understanding of added feature of a mail client program.

### ****Attachment****

Ability to attach file(s) along with the message is one of the most useful features of email. The attachment may be a **word document, PowerPoint presentation, audio/video files,** or **images.**

* In order to attach file(s) to an email, click the attach button. As a result, a dialog box appears asking for specifying the name and location of the file you want to attach.
* Once you have selected the appropriate file, it is attached to the mail.
* Usually a paper clip icon appears in the email which indicates that it has an attachment.
* When adding an attachment it is better to compress the attached files so as to reduce the file size and save transmission time as sending and downloading large files consumes a lot of space and time.

### ****Address Book****

Address book feature of a mail program allows the users to store information about the people whom they communicate regularly by sending emails. Here are some of the key features of an Address book:

* Address book includes the nick names, email addresses, phone number etc. of the people.
* Using address book allows us not to memorize email of address of a person, you just have to select recipient name from the list.
* When you select a particular name from the list, the corresponding email address link automatically get inserted in to it.

# Basic Services of Internet like: WWW, FTP

### ****WWW****

The World Wide Web (WWW) is a network of online content that is formatted in HTML and accessed via HTTP. The term refers to all the interlinked HTML pages that can be accessed over the Internet. The World Wide Web was originally designed in 1991 by Tim Berners-Lee while he was a contractor at CERN.

The World Wide Web is most often referred to simply as “the Web.”

The World Wide Web is what most people think of as the Internet. It is all the Web pages, pictures, videos and other online content that can be accessed via a Web browser. The Internet, in contrast, is the underlying network connection that allows us to send email and access the World Wide Web. The early Web was a collection of text-based sites hosted by organizations that were technically gifted enough to set up a Web server and learn HTML. It has continued to evolve since the original design, and it now includes interactive (social) media and user-generated content that requires little to no technical skills.

We owe the free Web to Berners-Lee and CERN’s decision to give away one of the greatest inventions of the century.

**File Transfer Protocol (FTP)**

File Transfer Protocol (FTP) is a standard Internet protocol for transmitting files between computers on the Internet over TCP/IP connections. FTP is a client-server protocol where a client will ask for a file, and a local or remote server will provide it.

The end-users machine is typically called the local host machine, which is connected via the internet to the remote host—which is the second machine running the FTP software.

Anonymous FTP is a type of FTP that allows users to access files and other data without needing an ID or password. Some websites will allow visitors to use a guest ID or password- anonymous FTP allows this.

Although a lot of file transfer is now handled using HTTP, FTP is still commonly used to transfer files “behind the scenes” for other applications — e.g., hidden behind the user interfaces of banking, a service that helps build a website, such as Wix or SquareSpace, or other services. It is also used, via Web browsers, to download new applications.

### How FTP works

FTP is a client-server protocol that relies on two communications channels between client and server: a command channel for controlling the conversation and a data channel for transmitting file content. Clients initiate conversations with servers by requesting to download a file. Using FTP, a client can upload, download, delete, rename, move and copy files on a server. A user typically needs to log on to the FTP server, although some servers make some or all of their content available without login, known as anonymous FTP.

FTP sessions work in passive or active modes. In active mode, after a client initiates a session via a command channel request, the server initiates a data connection back to the client and begins transferring data. In passive mode, the server instead uses the command channel to send the client the information it needs to open a data channel. Because passive mode has the client initiating all connections, it works well across firewalls and Network Address Translation (NAT) gateways.

### How to FTP

Files can be transferred between two computers using FTP software. The user’s computer is called the local host machine and is connected to the Internet. The second machine, called the remote host, is also running FTP software and connected to the Internet.

* The local host machine connects to the remote host’s IP address.
* The user would enter a username/password (or use anonymous).
* FTP software may have a GUI, allowing users to drag and drop files between the remote and local host. If not, a series of FTP commands are used to log in to the remote host and transfer files between the machines.

# Telnet, Gopher

**Telnet** is a user command and an underlying TCP/IP protocol for accessing remote computers. Through Telnet, an administrator or another user can access someone else’s computer remotely. On the Web, HTTP and FTP protocols allow you to request specific files from remote computers, but not to actually be logged on as a user of that computer. With Telnet, you log on as a regular user with whatever privileges you may have been granted to the specific application and data on that computer.

The result of this request would be an invitation to log on with a userid and a prompt for a password. If accepted, you would be logged on like any user who used this computer every day.

Telnet is most likely to be used by program developers and anyone who has a need to use specific applications or data located at a particular host computer.

### ****Gopher****

Gopher is an application-layer protocol that provides the ability to extract and view Web documents stored on remote Web servers. Gopher was conceived in 1991 as one of the Internet’s first data/file access protocols to run on top of a TCP/IP network. It was developed at University of Minnesota and is named after the school’s mascot.

Gopher was designed to access a Web server or database via the Internet. It requires that files be stored in a menu-style hierarchy on a Gopher server that is accessible through a Gopher-enabled client browser and/or directly. It initially supported only text-based file/document access but later came to support some image formats such as GIF and JPEG.

Gopher was succeeded by the HTTP protocol and now has very few implementations. Gopher-based databases, servers or websites can be accessed through two search engines: Veronica and Jughead.

# Internet, Intranet, Extranet

Information technology has been rapidly advancing over the last decade, with information being available as an on demand commodity at levels never before imagined. Today, a teenager in rural India with access to a computer and an Ethernet port has orders of magnitude more information available at the tips of his fingerprints than the President of the United States had access to just thirty years ago. Though it is taken for granted today, the Internet, and similar components such as Intranets, have been the primary tools by which people have been able to share such vast amounts of information. While the two are very similar, they differ in their usefulness and their overall goals when it comes to sharing information, specifically in who can access the information in question.

### ****Internet****

Though used on a daily basis by people all around the world, a thorough understanding of what the internet is lacking for most of its users. The internet can best be seen as a community of computers that are allowed to connect to each other, and any computer on the internet can connect any other computer at any time it wishes. Through infrastructure that spans the globe, there is one single, unified internet that all computers connect to, allowing anyone connected to share and access all the information that they choose to. While humans are often using computers in the traditional sense (with a mouse, keyboard, and monitor), many of the other ‘computers’ we connect to are most often servers, which act as holding stations that store all the data that is being accessed.

The Internet functions via several major hubs throughout the world, where they connect and are able to connect to other major hubs. Primarily ordered and managed by the United States, a person sitting in California that is connected to the internet can access servers anywhere else around the world that are also connected. Because servers are physically located throughout the world, this is why some websites are able to return information faster than others – a server in a nearby city does not have to send data as far as a server thousands of miles away.



### ****Intranet****

Intranet is a restricted version of the internet, that typically does not allow access to anyone outside of its network. An intranet is typically a local only network, meaning only people who are directly wired to the intranet can access the information stored on its servers. Intranets may be used for organizations or networks that do not want their information to be able to be accessed by outside sources, and is especially important for organizations that require a high amount of secrecy – such as a server that holds military secrets or a database for the CIA. Intranets are basically mini versions of the internet that connect just a few servers, instead of the countless number of servers that the internet holds and connects with one another.

### ****Extranet****

Internet and an intranet are not always separate and clear cut, and anything that is a blend of the two is considered an extranet. An extranet is a private intranet (or local network) that is connected to the Internet, but only allows access to certain information or access by certain groups of people. The extranet is a blend of the secrecy and control allowed to an intranet, but also the convenience and sheer amount of information enjoyed by using the internet.

Extranets, however, are not perfect, and almost any network connected to the internet can be accessed inappropriately given enough time, motivation, and resources by an interested party. If a hacker with the right skill set decides to access an extranet, the question is more a matter of when they will be able to get past security measures and access it, rather than if they will be able to.

# Limitations of internet

Internet retailing is advantageous in many ways. However there are also certain limitations or disadvantages that one cannot ignore completely. The following are some of the limitations of web retailing.

### ****1. Unfulfilment****

The major issue facing internet retailers is “unfulfilment” or the in ability of the business to deliver the customer orders accurately. Most deliveries by internet companies contain some errors. Goods ordered for special occasions like Christmas, Diwali etc., are delivered late. Internet companies outsource such services to parcel couriers.

Companies that send out small and easily deliverable packages like DVDs, software or books have a fulfilment advantage. But **delivery of a bulky assortment of goods within specific time** when the customer is not present is a major constraint.

### ****2. Security concerns****

A major barrier to the use of the internet for the transaction is **security**. There is a need for secure electronic transaction which will allow credit card-holder and merchant to authenticate each other during an internet transaction.

### ****3. Network limitations****

In electronic retailing, the **visual impact of website** is very important. But it raises conflicts. Graphic and multimedia attributes assume that the customer end has access to a high specification PC. Customers are frustrated when they experience slow data transfer.

### ****4. Demographics****

Web applications should demonstrate clear relevance to the customer base. The pages on the website should be targeted at specific online customer groups. These **pages should be dynamic** enough to cope with the changing interests of customer groups.

### ****5. Culture****

Customer should feel comfortable with electronic shopping. However, purchasing over internet is fought with difficulties. **Customers are reluctant to supply their credit card details** over the internet. They consider it to be **too risky and fear breach of security**. So, popular web browsers have incorporated secure payment encryption algorithms. Experiments on payment without having to transmit card details over the internet have been unsuccessful.

### ****6. Easy to Hack****

It is often easier for hackers to obtain credit card details, passed over a cordless or mobile telephone.

### ****7. Social Acceptance is doubtful****

The commercial success of internet technology depends upon the fundamental **question of social acceptance**. Only when users of technology are motivated to become customers, electronic commerce will flourish.

### ****8. Size of Internet Market****

While the home PC market is growing at a rapid speed, the home**internet market should also match the trend**. It means that people should become very familiar not only with personal computers but should have access to internet and use it quite frequently.

# Hardware & Software requirement of Internet

The following are the methods of connecting a computer to the Internet using software and hardware peripherals.

### ****Three Methods:****

* Connecting a computer using Wireless Broadband
* Connecting a computer using an Ethernet Cable
* Connecting a Computer Using Dial-Up Community

### ****Hardware Requirement:****

* To connect the Internet, any one of the following is mandatory.
* Modem is used to connect Internet through Telephone connection.
* NIC: Network Interface Card (wired/ wireless) facility is the most important hardware required to connect Internet. For example, the Laptop can be connected Internet through the wired/wireless.
* Dongle is used to connect the Internet using cellular network
* Wi-Fi router or Hotspot is used to connect the Internet using wireless network
* Electronic device which supports cellular network
* Internet Connectivity such as Dial-up connection, ISDN, DSL, Cable TV, wired and wireless (Cellular) Network.

### ****Software Requirement****

* The operating system should support TCP (Transfer Control Protocol) / IP (Internet Protocol), SMTP (Simple Mail Transfer Protocol), FTP (File Transfer Protocol), HTTP (Hyper Text Transfer Protocol) and HTTPS (Hyper Text Transfer Protocol Secured) protocols.
* Browsers and other Internet clients access to the web applications such as Outlook, Gmail, Whatsapp, Facebook, Twitter and etc.

### ****Connection Types:****

The following methods are able to connect internet.

### ****Dial-up Connection:****

A dial-up connection is established when two or more data communication devices use a **Public Switched Telephone** **Network**(PSTN) to connect to an Internet Service Provider (ISP) from computers. Many remote locations depend on Internet dial-up connections because broadband and cable are rare in remote areas with low population. Internet Service Providers often provide dial-up connections, a feasible alternative for budget-conscious subscribers.

### ****ISDN****

ISDN is the acronym of **Integrated** **Services Digital Network.**It establishes the connection using the phone lines (PSTN) which carry digital signals instead of analog signals. It is a set of communication standards for simultaneous digital transmission of data, voice, video, and other services over the traditional circuits of the public switched telephone network. There are two techniques to deliver ISDN services such as Basic Rate Interface (BRI) and Primary Rate Interface (PRI).

### ****DSL:****

**Digital Subscriber Line**(DSL) is a high-speed Internet service for homes and businesses that competes with cable and other forms of broadband Internet. DSL provides high-speed networking over ordinary Telephone lines using broadband modem technology. The technology behind DSL enables Internet and telephone service to work over the same phone line without requiring customers to disconnect either their Voice or Internet connections.

### ****Cable TV Internet Connection (setup box):****

The cable TV network can be used for connecting a computer or a local network to the Internet, competing directly with DSL (Digital Subscriber Line) technology.

This type of network is classified as HFC **(Hybrid Fiber-Coaxial),** as it uses both fiber optics and coaxial cables. The connection between the cable TV companies to the distribution points (Optical nodes) is made using fiber optics, with distances up to 25 miles (40 km). Each optical node is typically serves between 500 and 2,000 clients (customers).

### ****Satellite Internet Connection:****

Satellite Internet access is Internet access provided through satellite communication for domestic and enterprise usage. The facility of modern consumer grade satellite Internet service is typically provided to individual users through geostationary satellites. It provides fairly high data speeds, along with latest satellites using Ka-band to attain downstream data speeds up to 50 Mbps internet speed.

**Wireless Internet Connection:**

It is a technology for wireless local area networking with devices based on the IEEE 802.11 standards. Devices that can use Wi-Fi technology include personal computers, video-game consoles, phones and tablets, digital cameras, smart TVs, digital audio players and modern printers. Wi-Fi compatible devices can connect to the Internet via a WLAN and a wireless access point. Such an access point (or hotspot) has a range of about 20 meters (66 feet) indoors and a greater range of outdoors. Hotspot coverage can be as small as a single room with walls that block radio waves, or as large as many square kilometres achieved by using multiple overlapping access points.

# Searching web using Search engine

**Search engines** on the World Wide Web are remotely accessible programs that let you do keyword searches for information on the Internet. There are several types of search engines and searches may cover titles of documents, URL’s, headers, or full text. Keep in mind that the results you get from one search engine may not match the results you get from another search engine. In fact, they are often different due to the way each search engine behaves. Therefore, it may actually be beneficial to use more than one search engine on a regular basis.

In this section, we briefly look at Google and Yahoo!. Web pages are often dynamic and can change at any time. As a result, you may find that if either site changes, your experience with JAWS may be different than what is described here.

When you first go to the Google web site there is a blinking cursor in the search edit box near the middle of the page. But you can also perform searches right from the address bar. To move to the address bar, just press **ALT+D**. Either way, as you begin typing, an autocomplete list may appear. You can press **DOWN ARROW** to move through the list and then **ENTER** to perform a search, or you can simply continue typing what you are searching for without using the list.

After you have typed in some text, press **ENTER** to activate the Search button. Results appear on the page below. We will discuss some techniques for finding the results on the page in a moment. But first, Google only returns web pages that contain all of the words in your query. If you find that you get too many “hits” or web pages that match your search, you can enter more words in your search query to narrow the choices.

Using good keywords gives you better results. Be as specific as you can. For example, a search for the keyword “musicians” will yield far more results than a search for the keywords “Elvis Presley.” You do not need to include “and” between terms, but the order in which you type your keywords will affect the search results. You can also search for a specific phrase by including words in quotation marks. Google searches are not case sensitive.

**You can also use the following items within your keywords for Google searches:**

* **– (minus) sign.** Causes Google to exclude a word from your search. For example, “JAWS” can refer to a screen reading software or a famous movie. You can exclude many of the movie-related hits by searching for “JAWS -movie.” (Be sure to include a space before the minus sign and no spaces between the minus sign and the word “movie.”) Searches for JAWS with different conditions yielded the following results:
* JAWS, about 1,690,000,000 results
* JAWS windows -movie, still yields about the same number of results, but you find much more information about JAWS screen reader and very little, if any, information about movies. There will most likely still be links to videos on YouTube or other sources.
* “JAWS screen reader” (in quotes), about 49,600 results

As you narrow your search and use better keywords, you get more relevant results. Putting a phrase into quotes tells Google to look for the exact words in that exact order.

**Try typing different things such as names, phone numbers, and more to find people or things.**

Try a search for Freedom Scientific. Use this link to go to the Google web site. On the results page, there are a couple of things you can do to get more information about the results of the search:

* The statistics of your search are typically placed between the search edit box and the search results. You can use the JAWS find command **CTRL+F** to look for the word “Results,” and then read that line. For example, when testing this, the search found, “About 203,000,000 results (0.80 seconds).” This can be useful if you need to narrow the search.
* Google uses a “main” region to guide you to the search results. You can press **R** to move from one region to another.
* The items found as a result of your search are placed on the page as both links and headings. You can press the navigation quick key **H** to move quickly among the headings that match your search. Since they are also links, you can press **ENTER** to activate them and move to those web pages of interest.
* Below each heading (and link) that match your search is a short synopsis of what that page is about. After pressing **H** to move to a heading (link), just press **DOWN ARROW** to read the text below it for more information.
* Remember, you can also press **SHIFT+H** to move backwards.
* There is also a good structure to the headings. The search results are typically listed after a heading level two. The matches found for the search are typically level three headings.