Internet and worldwide web	- Introduction to the internet - Internet services - World Wide Web	***Introduction to the internet*** - Meaning of the internet - Implications (merits and demerits) ***Internet services*** - Different internet communication services - Email services - The concept of netiquette ***WWW*** - Web browsers (define, examples) - Search engines (define, examples) - Websites (define and give types) - The concept of cloud computing

THE INTERNET

- The Internet (simply called the "net") is a worldwide collection of networks that links together millions of businesses, government and commercial agencies, educational institutions, individuals and computers by means of modems, telephone lines, cables, and other communications devices and media.
- It is a network of networks in which users at any one computer can, if they have permission, get information from any other computer (and sometimes talk directly to users at other computers).
- It is a global interconnection of computers networks that can be accessed by the public for academic and commercial information.

Basic Terminologies:

- **Internet Service Provider (ISP):** This is the company that provides access to the Internet connection or internet services. Such as Africel, MTN, Airtel, Smile.
- **Broadband:** it's a term for a fast Internet connection.
- **Bandwidth** and **throughput:** Both of these terms refer to the amount of data that can be transferred between two points on a network in a given period of time. Bandwidth generally refers to a theoretical maximum, while throughput is a real-world, practical measurement.
- **Internet connection types:** The most common connection types are DSL, cable, fiber-optic, and dedicated leased lines. They vary in their speed capabilities (measured in megabits per second, or Mbps) and in cost.
    - **DSL** uses traditional telephone lines. Performance depends on how far you are away from the nearest telephone exchange. Residential DSL speeds can reach 20 Mbps for downloads and 1 Mbps for uploads.
    - **Cable** Internet works over standard cable television lines. Residential speeds can reach 100 Mbps for downloads and 2 to 10 Mbps for uploads, and business speeds can be has high as 400 Mbps for downloads and 20 Mbps for uploads.

- **Fiber-optic** lines offer even better performance. Download speeds range from 15 to 150 Mbps and upload speeds from 5 to 35 Mbps. Experimental services such as Google Fiber can reach download and upload speeds of 1,000 Mbit/s.
- **Dedicated leased lines** are dedicated (meaning not shared) fiber-optic or copper lines you lease from an ISP. This is the most expensive — but also the most reliable — option because you do not share the line with anyone else, and service levels are guaranteed as part of your contract. Speeds range from 1.5 Mbps (T1 connections) to 4.5 Mbps (T3 connections).

- **Uptime:** Sometimes referred to as availability or responsiveness, this refers to the amount of time that a network connection is functioning and usable.
- **Latency:** This is the number of milliseconds it takes for data to travel from one location to another across a network. It is sometimes also referred to as delay.

IP Address: This is the unique identifier for a computer or other device. Types of IP addressing include static IP addressing and dynamic IP addressing.

Network/Internet Protocol (IP)
A set of communication standards that control communication activity on the Internet. **NOTE:** An IP address is number assigned to any Internet-connected computer to uniquely identify it from that network. E.g. 192.168.1.1

Transmission Control Protocol (TCP)
A set of rules used to send data between computers over the Internet.
- *IP* – Handles the actual delivery of data
- *TCP* – keeps track of packets (divided message) for efficient routing through the Internet.

File Transfer Protocol (FTP)
A method of moving files between two Internet sites.

Telnet
The standard protocol for connecting one computer to another. It allows computer to act as remote terminals on another machine. This is done by remote logging to the distant computer which is called the host.

Internet-work Packet Exchange (IPX)
A LAN communication protocol used to move data between Server and workstation programs running on different network nodes.

Sequenced Packet Exchange (SPX)
A protocol developed to provide in-sequential data transfer for communicating from a workstation to a file server or another workstation.

Hypertext Transfer Protocol (HTTP)
A set of rules for exchanging files (text, graphic images, sound, video) on the web.

Hypertext Transfer Protocol Secured (HTTPS)

This is a protocol used on the internet/network with several activities taking place for secure access FTP. It is also used when exchanging files on the internet.

Simple Mail Transfer Protocol (SMTP)
It is used when sending emails on the Internet.

Secure File Transfer Protocol (HTTP)
This provide secure files transfer, access and management over a network.

Post Office Protocol (POP)
A communication technology for retrieving emails from a mail server.

Other terms

i) Hyperlinks – A text or image that causes the browser to load another page.
ii) Hypertext – A text that contains links to other documents. They cause another document to be retrieved and displayed.

Language of the Web

HTML	–	Hypertext Markup Language
XHTML	–	Extensible Hypertext markup Language
XML	–	Extensible Markup Language

History of the Internet

ARPANET
In August 1969, separate from the military project, the experimental network **ARPANET** was created by ARPA (*Advanced Research Projects Agency*, a division of the United States Department of Defense) in order to link four universities together:

- The Stanford Research Institute;
- The University of California at Los Angeles;
- The University of California at Santa Barbara;
- The University of Utah.

The ARPANET is now considered the precursor to the Internet. At that time, it already included several fundamental characteristics of the current network:

- One or several cores could be destroyed without disrupting the network's operation;
- Communication between machines could take place without the direction of a central machine;
- The protocols used were basic.

THE WORLD WIDE WEB (WWW)
This is an information system on the Internet which allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another.
The **World Wide Web** (or "Web" for short) is a global collection of information and electronic documents on the Internet, the global computer network linked together. The basic component of

the Web is the "web page," which can present text and graphics in an attractive, easy to use format.
The World Wide Web (WWW), also called the Web, consists of a worldwide collection of electronic documents. Each of these documents on the Web is called a Web page. The WWW emerged in service on the Internet. A Web page can contain text, graphics, animations, audio, and vide (i.e. multimedia elements), as well as built-in connections, called hyperlinks, to other documents.

A Web site is a collection of related Web Pages.

A Home page is the starting page or a table of contents for a Web site, and normally has a name called index.htm or index.html.

A web page: Is a page that contains text, graphics, audio and video and hyperlink to other document.
A web page (such as the ones we access when we connect to the Internet) is an electronic document written in a computer language called HTML (Hypertext Markup Language).
Each Web page has a unique address, called a Uniform Resource Locator (URL), which tells the browser where to locate the document.
A URL consists of a protocol, a *domain name*, and *sometimes the path to a specific* Web page or location on a Web page. These documents are stored on computers called servers located around the world.

The Web is popular for a couple of basic reasons:
- It is easy to jump from page to page, all over the world, with a click of the mouse or a keyboard entry.
- It is easy to create basic hypertext documents (web pages).

WHAT IS THE WEB MADE OF?
The Web consists of:
- Your personal computer
- Web browser software to access the Web
- A connection to an Internet service provider (ISP)
- Servers to host the data
- Routers and switches to direct the flow of data

HOW THE WEB WORKS
Web pages are stored on web servers located around the globe. When you enter the Uniform Resource Locator (URL) or website address of a web page in your web browser or click on a link, a request is sent to the sever that hosts the page. The server transmits the web page data to your computer and your web browser displays it on your screen.

The first page displayed is called the home page**.** The home page is the main, or introductory, web page for a company, school or other organization.

Web Pages
Web pages can contain text, graphics, audio, video, and animation, as well as interactive features, such as data entry forms and games.

Each page has a unique address known as a URL (Uniform Resource Locator), which identifies its location on the server. Web pages usually contain hyperlinks to other web pages. Hyperlinks are text and images that reference the addresses of other web pages.

Websites

A website consists of one or more web pages that relate to a common theme, such as a person, business, organization, or a subject, such as news or sports. The first page is called the home page, which acts like an index, indicating the content on the site. From the home page, you can click links to access other pages on the site or other resources on the Web. A link is a connection from one webpage to another webpage.

ACCESSING THE INTERNET

You should have the following to effectively use the Internet:

- ✓ **NIC Network Interface Card**: enables the computer to connect and be able to communicate.
- ✓ **Internet Service Provider (ISP):** is a company that supplies connections to the Internet, usually for a monthly fee. Examples of ISP's are Btopenworld, pipex, freeserve and AOL.
- ✓ **A computer or any other device** that a user will manipulate to use the service of Internet.
- ✓ **An Operating System**: required to configure the machine to accept all standards of using the Internet by itself and other computers connected.
- ✓ **Modem**: A modem is a device that converts your computer's digital signals into a format that can be sent over a regular phone line or for the computer to use.
- ✓ **Browser:** used to access pages on the Internet, examples include: Internet Explorer, Mozilla Firefox, Netscape navigator, e.t.c.

Examples of Internet Service Providers:

- ✓ Local Service Providers: MTN, Info com, Airtel, UTL, Vodafone, Smile, Africel, Safaricom, Halotel.
- ✓ AOL and MSN – Online Service Providers
- ✓ AT & T world net
- ✓ Comp Serve Interactive
- ✓ Microsoft Network
- ✓ Africa Online
- ✓ Prodigy internet

Factors to consider when choosing an Internet service Provider

1. **Price**: Price is important, however, it should not be the single determining factor.
2. **Connection options**: A dial-up connection is no longer your only option. There are many different speeds to choose from to meet your connection requirements, such as ISDN, cable, DSL and satellite.
3. **Features**: Just like other vendors, ISPs vary in the options their packages include. For example, some ISPs offer static IP addresses, while others use only DHCP-assigned ones.
4. **Customer/technical support**: Even the best connections experience problems, and chances are you will have a question or problem you need to address, which is why it is

vital to have a professionally trained and dedicated staff capable of solving any problem at any time. BroadbandReports.com is a good place to go to find out about an ISP's reputation for support, as well as performance.

5. **Performance**: Whether you're paying for a high-speed connection or just using dial-up, you should check the ISP's track record for such things as uptime and overall throughput. For example, even when using 56-Kbps dial-up modems, you can often only connect at 28.8 Kbps or 33.3 Kbps because of the modems used at the ISP. Likewise, one ISP may provide three e-mail addresses for a single account, while another may offer five.
6. **Local access numbers**: In most major cities, you won't have a problem finding local dial-up numbers for an ISP. However, if you travel or if your remote office is located in a rural location, you may face long-distance charges.
7. **Viability**: When selecting your ISP, do some checking to see how long the company has been around, their track record, and whether or not they received any awards. You might find a good ISP now, only to have it go out of business, forcing you to not only restart your search but modify configurations and transfer your Website and/or domain name.
8. **PC and MAC compatibility**: It goes without saying that everything is PC compatible, but not all services are compatible with the Mac OS. If you know how to configure your remote access (dialer), you can make any of these services work, but few offer the accelerated service for Macs. If you are a Mac user, look for a service that gives good instructions on how to set-up your Mac for using their service.
9. **Email or Web Browser Advertising**: Does the service include advertising at the bottom of your e-mails? Does the ISP insert any advertising or solicitation material on your web browser? Services that require you to download their software (other than a dialer configuration) will often alter your browser to be able to serve ads to you as you surf.
10. **Cancellation Policy**: We seldom think of how to cancel when signing up for a new service, but it is something you should consider. Do they tell you on their web site how to cancel? Is there a penalty for early cancellation? Do they offer a 30 day money back guarantee? Some services are set as 12 month contracts and there is an early cancellation penalty. Make sure you know the policy and also the procedure to cancel before you sign up.
11. **Download and Upload Speeds**: We all want fastest internet at the price we're willing to pay. Make sure when you're comparing services, you do so on an apples-to-apples basis, comparing the most similar plans based on both download and upload speeds. To find the ISPs with the fastest upload and download speeds actually tested by users worldwide, visit Speedtest.net's Net Index. Click on the map to drill down to your area and scroll down to the ranking of ISPs by speed index (available for download and upload speeds, as well as network quality).
12. **Cost and Contract**: Some services require you to rent the modem or buy it yourself; others provide it for you. Some offer free installation while others charge you for that service call. Most discount your internet service if you package it with television and/or phone service (but often only for a few months, so be sure to compare costs including after the bundle expires as well). And you might be able to avoid a multi-year contract with some—for a higher price, of course. These are the details you'll need to consider when comparing services by price.
13. **Terms of Service**: Similarly, make sure you know what the service's limitations are. There may be data caps, for example, limiting the amount of data you can use per month,

or restrictions on the kinds of activities you're allowed to do, such as running a web or file server.

14. **Add-ons and special features**: Many ISPs throw in extras just to make it seem like you're getting a great value. Things like anti-virus program subscriptions, an ISP-branded email address, and personal webpages are just that—extras that you likely don't need. One pretty cool add-on you might find, though, is free Wi-Fi hotspot access. For example, if you're a Cablevision customer anywhere near one of its public Wi-Fi towers (whether you're in a building like a coffee shop or outside in the park), you can hop on to it. That might sway you if you frequently use your laptop on the go.
15. **Reliability**: Of course, none of these features matter if you can't use the service when you need to. DSL Reports shows reviews from your neighbors, which is a great start. As mentioned above, you can also use the Net Index from Speedtest.net to get a ranking of real-world ISP quality tests.

BROWSER: A Web "browser" is used to access pages on the Internet.
It is simply the software used to view and navigate the Web. A browser (also known as client software) retrieves data from remote web servers, assembles it, then displays a web page. **Examples of popular browsers** are Microsoft Internet Explorer, Mozilla Firefox, Netscape Navigator and Opera. Browsers basically work the same way. Once you know one, you can easily use others.

SERVICES OF THE INTERNET/services provided by the internet.

The World Wide Web is one of the most popular services available on the Internet. Other widely used Internet services include e-mail, FTP, newsgroups, message boards, mailing lists, chat rooms, instant messaging, Internet telephony, and videoconferencing.

- ✓ **The World Wide Web:** also called the Web consists of a worldwide collection of electronic documents. Each of these documents on the Web is called a Web page.
  - A Webpage can contain text, graphics, animations, audio, and video (i.e. multimedia elements), as well as built-in connections called hyperlinks, to other documents.
- ✓ **E-mail**: is the transmission of messages via a computer network such as a local area network of the Internet using a communications link such as a modem and a telephone line.
- ✓ **Newsgroup:** also called a discussion group, is an online area where users conduct written discussions about a particular subject.
- ✓ **Message boards of discussion board:** is a Web-based type of discussion group that does not require a newsreader program.
- ✓ **Mailing lists:** is a group of e-mail names and address given a single name. When a message is sent to mailing list, every person on the list will receive a copy of the message.
- ✓ **Chat rooms:** is a location on an Internet server that permits users to chat with each other by typing lines of text on the computer.
- ✓ **FTP (File Transfer Protocol):** is an Internet standard that allows users to upload and download files with other computers.
- ✓ **Instant messaging:** is a real-time communications service that notifies a user when one

or more people are online and then allows the user to exchange messages or files with them.

- ✓ Messages in IM are even more brief, conversational, and informal than in e-mail.
- ✓ **Internet telephony:** sometimes called Voice over IP (VoIP) is a Web-based telephone service that allows a user to talk to others for just the cost of the Internet connection.
- ✓ **Videoconferencing:** is a meeting between two or more geographically separated people who use a network or the Internet to transmit audio and video data. A videoconference conducted over the Internet, using Web browsers and Web servers to deliver the service, is called a Web conference.
    - o A videoconference allows participants to collaborate as if they were in the same room. Videoconferencing software along with a microphone, speakers, and a web cam attached to the computer are required to participate in a videoconference.

Video conferencing is used to conduct live meetings or presentations over the Internet/network. Each participant sits at his or her own computer and is connected to other participants via the internet. This can be either a downloaded application on each of the attendee's computers or a web-based application where the attendees will simply enter a URL (website address) to enter the conference.

Uses of the internet

Internet is today one of the most important part of our daily life. There are large numbers of things that can be done using the internet and so it is very important. You can say that with the progress in the internet we are progressing in every sphere of life as it not only makes our tasks easier but also saves a lot of time.

People have different reasons for connecting to the Internet, which include:

- Shopping for goods and services (online shopping/e-commerce)
- Do research
- Take online trainings (e-learning)
- Send and receive messages
- Communicate with others around the world
- Access sources of entertainment and leisure e.g games
- Assess a wealth information e.g news, weather reports, etc

Below is a detailed list of the uses of the internet today.

1. Email: By using internet now we can communicate in a fraction of seconds with a person who is sitting in the other part of the world.

2) Information: The biggest advantage that internet offering is information. The internet and the World Wide Web has made it easy for anyone to access information and it can be of any type, as the internet is flooded with information.

3) Business: World trade has seen a big boom with the help of the internet, as it has become easier for buyers and sellers to communicate and also to advertise their sites. Now a day's most of the people are using online classified sites to buy or sell or advertising their products or services.

4) Social Networking: Today social networking sites have become an important part of the online community.

5) Shopping: In today's busy life most of us are interested to shop online. Nowadays, almost anything can be bought with the use of the internet. In countries like US most of consumers prefer to shop from home. We have many shopping sites on internet like amazon.com, Dealsglobe.com, e-bay etc. People also use the internet to auction goods.

6) Entertainment: On internet we can find all forms of entertainment from watching films to playing games online. When people surf the Web, there are numerous things that can be found. Music, hobbies, news, games and more can be found and shared on the Internet.

7) E-Commerce: Ecommerce is the concept used for any type of commercial maneuvering, or business deals that involves the transfer of information across the globe via internet.

8) Services: Many services are now provided on the internet such as online banking, job seeking, purchasing tickets for your favorite movies, and guidance services on array of topics in the every aspect of life, and hotel reservations and bills paying. Often these services are not available off-line and can cost you more.

9) Job Search: Internet makes life easy for both employers and job seekers as there are plenty of job sites which connects employers and job seekers.

10) Dating/Personals: People are connecting with others though internet and finding their life partners. Internet not only helps to find the right person but also to continue the relationship.

11) Education

There are a number of books, reference books, online help centres, expert's views and other study oriented material on the internet that can make the learning process very easier as well as a fun learning experience. There are lots and lots of websites which are related to different topic. You can visit them and can gain endless amount of knowledge that you wish to have. With the use of internet for education, you are non-longer dependent on some other person to come and teach you. There are various number of tutorials available over the internet using which you can learn so many thing very easily. There can't be any excellent use of the internet other than education as it is the key to achieve everything in life.

Factors affecting communication speed

Qn. Outline factors that determine data transmission speeds over the internet

i) Processor speed:

A faster processor will allow surfing the web at a faster speed than a slower one.

ii) Computer Memory

A computer with more available memory will tend to surf faster. To avoid slow-downs;

- Avoid opening unnecessary software applications
- Upgrade your systems memory

iii) Capacity of Hardware.

Hubs, switches and Network Interface cards have their own maximum speeds.

iv) Heavy Internet Traffic

As traffic increases, the speed decreases. Web traffic tends to increase throughout the day and peaks around early morning.

v) Bandwidth

The maximum amount of data that a transmission media can carry at a time. The higher the bandwidth, the more data and information the channel can transmit.

vi) The Server

Amount of RAM and the speed of the hard disk. **Other factors include;**

- ✓ **Computer processor speed**: a person using a computer with dual Pentium IV core processor is most likely to get faster connectivity to the internet as compared to one with a Pentium III or II processor
- ✓ **Distance the data travels**: the actual internet speed will vary, depending on the distance the data travels
- ✓ **Heavy traffic on the network**: the greater the number of computers on the network is, the more the internet speed reduces
- ✓ **Malware, spyware and viruses:** viruses hinder the operation of programs on the computer, regardless of its processor strength; this in turn slows down the speed of connectivity
- ✓ **Modem speed**: if your modern is substandard then this will slow down the speed at which data is transmitted
- ✓ **Natural condition**: instability in connection speed is also commonly caused by natural conditions such as heavy rains, stormy weather and thunder which interfere with the transmission of signals
- ✓ **Hardware problems**: poor network card, signal receiver can seriously reduce the speed of the data being processed by your system
- ✓ **Software problems**: you need good updated web browser software to display the web pages efficiently. Currently internet explorer version 6 is unable to display some WebPages with advanced features
- ✓ **Memory available**: with each program you open on your computer, then no you are using up more RAM memory. And more programs means less RAM memory hence slowing down the network
- ✓ **Technological circumstances**: such as loose connections of cables or maintenance work being done by your ISP.
- ✓ **Cookies**: when surfing, the browser collects in4m such as password and stores it on your local hard drive in a file known as cookies. Over time these cookies can compromise the speed of your internet connection, particularly if you visit many websites during a browsing session
- ✓ **Network topology**
- ✓ **location of software and files**
- ✓ **data transmission media**
- ✓ **transfer rate**
- ✓ **Speed of the Internet Service Provider (ISP), etc.**

NOTE: The Transmission Control Protocol / Internet Protocol (TCP/IP) is a suite of protocols used to communicate across the Internet.

Protocol – a set of formal rules describing how data can be transmitted across a network.

Advantages of using the Internet

- ✓ People have different reasons for connecting to the Internet, which include:

- ✓ It allows access to a wealth of information, such as news, weather, reports, and airline schedules. It provides information at various levels of study. It enables one to download files, listen to music and watch movies free of charge.
- ✓ Access sources of entertainment and leisure, such as online games, magazines, and vacation planning guides.
- ✓ It has powerful search engines that enable users locate special data in a short time.
- ✓ It provides the ability for a user to do research from your home versus research libraries.
- ✓ It provides message boards where people can discuss ideas on any topic.
- ✓ The Internet provides the ability of e-mails. Free mail service to anyone in the country. Therefore, communication is made simple and cheaper for a user. Platform for products like SKYPE, which allow for holding a video conference with anyone in the world who also has access.
- ✓ Friendships and love connections have been made over the Internet by people involved in love/passion over similar interests.
- ✓ It enables one to shop for goods and services online i.e. e-commerce. One can buy a car from Japan without necessarily travelling. Electronic commerce (*e-commerce*) is a financial business transaction that occurs over an electronic network, such as the Internet. Online shopping and banking are two popular types of e-commerce that uses either electronic money (e-money) or electric data interchange (EDI)
    - E-money is a means of paying for goods and services over the Internet
    - EDI is a set of standards that control the transfer of business data and information among computers both within and among companies.

  E-commerce business can be grouped into three basic models:
    - Business-to-consumer (B2C) e-commerce consists of the sale of goods to the general public.
    - Consumer-to-consumer (C2C) e-commerce occurs when one consumer sells directly to another, such as in an online auction.
    - Business-to-business (B2B) e-commerce consists of businesses providing goods and services to other businesses.

Advantages of e-commerce include

- ✓ Transactions can occur immediately and globally, thus save time for participants on both ends.
- ✓ Transactions can occur 24 hours per day.
- ✓ Businesses have access to millions of people with Internet connections.
- ✓ Businesses have the ability to gather customer information, analyze it, and react if appropriate.
- ✓ Information can be changed and be available quickly.
- ✓ Customers can compare prices easily.
- ✓ Feedback can be immediate.
- ✓ Manufacturers can buy and sell directly, avoiding the cost of the middleman.
- ✓ Distribution costs for information is reduced or eliminated.

Disadvantages of using the Internet

- ✓ There is a lot of wrong information on the Internet. Anyone can post anything, and much of it is garbage.
- ✓ There are predators that hang out on the Internet waiting to get unsuspecting people in dangerous situations.

- ✓ Some people are getting addicted to the Internet and thus causing problems with their interactions of friends and loved ones.
- ✓ Pornography that can get in the hands of young children too easily.
- ✓ Easy to a lot of time on the Internet. You can start surfing, and then realize far more time has passed than you realized. Internet and television together if added to the more inactive lifestyles of people which further exacerbate the obesity problem.
- ✓ Internet has a lot of "cheater" sites. People can buy essays and pass them off as their own far more easily than they used to be able to do.
- ✓ There a lot of dishonest businesses that has sprung up on the Internet to take advantage of people.
- ✓ Hackers can create viruses that can get into your personal computer and damage valuable data.
- ✓ Hackers can use the Internet for identity theft.
- ✓ It can be quite depressing to be on the Internet and realise just how uneducated so many people have become in today's society.

NOTE: E-mail Addresses
In order to send an e-mail, you have to know the e-mail address of the person you wish to e-mail. This is usually a short code, often made up of the users name followed by the **Internet Service Provider's (ISP)** code, but this can vary. Look at the three e-mail addresses below.

From: PhillipDavey@globalnet.co.uk
To: RosalindaDavey@aol.com
Cc: G.Davey@freeserve.co.uk
Each has a different ISP-Globalnet, AOL and Freeserve
To send an e-mail via the internet, you have to connect the ISP's server. Once you are connected, you can send the e-mail. The e-mail is then sent from your ISP server to the destination ISP server
Check point

- ✓ **USENET** - A worldwide bulletin board system that can be accessed through the Internet or through many online services. It contains more than 14,000 forums, called *newsgroups* that cover every imaginable interest group.
- ✓ **GOPHERSPACE** – a gopher allows someone to read files existing on other computers on the internet. It works like the World Wide Web but it acts in a tree like structure other than a jumble of links.

Gopher

A technology that is used to make files available over the Internet. It is a menu-based method of searching for information on the Internet.

Online service

A business that provides its subscribers with a wide variety of data transmitted over telecommunication lines. Enables subscribers to communicate with one another.

Bulletin Board Systems (BBS)

This is an electronic message center. You can view messages and also leave messages if you want.

- **THE E-MAIL SPAM**

Spam is a term used to describe unsolicited junk E-mail that commercial companies send out asking one to buy their goods and services. Spam is sent out as bulk E-mail often to lists of 10000 or more people at once. Because spam is not requested for, those who receive such E-mails get annoyed and this increases the internet traffic jam. Spammers use companies and robots to acquire people's e-mail addresses and when they send the spam, they hide their true addresses.

Web Chat

- ✓ A **web chat** is a system that allows users to communicate in real time using easily accessible web interfaces.
- ✓ It is a type of internet online chat distinguished by its simplicity and accessibility to users who do not wish to take the time to install and learn to use specialized chat software.
- ✓ **Text-based chat**: This is a way of communicating by sending text messages to people in the same chat-room in real-time. Some chat rooms such as Yahoo! use both text and voice simultaneously. The most popular of this kind is Internet Relay Chat (IRC).

THE INTERNET RELAY CHAT (IRC)

This is an internet feature/ facility that enables user to share keyboard conversation in real time system. Here with **IRC** people participate in live chats or conversation via Internet. They don't actually speak to one another or hear one another's voice; it means they hold keyboard conversation with each other on the Net. They type works on the computer and send them so that other people can see these words and respond immediately in the same way.

You can hold chats with many people all over the world at the same time.

Text chat - For live question and answer sessions, limited to the people connected to the meeting. Text chat may be public (echoed to all participants) or private (between 2 participants).

Polls and surveys - allows the presenter to conduct questions with multiple choice answers directed to the audience

Screen/desktop/application sharing - where participants can view anything the presenter currently has shown on their screen.

Advantages of IM

- ✓ Instant messaging enables people to exchange text messages
- ✓ Share digital photo
- ✓ Share video, and audio files
- ✓ Play games in real time.

Other typical features of a web conference include:

- ✓ Slide presentations - often created through PowerPoint or Keynote on a Mac
- ✓ Live video - via webcam or digital video camera
- ✓ VoIP (Voice over Internet Protocol) - Real time audio communication through the computer via use of headphones and speakers

- ✓ Recording - for viewing at a later time by anyone using a unique web address

NB: **ANIMATION**
This is appearance of motion created by displaying a series of still images in sequence
VIDEO
This Consists of full-motion images with sound played back at various speeds
Videoconferencing software along with a microphone, speakers, and A digital video camera attached to the computer are required to participate in a videoconference

To carry out video conferencing, you need these items
- Web cam
- Computer
- Phone
- Network such as the internet.
- Microphone

And Videoconferencing software such as
- iChat,
- Skype
- ,iVist,
- Gizmo etc),
- codec,
- modem,
- or router and speaker

Video and audio conferencing is supported by a **VOIP** (voice over internet protocol).
(a protocol that enables one computer or communication device to transmit a video or an audio signal to another device)

MERITS
- ✓ Saves transport fare
- ✓ Meeting can be recorded
- ✓ In case of limited classroom, this is the best method of teaching
- ✓ It case cheaper than holding physical meeting like paying for rooms, seats and others

DEMERITS
- ✓ Communication may not be effective especially when some people are not close to the microphone
- ✓ Some tools are costly
- ✓ Creates a room for lies

Hyperlinks
A hyperlink commonly called a link is a word, symbol, image, or other element in a hypertext document that electronically connects one web page to other web pages on the same web site, or web pages located on another web site. More specifically, a hyperlink is a connection between one page of a hypertext document to another. A hyperlink is a navigation element on a webpage.

HyperText is a text when clicked sends you another text, webpage or location. These Hyperlinks are the ones that contain Internet addresses to other location.

Identifying a Hyperlink
Text links are usually underlined and in a different color from the rest of the text.

To determine if a graphic is hyperlinked, move your cursor arrow over the image. You know the item is hyperlinked if:

- The arrow turns into a hand.
- A URL appears in the status bar at the bottom of your web browser.

How Hyperlinks Work
A text or graphic hyperlink hides a URL.

- Clicking a hyperlink passes the URL to your browser.
- Clicking different parts of a linked graphic, called an image map, takes you to different web pages or different places on the same page.
- In addition to pointing to web pages, hyperlinks can access media files, such as audio or video clips.

Navigating using Browser Buttons

Back and Forward buttons
This is used for the same purpose as the History list, except that Back and Forward are more convenient when you need to go back or forward just one or two pages.

Back Button – The Back button returns you to the previous page.
Forward Button – The Forward button returns you to the page you have backed up from.

For example, say you are looking at the Yahoo web page, and then you go to the Alta Vista page. Clicking on Internet Explorer's Back button will return you to the Yahoo page. From Yahoo, the Forward button will take you again to Alta Vista.

Note that this is not the same as the "Go Back" or "Next Page" buttons found on many Web pages (including this one). The difference is that the browser's buttons will take you back (or forward) to where you have been. The buttons on Web pages take you to the previous or next pages in a series of pages at that Web site, depending on how the *Web site* is organized.

Home button
The Home button takes you to the home page specified in the browser preferences.

Reload or Refresh button
The Reload (Netscape) or Refresh (Internet Explorer) button causes the current page you're viewing to be downloaded or sent again from its source and displayed "fresh". This can be useful if the page's contents change frequently (for example, a weather map). If you don't reload, the changes will not be displayed. Reloading is also useful if the page was not received properly for whatever reason--reloading it will usually work.

The Stop Button
Both Netscape and Internet Explorer have a stop sign in the top menu. Click on this button to stop loading of a current page that you are receiving or downloading. This is useful when you find that you've selected the wrong page, or a page that isn't what you expected or needed.

The Find Button
The Find button (Netscape) with binoculars is very handy for searching the text of the Web page that is currently being displayed. On Internet Explorer, you must go to Edit on the menu bar and

choose Find on this page. For example, you may have retrieved the page using a search engine to find Web pages that contain a certain word. Once you pull up one of those pages, use Find to quickly locate the word, instead of having to skim through the page. The Find button does not search the Internet.

The Print Button
The Print button lets you make a hard copy of the current page displayed in your browser.

Status bar
The Status bar at the bottom of browser window reports on the progress of the data downloaded from a web server

History Button
The History button produces a History Explorer bar and lets you select a web page you have previously accessed.

Downloading files
Downloading a file simply means to transfer a copy the file from a remote computer (a server) to your computer. Many files are available for downloading on the Internet, using a Web browser. These include shareware software programs, multimedia files (such as sound, video and graphics), and document files of all types.

Many times you are given instructions on how to download files on the particular web page - you may only need to "click on the link." With both Netscape and Internet Explorer (with Windows computers)

- you can right-click with your mouse to bring up a menu and
- choose "Save File As" (Netscape) or "Save Target As" (Internet Explorer).

Multimedia on the Web
Audio, video, animation, and interactive games are referred to as multimedia. Some multimedia content, called streaming media, are embedded in a web page and begin to play when you access the page. Others require that you download the multimedia file to your computer first. Multimedia files often require that your browser use a plug-in program to play the file, like QuickTime or Macromedia Flash Player.

Ways of Connecting to internet

What You Need to Know About Different Types of Internet Service
First, it's worthwhile to know the differences between the types of internet service available. "Broadband" is an umbrella term that covers all of the always-on types of internet connections: cable, satellite, DSL, and fiber optic service (a.k.a., FiOS). These are the high-speed internet services that keep you constantly connected. The other option is dial-up (yes, as in AOL dial-up, which still exists and people still pay for). Unless dial-up is you're only choice, you'll want to go with broadband. Here's a summary of the different types of broadband connections available to consumers:

1. ***DSL***

This stands for Digital Subscriber Line. It operates over regular telephone lines (like dial-up does) to deliver download speeds as fast as 25 megabits per second (with 100 Mbps or more expected later this year). There are two types of DSL: Asymmetric DSL (ADSL) and Symmetric DSL (SDSL). ADSL is the cheaper of the two and offers significantly faster download speeds (i.e., how fast information on the internet is delivered to you) than upload speeds (how fast information is sent from your computer to the internet). SDSL, on the other hand, provides equally fast upload and download speeds, which might be important if you are a VPN user or regularly backup large files to the cloud.

***Advantages*:** DSL is typically less expensive than other broadband options, and you'll likely have more than one DSL provider to choose from—as opposed to one single cable or fiber optic provider. The speeds you get from DSL are also usually very stable and consistent, because in many cases, you get a dedicated line.

***Disadvantages*:** The quality and speed of DSL service depends on distance: The farther away you are from the provider's central office (CO), the slower and less reliable your connection. Also, DSL speeds, while much faster than dial-up and probably enough for most users' needs, aren't as fast as other broadband types yet.

2. Cable broadband

This is offered by your cable television provider. It operates over coaxial cable TV wires and provides download speeds ranging from 3 Mbps to over 100 Mbps.

***Advantages*:** The quality and speed of your service doesn't depend on your distance, like it does with DSL. Cable is also typically much faster than DSL and satellite, and more widely available than fiber optic broadband.

***Disadvantages*:** In most cases, your available bandwidth is shared with others in your neighborhood, so the more people using the cable broadband service at once, the slower the internet service will be for everyone. This can really put a damper on your Netflix streaming at peak internet use times.

3. Satellite,

As you might expect, uses satellites to beam the internet feed to subscribers' installed satellite dishes. Satellite, no matter where you are, offers speeds of up to 15 Mbps down and 3 Mbps up.

***Advantages*:** Satellite covers areas where DSL, cable, and fiber are unavailable. For many people in rural areas it's the only broadband option.

***Disadvantages*:** It's both slower and more expensive (for the rated speeds) than other broadband options.

WORLD WIDE WEB