UACE Sub - ICT

Topic 8: Internet and World Wide Web

Source: www.mukalele.net

Background

- The number of users of the internet is exponentially growing due to increasing ease of use, low cost of the hardware and availability of adequate facilities in schools, public libraries, internet cafes etc.

- Although the basic use of internet was research, the number of users of e-mail has outgrown that of research. One can use the internet to communicate with anyone else online, in any place in the world without incurring any extra cost.

- It can also be used to join mailing list, bulletin boards or discussion groups that cover a huge variety of subjects.

Presentation Outline

UACE Sub – ICT Topic 8:

Topic 8: Internet and World Wide Web

- Sub Topic 1. Introduction to the Internet

- Sub Topic 2. Internet Services

- Sub Topic 3. World Wide Web

Sub Topic 1: Introduction to the Internet

Sub topic Objectives:

a. Meaning of Internet

– Explaining the meaning of the Internet

b. Implications of the Internet

– Discussing the advantages and disadvantages of using the Internet

a) Meaning of Internet

- Internet refers to the global interconnection of computer networks.

- Computers within a laboratory or office can be connected together using transmission media such as cables to form a local area network (LAN).

- Several LANs can be connected to form Wide Area Networks (WANs), which constitute the global Internet.

- The Internet enables millions of computers to communicate and share resources globally.
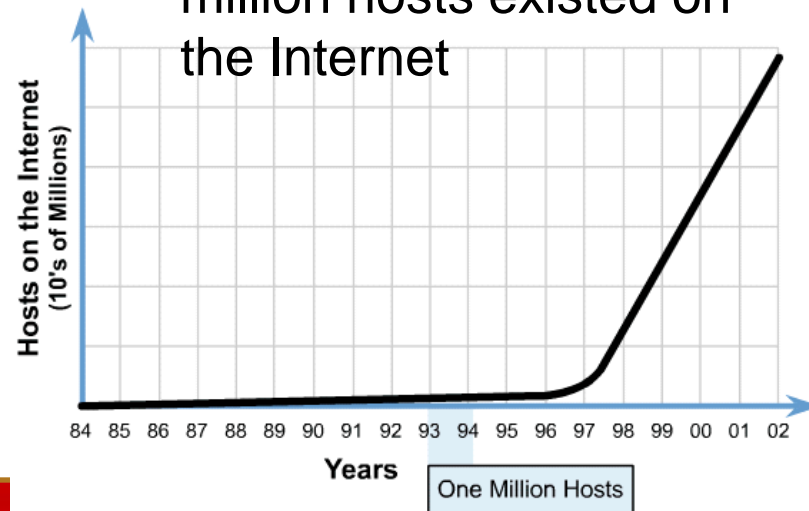
a) Meaning of Internet

- **History of the Internet:** In 1969 the U.S. Department of Defense commissioned the Advanced Research Projects Agency Network (ARPANET). The purpose was to provide communication links between supercomputers located at various regional sites (Universities and defense bases) within the United States.
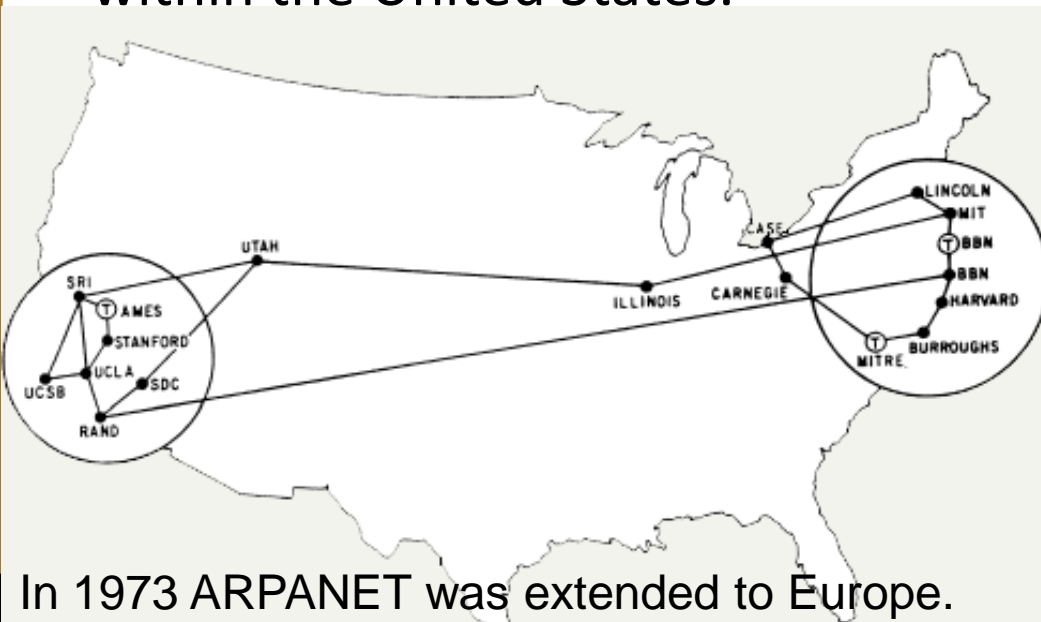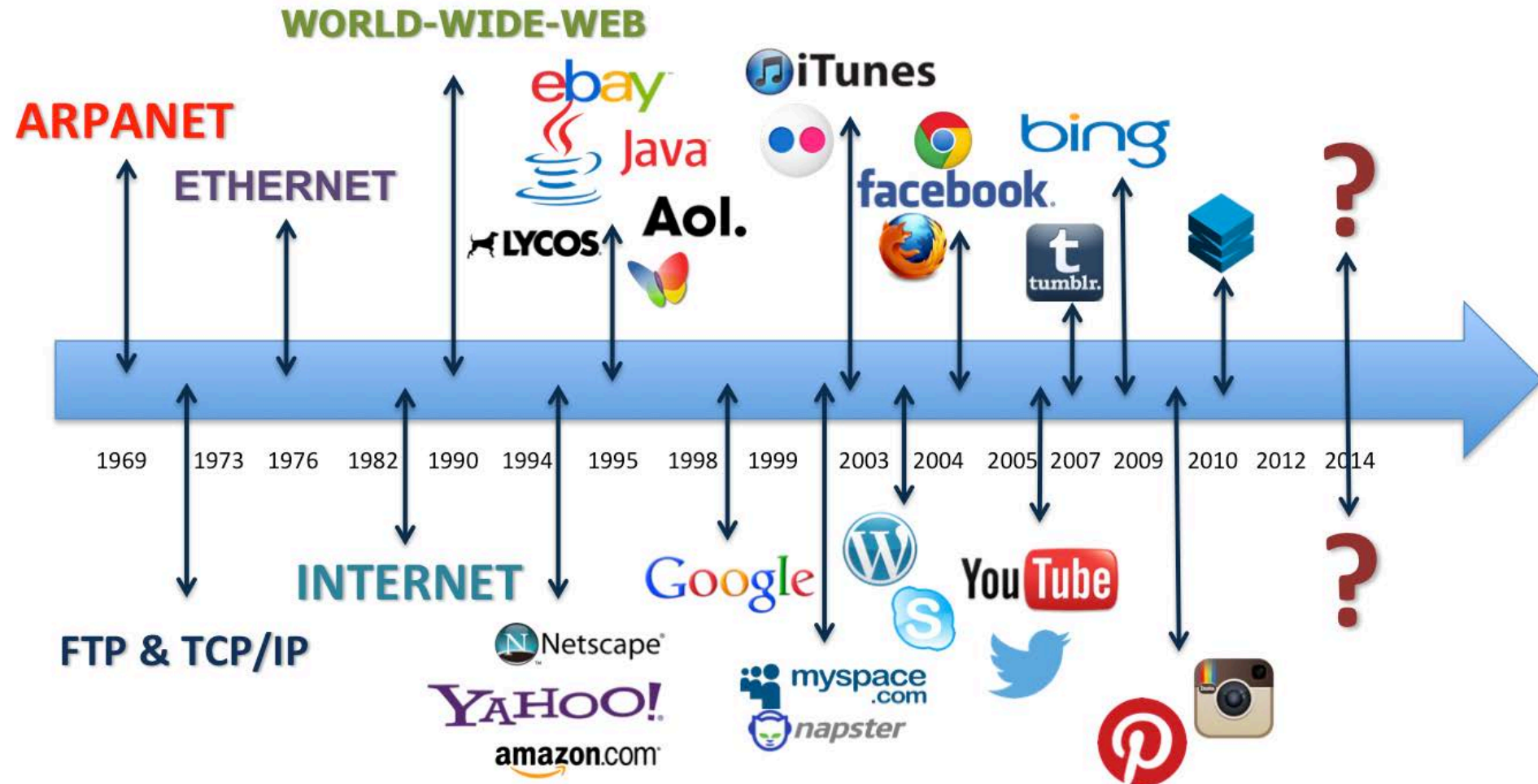
- It is this ARPANET that evolved into the Internet after computer networks were connected to it in different parts of the world.

- By1992, more than 1 million hosts existed on the Internet

In 1973 ARPANET was extended to Europe.

a) Meaning of Internet

- **History of the Internet: Timeline of Key Developments**

a) Meaning of Internet

## Requirements for Connecting to the Internet: These include:

a. **Computer / Device with a Network Interface Card.** The NIC may be based on Ethernet or wireless technologies.

b. **An Internet Service Provider (ISP):** the company that takes care of the technical aspects of connecting to the internet. ISPs available in Uganda include Mobile telephone companies like Orange, MTN, Airtel, UTL, etc.

b) **Modem:** This is a device that converts analogue telephone signals into digital computer information and vice-versa. Some computers have internal / inbuilt modems.

c) **Required Software:** programs necessary to use the internet services such as web browsers and Email Clients, FTP software, etc.

a) Meaning of Internet

- **Methods of Connecting to the Internet**

- As technologies develop, bigger, better and faster Internet connections methods evolve. ISPs provide internet connectivity through the following

- (a) Dial Up/ Analog access / Phone Line Connection,
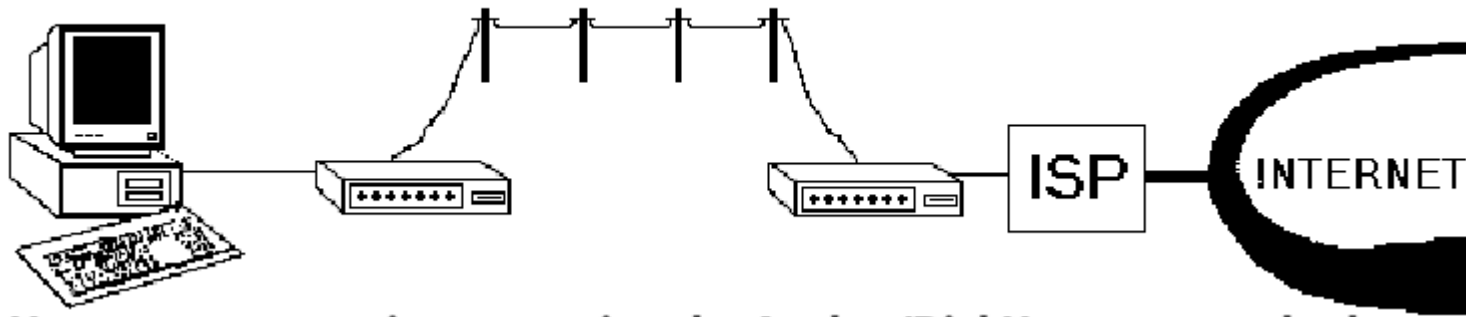
- (b) Broadband (cable or Digital Subscriber Line (DSL))/ Fiber

- (c) Satellite Connection, and other

- (d) Wireless broadcasts e.g Wi-Fi hotspots and Wi-Max.

a) Meaning of Internet

- **Methods of Connecting to the Internet**
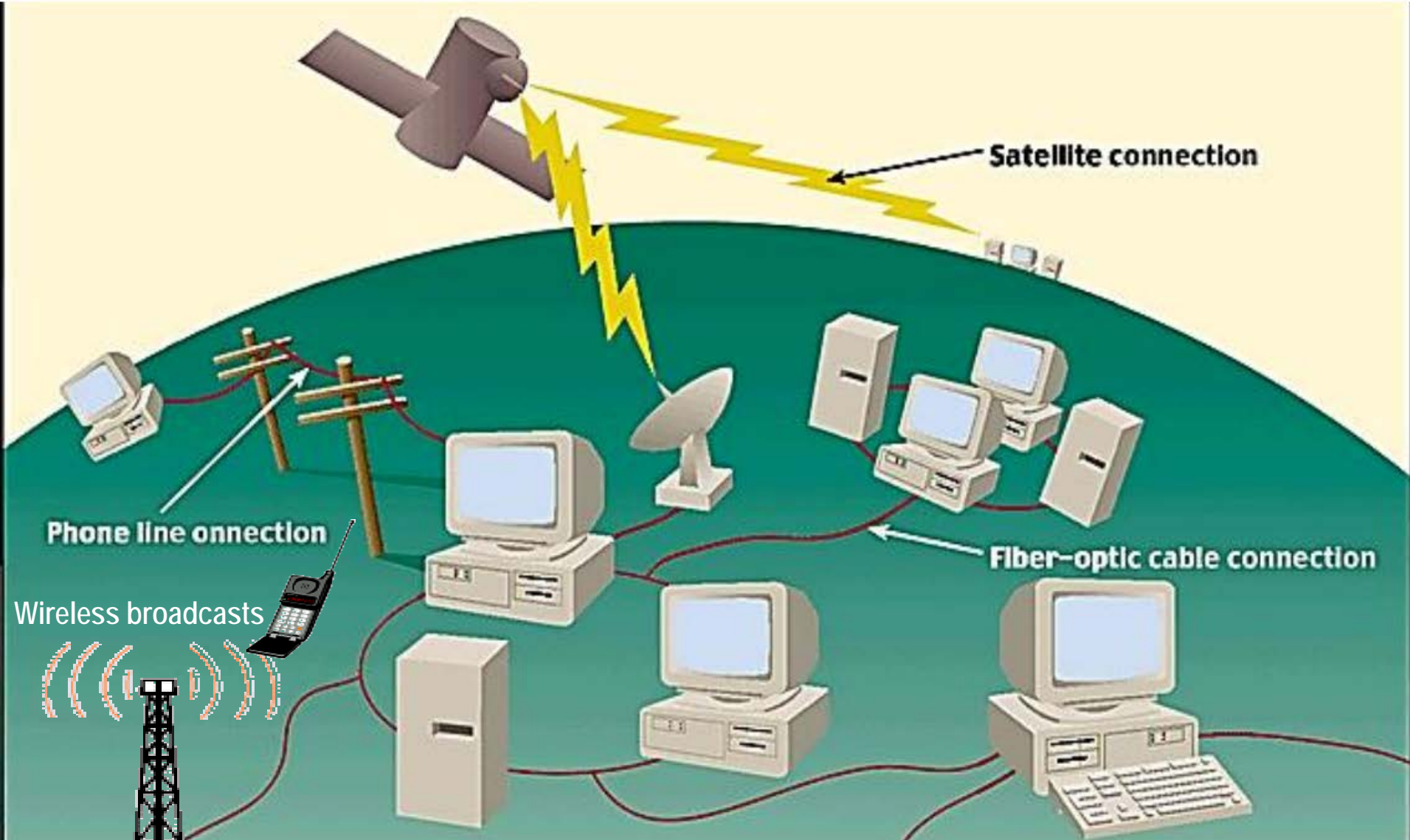
a) Meaning of Internet

FACTORS TO CONSIDER WHEN CHOOSING ISPS: These include:

a. **Availability:** Not all ISPs offer services in on all areas.

b. **Speed/ Network Performance**

c. **Price.** Prices vary by package

d. **Support Services / Customer care**

e. **Restrictions of use**

f. **Reliability :** How long the ISP has been in business

g. **Compatibility:** That the speed of their modems and their software should match the speed of yours

h. **Email addresses:** Check whether the ISP has email and WWW services. Some ISPs can set up a custom email address when you activate your account. This would appear something like name@isp.com.

a) Meaning of Internet

FACTORS AFFECTING THE SPEED OF AN INTERNET CONNECTION: These include:

a. **Computer Processor speed**

b. . **Distance the data travels**

c. **Traffic / number of users on the network**

d. **Malware, Spyware and Viruses.**

e. **Modem speed.**

f. **Natural Conditions**

g. **Positioning of wireless access points**

h. **Memory available**.

i. **Computer internet settings**

j. **Technological Circumstances** such as loose connections of cables or maintenance works being done by the ISP.

k. **Cookies:** Over time, cookie files saved by websites in browser can compromise the speed .

b) Implications of the Internet

- The Internet is available for everybody's use (public use). Unlike traditional broadcasting media, such as radio and television, the Internet does not have a centralized distribution system, or ownership.

- This flexibility has greatly contributed to the success and proliferation/expansion of the Internet.

- The increased use of the internet has come with both advantages and disadvantages.

b) Implications of the Internet

Advantages of using the Internet

- **Interactive communication**; internet offers several communication tools such as emails, chatting, instant messaging, audio and video conferencing, online telephone calls etc.

- **Resource sharing**; data, information, software programs can be shared over the internet.

- **Research**; internet helps in conducting research using books online, encyclopaedia, audio and video tutorial to answer research questions.

- **Entertainment tools for leisure**; through on-line games, online chats, multimedia (audio, video) etc.

b) Implications of the Internet

Advantages of using the Internet

- **Online services**; internet offers online services like e-business, e-commerce and e-learning.

- **Information on the World Wide Web** is easily accessible, powered by search engines.

- **Telecommuting**. Through internet connectivity and interactivity one can now work from home and communicate with the office through networked computers and telephone facilities.

- Has storage where you can store information safely and can access it anywhere.

- It is accessible 24/7 (always on)

- Plus a lot more advantages!!

b) Implications of the Internet

Disadvantages of using the Internet

- Computer viruses can be spread over the internet.

- Internet provides access to unsuitable material such as Pornography, the biggest threat to healthy mental life.

- Theft of Personal information: If you use the Internet, you may be facing grave danger as your personal information such as name, address, credit card number etc. can be accessed by hackers or thieves.

- Spamming: Spamming refers to sending unwanted e-mails in bulk, which provide no purpose and needlessly obstruct the entire system.

b) Implications of the Internet

Disadvantages of using the Internet

- Some people get addicted to the internet, causing problems with their social interactions of friends and loved ones.

- The initial cost of connecting to the internet is high. e.g. buying computers.

- Many people are computer illiterate and so can not use internet, hence miss.

- There is a lot of wrong information on the internet. Anyone can post anything, and much of it is garbage/ inaccurate.

Sub Topic 2. Internet Services

Sub topic Objectives:

- identifying the different Internet services.

- using email to communicate.

- using internet facility for research.

- explaining the concept of Netiquette.

a) Internet services

Below are some of the services enabled by the internet

a. **Telnet** – enables users to use the resources of a computer in another part of the world. This is done by remotely logging to the distant computer which is called the host.

b. **Email** – It allows the transfer of messages, documents, and pictures among others, across the Internet.

c. **Mailing list** – This is based on the email protocol. As an electronic mailing list it is very convenient when somebody wants to send a message or newsletter, for example, to many people in one go.

a) Internet services

d. **Internet Relay Chat (IRC)** – A live interactive discussion in which parties on the network exchange ideas and observation electronically. Chats are usually organized in what we call chat rooms.

e. **File Transfer Protocol** – The standard method for transferring files, whether downloading or uploading, to and from your computer with another computer on the Internet.

f. **Newsgroups** – Worldwide discussion areas where notices can be posted for anyone to view. They are equivalent to a discussion group or an electronic bulletin board. There are newsgroups for every conceivable topic and more, e.g. educational technology.

a) Internet services

g. **World Wide Web** – This refers to the global collection of websites consisting of linked electronic documents called Webpages stored on internet servers all over the world. The www is the most exciting service that has revolutionized the Internet, people use this service to browse for information.

h. **Instant Messaging:** A combination of real-time chat and e-mail by which short text messages are rapidly exchanged over the Internet, with messages appearing on recipient's display screen immediately upon arrival.

i. **Usenet**: A system of worldwide discussion groups.

a) Internet services

j. **Internet Telephony or Voice over IP**: Real-time voice conversations transmitted between computers on the Internet.

k. **Web Directory**: A listing of Web sites and their URLs, categorized by topic.

l. **Electronic Commerce/e-commerce:** Conducting commercial activities on the Internet.

m. **Social Networking.** A type of service where users can seek others who share their interests, find out what's going on in their areas of concern, and share information with one another (e.g. Facebook, Twitter).

a) Internet services

n. Cloud Computing: A service in which computer software, hardware and data are used remotely over the Internet, instead of acquiring and using them on a local computer.

o. Search Engines: Software programs that look through the Web to locate sites matching a keyword entered by the user. Keyword: A string of letters or words that indicates the subject to be searched.

b) Email communications

- Email communications refers to the transmission of messages via computer <u>networks</u> such as; a local area network, WANs, or <u>internet</u>.

- The email can be simple text, or include an attachment such as a word processing document, PDF or graphic.

- Email software (Commonly known as email client) is a computer program used to access and manage a user's email account. It may be web based or not.

- Popular locally installed email clients include Microsoft Outlook, Pegasus Mail, KMail, Evolution and Apple Mail.

- Popular web-based email clients / **webmail** include: GMail, Yahoo!, Lycos mail, and Hotmail.

b) Email communications

Advantages of using email as a means of communication

1. Easy to use. Emails applications have user friendly tools that help during composing messages.

2. Email supports sending of attachments like documents, zipped files, e.t.c

3. It is very fast in terms of speed: The e-mail is delivered instantly, anywhere across the globe.

4. Easy to prioritize: Since the mails have subject lines, it is easy to prioritize them and ignore unwanted mails.

5. Email messages can be sent to many recipients at the same time

b) Email communications

Advantages of using email as a means of communication

6. Emails can also carry hyperlinks that lead to other webpages with just a click

7. One can subscribe to news and other online services through email

8. Email software have management features that help users to organize their messages in folders like inbox, sent, draft, etc.

9. Easier for reference: When one needs to reply to a mail, there is a provision in the mailing system to attach the previous mails as references. This refreshes the recipient's knowledge, on what he is reading.

b) Email communications

Advantages of using email as a means of communication

10. Environment friendly: Compared to postal mails which use paper and fuel to transport letters. Electronic mail saves a lot of trees from being axed. It also saves fuel needed in transportation.

11. Email software have address book features that may be sorted in alphabetical order.

12. Email software has a good degree of security features such as username and password before sign in

13. Email applications have inbuilt English dictionary which safeguards the sender from incorrect spelling and grammar.

b) Email communications

Advantages of using email as a means of communication

14. Email is a relatively cheap means of communication since there are no printing or postage expenses involved.

15. 24/7 any time access. At any time of the day or night, one can communicate with friends, relatives, professors and business associates.

16. Messages remain permanent for future access from anywhere.

17. Use of graphics such as colorful greeting cards and interesting pictures can be sent through e-mails.

18. Advertising tool: many individuals and companies are using e-mails to advertise their products, services, etc.

b) Email communications

Limitations of using Email as means of communication.

1. **Emails can spread Viruses:** The recipient needs to scan the mails, as viruses are transmitted through them and have the potential to harm computer systems.

2. **Spam and Junk:** E-mails when used to send unsolicited messages and unwanted advertisements create nuisance called Spam. Checking and deleting these unwanted mails can unnecessarily consume a lot of time, and it has become necessary to block or filter the unwanted e-mails by means of spam filters.

3. **E-mail spoofing** is another common practice. Spoofing involves disguising as different sender by altering the e-mail headers or the addresses from which the mail is sent.

b) Email communications

Limitations of using Email as means of communication.

4. **Hacking and email interception:** The act of unauthorized attempts to bypass the security mechanisms of an information system or network is termed as hacking. After the e-mail is sent and before it is received by the desired recipient, it "bounces" between servers located in different parts of the world. Hence, the e-mail can be intercepted by a professional hacker.

5. **Misinterpretation:** One has to be careful while posting any kind of content through an e-mail. If typed in a hurry, the matter could be misinterpreted.

6. Since the content posted via e-mails is considered informal, there is a chance of business documents going unnoticed. Thus, vital communications and especially those requiring signatures are not managed through e-mails.

b) Email communications

Limitations of using Email as means of communication.

7. **Crowded inbox:** Over a period of time, the e-mail inbox may get crowded with mails. It becomes difficult for the user to manage such a huge chunk of mails.

8. **Need to check the inbox regularly:** In order to be updated, one has to check his e-mail account regularly, which may be expensive in the long run.

9. Email cannot be used without computers especially in remote areas without electricity.

10. In case **one forgets his/her** password, signing in is not possible and this can lead to loss of information.

11. Email may violate privacy in case someone else gets to know your user password since the other may check your mails.

b) Email communications

Components of an   e-mail message: Headers, Body, and Attachments

1. **Headers** : The message headers contain information concerning the sender and recipients. The exact content of mail headers can vary depending on the email system that generated the message. Generally, headers contain the following information:

   – **Subject**. The theme of the email message

   – **Sender (From).** This is the senders Internet email address.

   – **Date and time received (On).** The time the message was received.

   – **Recipient (To :).** First/last name of email recipient, as configured by the sender.

   – **CC: "Carbon copy"** enables copies of the email message to be sent to third party while acknowledging other recipients

   – **Bcc:** Enables copies of the mail message to be sent to the third party without acknowledging nay other recipients.

   – **Reply-to.** This is the Internet email address that will become the recipient of your reply if you click the Reply button.

b) Email communications

Components of an e-mail message: Headers, Body, and Attachments

2. Body:

– The body of a message contains text that is the actual content.

– The message body also may include signatures or automatically generated text that is inserted by the sender's email system.

3. Attachments

– Attachments are optional and include any separate files that may be part of the message.

ASSIGNMENT: Use an Internet facility to search for a webpage with the lyrics of the East African Anthem including both Kiswahili and English versions. Copy the lyrics text and save it in a new word document. Send it as an attachment to your friend's email and send a blind carbon copy to your teachers' email.

d) Netiquette

- Netiquette: rules of Behavior when using the Internet

- "Netiquette" refers to Internet etiquette. This simply means the use of good manners in online communication such as e-mail, forums, blogs, and social networking sites.

- It is important to use netiquette and communicate to people online in the same manner you would communicate physically.

d) Netiquette

Netiquette guidelines:

- **Be clear:** Make sure the subject line (e-mail) or title (web page) reflects your content

- **Use appropriate language:** Avoid sending Abusive and Emotional messages.

- Don't use ALL CAPITAL LETTERS--it's equal to shouting or screaming

- **Be brief:** If your message is short, people will be more likely to read it

- **Make a good impression:** Your words and content represent you; review/edit your words and images before sending

d) Netiquette

Netiquette guidelines:

- **Don't Forward e-mail messages you receive** *without permission of the original sender.*

- **Obey copyright laws:** Don't use others' images, content or use web site content without permission.

- **Do not send SPAM:** Spamming is posting or e-mailing unsolicited e-mail, often advertising messages, to a wide audience (another way of thinking of it is electronic junk mail).

- **Don't respond to "flames" or personal attacks**

- Always keep messages brief and use proper grammar and spellings.

d) Netiquette

Netiquette guidelines

- Never read someone's private mail.

- Don't Click on hyperlinks to unknown sites, especially on adverts and popups.

- Don't download attachments from unknown sources.

- Avoid impersonation.

- Adhere to the same standards of behaviour online that you follow in real life.

- Respect other people's time and bandwidth.

- Make yourself look good online.

- Respect other people's privacy.

- Logout or log off your account after use.

- Post only acceptable information that has no harm to the public.

- Remember you are not anonymous. What you write in an e-mail and web site can be traced back to you.

- Know where you are in cyber space.

Sub Topic 3. World Wide Web

Sub topic Objectives:

   a. Defining a web browser

   b. Identifying different web browsers.

   c. Defining a search engine.

   d. Identifying different search engines.

   e. Searching for information from the web.

   f. Using search engine syntax.

   g. Defining a website.

   h. Identifying different types of websites.

   i. Explaining the concept of cloud computing.

a) Web browsers

- A web browser is a software application for displaying WebPages the World Wide Web.
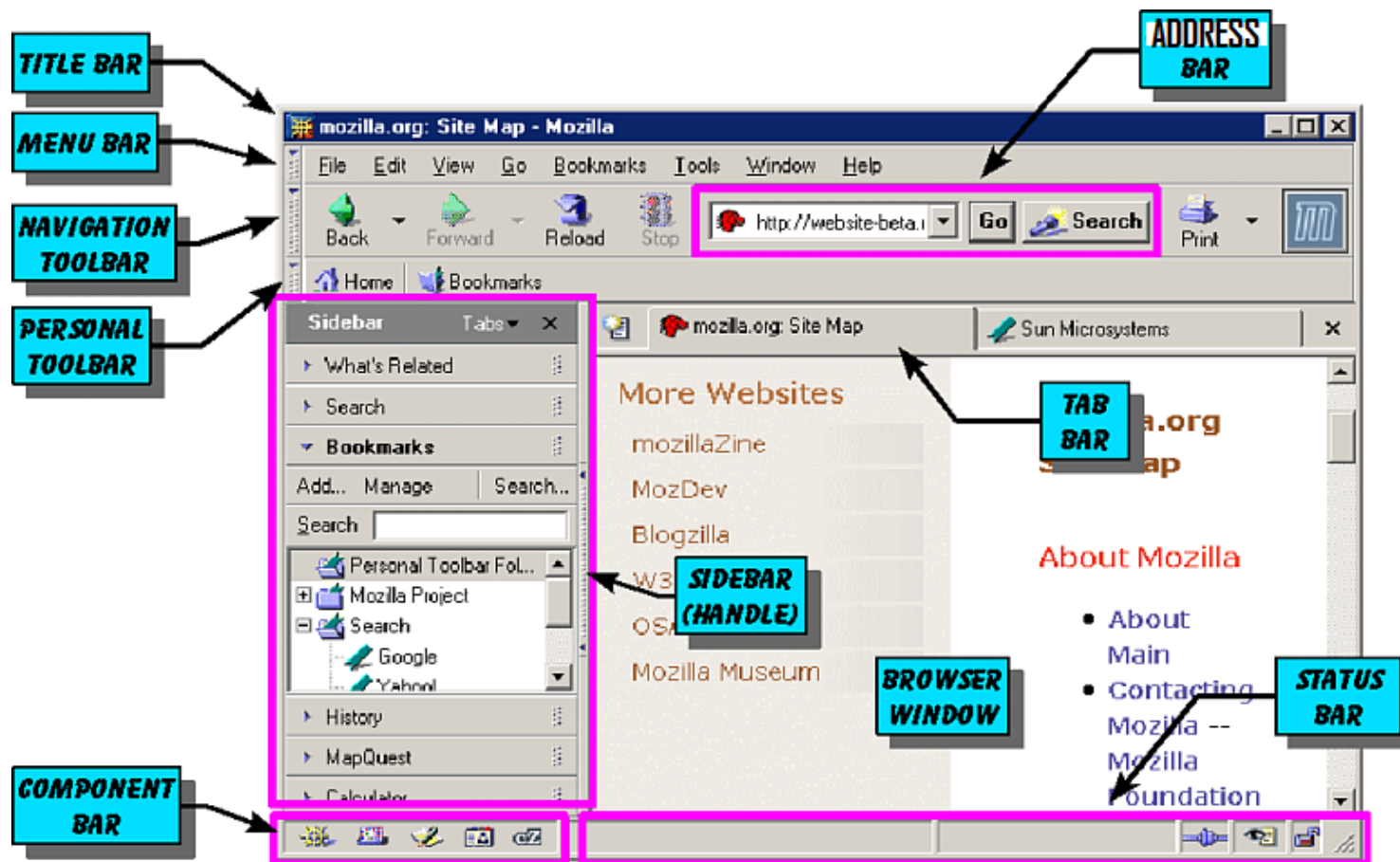
b) identifying different web browsers

- There are hundreds of web browsers. Popular ones include: Mozilla Firefox, Google Chrome, Opera, Apple Safari and Microsoft Internet Explorer/ Edge

c) search engines

- The world wide web is a big place. If you know the web address, or URL, of a site you can find it by typing it into the address bar along the top of your browser. But what if you don't know the URL?

- You can find pages easily search by using a search engine.

- A web search engine is a system that takes in user keywords, looks for information on the World Wide Web and return a line of results (hits), usually in form of a mix of links to matching webpages.
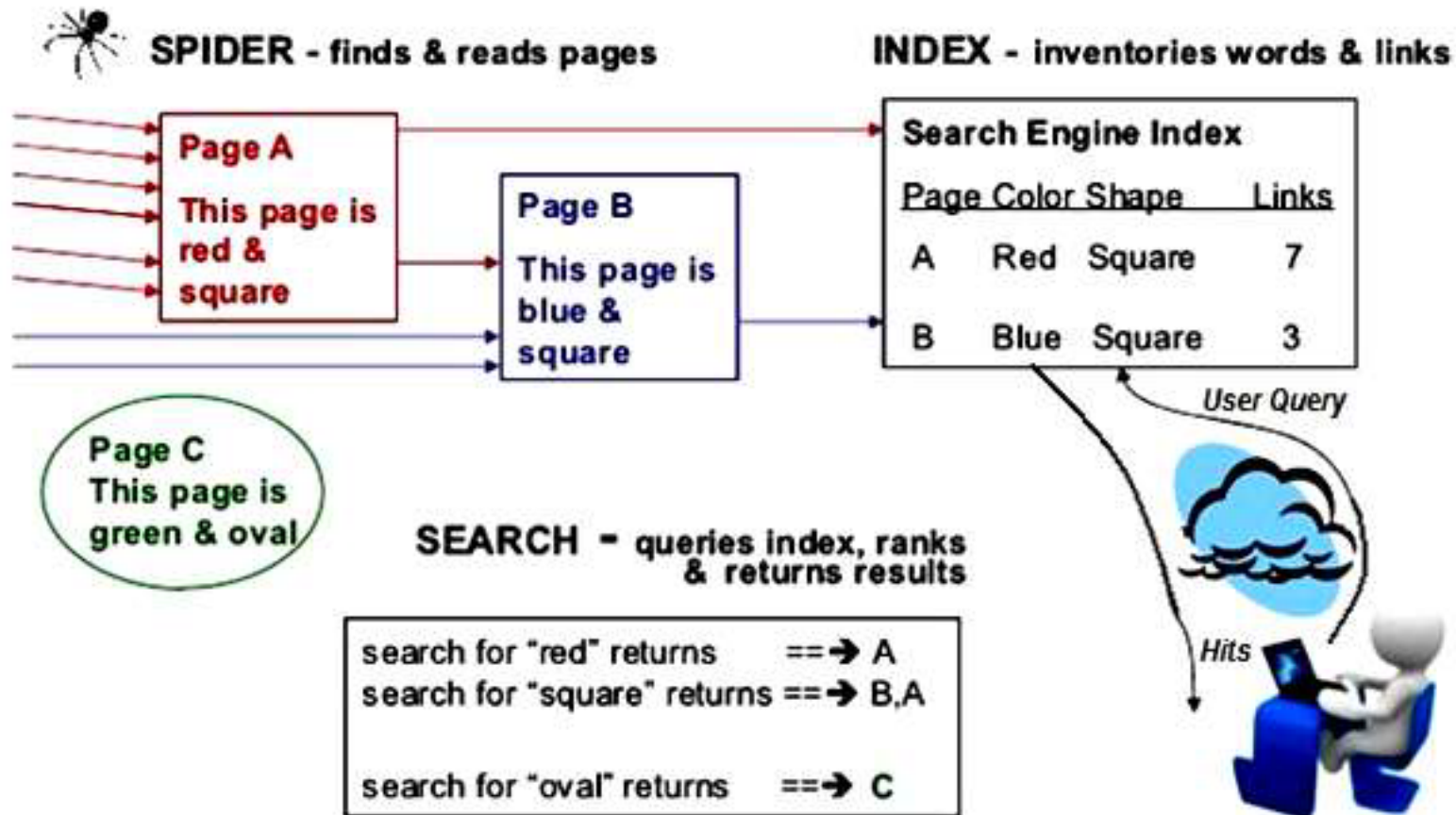
c) search engines

How search Engines Work

- Web search engines work by storing information about many web pages, which they retrieve by a spider (an automated Web crawler) which follows every link on the web pages.

- The search engine analyzes the contents of web pages and determines words to store in an **index database**.

- Index words can be extracted from the
  - titles,
  - page content,
  - headings (eg <H1>, <H2>), etc or
  - special fields called meta tags.
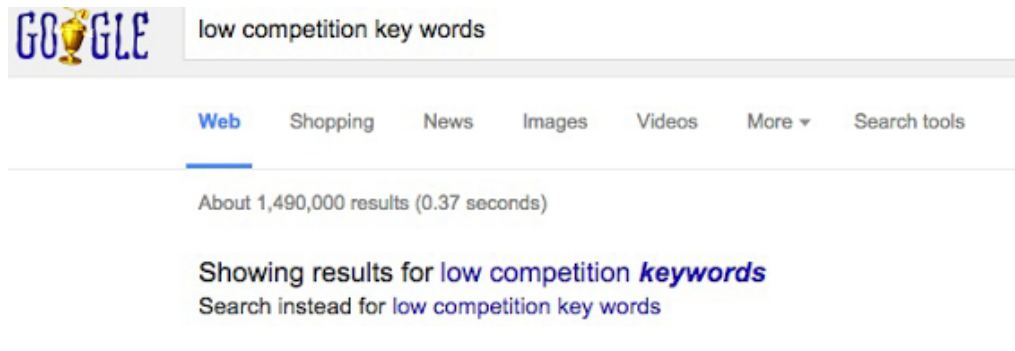
c) search engines

- How search Engines Work

SPIDER - finds & reads pages
INDEX - inventories words & links

Page A
This page is red & square

Page B
This page is blue & square

Page C
This page is green & oval

Search Engine Index

Page	Color	Shape	Links
A	Red	Square	7
B	Blue	Square	3

User Query

SEARCH - queries index, ranks & returns results

search for "red" returns ==➔ A
search for "square" returns ==➔ B,A
search for "oval" returns ==➔ C

Hits

- When a user enters a query into a search engine (typically by using keywords), the engine examines its index database and provides a listing of best-matching web pages according to its criteria, usually with a short summary containing the document's title and sometimes parts of the text.

d) identifying different search engines

- Popular search engines on the world wide web include

- Google,

- Bing,

- Yahoo,

- Ask.com, AOL.com, etc

Effective Internet Searching

- The challenge is to ask your question the right way, so that you don't end up overwhelmed with too many search results, underwhelmed with too few, or simply unable to locate the material that you need.

- **Keywords:** Search engines don't read sentences the way people do: instead, they look for the key words in your query in the websites they search. Common words are ignored (that, to, which, a, the, …)

SEARCH STRATEGIES

- Keyword Searching

- Boolean

- Advanced
  - Specify Filetypes
  - Search within a website
  - Search By Date
  - Use browser history etc

f) using search engine syntax

- Use "quotation marks" to search as a phrase and keep the words linked together.

- + and – can be used to include or exclude a word

- Boolean Syntax: Enter words and connect with Boolean Operators: AND, OR, NOT
  - AND will include sites where both words are found. Uses: joining different topics eg (ie. "global warming" AND California).
  - OR - requires at least one of the terms is found Uses: join similar or synonymous topics (ie. "global warming" OR "greenhouse effect")
  - NOT – searches for the first term and excludes sites that have the second term Uses: join similar or synonymous topics (ie. Washington NOT school)

f) using search engine syntax

Other Syntax:

- **The wildcard operator (*):** Google calls it the *fill in the blank* operator. For example, amusement *

- **Site search:** Many Web sites have their own site search feature, but you may use a search engine to get results from one website Example: site:www.newvision.co.ug ICT in schools.

- **Related sites:** For example, related:www.youtube.com can be used to find sites similar to YouTube.

- etc

g) defining a website

- The **Web (World Wide Web)** consists of websites hosted on **servers** on the internet globally.

- Websites contain information organized into Web pages.

- Webpages are electronic documents with text and graphic images, written in Hyper Text Markup Language (HTML).

- It contains hypertext links, or highlighted keywords and images that lead to related information.

- A collection of linked Web pages that has a common theme or focus is called a **Web site**.

- The main page that all of the pages on a particular Web site are organized around and link back to is called the site's **home page**.

g) defining a website

Client/Server Structure of the Web

- Web is a collection of files that reside on computers, called **Web servers**, that are located all over the world and are connected to each other through the Internet.

- When you use your Internet connection to become part of the Web, your computer becomes a **Web client** in a worldwide client/server network.

- A **Web browser** is the software that you run on your computer to make it work as a web client.

g) defining a website

Hypertext Markup Language (HTML)

- WebPages are written in HTML, which is interpreted by web browsers.

- HTML uses codes, or tags, to tell the Web browser software how to display the text contained in the document.

- For example, a Web browser reading the following line of text:

    <B> A Review of the Book<I>Wind Instruments of the 18th Century</I></B>

- recognizes the <B> and </B> tags as instructions to display the entire line of text in bold and the <I> and </I> tags as instructions to display the text enclosed by those tags in italics.

g) defining a website

Website Addresses

- Each computer on the internet does have a unique identification number, called an IP (Internet Protocol) address.

- The IPv4 addressing system uses a four-part number. For example, 106.29.242.17

- Most web browsers do not use the IP address to locate Web sites and individual pages.

- They use domain name addressing.

- A **domain name** is a unique name associated with a specific IP address by a program that runs on an Internet host computer.

- This program, which coordinates the IP addresses and domain names for all computers attached to it, is called **DNS (Domain Name System) software**.
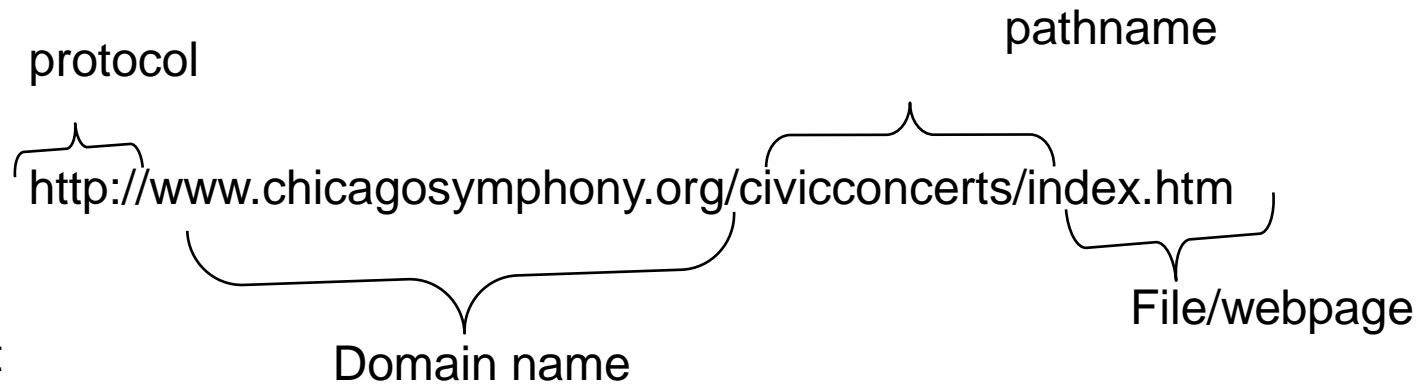
g) defining a website

Uniform Resource Locators

- The IP address and the domain name each identify a particular computer on the Internet.
- However, they do not indicate where a Web page's HTML document resides on that computer.
- To identify a Web pages exact location, Web browsers rely on a Uniform Resource Locator (URL).
- URL is a four-part addressing scheme that tells the Web browser:
  - ➢ What transfer protocol to use for transporting the file
  - ➢ The domain name of the computer on which the file resides
  - ➢ The pathname of the folder or directory on the computer on which the file resides
  - ➢ The name of the file

g) defining a website

Structure of a Uniform Resource Locator

pathname

protocol

http://www.chicagosymphony.org/civicconcerts/index.htm

Domain name

File/webpage

http => Hypertext
Transfer Protocol

| Protocol | | Folder and subfolder |

http:// www.newvision .co.ug /news/sports/ topstory.htm

| Host / website domain name | Top-Level Domain | Name of Webpage/ Document on the server and file extension |
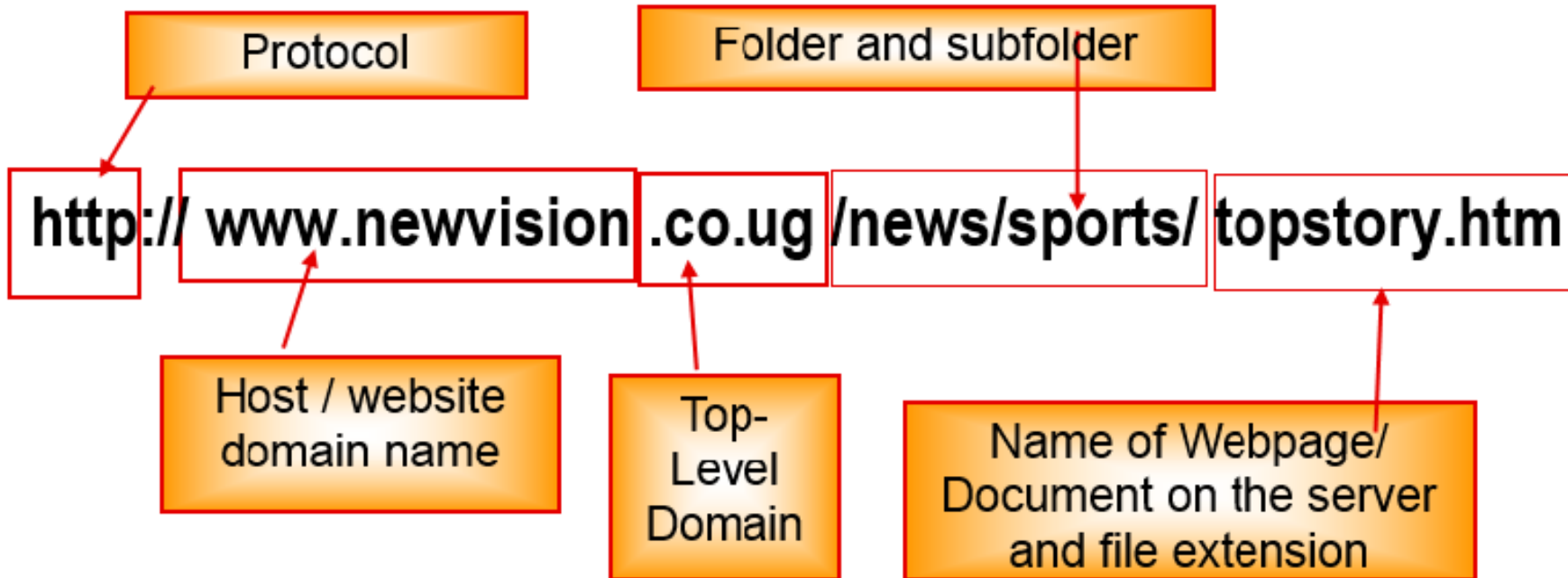
g) defining a website

READING WEB ADDRESSES

Let's look at the parts of a typical URL:

- **http://www.sc.edu/beaufort/library/pages/bones/lesson1.html**
- Here's what it all means:
- **"http"** means hypertext transfer protocol and refers to the rules used to transfer and deal with information
- **"www"** stands for World Wide Web and is the general name for the host server that supports text, graphics, sound files, etc. (It is not an essential part of the address, and some sites choose not to use it)
- **"sc"** is the second-level domain name and usually designates the server's location, in this case, the University of South Carolina
- **"edu"** is the top-level domain name (see below)
- **"beaufort"** is the directory name
- **"library"** is the sub-directory name
- **"pages" and "bones"** are the folder and sub-folder names
- **"lesson1"** is the file name
- **"html"** is the file type extension and, in this case, stands for "hypertext mark-up language" (that's the language the computer reads).

h) types of websites

- **1. Web portal :** An internet-based website that can perform many electronic functions and provide the user with quick access to a variety of information and services. EG. UNEB Results Portal

- **2. Content aggregator:** **C**ombines information such as news and entertainment, sports scores, weather forecasts, photographs and video from a variety of sources and makes the combined content available to its customers e.g Web-based feed readers like RSS Feeds, delicious.com, etc.

- **3. A wiki:** A website that allows collaborative editing of its content and structure by its users. E.g. Wikipedia

- **4. A blog:** A **blog** is a website in which journal entries are posted on a regular basis. A person who posts entries is called a **blogger**

- Blog posts are typically displayed in reverse chronological order (the most recent post appears first).A majority are interactive, allowing visitors to leave comments.

h) types of websites

5. Media sharing website

- Media sharing sites allow you to upload your photos, videos and audio to a website that can be accessed from anywhere in the world. E.g youtube.com, dailymotion.com, blip.tv, slideshare.net, archive.org, podbean.com, and many, many others.

6. Social networking Website

- An online service, platform, or site that focuses on building social relations among people who share interests by posting information, comments, messages, images, etc.

- *A type of website where users can seek others who share their interests, find out what's going on in their areas of concern, and share information with one another*

- *Examples include i).Facebook (ii) Twitter (iii) Google Plus, etc.*

h) types of websites

- **Social Networking Websites: Advantages**

- **Staying Connected:** The main purpose of social media is to be able to stay connected to friends and families The main purpose of social media is to be able to stay connected to friends and families

- **Finding People With Common Interests:** Social networking is also a great way to meet peers.

- **Invaluable Promotional Tool:** Companies, artists, etc use Social Media for advertising to the masses

- **Information Spreads Incredibly Fast** Breaking news and other important information can spread like wildfire on social media sites.

- **Helps To Catch And Convict Criminals: The Police uses social media to** to persecute criminals.

Social Networking Sites

h) types of websites

- **Social Networking Websites: Disadvantages**
- **Perpetuates False And Unreliable Information: Anyone can post any unverified rumours which** cause panic and severe misinformation in society.
- **Causing Major Relationship Problems:** Online social interactions have cause many breakups.
- **Cyber Bullying:** A new trend of cyber bullying is wreaking havoc all across the world. This is especially true with young kids publicly harassing one another, and posting mean or slanderous things which are broadcasted to the entire cyber world.
- **Used To Profile and Discriminate In The Job World:** Employers are using social media to pre-screen their applicants.

- **The Addiction Is Real:** One of the biggest problems with the social media craze is that people are becoming more and more addicted to using it. It is the number one time waster at work, in school, and at home.
- **Privacy Violation:** *Social Networks may violate privacy in case someone else gets to know your user password.*
- **Misinterpretation**: *One has to be careful while posting any kind of information on social networks. If typed in a hurry, the matter could be misinterpreted.*

h) types of websites

Sample Examination Type Question:

(a) The World Wide Web has greatly evolved and it consists of different types of websites, including blogs and wikis. Tabulate **three** differences between blogs and wikis. *(3 marks)*

(b) Describe **two** ways to evaluate the reliability of information found on a website. *(2 marks)*

h) types of websites

Possible Answer:(a) Differences between a Blog and a Wiki

Blog	Wiki
1. Blog usually has a single author	1. a Wiki usually has many authors
1. Blog is usually in reverse chronological structure	1. a Wiki has a structure determined by content and users
1. Blog is usually personal/someone's opinion	1. a Wiki is usually objective
1. The public can't edit someone's blog, can only add comments to a blog.	1. a Wiki can be edited by the public users.

h) types of websites

B)Evaluating the reliability of information found on a website

- **Check the last part of the URL.** The top level domain can help to identify reliability (for example .gov, .ac, .ed, .sch are usually fairly reliable, while.org, .co, .com are less reliable).

- **See if responsible bodies have endorsed the site** e.g. UNEB. If site is endorsed by reliable/reputable people/organizations it can be accepted as being reliable.

- **Checking the author's credentials**. If the author's credentials are good it is likely to be reliable.

- **Can compare information from sites to see if it is reliable**. If information is comparable to information from reliable/ authenticated/text books it is likely to be reliable.

- **Check the date of the last update.** If the date of the last update was a long time ago it is likely to be unreliable.

- **Are any advertisements present?** If site has excessive advertising it could be unreliable. If the advertising is related only to its own products it could be unreliable. If it has testimonials it is likely to be reliable.

h) cloud computing

- **Cloud computing** is Internet-based computing, whereby shared resources e.g hardware, software and information are provided to other devices on-demand.

- In simple terms, Cloud computing is using the internet to access someone else's software running on someone else's hardware in someone else's data center.

- Cloud computing operates on a similar principle as web-based email clients, allowing users to access all of the features and files of the system without having to keep the bulk of that system on their own computers. In fact, most people already use a variety of cloud computing services without even realizing it such as Gmail, Google Drive, Google Docs, etc.

- The online software services 'on the cloud' have long been referred to as Software as a Service (SaaS) and the hardware as Infrastructure as a service (IaaS).
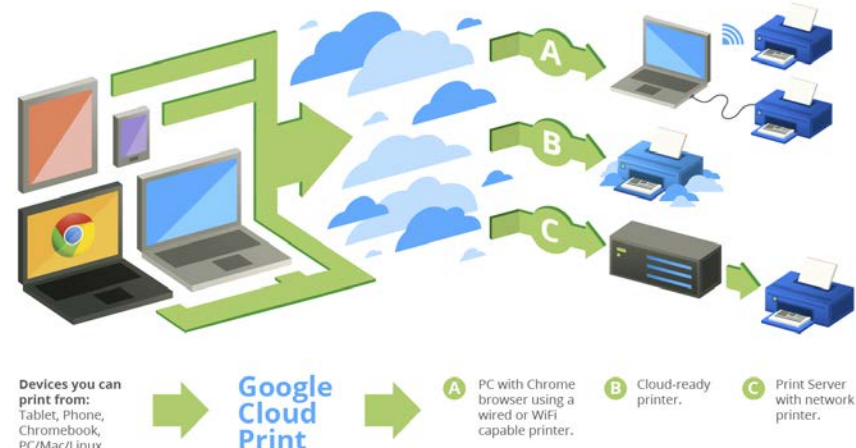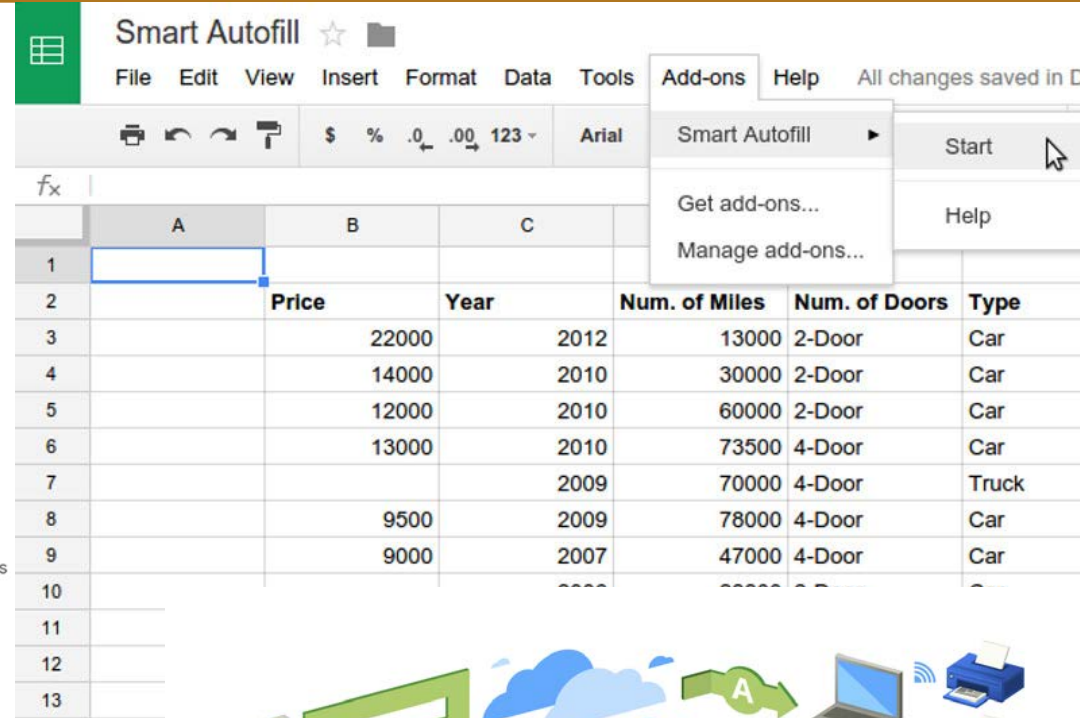
h) cloud computing

Some Examples of Cloud computing applications

Left: Online Google Sheets, Part of Google Docs Suite, the Cloud Alternative to Microsoft Office Programs

Comparison of Google Suite vs Microsoft Suite

FUNCTION	GOOGLE	MICROSOFT
Word-Processing	Docs	Word
Spreadsheets	Sheets	Excel
Presentations	Slides	PowerPoint
Email	Gmail	Outlook
Web Pages	Sites	SharePoint
Storage	Drive	OneDrive
Instant Messaging	Talk	Lync
Video Conferencing	Hangouts	Lync
Social Networking	Google+	Yammer
Note Taking	Keep	OneNote

Google Cloud Print Service

h) cloud computing

Advantages of Cloud Computing

- Lower computer costs:
  - You do not need a high-powered and high-priced computer to run cloud computing's web-based applications.
  - Since applications run in the cloud, not on the desktop PC, your desktop PC does not need the processing power or hard disk space demanded by traditional desktop software.
- Improved performance: With few large programs hogging your computer's memory, you will see better performance from your PC.
- Reduced software costs:
  - Instead of purchasing expensive software applications, you can get most of what you need cheaply, e.g most cloud computing applications today, such as the Google Docs suite better than paying for similar commercial software.
- Better Security: By using encryption, information on the cloud is less accessible by hackers or anyone not authorized to view the data. As an added security measure, with most cloud-based services, different security settings can be set based on the user.

h) cloud computing

Advantages of Cloud Computing

- Instant software updates:
  - Another advantage to cloud computing is that you are no longer faced with choosing between obsolete software and high upgrade costs.
  - When the application is web-based, updates happen automatically.

- Improved document format compatibility.
  - You do not have to worry about the documents you create on your machine being compatible with other users' applications.

h) cloud computing

Advantages of Cloud Computing

- **Unlimited storage capacity:** Cloud computing offers virtually limitless storage on servers in powerful datacenters.

- **Increased data reliability/ safety:** Unlike desktop computing, in which if a hard disk crashes and destroy all your valuable data, a computer crashing in the cloud should not affect the storage of your data.

- **Universal document access:** That is not a problem with cloud computing, because you can access it whenever you have a computer and an Internet connection.

- **Easier group collaboration:** multiple users can collaborate easily on documents and projects

- **Device independence:** Even to a portable device, and your applications and documents are still available.

h) cloud computing

Disadvantages of Cloud Computing

- Requires a constant Internet connection: Cloud computing is impossible if you cannot connect to the Internet. A dead Internet connection means no work.

- Does not work well with low-speed connections: Web-based applications require a lot of bandwidth to download, as do large documents.

- Features might be limited: Many web-based applications simply are not as full-featured as their desktop-based applications. For example, you can do a lot more with Microsoft PowerPoint than with Google Presentation's web-based offering.

h) cloud computing

Disadvantages of Cloud Computing

- Can be slow: Even with a fast connection, web-based applications can sometimes be slower than accessing a similar software program on your desktop PC. Everything about the program, from the interface to the current document, has to be sent back and forth from your computer to the computers in the cloud.

- Stored data might not be secure: With cloud computing, all your data is stored on the cloud. Any unauthorised users gaining access to your password may access confidential data.

- Migration issues: Each cloud systems uses different protocols and different APIs, so your normal applications will have to be adapted to execute on these platforms.

UACE Sub - ICT

End of Topic 8: Internet and World Wide Web

Next Topic:

Topic 9: Computer Word Processing II