

Chapter 9 :Introduction to Internet and Web

HISTORY OF INTERNET

- The seeds of Internet were planted in 1969, when U.S Department of Defense sponsored a project named ARPANET(acronym for advanced Research Projects Agency NETWORK).
- In mid 80's, another federal agency, the National Science Foundation, created a new, high –capacity network called NSFnet, which was more capable than ARPANET.
- It was the Inter-networking i.e the linking of these two and some other networks(i.e the ARPANET, NSFnet and some private networks) that was named Internet.
- The original ARPANET was shut down in 1990, and the government funding for NSFnet discontinued in 1995.
- The commercial Internet services came into picture, which are still running the Internet.

ADVANTAGES OF INTERNET

- Greater access to information reduces research times.
- Useful communication links.
- Global reach enables one to connect to anyone on the Internet.
- Easy communication with other people.
- Publishing documents on the Internet saves paper.
- A valuable resource for companies to advertise and conduct business.

Disadvantage of the Internet

- Cyber frauds may take place involving Credit/Debit card numbers and details.
- Unsuitable and undesirable material available that sometimes are used by notorious people such as terrorists.
- Computer viruses get downloaded and spread across machines connected to networks and have detrimental effects.
- Much of the information isn't checked and may be incorrect or irrelevant .
- Message sent across the Internet can be easily intercepted and are open to abuse by others.

- Too much time spent on the the Internet could result in a lack of face-toface interaction with others and a loss of social skills.

- Going on-line runs the risk of hackers or viruses being able to damage our computer.

Knowledge

WORLD WIDE WEB(WWW)

- “the world wide web(WWW) is a set of programs, standards and protocols that allows the multimedia and hypertext files to be created, displayed and linked on the internet.

- WWW was proposed between 1989-1991 by Tim Berners-Lee
- Before WWW Internet was mainly used for obtaining textual information.
- The WWW is also affectionately called "The Web".
- WWW was proposed between 1989-1991 by Tim Berners-Lee proposed in 1989, WWW became a reality with invention of HTML and a text browser in 1990.

WEB SERVERS

- A **WEB SERVER** is a computer that stores websites on the Internet and delivers web pages to Viewers upon request.
- A **web server** is also called WWW server.
- A **web** generally programs or software that wait for requests from the web browser.
- **Some example of web** servers are : Apache, IIS, nginx, CWS, Netsite etc.

Services Provided by server

- Equipment /Resource Sharing
- Centralised File Saving for Data Sharing.
- Centralised Virus Scanning
- Centralised Backups

URLs


- A location on a net server is called a website.
- Each web site has a unique address called URL(Uniform Resource Locator) eg the web site of Microsoft has an address or URL called <http://www.microsoft.com>
- The Internet structure of the World Wide Web is built on a set of rules called Hypertext Transfer Protocol (HTTP) and a page description language called Hypertext Markup Language(HTML) generally.
- HTTP uses Internet addresses in a special format called a Uniform Resource Locator or URL
- URLs look like this
- Type://address/path

- **Where type: specifies the type of server in which the files is located, addressis the address of server, and path tells the location of file on the server.**
- <http://encycle.msn.com/getinfo/styles.asp>
 - http: specifies the type of server, encycle.msn.com is the address of server and getinfo /style.asp is the path of the file styles.asp.
 -
- The other examples of URLs are <ftp://ftp.prenhall.com>, <http://www.yahoo.com>, new://alt.tennis etc.

Elements of URL

- As we know that a URL(Uniform Resource Locator) is an address of a file on Internet.
- URL is determined by the following:
 - The type of server or protocol
 - The name/address of the server on the Internet
 - The location of the file on the server(this location may be related as a “path” through the file hierarchy)
- The intelligent browsers like Netscape Navigator or Mozilla FireFox or Microsoft Internet Explorer, can display files in just about any format available on any of the common types of servers.
- Typical URL e.g, <http://www.khoj.com>, the “http” identifies both the protocol and server. According to standard URL syntax, a colon(:) and two forwarded slashes(//) follow the protocol/server.
- Other component of the address is the name of the server, in this case, www.khoj.com. Server names have multiple components.
- Commonly a web server’s name will begin “WWW” for World Wide Web.
- The “.com” suffix(called a domain indicator) indicates that Khoj is a commercial entity, as opposed to a nonprofit organization(“.org”), a school or university(“.edu”), a branch of the Govt(“.gov”) etc.
- The naming scheme by which servers are identified is also known as the domain name system.
- In addition to it, a two letter abbreviation indicating the country name may be used e.g <http://www.microsoft.co.in>

URL Types

- Absolute URLs (it gives complete location information, it begins with protocol like http:// etc)
- Relative URLs(it used for the files/documents being used as content in the webpage, e,g, image files , doc files or pdf files etc. < eg

WebSite:

- A web site is a collection of web pages which are digital files generally written using HyperText Markup Language(HTML)
- For a website to be available to everyone in the world at all times, it must be stored or “hosted” on a computer that is connected to the Internet round the clock such a computer is known as a Web server.
- The web pages of awebsite are linked together(through hyperlinks and hupertext) and share a common interface and design.
- The site might also contain additional doucuments and files such as images, videos or other digital assets.
- Website can also be thought of as a digital environment capable of delivering information and solutions and promoting interaction between people, places and things to support the goals of the organization it was created for.

Components of Website

- Webhost
- Address
- Homepage
- Design
- Content

The Navigation Structure :-The navigation structure of a website is the order of the pages, the collection of what links to what. Usually it is held together by at least one navigation menu.

Web Pages:

- A webpage is a digital document that is linked to the World Wide Web and viewable by anyone connected to the internet having a web browser.
- It can contain any type of information, such as text, colour, graphics, animation, video and sound etc.

Component of Webpage

- Content wise -----text, images, graphics, video, sound, hyperlinks
- Structure wise---- Page Title , Header , Body of the web page , Navigational links, Footer

Types of Web Page

- A web page may be a static web page or a dynamic web page depending upon what type of content it stores.
- A web page may contain some content which remains just the same throughout or some content that changes with time or place or type of visitor etc. based on this property, the content of a web page can be these types:
[Static Web Page](#) , [Dynamic Web Page](#)