Web Technologies

UNITI

INTRODUCTION TO THE WEB

Understanding the internet and WWW

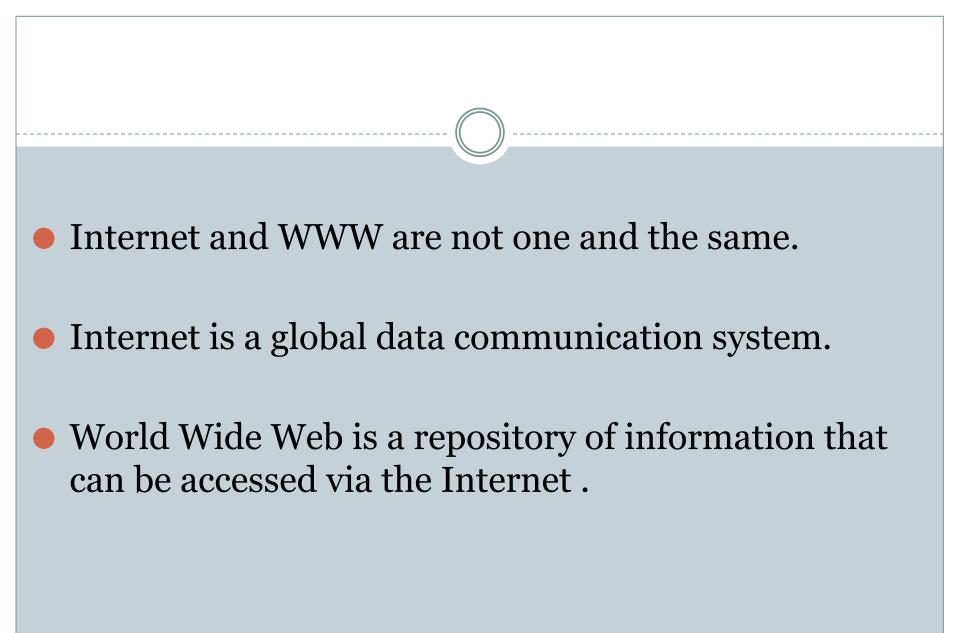
- Internet is a global system that consists of interconnected computer networks that uses the internet protocol
- Internet use a common set of rules called Protocols
- Standard protocol: Transmission Control Protocol/Internet Protocol (TCP/IP) Is used by the internet

- To retrieve information from the internet, WWW is used.
- The information is accessed as 'web pages' or 'HTML' documents.

 Web pages contain links called hyperlinks, which allows to access other web pages by simply clicking them. Web pages are viewed using a software called 'browser'.

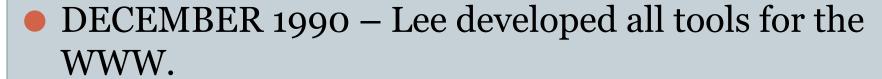
• First browser : Mosaic

- Commonly used browsers :
 - Microsoft Internet Explorer
 - Netscape Navigator
 - Mozilla Firefox



History of the Web

- 1980 WWW was started @ European Organization for Nuclear Research (CERN), Laboratory, Switzerland by Tim Berners-Lee.
- 1989 NeXTcube computer became the world's first web server.
- Tim considered several names:
 - Information mesh
 - The information mine/mine of information
 - o Finally, WWW



- HTTP 0.9(Hyper Text Transfer Protocol)
- HTML
- First web browser(web editor)
- First HTTP server
- o First website http://info.cern.ch
- o First web page address <u>http://info.cern.ch/hypertext/WWW/TheProject.html</u>
- First practical web browser : Mosaic in 1993 by Marc Andreessen

 September 1994 – Berners-lee founded World Wide Web Consortium(W3C)

WWW became commercially during 1996-98

 Now, the Internet has become such an integral part of our lives.

PROTOCOLS GOVERNING THE WEB

- Protocol is a set of rules that defines
 - Syntax (grammatical structure) and semantics(vocabulary) of the connection.
 - Examples of syntax: words,phrases,punctuation to form sentences
 - Examples of semantics: entire texts to single words('destination' and 'last stop')
 - Data transfer between two computing endpoints.

- TCP/IP is used to govern the web and to communicate across the internet.
- TCP/IP has a set of layers
- Commonly used protocols are
 - HTTP(HyperText Transfer Protocol)
 - SMTP(Simple Mail Transfer Protocol)
 - DNS(Domain Name System)

CREATING WEBSITES FOR INDIVIDUALS AND THE CORPORATE WORLD

- A *website* is set of related web pages that are addressed with a common domain name or IP address.
- A website is hosted on a machine called web server.
- The web pages of a website are accessed using URLs(Uniform Resource Locator)
- Web pages contain hyperlinks that guide the visitors navigating the website.

- Each website is usually designed for a specific purpose.
- Websites has two groups
 - Personal Websites
 - Corporate Websites

Personal Web Sites

- Personal Websites contain web pages that are created by an Individual Person.
- Individual information only available.
- Separate domain/larger domain.
- Many Internet Service Providers(ISPs) provide a few megabytes of space to their subscribers.

Corporate Websites

- Corporate website is developed by Company or Private enterprise.
 - o such as charities or non-profit organization
- Any website can contain a hyperlink to any other websit.

WEB APPLICATIONS

- Web applications accessed by web browsers usually through networks.
- Web applications run on a server called web server.
- Each web application is identified by a URL.



- □ Service oriented − implement web services and coded using server side technologies.
- □ Presentation oriented are usually clients of service oriented applications. They are coded in browser supported language
 - HTML, XML, JavaScript.