

Web Programming _1_web concepts

What is Internet?

Definition:

The Federal Networking Council (FNC) 's definition of the term "Internet".

"Internet" refers to the global information system that :

- (i) Is logically linked together by a globally unique address space based on the Internet Protocol (IP) or its subsequent extensions/follow-on;
- (ii) Is able to support communications using the Transmission Control Protocol/Internet Protocol (TCP/IP) suite or its subsequent extensions/follow-ons, and/or other IP-compatible protocols; and
- (iii) Provides, uses or makes accessible, either publicly or privately, high level services layered on the communications and related infrastructure described herein."

World Wide Web (WWW)

The World Wide Web:

The **World Wide Web (WWW)** is a vast collection of documents that are linked together and served to a browser when requested

It was introduced on February 26, 1991 by TimBernersLee

It supports different kinds of documents such as text, pictures, audio, video etc

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Web Page

A web page is a single HTML document, which can contain text, pictures, audio, video and small interactive programs.

Each HTML document is a single Web page, regardless of the length of the document or the amount of information included.

Hypertext transfer protocol (HTTP) is used to publish and retrieve Web pages.

Web Site

A web site is a collection of Web pages under the control of a particular person or a group.

The first page in a Website is '**index**' or '**default**'.

Web Browser

A client software that allows you to display and interact with a hypertext document hosted on the Web server is called a Web browser.

It is used to view WebPages, read email and newsgroups among other text.

On accessing a document using a browser, the document is transferred to your local host and the link is broken.

The following are the famous web browsers.

- ✓ NCSA's Mosaic
- ✓ Netscape Navigator
- ✓ Microsoft Internet Explorer



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Web Server

A computer, including software package, that provides a specific kind of service to client software running on other computers.

More specifically, a server is a computer that manages and shares web based applications accessible anytime from any computer connected to the Internet.

A Web server hosts the contents, which can be viewed by a special graphical software available on the client system.



URL

- ❑ URL stands for Uniform/Universal Resource Locator.
- ❑ The URL is the address of a resource available on the Internet.
- ❑ URL contains information about
 - ✓ The protocol (default : http),
 - ✓ port no (default : 80 for http),
 - ✓ machine name and
 - ✓ path of the resource

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Protocol

- "protocol" usually refers to a set of rules that define an exact format for communication between systems.

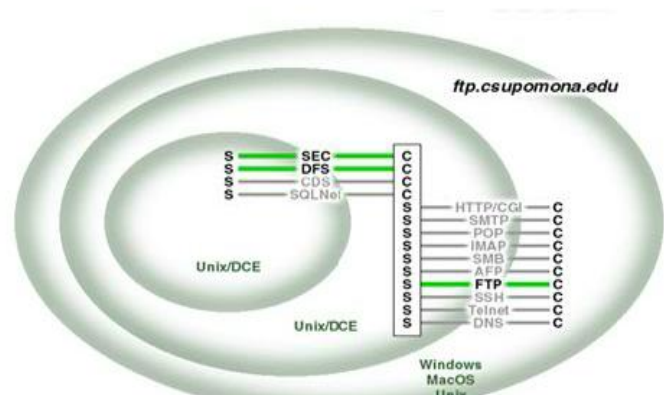
HTTP

- Hypertext Transfer Protocol is the protocol that Web servers and Web browsers use to communicate.
- A single HTTP operation is known as a Transaction. It consists of three steps :
 - ✓ Establishing a connection.
 - ✓ Issuing request from clients and getting responses from servers.
 - ✓ Termination of the connection by the Server.



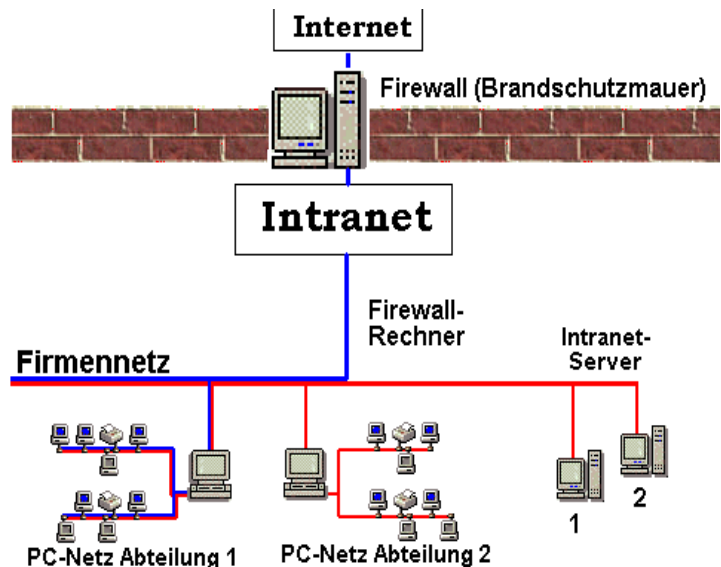
FTP

- File Transfer Protocol is the service that allows computers to transfer binary files across the internet/intranet.
- Files could include spreadsheets, digital photographs, sounds, compiled programs, or documents from word processing packages.



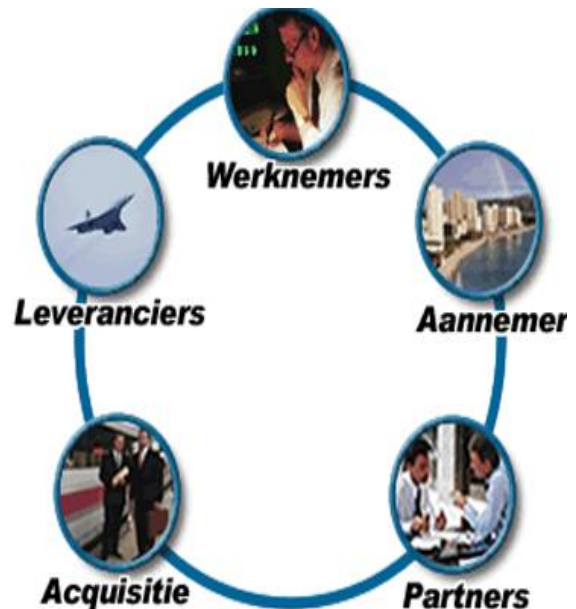
Intranet

- Intranet is a private computer network that uses internet protocols.
- Sometimes the Term refers to most visible service, the internal service.
- Briefly an intranet can be understood as "a private version of the internet".
- It can include one or more groups of computers, all joined in much the same way that your computer connects to the Internet.
- Intranet is similar to the Internet, except that they are either not connected to the Internet or shielded from the Internet by a firewall, which prevents people outside the firewall from accessing the information on the intranet.



Extranet

- ❑ An extranet is a private network that uses the Internet protocols and the public telecommunication system to securely share part of a business's information or operations with suppliers, vendors, partners, customers, or other businesses
- ❑ An extranet can be viewed as part of a company's intranet that is extended to users outside the company. An extranet requires security and privacy.



Search Engine

- ❑ A search engine is a program that locates and displays required information from the web.
- ❑ It allows us to submit a form containing a query that consists of a word or phrase describing the specific information that we need.
- ❑ To write queries in search engine we must learn the query syntax of the search engine.
- ❑ The following are some of the search engines

| | |
|---------------|--------------------|
| ❑ GOOGLE | www.google.com |
| ❑ AOL | www.aol.com |
| ❑ EXITE | www.exite.com |
| ❑ INFOSEEK | www.infoseek.com |
| ❑ META SEARCH | www.metasearch.com |
| ❑ MSN | www.msn.com |



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Internet Working with TCP/IP

- ❑ Transmission Control Protocol/Internet Protocol A protocol for communication between computers, used as a standard for transmitting data over networks and as the basis for standard Internet protocols.
- ❑ TCP is one of the main protocols in TCP/IP networks. Whereas the IP protocol deals only with packets, TCP enables two hosts to establish a connection and exchange streams of data. TCP guarantees delivery of data and also guarantees that packets will be delivered in the same order in which they were sent.
- ❑ TCP/IP assigns a unique number to every workstation in the world i.e. is IP Address.



INTERNET PROTOCOL (IP)

- ❑ IP - is responsible for moving packet of data from node to node.
- ❑ IP forwards each packet based on a four byte destination address.
- ❑ The address is a string of four numbers separated by periods (such as 172.16.0.1) used to represent a computer or other device on the Internet.