



# World wide Web

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- The www or the web is a repository of information spread all over the world and linked together. The www has a unique combination of flexibility, portability and user friendly features that distinguish it from other services provided by the Internet.
- The www project was initiated by CERN (European Laboratory for Particle Physics) to create a system to handle distribute resources necessary for scientific research.
- The www today is a distributed client-server service in which a client using a browser can access a service using a server. However, the service is distributed over many locations called websites.

# Introduction



- The www uses the concept of hypertext and hypermedia. In a hypertext environment, information is stored in a set of documents that are linked together using the concept of pointers. An item can be associated with another document using a pointer.
- The user can move to other documents by clicking the items that are linked to the other documents.
- Hypertext documents contain only text whereas hypermedia documents can contain pictures, graphics and sound.
- A unit of hypertext or hypermedia available on the web is called a *page*. The main page for an organization or an individual is known as *homepage*.

# Hypertext and Hypermedia

- A web browser is a software that acts as an interface between the user and www. Browsers can be text based or graphical. Browsers are also referred to as ***web clients*** or ***universal clients*** because in the client server model the browser functions as the client programming.
- The browser acts on behalf of the user.
  - It contacts a web server and sends a request for information.
  - It receives the information and then displays it on the users computer.

# Web Browser



- The www incorporates hypertext images, sound and video that can be viewed through a graphical browser. Browsers often include helper application which are actually software program that are needed to display images, hear sound or run animation sequences.
- The browser automatically invokes these helper applications when the user selects a link to a resource.
- There are different types of browsers. All perform the same basic function i.e. transferring hypertext but many has specific features that are unique.
- Basic function of browser is to open, view, save and print a web page. To accomplish this, web browser find, retrieve, view and send information over the Internet.

- **Mosaic**: It is one of the oldest and first Graphical web browser. It was introduced by NCSA (National Centre for Super Computing Applications) at University of Illinois in 1992. It is considered as basic for many other popular browsers.
- **Netscape Navigator**: It was a first commercial web browser released in 1994 by Marc Andrewson at Netscape Communication Corp. Its features are chatting, web based word processing, e-mail, image loading, etc.

# Commonly used Browsers

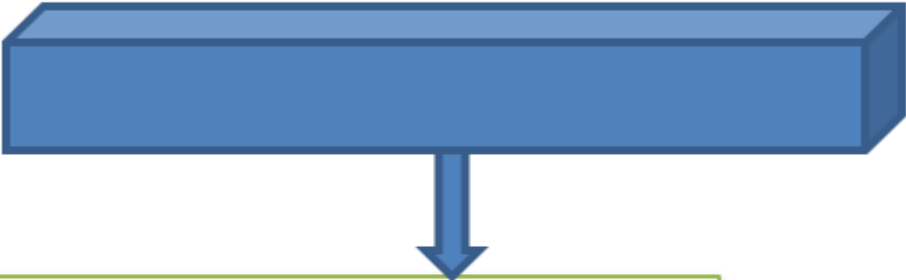


- **Microsoft Internet Explorer:** Microsoft released internet explorer in 1995. it is one of the most popular browser today. It is a graphical web browser which enables a user to fully experience the hypertext, images, sounds, videos, etc. that are available on www.
- **FireFox:** It is a web browser for Mozilla released in 2004. this is one of the most popular browser due to its security and speed.
- Above given browsers are online browsers. There are some offline browsers like MS-Outlook that make downloads available when computer is connected to the Internet.

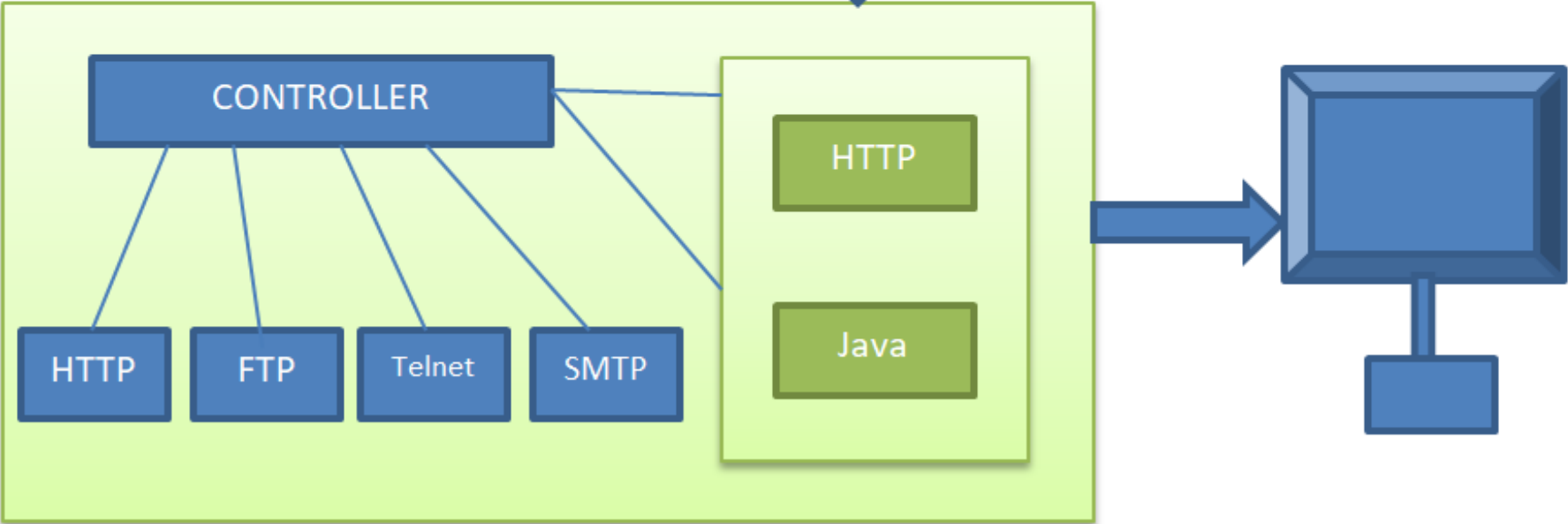
- A variety of vendors offer commercial browsers that interpret and display a web document and all of them use nearly the same architecture. Each browser usually consists of three parts:
  - **A Controller:** The Controller receives input from the keyboard or mouse and uses a client program to access the document. After the document has been accessed, the controller uses one of the interpreters to display the document on the screen.
  - **A Client Program:** It can be one of the methods or protocols such as HTTP, FTP or Telnet.
  - **Interpreter:** It is a software used to display the hypertext document on the screen. It can be HTML or Java depending on the type of document.

# Browser Architecture





Browser



# Browser Architecture

- Display all the web pages faster.
- Display previously viewed pages faster.
- Display text in a different font.
- Specify which font and colour to always use.
- Display text larger or smaller.
- View webpages in a different language.
- Add the page to our favourites.
- Organize our favourites into folders.
- Change home page.
- Save text and graphics from the web.

# Features of Browsers



- On the Tools Menu in the browser, click Internet options.
- Click the Advanced tab.
- In the multimedia area, clear one or more of the show picture, play animation, play video, or play sound check boxes.
- If the show picture or play video check box is cleared, we can still display an individual picture or animation on the web page by right clicking its icon and then clicking show picture.
- If the pictures on the current page are still visible, after we clear the Show Pictures check box, we can hide them by clicking View Menu and then clicking Refresh.

# Displaying Web Pages

- When you see text or graphics on a webpage, you can save them on a computer hard disk. Later we can open the saved file and review it offline.
- To **save the text or source file**:
  - On the Toolbar, click File and then click Save As.
  - Click Save to save the file.
- To **save a graphic**:
  - Right click the graphic.
  - On the shortcut menu that appears click Save Picture as.
  - Click Save to save the file.

# Saving Text and Graphics from the Web

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- Open your webpage.
- On the top of your browser, click on the print option and select Print Preview sub menu.
- If a print preview is as per your requirement, click on print button.
- Click on OK button, and you will get printout of webpage.

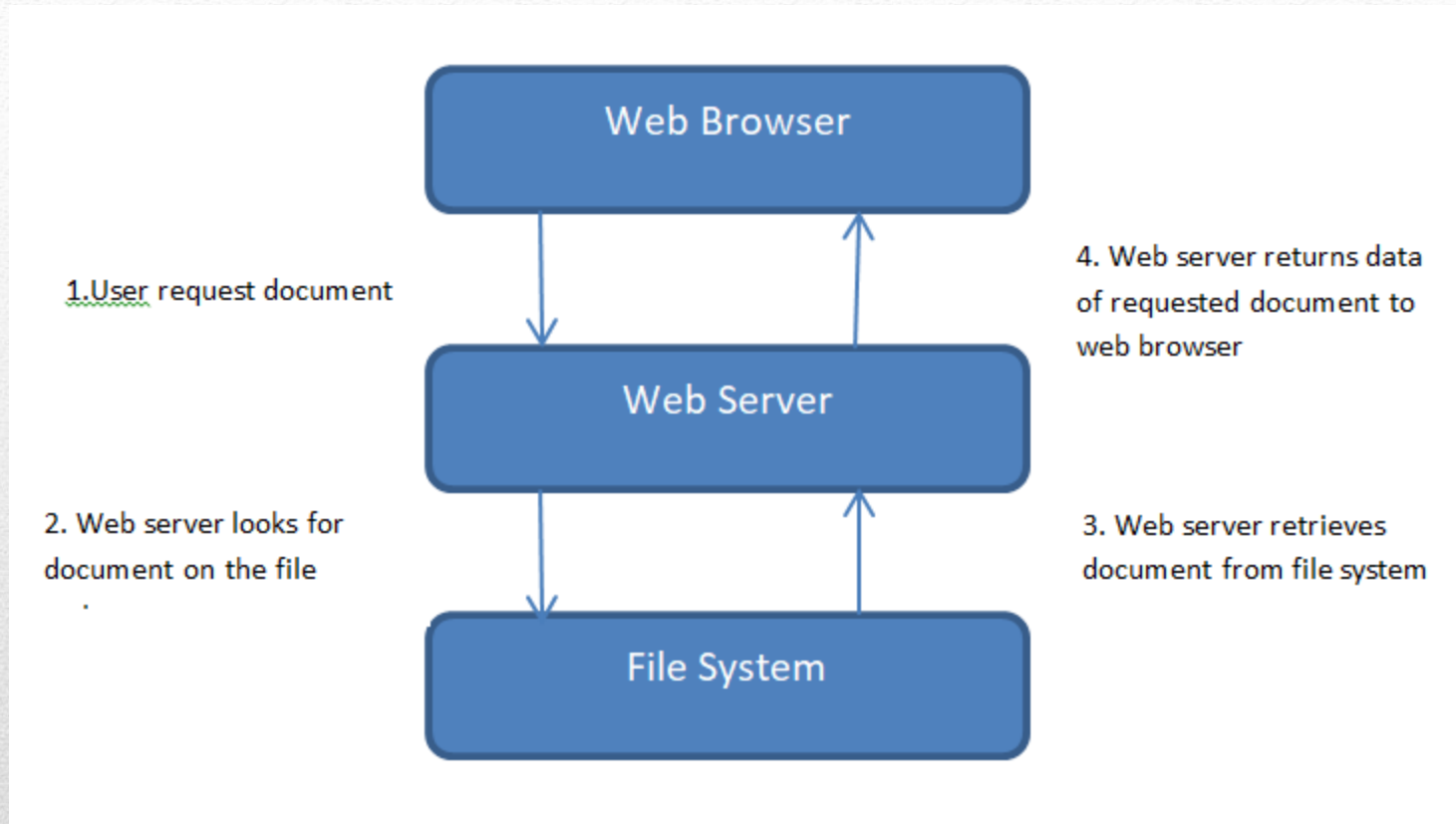
# Printing a Webpage

- The Internet is the network of networks. The world wide web application that work with the internet. There are various services that the Internet provide and www is one of the service provided by the internet. Whenever user request for particular webpage. The world wide web works as follows:
  - First user enters URL of required website or webpage in the address bar of the web browser e.g. <http://www.yahoo.com>
  - For entered URL, browser sends a request to domain name server (DNS) to retrieve its IP address. When IP address is received, browser send a request to web browser using HTTP protocol.
  - After sending request, server start to locate webpage on its hard disk or memory. If requested page is found, server sends its web browser and http connection is closed.

# Working of WWW

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# Working of WWW

- Web server is a program that uses the client server model and www's hypertext transfer protocol to serve the webpages to web user client computers that forward their request.
- Web server serve simple static content and images. User request for files through browser which is picked up by a web server. The desired file is loaded from disk where it travels back across the network and is finally delivered to the web browser through the web server.

# Web Server



- The components and elements related to web server are HTTP, dynamic content, CGI (Common Gateway Interface), Active documents.
- **Dynamic Content:** A dynamic content is created by a web server whenever a browser request the document. When a request arise, the web server runs an application program that create a dynamic document.
- **Common Gateway Interface (CGI):** It is a technology that creates and handles dynamic documents. GUI is a set of standard that defines how a dynamic document should be written; how input data should be supplied to the program, how the output result should be used.

# Components of Web Server

- **Active Document:** For many applications you need to run a program at the client site. These are called active documents. When a browser request an active document, the server sends the copy of documents in the program.
- **HTTP:** HTTP protocol is mainly used to access data on the world wide web (www). It transfers data in the form of plain text, hypertext, audio, video and so on





# THANKS!!!

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