

**E-Content of
INTERNET TECHNOLOGY AND WEB DESIGN**

Chapter : 8.11 World Wide Web (WWW)

Topic : 8.11.1 World Wide Web (WWW)

Introduction to World Wide Web (WWW)

- World Wide Web (abbreviated as WWW or W3, commonly known as the web) is a system of interlinked documents that are accessed via the internet.



FIG 8.10 : World Wide Web

- The term Internet and WWW are often used in everyday speech without much distinction.

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- In 1989 a small group of people led by **Tim Berners-Lee** at CERN (Conseil Européen pour la Recherche Nucleaire or the European Laboratory for Particle Physics) proposed a new protocol for the Internet as well as a system of document access to use it.
- The intent of this new system, which the group named the World Wide Web, was to allow scientists around the world to use the internet to exchange documents describing their work.

Web or Internet

- It is important to understand that the Internet and the World Wide Web are not the same thing.
- The internet is a collection of computers and other devices connected by equipment that allows them to communicate with each other.
- The web is a collection of software and protocols that has been installed on most, if not all, of the computers on the internet.
- The internet was quite useful before the web was developed and it is still useful without it.
- However, it is now the case that most users of the internet use it through the web.
- The internet is a global data communications system including hardware and software infrastructure that provides connectivity between computers.
- In contrast, the web is one of the services provided via the internet.
- Web is a collection of interconnected documents and other resources, linked by hyperlinks and URLs.
- Thus in short the web is an application running on the internet.
- Viewing a web page begins either by typing the URL of the page into a web browser or by following hyperlinks to that page.
- The web browser then initiates a series of communication messages, behind the screens, in order to fetch and display it.

World Wide Web (WWW)

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- World Wide Web (abbreviated as WWW or W3, commonly known as the web) is a system of interlinked documents that are accessed via the internet.
- The term Internet and WWW are often used in everyday speech without much distinction.
- With a web browser, one can view web pages that may contain text, images, videos and other multimedia and navigate between them via hyperlinks.
- World Wide Web is a system of internet servers that support specially formatted documents.
- The documents are formatted in a markup language called HTML (HyperText Markup Language) that supports links to other documents, as well as graphics, audio and video files.
- Web links are stored within the page itself and when you wish to “jump” to the page that is linked, you select the “hotspot” or “anchor”. This technique is sometimes called hypermedia or Hypertext.
 - Provide a graphical interface.
 - Allow you to create “links” from one piece of information to another.
 - Can incorporate references to text, graphics, sound and movies (or multimedia).
 - “Understand” other Internet protocols, such as ftp, gopher and telnet.
- The World Wide Web is nonlinear with no top or no bottom. The meaning of nonlinear is you do not have to follow a hierarchical path to information resources.

Basic Elements of World Wide Web (WWW)

- The web is based on a Client/Server System. We use a web client to communicate with the web server.
- A web server is a computer connected to the internet that runs a program (which is also called web server) that takes responsibility for sorting, retrieving and distributing some of the web files.
- A web client or web browser is a computer that request files from the web.
- **URLs** are used by web browsers to locate internet resources. A URL specifies the protocol to be used in accessing the resource, the name of the server on

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which the resource resides and optionally the path to a resource. For example, <http://www.nielit.in>

- **HyperText Transfer Protocol** is the standard protocol that allows web clients and servers to communicate. This protocol is used to carry requests from a browser to a web server and to transport pages from the web server back to the requesting browser.
- The **HyperText Markup Language** is the universal language of the web. It is used for writing pages for the web. HTML allows text to include codes that define fonts, layout, embedded graphics and HyperText Links. HTML can be compared to word processing.
- You can tune into **Web radio and TV Broadcasts** and listen to live broadcasts or call up older ones from the archives. The ability to send sound and video over the internet also has other uses. It makes it possible to offer narrated web tours, let buyers preview music or offer verbal descriptions of products.
- Full **Multimedia**, which include graphics, sound, video and animation is widely available over the web. Using technologies such as Shockware and Java, these presentations can be transferred to your computer.

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Topic : 8.12.1 Browser

Browser

- To access the World Wide Web, you use what is called a web browser.
- Browsers are sometimes also called web clients that use HyperText Transfer Protocol to make request to web servers.
- When you follow a Hyperlink, the browser (acting like a client) sends a request to a site on the internet.
- That site (acting like a server) returns a file which the browser then has to display.
- When you run a web client i.e., web browsers, like Netscape communicator or Microsoft's Internet Explorer on your computer, the client contacts a web server and request information or resources.
- The web server locates and send the information to the web browser, which displays the results. Thus browsers
 - Allows you to enter the address of the site you want to jump to (called a URL or uniform resource locator) or to jump there by clicking hotspots, high-lighted words, buttons, pictures or icons called hyperlinks on your screen.
 - Formats web documents for display on your screen.
 - Allows you to backup and go forward through pages you have already visited.
 - Allows you to copy text from the screen and paste it into a word processing program.
 - Allows you to print the document you see on the screen.
 - Makes it possible to transfer files-text, graphics, movies, animations, sounds and programs from other computers to your computer (called downloading) also provides access to new groups.
 - Allows you to send and receive e-mail and other internet services such as ftp (file transfer protocol), gopher and Usenet news-groups.

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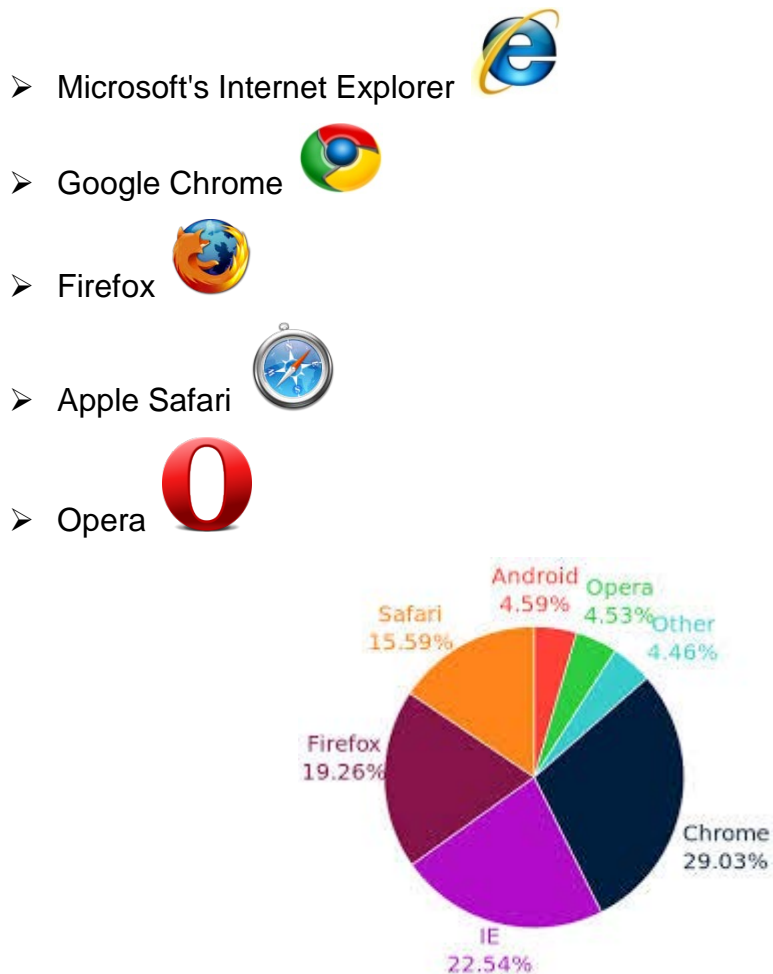
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Web Browsing Software

- A Web browser is a software application used for presenting and traversing the information on World Wide Web, including Web Pages, images, video and other necessary files (or) data required by users.
- Web Browser is not hardware, it is **software**.
- A web browser is a **client side software program** which communicates with web servers on the internet and request information wanted by users. It also enables uploading and downloading of files.
- The web address of a particular object published on the web is known as URL (Uniform Resource Locator). Each object in the web is identified or searched with the help of URL.

Popular Web Browsing Software

- The most popular web browsers access the globe



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FIG 8.11 : Web Browsing Software Usage

Functions of Web Browser

- The web browser gets **URL (Uniform Resource Locator)** of the site and understands the web address of DNS (Domain Name Server) hyperlinks.
- It identifies the web page and formats the web documents to display on the screen.
- The Web browser helps users to have a history and go back & forward through pages that have already visited.
- The web browser makes possible to copy text from the web page and paste it into a word processing program (or) as desired by users.
- Web browser helps to print the web documents/pages.
- The web browser makes possible to transfer online documents to user's computer called downloading.
- The web browser allows user to send and receive e-mails, through web mail.

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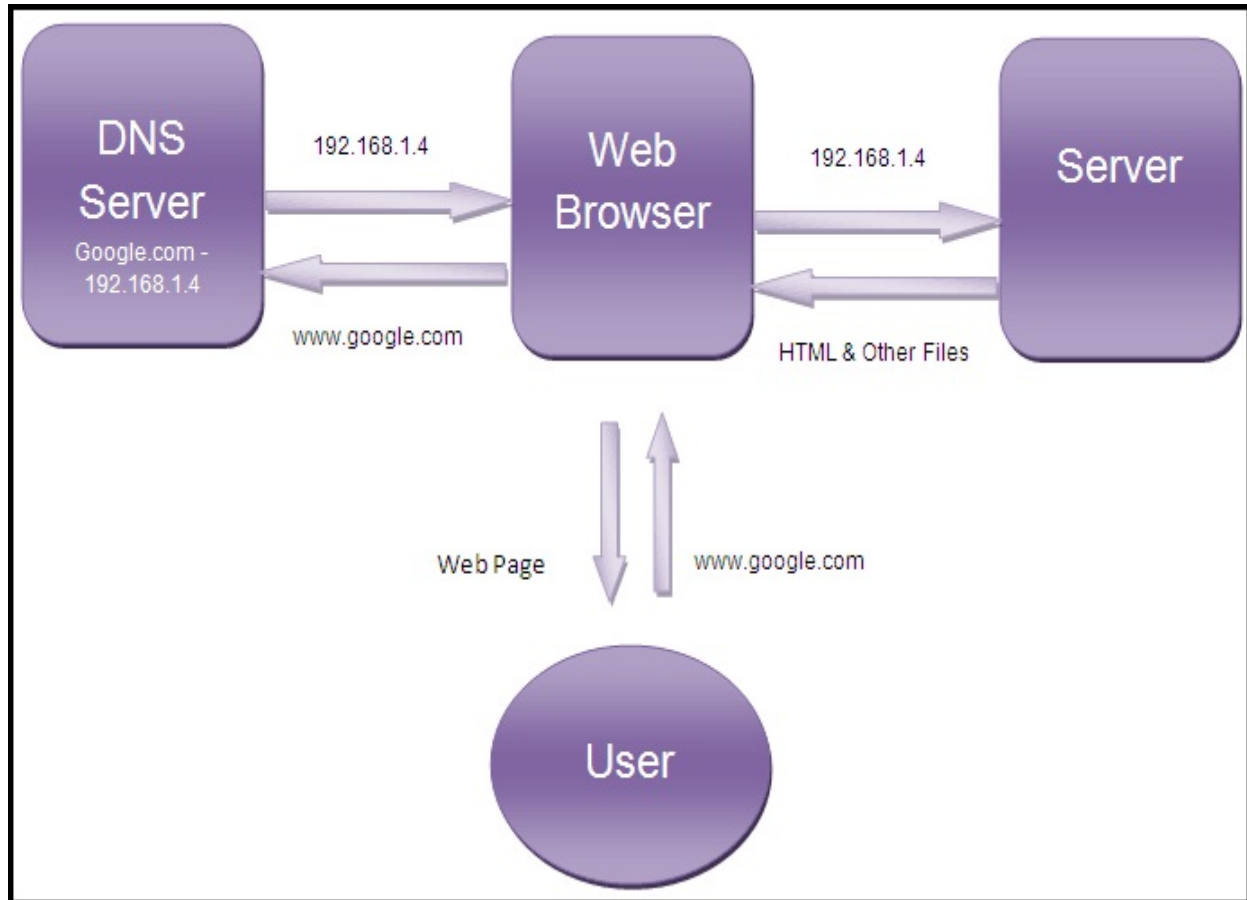


FIG 8.12 : Web Browser Functions

Purpose of Web Browsing Software

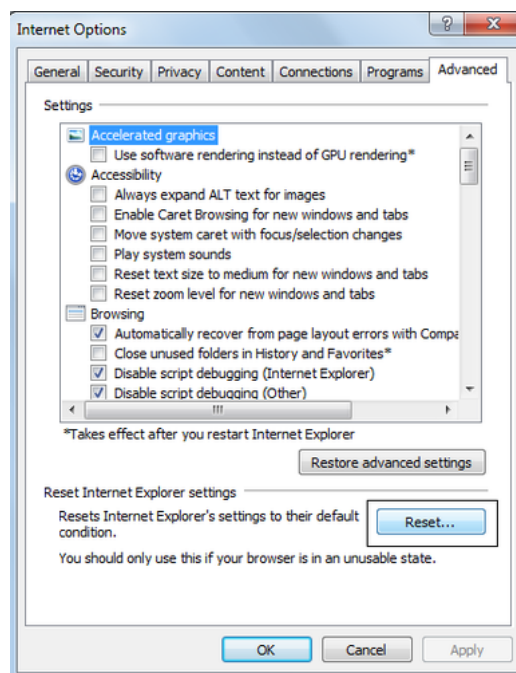
- Web browser software sends the required information to the web server and gets the information, and then it displays the result on the user computer.
- Simply, Internet browsers are the tools we use to navigate through millions of websites.
- A web browser has the ability to interpret or display many types of stored files like HTML and other browser supported files even when they aren't connected to the internet.
- Especially in windows 2000, Internet Explorer is a built-in browser that enables users to open most image files quickly.
- Web Browsers are used for businesses, marketing, education and information gathers about subjects, medical, etc.,

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- Web Browser makes it easier to get the most from the World Wide Web, whether users are searching for new information or browsing the favorite web sites.
- Web browser helps the user to open several web pages at the same time.
- Web browser allows the user to maintain his visited web page history and also to store the web pages as **favorites**.
- User can switch between many different web pages easily.

To Configure a Web Browser

- **Configuring Internet Explorer to default settings**
 - Open the Internet Explorer and click the **Explorer menu**.
 - Then select the **Internet options** menu. Internet options dialog box gets opened.
 - Then select the **Advanced tab** from internet options dialog box.
 - Click the **Reset** button.
 - Check the **Delete personal settings** option and then click the **Reset button** from reset internet settings dialog box.
 - Finally click the **Close** button.



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FIG 8.13 : Configuring Explorer

- **Configuring chrome to default settings**
 - Open the Chrome browser and click on **Chrome menu**.
 - Then select **settings** from the menu.
 - Enter **Reset browser** in the search settings option.
 - Then click the **Reset browser settings** button.
 - From the dialog box click the **Reset** button.
 - Then close the browser and open again.

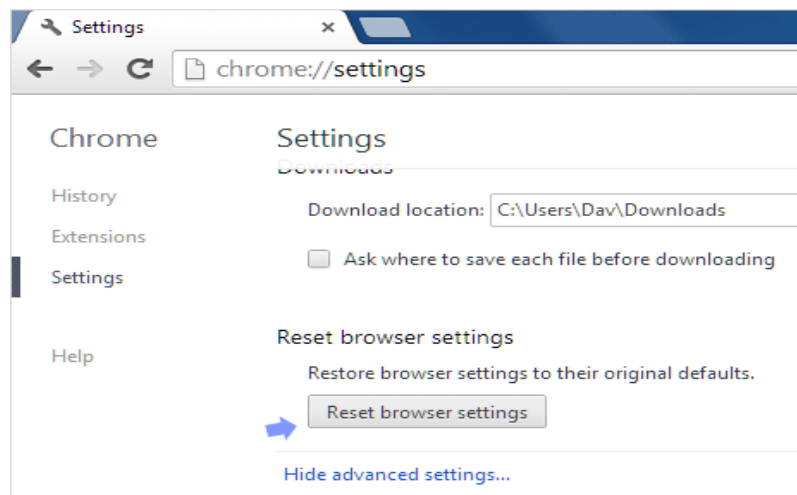


FIG 8.14 : Configuring Chrome