HOW WEB WORKS
NOTES

Disclaimer

The data in the tutorials is supposed to be one for reference.

☞ We have made sure that maximum errors have been rectified. Inspite of that, we (ECTI and the authors) take no responsibility in any errors in the data.
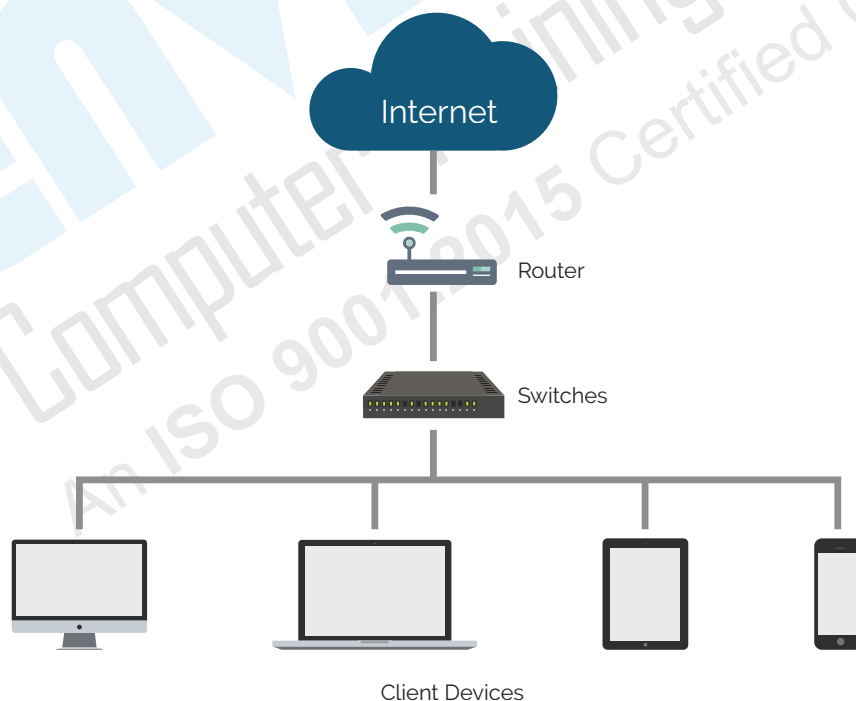
☞ The notes are theoretical concepts only.

☞ These are pre-requisites for any Web Development Courses.

☞ pre-requisites for any Web Development Courses.

What is Internet?

The Internet is essentially a global network of computing resources. You can think of the Internet as a physical collection of routers and circuits as a set of shared resources.

Some common definitions given in the past include –

☞ A network of networks based on the TCP/IP communications protocol.

☞ A community of people who use and develop those networks.

ENVISION ®
Computer Training Institute
An **ISO 9001:2015** Certified Company

Learn
UI/UX Development
from Experts
Call Now: +91 7498713536

Internet-Based Services:

Some of the basic services available to Internet users are −

☞ **Email:** A fast, easy, and inexpensive way to communicate with other Internet users around the world.

☞ **Telnet:** Allows a user to log into a remote computer as though it were a local system.

☞ **FTP:** Allows a user to transfer virtually every kind of file that can be stored on a computer from one Internet-connected computer to another.

☞ **UseNet News:** A distributed bulletin board that offers a combination news and discussion service on thousands of topics.

☞ **World Wide Web (WWW):** A hypertext interface to Internet information resources

What is WWW?

Some of the basic services available to Internet users are −

☞ WWW stands for World Wide Web. A technical definition of the World Wide Web is − All the resources and users on the Internet that are using the Hypertext Transfer Protocol (HTTP).

☞ A broader definition comes from the organization that Web inventor Tim Berners-Lee helped found, the World Wide Web Consortium (W3C): The World Wide Web is the universe of network-accessible information, an embodiment of human knowledge.

☞ In simple terms, The World Wide Web is a way of exchanging information between computers on the Internet, tying them together into a vast collection of interactive multimedia resources.

ENVISION®
Computer Training Institute
An ISO 9001:2015 Certified Company

Learn
UI/UX Development
from Experts
Call Now: +91 7498713536

What is HTTP?

☞ HTTP stands for Hypertext Transfer Protocol. This is the protocol being used to transfer hypertext documents that makes the World Wide Web possible.

☞ A standard web address such as https://www.google.com/ is called a URL and here the prefix http indicates its protocol

What is URL?

☞ URL stands for Uniform Resource Locator, and is used to specify addresses on the World Wide Web. A URL is the fundamental network identification for any resource connected to the web (e.g., hypertext pages, images, and sound files).

☞ A URL will have the following format:

protocol://hostname/other_information

☞ The protocol specifies how information is transferred from a link. The protocol used for web resources is Hypertext Transfer Protocol (HTTP). Other protocols compatible with most web browsers include FTP, telnet, newsgroups, and Gopher.

☞ The protocol is followed by a colon, two slashes, and then the domain name. The domain name is the computer on which the resource is located.

☞ Links to particular files or subdirectories may be further specified after the domain name. The directory names are separated by single forward slashes.

What is Website?

☞ Collection of various pages written in HTML markup language is called a website. This is a location on the web where people can find information on latest technologies. Similarly, there are millions of websites available on the web.

☞ Each page available on the website is called a web page and first page of any website is called home page for that site.

What is Web Server?

☞ Every Website sits on a computer known as a Web server. This server is always connected to the internet. Every Web server that is connected to the Internet is given a unique address made up of a series of four numbers between 0 and 256 separated by periods. For example: 68.178.157.132 or 68.122.35.127.

☞ When you register a Web address, also known as a domain name, such as ecti.co.in you have to specify the IP address of the Web server that will host the site.

What is Web Browser?

☞ Web Browsers are software installed on your PC. To access the Web you need web browsers, such as Microsoft Edge, Google Chrome or Mozilla Firefox. On the Web, when you navigate through pages of information this is commonly known as browsing or surfing

What is SMTP Server?

☞ SMTP stands for Simple Mail Transfer Protocol Server. This server takes care of delivering emails from one server to another server. When you send an email to an email address, it is delivered to its recipient by a SMTP Server.

What is ISP?

☞ ISP stands for Internet Service Provider. They are the companies who provide you service in terms of internet connection to connect to the internet.

☞ You will buy space on a Web Server from any Internet Service Provider. This space will be used to host your Website

ENVISION®
Computer Training Institute
An **ISO 9001:2015** Certified Company

Learn
UI/UX Development
from Experts
Call Now: +91 7498713536

What is DNS?

☞ DNS stands for Domain Name System. When someone types in your domain name, www.example.com, your browser will ask the Domain Name System to find the IP that hosts your site. When you register your domain name, your IP address should be put in a DNS along with your domain name. Without doing it your domain name will not be functioning properly

What is W3C?

☞ W3C stands for World Wide Web Consortium which is an international consortium of companies involved with the Internet and the Web.
☞ The W3C was founded in 1994 by Tim Berners-Lee, the original architect of the World Wide Web. The organization's purpose is to develop open standards so that the Web evolves in a single direction rather than being splintered among competing factions. The W3C is the chief standards body for HTTP and HTML

How Web Works?

On the simplest level, the Web physically consists of the following components:

☞ **Your personal computer:** This is the PC at which you sit to see the web.

☞ **A Web browser:** Software installed on your PC which helps you to browse the Web.

☞ **An internet connection:** This is provided by an ISP and connects you to the internet to reach to any Website.

☞ **A Web server:** This is the computer on which a website is hosted.

☞ **Routers & Switches:** They are the combination of software and hardware that take your request and pass to appropriate Web server.

☞ The Web is known as a client-server system. Your computer is the client and the remote computers that store electronic files are the servers.

Step for how the Web Works

A user enters a URL into a browser (for example, Google.com. This request is passed to a domain name server.

☞ The domain name server returns an IP address for the server that hosts the Website (for example, 68.178.157.132).

☞ The browser requests the page from the Web server using the IP address specified by the domain name server.

☞ The Web server returns the page to the IP address specified by the browser requesting the page. The page may also contain links to other files on the same server, such as images, which the browser will also request.

☞ The browser collects all the information and displays to your computer in the form of Web page.

Web Browser

☞ A web browser (commonly referred to as a browser) is a software application for accessing information on the World Wide Web. When a user requests a particular website, the web browser retrieves the necessary content from a web server and then displays the resulting web page on the user's device.

☞ Some of the popular Web Browser is as follows: Google Chrome, Mozilla Firefox, Internet Explorer, Safari, Microsoft Edge, Opera, etc.

Web Server

☞ A web server is server software, or hardware dedicated to running said software, that can satisfy World Wide Web client requests. A web server can, in general, contain one or more websites. A web server processes incoming network requests over HTTP and several other related protocols. The primary function of a web server is to store, process and deliver web pages to clients. The communication between client and server takes place using the Hypertext Transfer Protocol (HTTP). Pages delivered are most frequently HTML documents, which may include images, style sheets and scripts in addition to the text content.

Learn UI/UX Development from Experts
Call Now: +91 7498713536

ENVISION®
Computer Training Institute
An **ISO 9001:2015** Certified Company

Thank You