Web-Technologies, Server side technologies, Web-server, Web-browser, Introduction PHP, Future of PHP, adding PHP to HTML Syntax and variable, control and function, Passing information between page, String, Array and Array Function, Date Function

U15A2BWD Basic Web Programming & Designing

Unit-1

Biren Patel
Assistant Professor, DCS, Ganpat University

Read this first:

Millions of businesses use the Internet as a cost-effective communications channel. It lets them exchange information with their target market and make fast, secure transactions. However, effective engagement is only possible when the business is able to capture and store all the necessary data, and have a means of processing this information and presenting the results to the user.

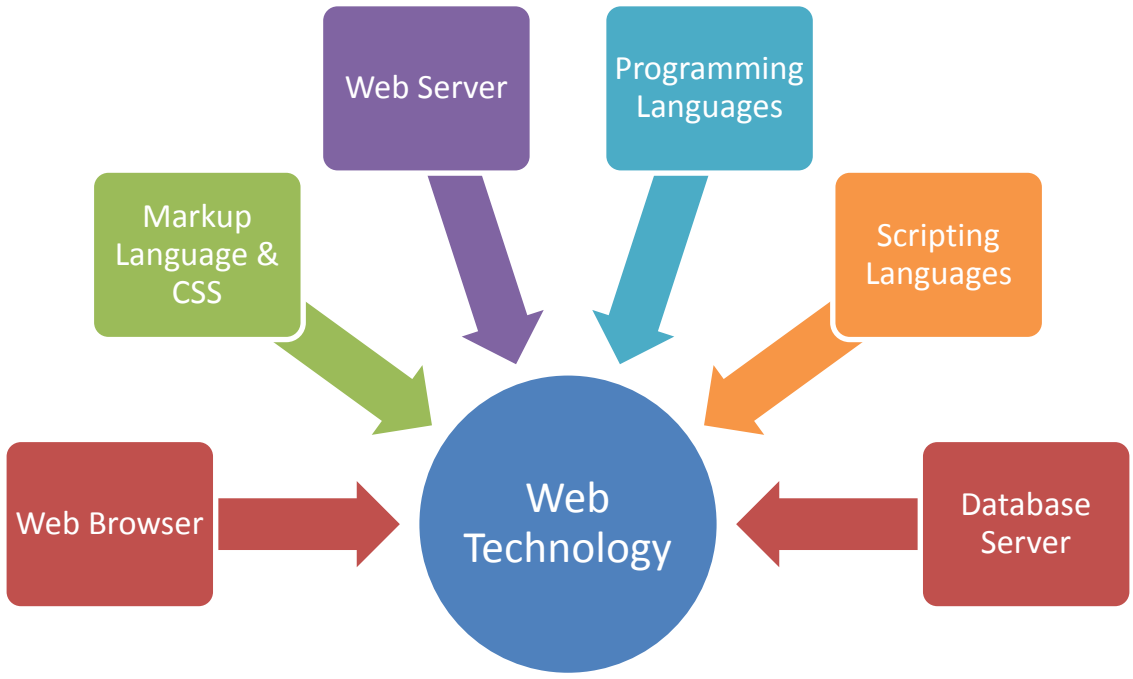
What is Web Technologies?

A web technology refers as an interface between web servers and their clients. It means computers communicate with each other using markup languages, programming interfaces and languages, web servers, web browsers.

Why we used Web Technology?

The general idea is that it is used because it can reach many people all over the world on multiple platforms and operating systems, to make the Internet more powerful and easier to use.

Components of Web Technology



- **Web Browser**

  A web browser (commonly referred to as a browser) is a software application for retrieving, presenting and traversing information resources on the World Wide Web. An information resource is identified by a Uniform Resource Identifier (URI/URL) and may be a web page, image, video or other piece of content. Examples are; Internet Explorer, Google Chrome, Safari etc.

- **Markup Language and CSS**

  A markup language is a computer language that uses tags to define elements within a document. It is human-readable, meaning markup files contain standard words, rather than typical programming syntax. While several markup languages exist, the two most popular are HTML and XML.

  HTML is a markup language used for creating WebPages. The contents of each webpage are defined by HTML tags. Basic page tags, such as <head>, <body>, and define sections of the page, while tags such as <table>, <form>, <image>, and <a> define elements within the page. Most elements require a beginning and end tag, with the content placed between the tags.

Write a down the HTML script for login page.

  XML is used for storing structured data, rather than formatting information on a page. While HTML documents use predefined tags (like the examples above), XML files use custom tags to define elements.

CSS stands for Cascading Style-sheet used to control the style and look of WebPages in simple and easy way.

Write down CSS script to format any three HTML tag.

- **Web Server**

  Web server refers to server software, or hardware dedicated to running said software.Web Server accept HTTP request that comes from client and ask web application to process the request and prepare the response. Then send response back to the client browser.

- **Programming Language**

  Programming languages enable you to create custom applications and add functionality that is not already part of an application.

- **Scripting Language**

  Scripting languages are also programming languages. The between the two is that scripting languages do not require the compilation and are rather interpreted. For example, normally, a C program needs to be compiled before running whereas normally, a scripting language like JavaScript or PHP need not be compiled.

Client-side Scripting: It runs at client-side in browser and uses client machine environment for execution.

- Make interactive webpages.
- Make stuff happen dynamically on the web page.
- Interact with temporary storage, and local storage (Cookies, localStorage).
- Send requests to the server, and retrieve data from it.
- Provide a remote service for client-side applications, such as software registration, content delivery, or remote multi-player gaming.

Examples:

Server-side Scripting: It runs at server-side and uses specialized environment for execution installed at server. User sends a request to fulfill his requirement to server and server side scripting performs the operation to fulfill user's request. And it forms HTML response which is later executed at client machine.

- Process user input.
- Display pages.
- Structure web applications.
- Interact with permanent storage (SQL, files).

Examples:

- **Database Server**

  Databases allow you to store information for easy retrieval. On the Internet, databases are used to store users' logon information, product information, and customers' orders, among other things. There are almost as many database products as there are reasons and ways to use databases. Examples: access, SQL Server, MySQL, etc.

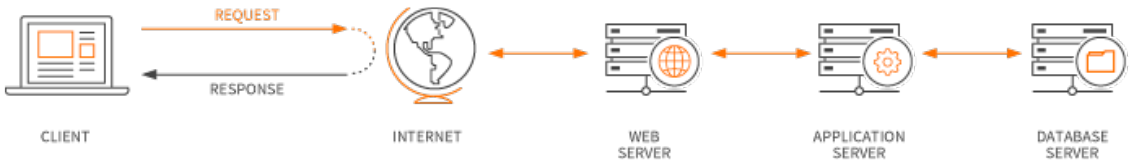
What is Web Application?

A web application is a computer program that utilizes web browsers and web technology to perform tasks over the Internet.

Web applications use a combination of server-side scripts (PHP and ASP) to handle the storage and retrieval of the information, and client-side scripts (JavaScript and HTML) to present

information to users. This allows users to interact with the company using online forms, content management systems, shopping carts and more. In addition, the applications allow employees to create documents, share information, collaborate on projects, and work on common documents regardless of location or device.

How does web App works?



1. User sends a request to the web server over the Internet, either through a web browser or the application's user interface
2. Web server forwards this request to the appropriate web application server
3. Web application engine or environment or framework hosted on web server performs the requested task – such as querying the database or processing the data – then generates the results of the requested data
4. Web application server sends results to the web server with the requested information or processed data (In major cases both lies on same server)
5. Web server responds back to the client with the requested information that then appears on the user's browser

BENEFITS OF A WEB APPLICATION

- Web applications run on multiple platforms regardless of OS or device as long as the browser is compatible
- All users access the same version, eliminating any compatibility issues
- They are not installed on the hard drive, thus eliminating space limitations
- They reduce costs for both the business and end user as there is less support and maintenance required by the business and lower requirements for the end user's computer