

XII - CHAPTER - 4

WEB TECHNOLOGY

1. Website : It is a collection of web pages that developed with the help of HTML.

➤ **www** - World Wide Web ➤ **HTML** - Hyper Text Markup Language

2. Communication on the web

(i) client (user /browser) to web server : User request a webpage from a server and the server returns back the web page to the client.

(ii) web server to web server communication : Communication between two web servers

**** Payment Gateway:** It is a server that acts as a bridge between merchant server & bank server.

***3. Web Server**

It is a powerful computer that is used to store, process and deliver web pages files when requested by users. This communication is done using Hypertext Transfer Protocol (HTTP+Port 80).

4. Use of software port

A software port is used to connect a client computer to a server to access its services like HTTP, FTP ,SMTP etc. A port is associated with an IP address. eg: 215.114.85.17:80

***4.1 Port Numbers and their uses**

Port Number	Service
53	***Domain Name System(DNS)service
80	***HyperText Transfer Protocol(HTTP)
443	***HyperText Transfer Protocol Secure(HTTPS)
20 &21	File Transfer Protocol (FTP)
22	Secure Shell (SSH)
25	Simple Mail Transfer Protocol (SMTP)
110	Post Office Protocol(POP3)

*******5. Static and dynamic web pages**

Static Web pages	Dynamic web pages
Content and layout of a web page is fixed.	Content and layout may change during runtime.
Never use a database.	Use a database.
Easy to develop	Difficult to develop
Directly run on the browser	Runs on the server & display result on browser

6. Scripts: Scripts are program codes written inside HTML pages.

Tag : < SCRIPT >, Attribute : Type, Src

6.1 Two type of scripting languages

6.1.1. **Client side scripting** - JavaScript ,VB Script

AJAX : Asynchronous JavaScript and Extensible Markup Language

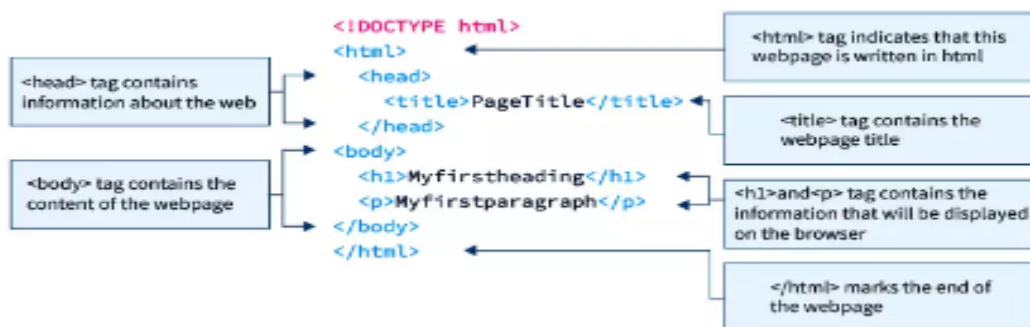
A web page can be displayed to fit the screen without loading entire parts of a web page.

6.1.2. . Server side scripts - PHP - 'PHP :Hypertext Preprocessor, ASP - Active Server Pages , JSP - Java Server Pages

***6.2 Compare client side scripting and server side scripting

Client side scripting	Server side scripting
Script is copied to the client browser	Script remains in the web server
Executed in the client browser	Executed in the web server.
Used for validation of client data.	Used to connect to databases.

***7. Structure of HTML code



***8. Container tags and empty tags

Container tag : Tags that requires opening tag and closing tag

Eg: <HTML></HTML>, <HEAD></HEAD>, <BODY></BODY>, <P></P> etc.

Empty tag : Tags that require only an opening tag. Eg:
, , <HR>

*****9. Attributes of Tag** : A parameter associated with the opening tag used to configure the behavior or display of an HTML element.

Tag	Attributes	Use
HTML	Lang	To specify the language used in the webpage
	Dir	Specify the direction of the text to be displayed on the web page. Values are : ltr, rtl
BODY	Bgcolor	Specifies background color for the Web document
	Background	Set image as background
	Text	Specifies the color of the text contents
	Link	Specifies the color of the unvisited links. Default color-Blue
	Vlink	Specifies the color of the visited link. Default color : purple.
	Alink	Specifies the color of active hyperlink. Default color:Green
	Leftmargin, Topmargin	Specifies the Left margin & Top margin of the webpage.

9.2. Some common tags		
Tags & Attribute	Use & Attribute Values	
Heading tag : <H1>,<H2>,<H3>,<H4>,<H5>,<H6> Attribute : Align	They are used to create headers of different sizes. The largest is H1 and the smallest heading is H6. Attribute values : left,right,center	
<P> tag- Paragraph Tag Attribute : Align	Used to create paragraphs. Attribute values : left,right,center, justify	
 tag - Break Tag	Used to insert a line break	
<HR> - Horizontal tag Attribute : Align,Size,Width,Color	Used to create a horizontal line	
<CENTER> tag	Used to display contents to the center of webpage	
9.3. Text formatting tags		
 - Bold Tag &	Make the text Bold	
<I> tag & tag	Make the text italics	
<U> tag	Underline the text	
<S> tag & <STRIKE>tag	strike through the text	
<BIG>tag & <SMALL> tag	Make a text big sized(BIG),Make a text small sized (SMALL)	
<Q> tag	"Enclose text in double quotes"	
<PRE> tag	Text appears in the same format as typed in a web document without any other formats.	
<ADDRESS> tag	Used to display a postal address.	
<DIV> tag	Used to define a block or section on a web page. Attributes : Align, Id, Style	
 tag	Allows changing the size, style, and color of text enclosed within the tag. Attributes : Color, Face, Size	
9.4. <MARQUEE> Tag		
<MARQUEE> Tag	Used to scroll texts and images on a web page. Most probably words scroll from right to left in a web page	
	Attributes	Use & Attribute values
	Direction	Specifies the direction of scroll. Value :- left, right, up or down Code : <MARQUEE Direction="left"> Have a nice day </MARQUEE >

<MARQUEE>	width	Specify width of the marquee text Eg: width="10" or width="20%"
	height	Specify width of the marquee text Eg: height="10" or height="20%"
	Behaviour	Specifies how the marquee text should move. Value: scroll, slide, alternate.
	Scrollamount	Control the speed of scrolling marquee
	Scrolldelay	Sets the time limit between movement of marquee text.
	Loop	Specifies how many times the marquee text must scroll.
	Bgcolor	Set the background color of marquee text
	Used to insert images in a web page. It's an empty tag. Eg Code : <code></code>	
	Attribute	Use & Attribute values
	Src	Specifies the location (path) of the image file to be added to a web page.
	Align	Specifies the position of the image on the web page. Value : top ,middle, bottom
	Width	The width of the image is specified in pixels.
	Height	The height of the image is specified in pixels.
	Alt	Text to be displayed appears if the browser cannot display the image
	Border	To set a border around the image.
<SUP> Tag Superscript Text Tag	Text within <sup> appears above the surrounding text in a smaller font. Eg : $a^2+2ab+b^2$ Code :- <code>a<SUP>2</SUP>+2ab+b<SUP>2</SUP></code>	
<SUB> Tag Superscript Text Tag	Text within <sub> appears below in a smaller font than the surrounding text. Eg : H_2O , H_2SO_4 Code :- <code>H<SUB>2</SUB>O</code> <code>H<SUB>2</SUB>SO<SUB>4</SUB></code>	

10. HTML entities for reserved characters

Special characters cannot be used directly in an HTML document. Some code is used to make it visible. Eg :To display A > B in the html document use the code A > B

Symbol	Description	Entity Name
	Non-breaking space Gives space between texts without entering a new line.	
"	quotation mark	"
'	apostrophe	'
&	ampersand	&
<	less-than	<
>	greater-than	>
©	Copyright	©
TM	Trade Mark	™
®	Registered	®

11. Adding comments in HTML document

Comments help the web developer to understand the code. Comments are not displayed in the browser window. . HTML comments are placed within <!-- -->

Eg :

```
<!--This is a comment. Comments are not displayed in the browser-->
<p>This is a paragraph</p>
```

Above example "This is a paragraph" is Only visible in the browser.