**HTML**

1. **What is HTML:**

HTML stands for Hyper text mark up language it is use to define the structure of the web page mark up language is not similar to programming language .

A markup language adds “meaning” or “structure” to plain text so that a computer or browser knows how to handle that text.

A web page is created with the help of 3 things :

1. HTML : this defines the structure of the web page
2. CSS : this apply styles to the HTML elements
3. Java script provide the functionality and make web site dynamic
4. **What is webpage:**

A web page is a document on the World Wide Web that is usually written in HTML (HyperText Markup Language) and can be viewed using a web browser.

It may contain:

1. Text
2. Images
3. Links to other pages
4. Multimedia (audio, video)
5. Scripts (JavaScript for interactivity)
6. Styles (using CSS)
7. User: The person who uses a web browser to access websites.They type URLs, click links, fill forms, etc.
8. Web Browser: A software application (like Chrome, Firefox, Edge) used to access and display websites. It sends requests to servers and renders HTML, CSS, and JavaScript to show the web page.
9. Web Server: its also a powerful computer which work a server for the web browser when we try to find a website with URL it give us web pages and content of the website and it also manage the backend of the website and return error message if the request cannot be fulfilled
10. Website: A collection of related web pages stored on a web server.
11. **HTML tags:**

HTML tags are keywords enclosed in angle brackets (< >) used to define elements in an HTML document .They tell the browser how to display or structure content like text, images, links, forms, etc.

**Structure of a Tag:**

<tagname>Content</tagname>

<tagname> = Opening tag

</tagname> = Closing tag

Content = Text or elements inside the tag

**Example:**

**<p>This is a paragraph.</p>**

**Types of HTML Tags:**

HTML tags can be classified into two main types:

1. Paired (Container) Tags

Have both an opening and a closing tag Used to wrap content.

**Example:**

<p>Paragraph</p>

<b>Bold text</b>

<div>Division</div>

2. Unpaired (Empty) Tags

Self-closing; no closing tag required. Used for elements that don’t wrap content.

**Example:**

<br> <!-- Line break -->

<hr> <!-- Horizontal rule -->

<img src="image.jpg" alt="Image"> <!-- Image -->

<input type="text"> <!-- Form input -->

1. **Different HTML tags :**
2. **Pharagraph tag:**

<p> : paragraph tag is used to show a simple text on the web page . it’s a pair tag It have both opening and closing tag

Example :

<p> this is a simple phara </p>

1. **Anchor tag :**

<a> : this is a tag use to add a link and redirect user to other web pages like if we want to show different pages to user we can use anchor tag to redirect user to other wisite or web page of same website

Example :

<a href=”here we give the URL to webpage”> this is a link </a>

In href we can give a relative address to other html file if it present in our directory

1. **Image tag :**

<img>: this tag allow us to add a image to the web page it is a unpaired tag we use <img > and give the address of the image in the src attribute

Example :

<img src=”img url/address” height =100 width =120 alt =”flower img”>

In image tag we can put attribute like width and height which allow us to control the size of image but these are not mandatory to put always there is a attribute called alt which show a text if the image does not load this allow us to give information about image which should be there and used by search engine to identify web page content

1. **Bold/italic/underline tag :**

These tags are user to modify the text look like <b> text </b>make it bold. Same as <i> text</i> will change it to italic <u> text </u> underline the text

Example:

<b>bold TEXT</b>

<u>underline TEXT</u>

<i>italic TEXT</i>

1. **Break line tag :**

This is a self closing tag which Is use to break the line and it is use in pharagraph to break lines but its not use very much

Example

<p> this is line 1 <br> this is line 2 </p>

1. **Big/Small tag :**

These tags make the text a bit bigger then normal and smaller make it smaller these are use to add emphasis to text in certain context of the webpage .

Example:

<big>bold TEXT</big>

<small>underline TEXT</small>

1. **Horizontal ruler tag :**

This add a dividing ruler to the web page use to divide section of content of web page is a self closing tag

Example: <hr>

1. **Superscript /Subscript tag :**

These tags are use to make the text subscript of super script use to display formula of maths like exponents , chemistry fomulas atomic numbers etc

Example:

<p>H <sub>2</sub> O</p> : H2O

<p>x<sup>2</sup> O</p> : x2

1. **Pre tag:**

This tag is similar to the p tag but this tag keep the text format same as its given by keeping line break and spaces its use to show code and content that format should be fix as given by user

Example:

<pre>

this is a text doc1

This is a text doc2

</pre>

1. **Heading tag:**

These are tags use to display text as a heading where it range from h1 to h6 where h1 is largest and h6 is the smallest

Example:

<h1> heading 1<h1>

<h2> heading 2<h2>

<h3> heading 3<h3>

<h4> heading 4<h4>

<h5> heading 5<h5>

<h6> heading 6<h6>

1. **<!DOCTYPE html>:**

It is a declaration that defines the document type and version of HTML being used, typically HTML5.

Example

<!DOCTYPE html>

1. **Html tag :**

The <html> tag is the root element that wraps all the content of an HTML document.

Example

<html>

// whole web page content head body goes here

</html>

1. **Head tag :**

The <head> tag contains meta-information about the HTML document, like the title, character set, and linked resources.

Example

<head>

// here all meta tags style or link tags goes which does not show to user

</head>

1. **Body tag:**

The <body> tag holds all the visible content of a web page, such as text, images, and buttons.

Example

<body>

//This is where the all content and tag goes

</body>

1. **<link>:**

The <link> tag is used to connect external resources like stylesheets (CSS) or java scripts to the HTML document.

Example

<link rel =”type of file” href =”file path”>

1. **Meta:**

The <meta> tag provides metadata about the web page, such as character encoding, author, description, and viewport settings.

Example:

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<meta name="description" content="A simple demo page">

1. **Title :**

This tag is use to set the title of web page which can be display on the brower tab when the web page is open

Example

<title> web page </title>