**HTML**

*(HyperText Markup Language)*

* It is the standard markup language used to create and design web pages
* It is a crucial component of web development and is used to structure content on the World Wide Web
* HTML is often used in conjunction with Cascading Style Sheets (CSS) for styling and JavaScript for interactivity, forming the core technologies for building modern, dynamic web pages

Document Type Declaration in html:

<!DOCTYPE html>

HTML:

<html> ... </html>

Head:

<head> ... </head>

Title:

<title> ... </title>

Body:

<body> ... </body>

Text Elements:

Paragraph:

<p> ... </p>

Heading 1 to Heading 6:

<h1> ... </h1> to <h6> ... </h6>

Bold:

<strong> ... </strong>

Italic:

<em> ... </em>

Underline:

<u> ... </u>

Line Break:

<br>

List Elements:

Unordered List:

<ul> ... </ul>

List Item:

<li> ... </li>

Ordered List:

<ol> ... </ol>

List Item:

<li> ... </li>

Link and Anchor:

Anchor:

<a href="url"> ... </a>

Image:

Image: <img src="source" alt="description">

Table Elements:

Table:

<table> ... </table>

Table Row:

<tr> ... </tr>

Table Header Cell:

<th> ... </th>

Table Data Cell:

<td> ... </td>

Form Elements:

Form:

<form action="url" method="get/post"> ... </form>

Input Field:

<input type="text" name="fieldname">

Textarea:

<textarea name="textareaName"></textarea>

Select Dropdown:

<select> ... </select>

Option within Select:

<option value="optionValue">Option Text</option>

Submit Button:

<input type="submit" value="Submit">

Division and Span:

Division:

<div> ... </div>

Span:

<span> ... </span>

css

*(Cascading Style Sheets)*

* It is a stylesheet language used to describe the presentation and formatting of a document written in HTML or XML
* CSS enables web developers to control the layout, appearance, and styling of HTML elements, allowing for consistent and visually appealing designs across different web pages
* CSS saves a lot of work. It can control the layout of multiple web pages all at once

Three Ways to Insert CSS

There are three ways of inserting a style sheet:

• External CSS

• Internal CSS

• Inline CSS

External CSS

With an external style sheet, you can change the look of an entire website by

changing just one file

Each HTML page must include a reference to the external style sheet file inside

the <link> element, inside the head section.

Internal CSS

An internal style sheet may be used if one single HTML page has a unique style.

The internal style is defined inside the <style> element, inside the head section

Inline CSS

An inline style may be used to apply a unique style for a single element.

To use inline styles, add the style attribute to the relevant element. The style

attribute can contain any CSS property.

Css syntax

Eg:h1 (selector) {

Color(property): blue(value);

font-size: 12px;

}

Css Selectors

They selects the HTML elements we want to style.

CSS element selector

The element selector selects HTML elements based on the element name.

Eg: p{

text-align: center;

color: red;

}

CSS id selector

The id selector uses id attribute of an HTML element to select specific

element. # is used to select id.

Eg: #paral{

text-align: center;

color: red;

}

CSS class selector

The class selector selects HTML element to select specific element. (.) is used

to select class.

Eg: .paral{

text-align: center;

color: red;

}

CSS Universal selector

The universal selector (\*) selects all HTML elements on the page.

Eg: \*{

text-align: center;

color: red;

}

CSS Padding

Padding is used to create space around an element's content, inside of any

defined borders.

CSS Margins

Margins are used to create space around elements, outside of any defined

borders.

Css borders

The CSS border properties allow you to specify the style, width, and color of an

element's border.

Javascript

* JavaScript is a versatile programming language that is primarily used to add interactivity and dynamic behavior to web pages.
* It is commonly executed in web browsers and allows developers to manipulate the content, structure, and presentation of a webpage

JavaScript Used For:

### Web Development

* Web-Based Games and Applications
* Server-Side Programming
* Mobile App Development
* Artificial Intelligence

some key aspects of JavaScript syntax

1. Statements

JavaScript programs consist of individual statements. Each statement typically performs a specific action or task.

Eg:

let message = "Hello, World!";

console.log(message);

1. **Variables:**

Variables are used to store and manipulate data in JavaScript. They are declared using the **let**, **const**, or **var** keyword.

Eg:

let age = 25;

const pi = 3.14;

1. **Data Types:**

JavaScript supports various data types, including strings, numbers, booleans, objects, arrays, and more.

Eg:

let name = "John";

let count = 42;

let isTrue = true;

let person = { firstName: "John", lastName: "Doe" };

let colors = ["red", "green", "blue"];

1. **Operators:**

Operators are used for performing operations on variables and values. They include arithmetic operators (**+**, **-**, **\***, **/**), comparison operators (**==** , **!=** , **>,** **<**), and logical operators (**&&** , **||** , **!**), among others.

Eg:

let result = 5 + 3;

let isEqual = (result == 8);

let logicalAnd = (true && false);

1. **Functions:**

Functions are reusable blocks of code that can be defined and called with or without parameters.

Eg:

function add(a, b) {

return a + b;

}

let sum = add(5, 3);

1. **Conditionals:**

Conditionals allow you to execute different code based on specified conditions.

Eg:

let temperature = 25;

if (temperature > 30) {

console.log("It's a hot day!");

} else {

console.log("It's a moderate day.");

}

1. **Loops:**

Loops are used to repeatedly execute a block of code.

Eg:

for (let i = 0; i < 5; i++) {

console.log("Iteration " + i);

}