**CSS 3**

**Cascading Style Sheets**. It is used to control the style and layout of web pages. While HTML provides the structure (like headings, paragraphs, buttons), CSS determines **how these elements look**—their colors, size, spacing, and position.

A styling language introduced on **17th Dec 1996** by **W3C (www consorhum)** and spearheaded by **Tim Berners-Lee**.

**Frameworks: SASS, SCSS, Tailwind**

SYNTAX:

Selector {

property: value;

property: value;

}

EXAMPLE:

h1 {

color: red;

font-size: 24px;

}

Shorthand: font: italic bold 20px/1.5 Arial, sans-serif;

Types of CSS:

1. Inline CSS

* Written inside an HTML tag using the style attribute.
* **Priority**: Inline CSS has the **highest precedence**.

<h1 style="color: blue; font-size: 24px;">Hello, World!</h1>

1. Internal CSS

* Written within the <style> tag inside the <head> section of an HTML document.

<style>

p {

color: green;

font-size: 18px;

}

</style>

1. External CSS(prefereed most)

* Written in a separate .css file and linked using <link> in the <head> section.

<link rel="stylesheet" href="styles.css">

**SELECTORS**

* A method to select an html element to apply CSS.

1. Tag selector name
2. Class selector
3. ID selector
4. Universal selector

* Class selector

Using attribute class to duplicate class name

.classname ->to call class

Syntax:

<tag class=”name”>

Content

</tag>

* Id selector
  + Attribute id
  + Id should be unique

Syntax:

<tag id=”name”>

Content

</tag>

* Universal selector

Used to select all the tags

Syntax:

\*{

attributes

}

* Type selector

Used to work with input elements

Ex:

input[type="text"]{

*height*: 35px;

*width*: 35%;

*background-color*: azure;

*border*: 1px goldenrod solid;

*border-radius*: 10%;

        }

CSS BOX MODEL (margin and border difference)

The **box model** defines how elements are structured on a webpage. Each element consists of:

1. **Content**: The actual text or image inside the box.
2. **Padding**: Space between the content and the border.
3. **Border**: The outline around the padding.
4. **Margin**: Space outside the border.

Content

Margin

Content

Border

Padding

left

bottom

Right

Top

div {

width: 300px;

height: 200px;

padding: 20px;

margin: 10px;

border: 2px solid black;

}

/\*shorthend padding:100px(top) 200px(right)  100px(bottom) 200px(left) ; \*/

            /\* 2values: 1st value is top and bottom and 2nd value is left and right\*/

            /\* 1 value: all side  \*/

BACKGROUND (color pallets)

The background property in CSS allows you to style the background of elements like <div>, <body>, or any other HTML element. It can include colors, images, gradients, and other visual effects.

1. **Basic background color**

Use: names, Hexadecimal values, RGB or HSL

Ex: body

{

background-color: lightblue; /\* Using a color name \*/

}

* Colour name directly or go to color pallets(copy and paste)
* **Hexadecimal**: #RRGGBB (e.g., #ff5733)
* **RGB**: rgb(red, green, blue) (e.g., rgb(255, 87, 51))
* **HSL**: hsl(hue, saturation, lightness) (e.g., hsl(9, 100%, 60%))

1. **Background Image**

set an image as the background

Ex: body

{

background-image: url('background.jpg'); (local / web)

}

* **Background image properties**

1. **background-repeat: no-repeat;**

Possible values**: repeat, no-repeat, repeat-x, repeat-y**

1. **background-position: center center;**

You can use values like **top, bottom, left, right, or center**

1. **background-size:cover;**

elements: **cover, contain**

1. **background-attachment**: Controls whether the background image scrolls with the page.

**Values**:**scroll,fixed,local**

1. **Background Gradients**: allow to create a smooth transition between two or more colors.

**background: linear-gradient (to right, red, yellow);**

**background: radial-gradient(circle, red, yellow); /\*** Circular gradient \*/

Shorthand: Background

body {

background: #ff5733 url('background.jpg') no-repeat center center fixed;

}

**Combinators**

* It will combines the multiple selectors(method to select styles).

1. Descendent selector
2. Child selector
3. Adjacent sibling selector
4. General sibling selector

DECENDENT SELECTOR

Selects elements belonging to same family. Elements can be different class but if it belongs to same family it will be selected.

Syntax:

Selector1 selector2 {

//CSS property

}

    <style>

        body{

*background-color*:goldenrod;

        }

        .thakur h1{

*color*: darkgrey;

        }

    </style>

</head>

<body>

    <div class="thakur">

        <h1>This is boy from thakur family</h1>

        <p>This girl belongs to thakur family</p>

        <h4>This is some random dude from thakur family </h4>

        <h1>Some random npc from thakur family</h1>

Clild selector:

Element will be selected only if they are direct child of a class.

Syntax:

Sel1 >sel2{

//Css property

}

<style>

        .grand-parent > h1{

*color*:darkorchid;

        }

        .parent>h1{

*color*: aqua;

        }

    </style>

</head>

<body>

    <div class="grand-parent">

        <h1>This is grand parent </h1>

        <p> this is parent</p>

        <div class="parent">

            <h1>THis is child</h1>

        </div>

    </div>

**Adjacent Sibling Selector**

Immediate after the element not before .

Syntax:

Sel1+sel2{

//CSS property

}

 <style>

        h1+p{

*color*: cornflowerblue;

*text-shadow*: 3px 5px 1px black;

*font-size*: 5rem;

        }

    </style>

</head>

<body>

    <h1>Child one</h1>

    <p>child two</p>

    <div>This is child three</div>

    <h5>this is child four</h5>

    <h1>This is child five</h1>

    <h2>This is child six</h2>

</body>

**General Sibling Selector**

Squiggly selector selects after and all the elements

Syntax:

Sel1~sel2{

//css properties

}

<style>

        p~h1{

*color*: chartreuse;

*text-decoration*: underline;

*background-color*: black;

        }

    </style>

</head>

<body>

    <h1>Child one</h1>

    <p>child two</p>

    <div>This is child three</div>

    <h5>this is child four</h5>

    <h1>This is child five</h1>

    <h2>This is child six</h2>

    <h5>this is seven</h5>

    <h1>hellow </h1>

    <p>meow</p>