

# CSS - Cascading Style Sheet

**CSS (Cascading Style Sheets)** is a stylesheet language used to describe the presentation of a document written in HTML.

## Basic Syntax:

**example** The basic syntax of CSS consists of a selector followed by a set of curly braces. Inside the curly braces, multiple properties and their values can be defined to style elements on the webpage. For example, a basic CSS rule could look like this:

```
selector {  
  property: value;  
}
```

- **Selector:** Targets the HTML element(s) to style (e.g., `body`, `h1`, `.class`, `#id`).
- **Property:** The style attribute you want to modify (e.g., `color`, `font-size`).
- **Value:** The specific value assigned to the property (e.g., `red`, `16px`).

## Way to Include Style:

CSS can be included in an HTML document using **three methods: Inline, Internal, and External**. Here's an explanation with examples for each:

**1) Inline:** is applied directly to an HTML element using the `style` attribute. This method is best for quick styling of individual elements but is not recommended for large projects.

```
<p style="color: blue;">This is a blue paragraph.</p>
```

**2) Internal:** Internal CSS is placed within the `<style>` tags in the `<head>` section of an HTML document. Here's an example:

```
<head>  
  <style>  
    p {  
      color: red;  
    }  
  </style>  
</head>
```

**3) External:** An external CSS file is created separately and linked to the HTML document using the `<link>` element. Here's an example:

```
<head>  
  <link rel="stylesheet" href="styles.css">  
</head>
```

# Selectors:

CSS selectors are used to target specific HTML elements for styling. There are different types of selectors available.

**1) Universal Selector (\*)**: Selects all elements.

```
* {  
  color:red;  
}
```

**2) Element Selector**: Selects all elements of a specific type. For example, to select all `<p>` elements, you can use:

```
p {  
  color:red;  
}
```

**3) Class Selector**: Selects elements with a specific class attribute value. To select all elements with the class "highlight", you can use:

```
.highlight {  
  background-color: yellow;  
}
```

**4) Id Selector** : Selects a single element with a specific id attribute value. To select the element with the id "header", you can use:

```
#header {  
  font-size: 24px;  
}
```

**Attribute Selector**: Selects elements with specific attributes. » ***`input[type="text"] { border: 1px solid gray; }`***

**Group Selector**: Selects multiple elements separated by commas » ***`h1, h2, h3 { color: navy; }`***

**Descendant Selector**: Selects elements inside a specific container. » ***`div p { color: green; }`***

**Child Selector (>)**: Selects direct children of an element. » ***`ul > li { list-style: none; }`***

**Pseudo-classes**: Select elements in a specific state. » ***`a:hover { color: red; }`***

**Pseudo-elements**: Style specific parts of an element. » ***`p::first-line { font-weight: bold; }`***

## color:

CSS color is a property used to define the text color in a web element. You can set colors using different methods such as predefined color names, RGB, hexadecimal values.

**color: red;**

**color: #ff5733;**

**color: rgb(255, 87, 51);**

## background-color:

In CSS, the `background-color` property is used to set the background color of an element. You can define the background color using various methods like named colors, RGB, hexadecimal values.

**background-color: red;**

**background-color: #ff5733;**

**background-color: rgb(255, 87, 51);**

# Border, Margin, Padding

**Border** : In CSS, the `border` property is used to define the style, width, and color of an element's border. You can set the border for all sides or specify individual sides (top, right, bottom, left).

code example :

```
border: 1px solid black;
```

**Margin** : In CSS, the `margin` property is used to define the space between an element's border and nearby elements. You can set the margin for individual sides (top, right, bottom, left) or use shorthand to set all sides at once.

```
margin: 10px; /* set margin on all sides */
```

```
margin-top: 20px; /* set margin on the top side only */
```

```
margin: 10px 5px; /* set top/bottom margin to 10px and left/right margin to 5px */
```

**Padding** : In CSS, the `padding` property is used to define the space between an element's content and its border. You can set the padding for individual sides (top, right, bottom, left) or use shorthand to set all sides at once.

```
padding: 10px; /* set padding on all sides */
```

```
padding-top: 20px; /* set padding on the top side only */
```

```
padding: 10px 5px; /* set top/bottom padding to 10px and left/right padding to 5px */
```

# Text and Typography-related

*color: #333;* » Sets the text color

*background-color: #f5f5f5;* » Sets background color behind text

*font-family: Arial, sans-serif;* » Sets the font family

*font-size: 16px;* » Sets the size of the text

*font-style: normal;* » normal, italic, oblique - Sets the style of the text

*font-weight: normal;* » normal, bold, bolder, lighter, 100-900 - Sets the thickness of text

*line-height: 1.5;* » Sets the space between lines of text

*letter-spacing: 1px;* » Controls the space between letters

*word-spacing: 2px;* » Controls the space between words

*text-align: left;* » left, right, center - Aligns the text

*text-decoration: none;* » none, underline, overline, line-through - Adds decoration to text

*text-transform: capitalize;* » none, uppercase, lowercase, capitalize - Transforms text case

*white-space: normal;* » normal, nowrap, pre - Handles text wrapping and spaces

*text-shadow: 1px 1px 2px rgba(0, 0, 0, 0.2);* » Adds shadow to text

# Div & Table-related

## Div:

*width: 300px;* » Sets the width of the div

*height: 200px;* » Sets the height of the div

*padding: 10px;* » Adds inner spacing inside the div

*margin: 20px auto;* » Adds outer spacing around the div

*border: 1px solid black;* » Defines the border width, style, and color of the div

*overflow: hidden;* » Hides content that overflows the div

*background-color: lightblue;* » Sets the background color of the div

*box-shadow: 2px 2px 10px gray;* » Adds a shadow around the div

*display: flex;* » Specifies the layout behavior of the div

*text-align: center;* » Aligns text inside the div

*align-items: center;* » Aligns items

*justify-content: center;* » Aligns items along the main axis in a flex container

*position: relative;* » Specifies how the div is positioned in the document

*z-index: 10;* » Controls the stacking order of the div

# Table

*border: 1px solid black;* » Defines the border for the table

*border-collapse: collapse;* » Combines table borders into a single border

*width: 100%;* » Sets the width of the table

*height: auto;* » Sets the height of the table

*text-align: left;* » Aligns text horizontally in table cells

*vertical-align: middle;* » Aligns text vertically in table cells

*padding: 10px;* » Adds spacing inside table cells

*margin: 20px auto;* » Adds outer spacing around the table

*background-color: #f5f5f5;* » Sets the background color of the table

*table-layout: fixed;* » Uses a fixed table layout

*caption-side: top;* » Positions the table caption at the top

*empty-cells: show;* » Displays borders around empty cells

*box-shadow: 2px 2px 5px rgba(0, 0, 0, 0.2);* » Adds a shadow around the table

*overflow: auto;* » Adds scrollbars if the table content overflows