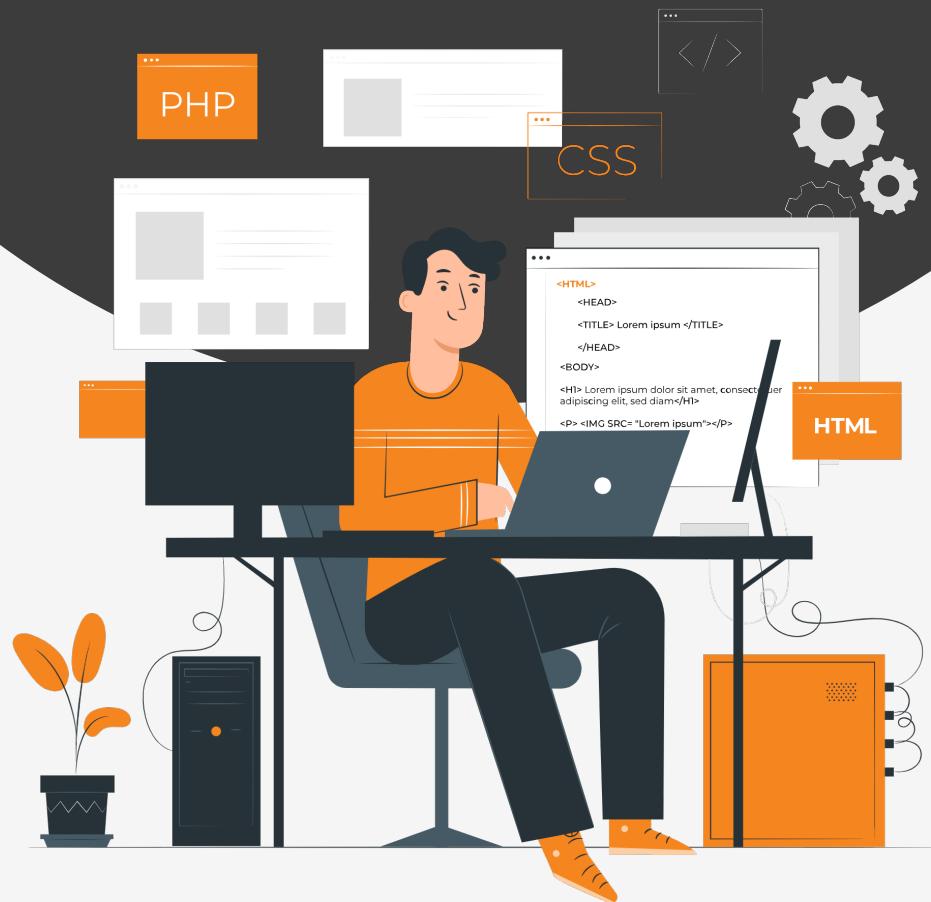


# Lesson:

## Color



# Topics

- Color name
- hex color
- rgb
- Rgba
- hsl
- hsla
- opacity

In CSS colors refer to the visual aspect of an element, such as the foreground or background color, text color, border color, etc. It is a fundamental aspect of web design, as it helps to create visually appealing and attractive designs.

The CSS Colors in various formats can be specified in different ways, such as using color names, hexadecimal values, RGB values, RGBA values, or HSL, and HSLA values. CSS also provides predefined color keywords, which are easier to use and remember than color codes. By defining the color of an element in CSS, designers can create a visually consistent design across all website pages.

Now let's understand the different types of various CSS colors format

## Color Name

CSS provides a set of predefined color keywords, including commonly used colors such as "red", "blue", "green", "yellow", "aqua", "black", and many more. Predefined color keywords are not case-sensitive and can be used in any CSS property that accepts a color value.

Example of named color -

```
Unset
h1 {
    color: black
}
```

In the above example, the named color "black" is used to style the heading (h1) in HTML. The "color" property in CSS is used to set the text color of an element on a webpage.

## hex color

In CSS, hexadecimal notation (hex color) is a method of specifying color using a six-digit code that represents the amount of red, green, and blue (RGB) in a color. Each pair of digits in the code represents the intensity of each color channel, with values ranging from 00 (0) to FF (255) in hexadecimal notation.

To use hexadecimal notation in CSS, you can use the pound sign (#) followed by the six-digit code

## Example of Hex Color-

```
Unset
h1 {
    color: #ffffff
}
/* output - white h1 tag*/
```

In the above example, the hexadecimal color code '**ffffff**' is used to style the heading HTML "h1" color to white.

## rgb

In CSS, the **rgb()** is a function of specifying color using values for red, green, and blue. The RGB model is an additive color model, which means that colors are created by adding different amounts of red, green, and blue light together. The values for red, green, and blue can range from 0 to 255.

## Example of RGB

```
Unset
p{
    color: rgb(255, 255, 255);
}
/* output - white paragraph text color text color */
```

In the above example, the rgb color value is used to style the HTML "p" element color to white.

## rgba

Similar to the Rgb, The rgba() function can also be used to specify an additional alpha value for transparency. The alpha value ranges from 0 (fully transparent) to 1 (fully opaque).

## Example of RGBa

```
Unset
p {
    color: rgba(0,0,0, 0.5)
}
/* output - light grey out color */
```

In the above CSS example, the style rule is applied to the <p> paragraph element. The CSS rule sets the text color of the <p> paragraph to a semi-transparent black using the RGBa (Red, Green, Blue, alpha) color notation.

## hsl

In CSS, HSL (Hue, Saturation, Lightness) is a color model that represents colors based on three values: hue, saturation, and lightness. The HSL model is designed to be more intuitive than other color models, as it allows you to specify a color based on its perceived attributes of hue, saturation, and brightness

The hue value is represented by a degree value between 0 and 360, which corresponds to the color wheel. To use HSL color in CSS, you can

using the `hsl()` function, followed by three comma-separated values representing the hue, saturation, and lightness, respectively.

### Example of HSL

```
Unset
p {
    color: hsl(120, 60%, 50%);
}
/* output - light green color*/
```

In the given CSS code, the style rule is applied to the `<p>` paragraph element. The CSS rule sets the text color of the `<p>` paragraph to a color defined using the HSL (Hue, Saturation, Lightness) color notation.

## hsla

The `hsla()` function can also be used to specify an additional alpha value for transparency. The alpha value ranges from 0 (fully transparent) to 1 (fully opaque).

### Example - HSLa

```
Unset
p{
    color: hsla(240, 100%, 50%, 0.5);
}
/* Output - light color similar to purple color*/
```

In the given CSS example code, the style rule is applied to the `<p>` paragraph element. The CSS rule sets the text color of the `<p>` paragraph to a semi-transparent blue color using the HSLa (Hue, Saturation, Lightness, alpha) color notation.

## hslaOpacity

The opacity property in CSS sets the transparency of an element. The opacity value can be a number from 0.0 to 1.0, where 0.0 is completely transparent and 1.0 is completely opaque.

### Example - HSLa

```
Unset
element{
    opacity: opacity_value;
}
/*opacity_value ranges from 0 to 1*/
```

**Example: Consider below image**

Unset

```

```



**Let's alter image opacity with 0.1, 0.5 and 0.8.**

<code>img {     opacity: 0.1; }</code>	<code>img {     opacity: 0.5; }</code>	<code>img {     opacity: 0.8; }</code>
		