



CSS Colors



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1 CSS Colors



CSS Colors



CSS Colors are defined by;

- * names
- * RGB
- * HEX
- * HSL
- * RGBA
- * HSLA values

maroon #800000	red #ff0000	orange #ffa500	yellow #ffff00	olive #808000
purple #800080	fuchsia #ff00ff	white #ffffff	lime #00ff00	green #008000
navy #000080	blue #0000ff	aqua #00ffff	teal #008080	
black #000000	silver #c0c0c0	gray #808080		



2 Color Names

Color Names



Color Names

- A color can be defined by using a default color name
- CSS/HTML supports 140 standard color names.

The screenshot shows a code editor with two panels: HTML and CSS. The HTML panel contains the following code:

```
1 <!DOCTYPE html>
2 <html>
3   <body>
4     <h1>Color Names</h1>
5     <p id="par1">blue</p>
6     <p id="par2">green</p>
7     <p id="par3">pink</p>
8     <p id="par4">yellow</p>
9     <p id="par5">red</p>
10  </body>
11 </html>
```

The CSS panel contains the following code:

```
1 #par1 {background-color:blue;}
2 #par2 {background-color:green;}
3 #par3 {background-color:pink;}
4 #par4 {background-color:yellow;}
5 #par5 {background-color:red;}
```

On the right side of the editor, a preview window titled "Color Names" displays the rendered output. It shows the title "Color Names" followed by five horizontal bars, each labeled with a color name and its corresponding color: blue, green, pink, yellow, and red.



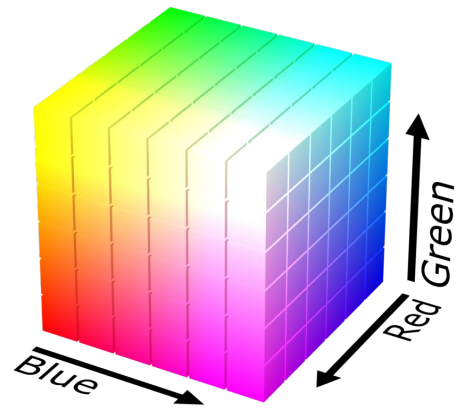
3 RGB Values

RGB Values



- A color can be defined with an RGB value:

rgb(red, green, blue)



- Each red, green, and blue parameter defines the intensity of the color between 0 and 255.
- For example, `rgb(0, 0, 255)` is displayed as blue, because blue is set to 255 and the others are set to 0.
- To display the color black, all color parameters must be set to 0, like this: `rgb(0, 0, 0)`.
- To display the color white, all color parameters must be set to 255, like this: `rgb(255, 255, 255)`.

RGB Values



RGB values

- A color can be defined with a RGB value

HTML

```
1 <!DOCTYPE html>
2 <html>
3   <body>
4     <h1>RGB Values</h1>
5     <p id="par1">blue</p>
6     <p id="par2">green</p>
7     <p id="par3">white</p>
8     <p id="par4">yellow</p>
9     <p id="par5">red</p>
10  </body>
11 </html>
```

CSS

```
1 #par1 {background-color:rgb(0,0,255);}
2 #par2 {background-color:rgb(0,255,0);}
3 #par3 {background-color:rgb(255,255,255)}
4 #par4 {background-color:rgb(255,255,0);}
5 #par5 {background-color:rgb(255,0,0);}
6
```

RGB Values





4 HEX Values

HEX Values



Decimal	Hexadecimal	Binary	Decimal	Hexadecimal	Binary
0	0	0000	8	8	1000
1	1	0001	9	9	1001
2	2	0010	10	A	1010
3	3	0011	11	B	1011
4	4	0100	12	C	1100
5	5	0101	13	D	1101
6	6	0110	14	E	1110
7	7	0111	15	F	1111

red = rgb(255,0,0) = #ff0000
green = rgb(0,0,255) = #00ff00
blue = rgb(0,0,255) = #0000ff
yellow = rgb(255,255,0) = #ffff00

- A color can be defined using a hexadecimal value:

RRGGBB

- RR: red
- GG: green
- BB: blue

- The hexadecimal values must be between 00 and FF.

$$FF : (F[15] * 16) + (F * 1) = 255$$

$$35: (3 * 16) + (5 * 1) = 53$$

$$165: 165/16 = 10 \rightarrow A + 5 = A5$$

HEX Values



HEX Values

- A color can be defined with a HEX value

HTML

```
1 <!DOCTYPE html>
2 <html>
3   <body>
4     <h1>HEX Values</h1>
5     <p id="par1">blue</p>
6     <p id="par2">green</p>
7     <p id="par3">white</p>
8     <p id="par4">yellow</p>
9     <p id="par5">red</p>
10  </body>
11 </html>
```

CSS

```
1 #par1 {background-color:#0000FF;}
2 #par2 {background-color:#00FF00;}
3 #par3 {background-color:#FFFFFF;}
4 #par4 {background-color:#FFFF00;}
5 #par5 {background-color:#FF0000;}
```

HEX Values

blue

green

white

yellow

red

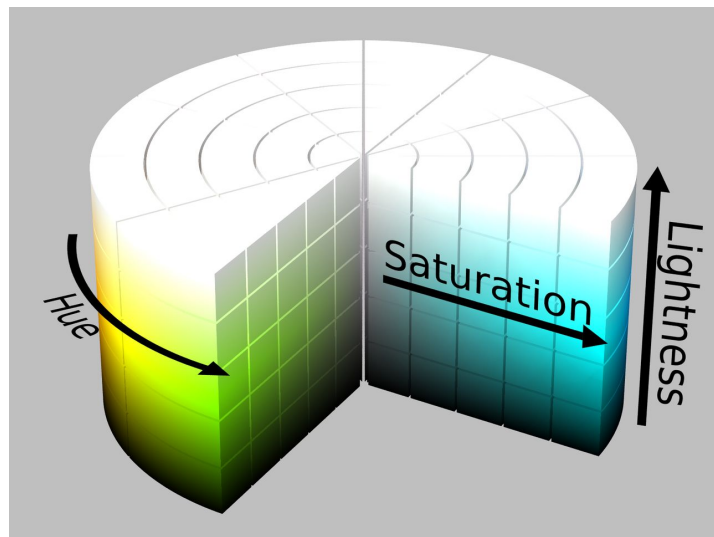


5 HSL Values



HSL Values

- A color can be defined using Hue, Saturation, and Lightness (HSL):
- **hsl(hue, saturation, lightness)**
- **Hue** is a degree on the color wheel from 0 to 360. 0 is red, 120 is green, and 240 is blue.
- **Saturation** can be described as the intensity of a color. It is a percentage value, 0% means a shade of gray, and 100% is the full color.
- **Lightness** is also a percentage, 0% is black, 50% is neither light or dark, 100% is White.



HSL Values



HSL Values

- A color can be defined with a HSL value

HTML

```
1 <!DOCTYPE html>
2 <html>
3   <body>
4     <h1>HSL Values</h1>
5     <p id="par1">blue</p>
6     <p id="par2">green</p>
7     <p id="par3">white</p>
8     <p id="par4">yellow</p>
9     <p id="par5">red</p>
10  </body>
11 </html>
```

CSS

```
1 #par1 {background-color:hsl(240, 100%, 50%);}
2 #par2 {background-color:hsl(120, 100%, 25%);}
3 #par3 {background-color:hsl(0, 0%, 100%);}
4 #par4 {background-color:hsl(60, 100%, 50%);}
5 #par5 {background-color:hsl(0, 100%, 50%);}
```

HSL Values

blue

green

white

yellow

red



5 RGBA Values

RGBA Values



- RGBA color values are the RGB color values with an alpha channel that defines the **opacity** of a color.
- A RGBA color value is specified with:

rgba(red, green, blue, alpha)

- Alpha parameter is a number between 0 (fully transparent) and 1 (not transparent).

RGBA Values



RGBA Values

- RGBA color values are the RGB color values with an alpha channel that defines the opacity of a color.

HTML

```
1 <!DOCTYPE html>
2 <html>
3   <body>
4     <h1>RGBA Values</h1>
5     <p id="par1">green with opacity</p>
6     <p id="par2">green with opacity</p>
7     <p id="par3">green with opacity</p>
8   </body>
9 </html>
```

CSS 100+ unsaved changes

```
1 #par1 {background-color: rgba(0, 255, 0, 0.1);}
2 #par2 {background-color: rgba(0, 255, 0, 0.3);}
3 #par3 {background-color: rgba(0, 255, 0, 0.7);}
4
```

RGBA Values

green with opacity

green with opacity

green with opacity



5 HSLA Values



HSLA Values

- HSLA color values are the HSL color values with an alpha channel which specifies the opacity for a color.
- A HSLA color value is specified with:
 - **hsla(hue, saturation, lightness, alpha)**
- Alpha parameter is a number between 0 (fully transparent) and 1 (not transparent):

HSLA Values



HSLA Values

- HSLA color values are the HSL color values with an alpha channel which specifies the opacity for a color.

HTML

```
1 <!DOCTYPE html>
2 <html>
3   <body>
4     <h1>HSLA Values</h1>
5     <p id="par1">blue with opacity</p>
6     <p id="par2">blue with opacity</p>
7     <p id="par3">blue with opacity</p>
8   </body>
9 </html>
```

CSS

```
1 #par1 {background-color:hsla(240, 100%, 50%, 0.1);}
2 #par2 {background-color:hsla(240, 100%, 50%, 0.3);}
3 #par3 {background-color:hsla(240, 100%, 50%, 0.7);}
4
```

HSLA Values

blue with opacity

blue with opacity

blue with opacity