

Colors



Colors are specified by:

- a valid color name - like "red"
- an RGB value - like "rgb(255, 0, 0)" or an RGBA value – the “A” controls opacity
- a HSL or HSLA value – stands for hue, saturation, lightness, and alpha (opacity).
- a HEX value - like "#ff0000"

Name

There are 140 standard named colors. Go to <http://html-color-codes.info/color-names/> to see the colors sorted according to their shade.

RGB Value

RGB color values can be specified using this formula: rgb (red, green, blue).

Each parameter (red, green, and blue) defines the intensity of the color between 0 and 255.

For example, rgb(255,0,0) is displayed as red, because red is set to its highest value (255) and the others are set to 0.

Go to the color picker at http://www.w3schools.com/colors/colors_picker.asp to change the rgb values and see the color you create.

RGBA Value

RGBA color values include a variable for the opacity of the color. The alpha value is a number between 0.0 (fully transparent) and 1.0 (not transparent at all):

Go to https://www.w3schools.com/html/html_colors_rgb.asp to change the rgba values to see the effect.

HSL and HSLA

Hue is a degree on the color wheel from 0 to 360. 0 is red, 120 is green, and 240 is blue.

Saturation is a percentage value. 0% means a shade of gray, and 100% is the full color.

Lightness is also a percentage value. 0% is black, and 100% is white.

The alpha value is a number between 0.0 (fully transparent) and 1.0 (not transparent at all)

Here's an example of an HSLA value: `hsla(37, 100%, 60%, 0.4)`

Go to https://www.w3schools.com/html/html_colors_hsl.asp to play around with the sliders and see the effect.

By Hexadecimal Value

Hexadecimal numbers range from 0 – 9 and then A, B, C, D, E, and F (see the chart on right). 0 is the lowest value; F is the highest value.

With HTML, RGB values can also be specified using hexadecimal color values in the form: #RRGGBB, where RR (red), GG (green) and BB (blue) are hexadecimal values between 00 and FF (same as decimal 0-255).

For example, #FF0000 is displayed as red, because red is set to its highest value (FF) and the others are set to the lowest value (00).

Decimal Hexadecimal

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	A
11	B
12	C
13	D
14	E
15	F
16	10
17	11
etc	etc