



CSS VALUES AND UNITS

Ruth Cardona – WDD 230 – Web Development I - 2023

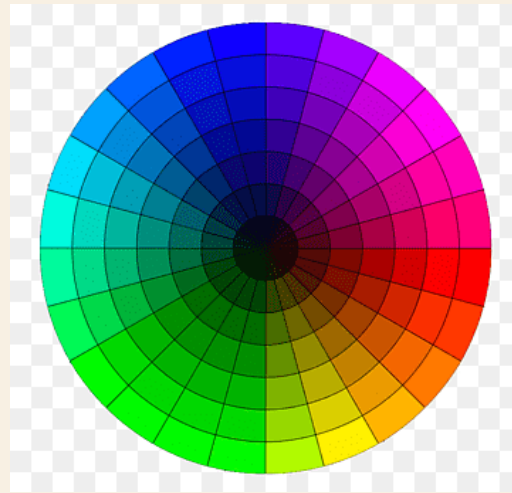
CSS UNITS & VALUES

LENGTH



**em, rem, px,
cm, mm, in, pt,
vw, vh, %**

COLORS



**rgb, rgba, hsl, hsla,
hwb, hexadecimal,
keywords, opacity,
alpha,**

IMAGES / BACKGROUNDS



**background-
images, gradient,
position**

LENGTH

ABSOLUTE

MDN: https://developer.mozilla.org/en-US/docs/Learn/CSS/Building_blocks/Values_and_units#numbers_lengths_and_percentages

Unit	Name	Equivalent to
cm	Centimeters	1cm = 37.8px = 25.2/64in
mm	Millimeters	1mm = 1/10th of 1cm
Q	Quarter-millimeters	1Q = 1/40th of 1cm
in	Inches	1in = 2.54cm = 96px
pc	Picas	1pc = 1/6th of 1in
pt	Points	1pt = 1/72nd of 1in
px	Pixels	1px = 1/96th of 1in

LENGTH

Relative

MDN: https://developer.mozilla.org/en-US/docs/Learn/CSS/Building_blocks/Values_and_units#numbers_lengths_and_percentages













Unit	Relative to		
em	Font size of the parent, in the case of typographical properties like font-size , and font size of the element itself, in the case of other properties like width .	vh	1% of the viewport's height.
		vmin	1% of the viewport's smaller dimension.
		vmax	1% of the viewport's larger dimension.
ex	x-height of the element's font.	vb	1% of the size of the initial containing block in the direction of the root element's block axis .
ch	The advance measure (width) of the glyph "0" of the element's font.	vi	1% of the size of the initial containing block in the direction of the root element's inline axis .
rem	Font size of the root element.	svw, svh	1% of the small viewport 's width and height, respectively.
lh	Line height of the element.	lvw, lvh	1% of the large viewport 's width and height, respectively.
r1h	Line height of the root element. When used on the font-size or line-height properties of the root element, it refers to the properties' initial value.	dvw, dvh	1% of the dynamic viewport 's width and height, respectively.
vw	1% of the viewport's width.		

% Percentage: Represent a fraction of some other value, they are always relative to another quantity

COLOR

Modern computers supports 24-bit colors = 16,777,216 values

COLOR KEYWORDS

color:		
	aliceblue	#f0f8ff
	antiquewhite	#faebd7
	aqua	#00ffff
	aquamarine	#7fffd4
	azure	#f0ffff
	beige	#f5f5dc
	bisque	#ffe4c4
	black	#000000
	blanchedalmond	#ffebcd
	blue	#0000ff
	blueviolet	#8a2be2
	brown	#a52a2a

W3C wiki: <https://www.w3.org/wiki/CSS/Properties/color/keywords>

HEXADECIMAL RGB VALUES



#C82A54	#EF280F	#E36B2C	#E36B2C
#E7D40A	#6DC36D	#02AC66	#23BAC4
#109DFA	#024A86	#E69DFB	#FF689D
#ECECEC	#BBA9BB	#8C4966	#222222

- Colors:
<https://colors.co/>
- Adobe Color Wheel:
<https://color.adobe.com/es/create/color-wheel>
- Color Hunt:
<https://colorhunt.co/>

**# + 6 hexadecimal number between 16 values
(0123456789abcdef)**

RGB AND RGBA VALUES (RED, GREEN, BLUE, ALPHA)

rgba(0,0,255,.2)
rgba(0,0,255,.4)
rgba(0,0,255,.6)
rgba(0,0,255,.8)
rgba(0,0,255,1)

```
.caja-1{background-color:rgba(0,0,255,.2);}
.caja-2{background-color:rgba(0,0,255,.4);}
.caja-3{background-color:rgba(0,0,255,.6);}
.caja-4{background-color:rgba(0,0,255,.8);}
.caja-5{background-color:rgba(0,0,255,1);}
```

**Decimal number
Between 0 and
255.
Alpha between 0 & 1.**

- RGBA Color Picker:
<https://rgbacolorpicker.com/>
- W3 Schools Color Picker:
https://www.w3schools.com/colors/colors_picker.asp

HSL AND HSLA (HUE, SATURATION, LIGHTNESS, ALPHA)

Hue:



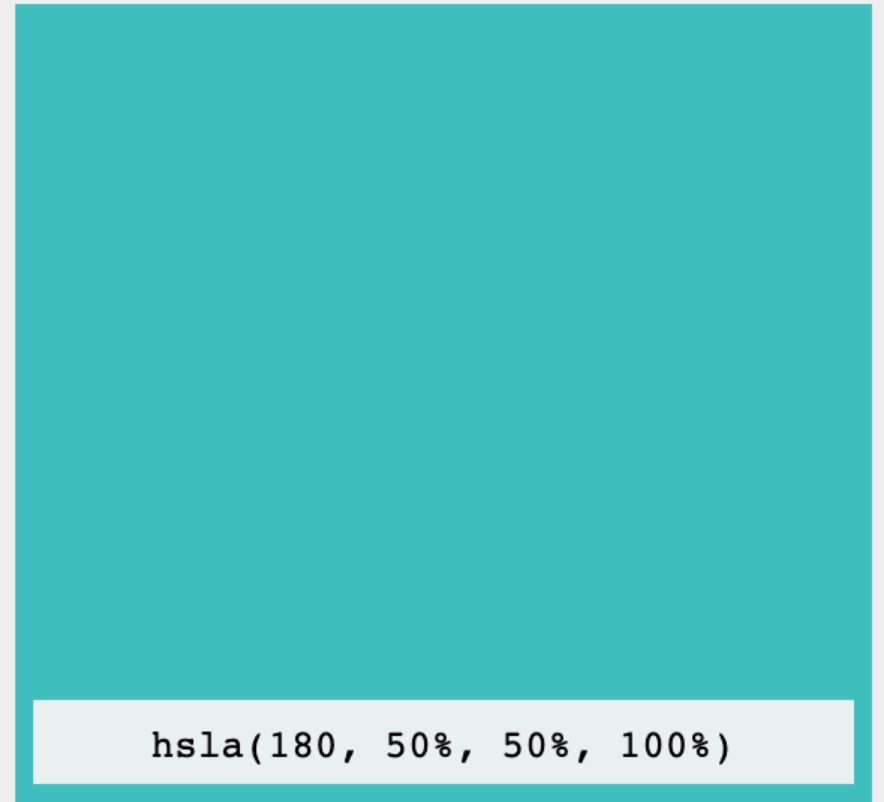
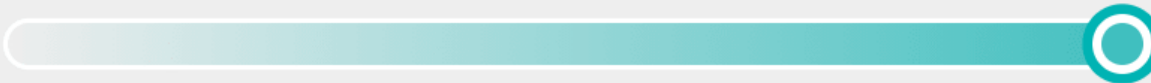
Saturation:



Lightness:



Alpha:



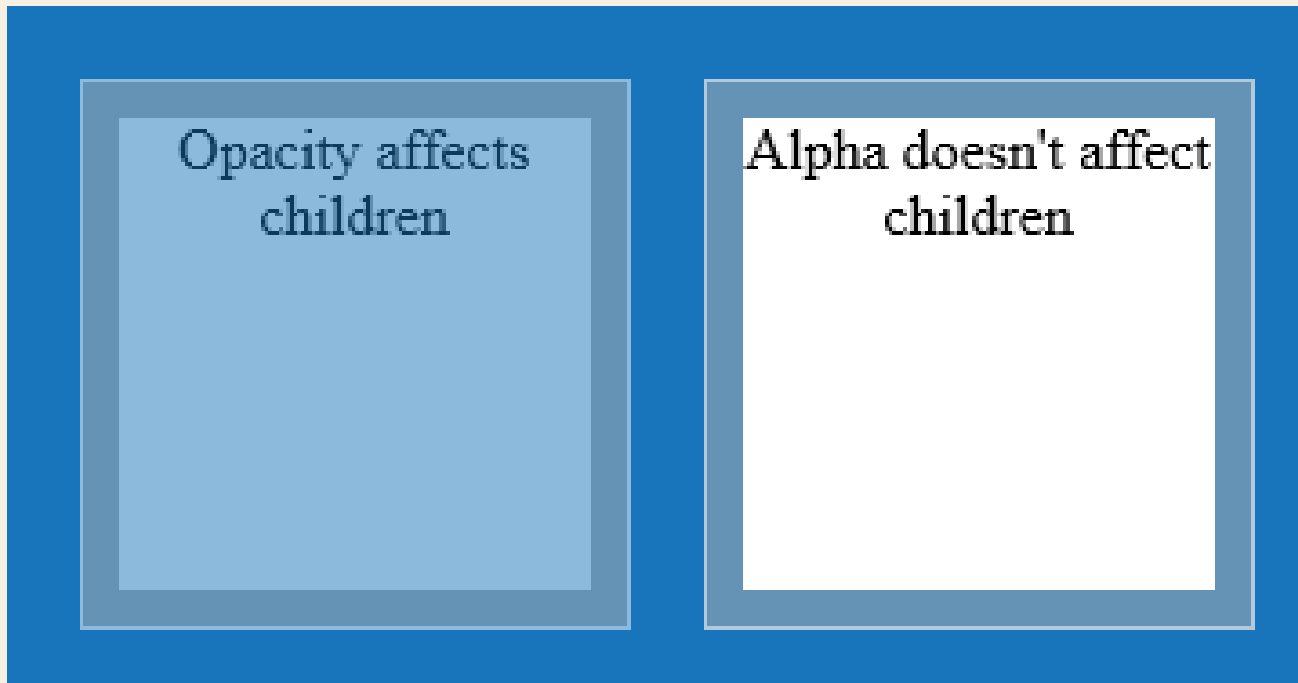
```
hsla(180, 50%, 50%, 100%)
```

H -> values between 0 and 360

S L A -> values between 0 and 100%

OPACITY VS ALPHA

- When you use opacity you make the element and everything inside it opaque.
- Alpha only makes the color you are specifying opaque.

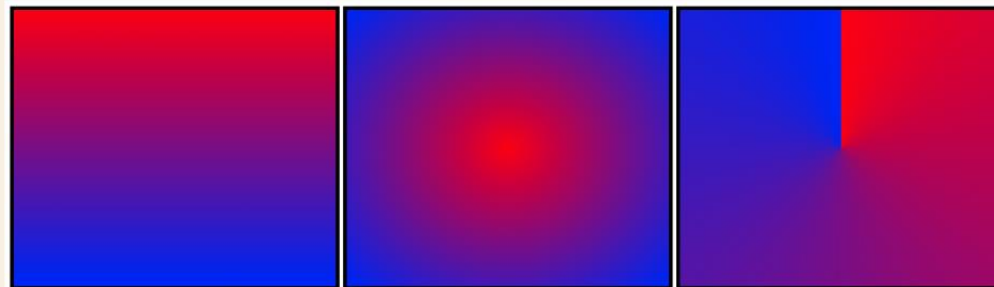


IMAGES

The image value type is used wherever an image is a valid value

BACKGROUND-IMAGE AND GRADIENT

- **`.image { background-image: url(star.png); }`**
- **`.gradient { background-image: linear-gradient(90deg, rgba(119,0,255,1) 39%, rgba(0,212,255,1) 100%); }`**



Linear

Radial

Conic



<https://medium.com/@beingrahul/uses-of-linear-gradient-in-css-df3e88df678d>

POSITION

2d Coordinates: right, left, center, bottom , top



```
.box {  
  height: 300px;  
  width: 400px;  
  background-image: url(star.png);  
  background-repeat: no-repeat;  
  background-position: right 40px;  
}
```



THANK YOU

WDD 230 - Week 5 - Winter 2023