

CSS Essentials

Values and Units



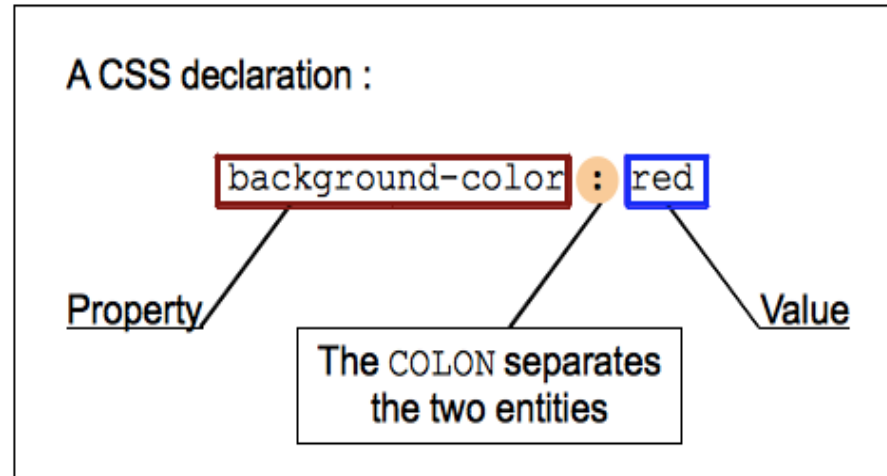
- 1. CSS Value**
- 2. Distance unit**
- 3. Percentages**
- 4. Ems and rems**
- 5. Color**

Section 1

CSS Value

1. CSS Value

- **CSS value:** Every CSS declaration includes a property / value pair. Depending on the property, the value can include a single integer or keyword, to a series of keywords and values with or without units



1. CSS Value

➤ Data type

- ***Textual data type:***

- custom-ident

```
1  @keyframe validIdent {  
2      /* keyframes go here */  
3  }
```

- Pre-defined keywords as an ident:

```
.box {  
    float: left;  
}
```

1. CSS Value

➤ Data type

▪ *Textual data type:*

○ string:

```
1 | .item {  
2 |     grid-area: content;  
3 | }
```

○ url:

```
.box {  
    background-image: url("images/my-background.png");  
}
```

➤ Data type

▪ *Numeric data types*

- *Integer*: A whole number such as 1024 or -55
- *Number*: A decimal number
- *Dimension*: A number with a unit attached to it
- *Percentage*: A fraction of some other value

Section 2

Distance unit

2. Distance unit

➤ **Distance unit (length unit):** There are 2 types of **distance** unit in CSS: Relative and Absolute

❖ ***Absolute length units*** are fixed to a physical length

Unit	Description
cm	centimeters
mm	millimeters
in	inches (1in = 96px = 2.54cm)
px *	pixels (1px = 1/96th of 1in)
pt	points (1pt = 1/72 of 1in)
pc	picas (1pc = 12 pt)

2. Distance unit

➤ Distance unit (length unit):

❖ *Relative length unit* specify a length in relation to something else.

Unit	Description
em	Relative to the font-size of the element (2em means 2 times the size of the current font)
ex	Relative to the x-height of the current font (rarely used)
ch	Relative to width of the "0" (zero)
rem	Relative to font-size of the root element
vw	Relative to 1% of the width of the viewport*
vh	Relative to 1% of the height of the viewport*
vmin	Relative to 1% of viewport's* smaller dimension
vmax	Relative to 1% of viewport's* larger dimension
%	Relative to the parent element

Section 3

Percentage

3. Percentage

- **Percentage** is a type that represents a fraction of some other value.
- It is always relative to another quantity.
- Each property that allows **percentages** also defines the quantity to which the percentage refers.
- This quantity can be a value of another property of the same element, the value of a property of an ancestor element, a measurement of a containing block, or something else.

Section 4

Ems & remS

4. Ems & rems

- **em** and **rem** are the two relative lengths you are likely to encounter most frequently when sizing anything from boxes to text.
 - **em** unit means ***"my parent element's font-size"***: Relative to 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.
 - **rem** unit means ***"The root element's font-size"***: Relative to font size of the root element.

Section 5

Colors

➤ **Colors** in CSS can be specified by the following methods:

- Hexadecimal colors
- RGB colors
- RGBA colors
- HSL colors
- HSLA colors
- Predefined/Cross-browser color names
- With the **currentcolor** keyword

5. Colors

- An **RGB color** value is specified with the `rgb()` function, which has the following syntax: ***rgb(red, green, blue)***
- Each parameter (red, green, and blue) defines the intensity of the color and can be an integer between 0 and 255 or a percentage value (from 0% to 100%).

```
.one {  
  background-color: rgb(2, 121, 139);  
}  
  
.two {  
  background-color: rgb(197, 93, 161);  
}  
  
.three {  
  background-color: rgb(18, 138, 125);  
}
```

rgb(2, 121, 139)

rgb(197, 93, 161)

rgb(18, 138, 125)

5. Colors

- **HSL** stands for **Hue**, **Saturation**, and **Lightness** - and represents a cylindrical-coordinate representation of colors
- An **HSL color** value is specified with the `hsl()` function, which has the following syntax: ***hsl(hue, saturation, lightness)***
- **Hue** is a degree on the color wheel (from 0 to 360) - 0 (or 360) is red, 120 is green, 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; 0% is black, 100% is white.

```
.one {  
  background-color: hsl(188, 97%, 28%);  
}
```

`hsl(188, 97%, 28%)`

5. Colors

- **HSLA color** values are an extension of HSL color values with an alpha channel - which specifies the opacity of the object.
- An **HSLA color** value is specified with the `hsla()` function, which has the following syntax: ***hsla(hue, saturation, lightness, alpha)***
- The **alpha** parameter is a number between 0.0 (fully transparent) and 1.0 (fully opaque).

```
.one {  
  background-color: hsla(188, 97%, 28%, .3);  
}  
  
.two {  
  background-color: hsla(321, 47%, 57%, .7);  
}
```

`hsla(188, 97%, 28%, .3)`

`hsla(321, 47%, 57%, .7)`

5. Colors


- ***Predefined/Cross-browser color names:*** 140 color names are predefined in the HTML and CSS color specification.

white	black	cyan	darkCyan
red	darkRed	magenta	darkMagenta
green	darkGreen	yellow	darkYellow
blue	darkBlue	gray	darkGray
lightGray			

5. Colors

- With the ***currentcolor*** keyword: The ***currentcolor*** keyword refers to the value of the color property of an element.

```
#myDIV {  
  color: blue; /* Blue text color */  
  border: 10px solid currentcolor; /* Blue border color */  
}
```



This div element has a blue text color and a blue border.

6. Quiz

➤ Given the following styles:

```
1  body {  
2    |  font-size: 20px;  
3  }  
4  div {  
5    |  font-size: 1.5em;  
6  }
```

What is the computed value of the font-size of div in pixels?

6. Quiz

- Which of the following measurement is relative to font-size of the root element?
- A. rem
 - B. em
 - C. root
 - D. rr

6. Quiz

- Which of the following options are accepted by the color property?
 - A. Hexadecimal
 - B. Color names
 - C. Decimal
 - D. Octal

Thank you

