

# CSS Essentials

*Values and Units*



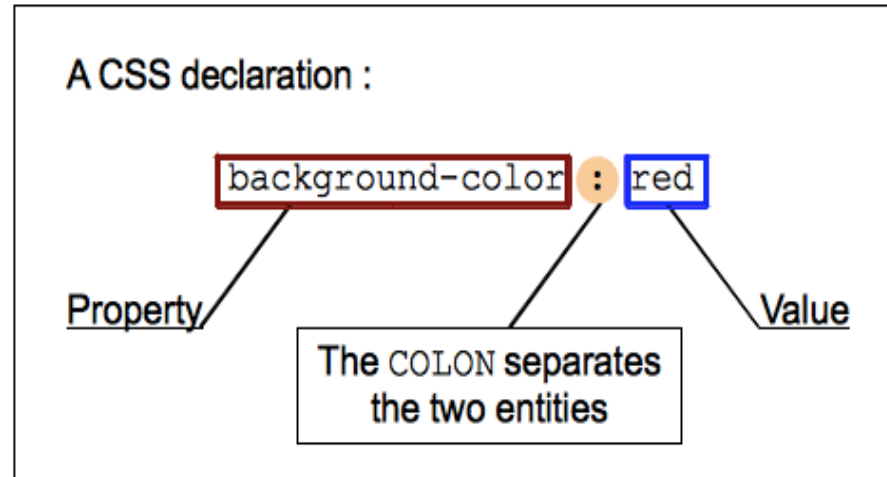
- 1. CSS Value**
- 2. Distance unit**
- 3. Percentages**
- 4. Ems and rems**
- 5. Color**

## 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");  
}
```

# 1. CSS Value

## ➤ 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

# 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

