

CSS

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CSS

- CSS stands for **Cascading Style Sheets**.
- CSS was developed by the **W3C**(World Wide Web Consortium).
- CSS is a style sheet language used to describe the **presentation** of a document written in a markup language.
- Styles define how to **display** HTML elements (font face, size,color, alignment, ...etc)
- Styles are normally stored in **Style Sheets**
- The term **cascading** derives from the fact that multiple style sheets can be applied to the same Web page.
- Due to CSS, all **HTML presentation** tags and attributes are deprecated , e.g. font , center , etc

CSS Versions

- Cascading Style Sheets 1 (CSS1)
 - Features: Fonts, Colors, Alignment, Spacing
- Cascading Style Sheets 2 (CSS2 CSS2.1)
 - Features: Layout, Positioning... (CSS P)
- Cascading Style Sheets 3 (CSS 3)
 - Features: Effect, Sizing...

Styles will be applied to HTML in the following order:

1. Browser default
2. External style sheet
3. Internal style sheet (in head)
4. Inline style

Using CSS

```
<h1 style="color:blue;">A Blue Heading</h1>
```

- ▶ **Inline** - by using the **style** attribute inside HTML elements

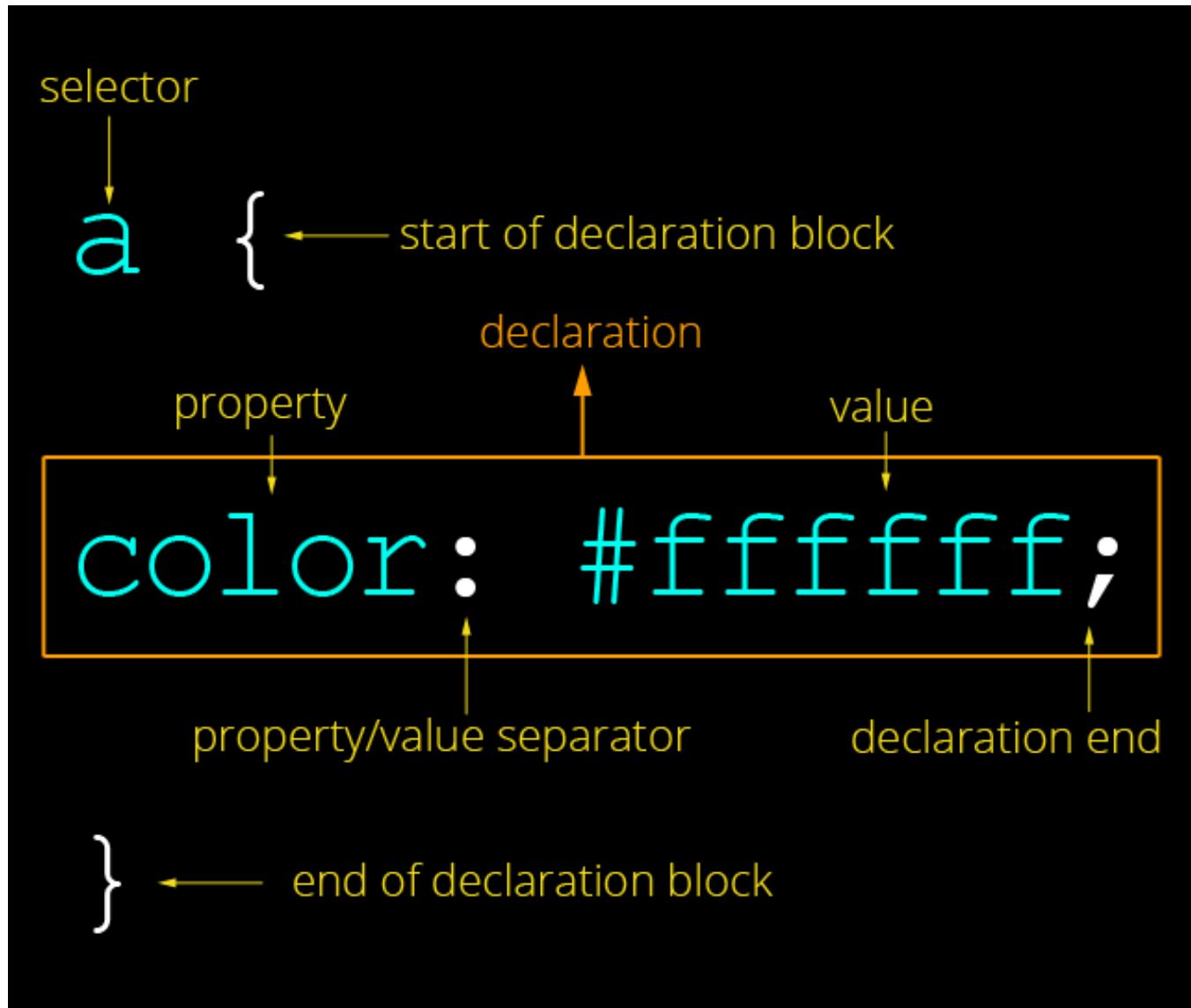
- ▶ **Internal** - by using a **<style>** element in the **<head>** section

```
<head>  
<style>  
  body {background-color: powderblue;}  
  h1   {color: blue;}  
  p    {color: red;}  
</style>  
</head>
```

- ▶ **External** - by using a **<link>** element to link to an external CSS file

```
<head>  
  <link rel="stylesheet" href="styles.css">  
</head>
```

syntax



CSS selectors

- Tag Selectors

- We use the tag name to select the element

```
p {  
  text-align: center;  
  color: red;  
}
```

- id Selector

- id of an element is unique within a page
 - An id name cannot start with a number!

```
#para1 {  
  text-align: center;  
  color: red;  
}
```

- class Selector

- Class of an element can be used with a group of elements to apply same style for a group of elements.

```
.center {  
  text-align: center;  
  color: red;  
}
```

specify only specific HTML elements affected by a class or id.

```
p.bold{  
  font-weight:bold;  
}
```

```
p .bold{  
  font-weight:bold;  
}
```

```
p#bold{  
  font-weight:bold;  
}
```

```
p #bold{  
  font-weight:bold;  
}
```


Adding more than one class to the same HTML element.

- You can add more than one class to same HTML element by adding a space between the classes.

```
<p class="center large">This paragraph refers to two classes.</p>
```

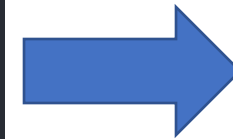
- In this example the paragraph belongs to the two classes center and large at the same time so it will be affected by the styles of both classes.

Universal Selector

```
* {  
  text-align: center;  
  color: blue;  
}
```

Grouping Selector

```
h1 {  
  text-align: center;  
  color: red;  
}  
  
h2 {  
  text-align: center;  
  color: red;  
}  
  
p {  
  text-align: center;  
  color: red;  
}
```



```
h1, h2, p {  
  text-align: center;  
  color: red;  
}
```

Combinators

- Selection depends on relationship between the elements.

Descendant Selector

```
div p {  
    background-color: yellow;  
}
```

Child Selector (>)

```
div > p {  
    background-color: yellow;  
}
```

Adjacent Sibling Selector (+)

```
div + p {  
    background-color: yellow;  
}
```

General Sibling Selector (~)

```
div ~ p {  
    background-color: yellow;  
}
```

Calculating a selector's specificity

- count the number of ID selectors in the selector (= a)
- count the number of class selectors (= b)
- count the number of type selectors (= c)

```
*          /* a=0 b=0 c=0 -> specificity = 0 */
LI         /* a=0 b=0 c=1 -> specificity = 1 */
UL LI      /* a=0 b=0 c=2 -> specificity = 2 */
UL OL+LI   /* a=0 b=0 c=3 -> specificity = 3 */
```

```
UL OL LI.red    /* a=0 b=1 c=3 -> specificity = 13 */
LI.red.level    /* a=0 b=2 c=1 -> specificity = 21 */
#x34y           /* a=1 b=0 c=0 -> specificity = 100 */
```

CSS Colors

- using CSS Color Names ex(Tomato ,Orange ,DodgerBlue, etc..)
 - [140 standard color names](#).
- CSS RGB Colors
 - rgb(red, green, blue)
 - To display black, set all color parameters to 0, like this: rgb(0, 0, 0).
 - To display white, set all color parameters to 255, like this: rgb(255, 255, 255).
- **rgba(*red, green, blue, alpha*)**
 - The alpha parameter is a number between 0.0 (fully transparent) and 1.0 (not transparent at all)

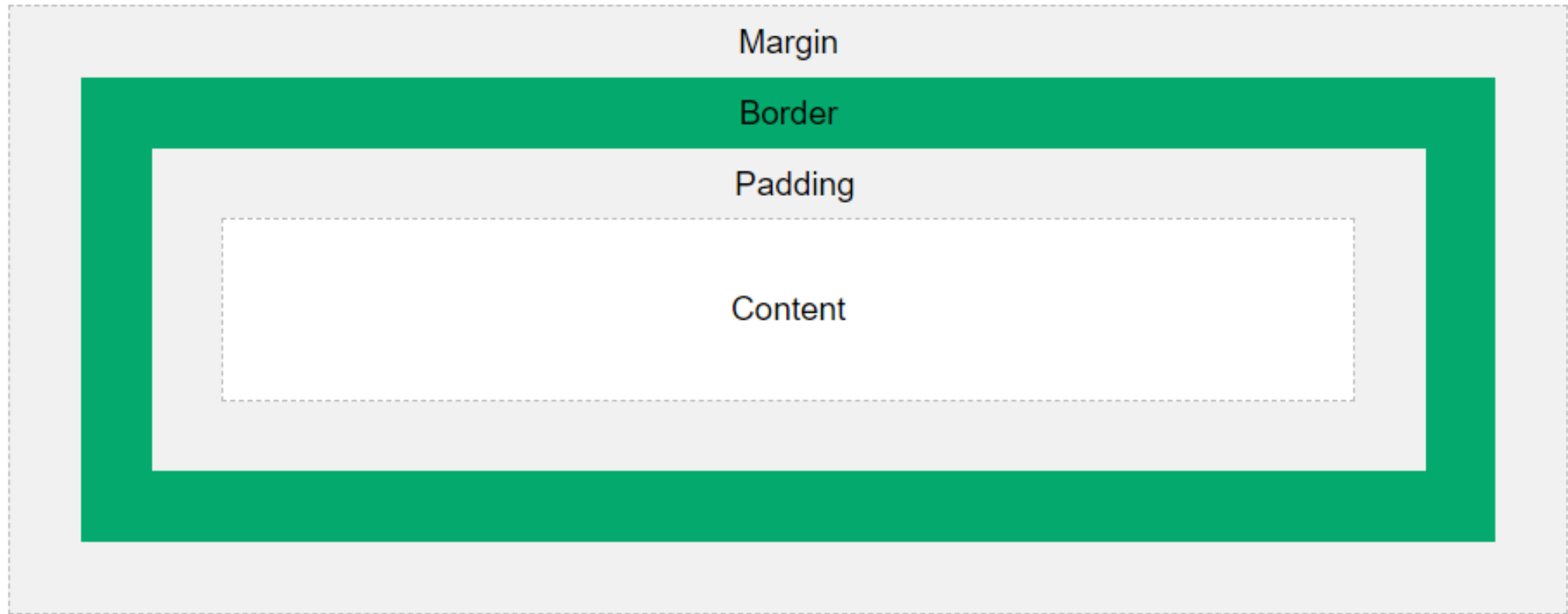
HEX Value

- #ff0000 is displayed as red

HSL Value

- hsl(hue, saturation, lightness)

CSS Box Model



Display

- Inline
- Block
- None
- Inline-block

```
{display: none;}  
{display: inline;}  
{display: block;}  
{display: inline-block;}
```

CSS font Property

- `font` property is a shorthand property for:
 - `font-style`
 - `font-variant`
 - `font-weight`
 - `font-size/line-height`
 - `font-family`

Backgrounds

- background-color
- background-image

```
div {  
  background-color: green;  
  opacity: 0.3;  
}
```

```
p {  
  background-image: url("paper.gif");  
}
```

position Property

- static
- relative
- fixed
- absolute
- sticky

float Property

- Right
- Left
- None

```
img {  
  float: left;  
}
```

- Clear float

```
img {  
  float: left;  
}  
  
p.clear {  
  clear: left;  
}
```

- Display:table
 - To fix the hack of float parent element smaller than floated element