Introduction to CSS

What is CSS?

CSS is the language we use to style a Web page.

- CSS stands for Cascading Style Sheets.
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media.
- CSS saves a lot of work. It can control the layout of multiple web pages all at once.
- External stylesheets are stored in CSS files.
- CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.

CSS Example

```
body {
 background-color: lightblue;
}
h1 {
  color: white;
  text-align: center;
}
p {
  font-family: verdana;
  font-size: 20px;
}
```

CSS Solved a Big Problem

HTML was NEVER intended to contain tags for formatting a web page!

HTML was created to describe the content of a web page, like:

```
<h1>This is a heading</h1>

<p>This is a paragraph.</p>
```

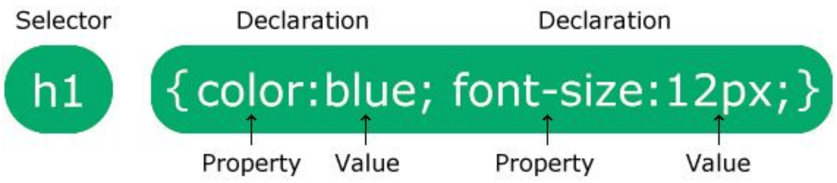
When tags like <font>, and color attributes were added to the HTML 3.2 specification, it started a nightmare for web developers. Development of large websites, where fonts and color information were added to every single page, became a long and expensive process.

To solve this problem, the World Wide Web Consortium (W3C) created CSS.

CSS removed the style formatting from the HTML page!

CSS Syntax

1. The selector points to the HTML element you want to style.
2. The declaration block contains one or more declarations separated by semicolons.
3. Each declaration includes a CSS property name and a value, separated by a colon.
4. Multiple CSS declarations are separated with semicolons, and declaration blocks are surrounded by curly braces.



CSS Selectors

The CSS Element Selector

```
<!DOCTYPE html>
<html>
<head>
<style>
p {
        text-align: center;
        color: red;
}
</style>
</head>
<body>

<p>Every paragraph will be affected by the style.</p>
<p id="para1">Me too!</p>
<p>And me!</p>

</body>
</html>
```

The CSS Id Selector

```
<!DOCTYPE html>
<html>
<head>
<style>
#para1 {
        text-align: center;
        color: red;
}
</style>
</head>
<body>
<p id="para1">Hello World!</p>
<p>This paragraph is not affected by the style.</p>
</body>
</html>
```

The CSS Class Selector

```
<!DOCTYPE html>
<html>
<head>
<style>
.center {
        text-align: center;
        color: red;
}
</style>
</head>
<body>
<h1 class="center">Red and center-aligned heading</h1>
<p class="center">Red and center-aligned paragraph.</p>
</body>
</html>
```

The CSS Class Selector (continued ..)

You can also specify that only specific HTML elements should be affected by a class. In this example only <p> elements with class="center" will be red and center-aligned:

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

p.large {
  font-size: 300%;
}
```

HTML elements can also refer to more than one class.In this example the <p> element will be styled according to class="center" and to class="large":

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

<p > This is as it is </p>
```

The CSS Universal Selector

The universal selector (*) selects all HTML elements on the page.

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

The CSS Grouping Selector

Look at the following CSS code (the h1, h2, and p elements have the same style definitions):

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

h2 {
        text-align: center;
        color: red;
}

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

It will be **better** to group the selectors, to minimize the code. To group selectors, separate each selector with a comma.

```
h1, h2, p {

        text-align: center;

        color: red;

}
```

All CSS Simple Selectors - Summary

Selector	**Example**	**Example Description**
#id	#firstname	Selects the element with id="firstname"
.class	intro	Selects all elements with class="intro"
element.class	p.intro	Selects only <p> elements with class="intro"
*	*	Selects all elements
element	p	Selects all <p> elements
element,element,..	div, p	Selects all <div> elements and all <p> elements

Three Ways to Add CSS

1. External CSS

With an external style sheet, you can change the look of an entire website by changing just one file!

Each HTML page must include a reference to the external style sheet file inside the <link> element, inside the head section.

An external style sheet can be written in any text editor, and must be saved with a .css extension.

The external .css file should not contain any HTML tags.

Example

An HTML page:

```
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" href="mystyle.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

mystyle.css:

```
body {
  background-color: lightblue;

}

h1 {

  color: navy;

  margin-left: 20px;

}
```

2. Internal CSS

An internal style sheet may be used if one single HTML page has a unique style.

The internal style is defined inside the <style> element, inside the head section.

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
  background-color: linen;
}
h1 {
  color: maroon;
  margin-left: 40px;
}
</style>
</head>
<body>
<h1>This is a heading</h1>
</body>
</html>
```

3. Inline CSS

An inline style may be used to apply a unique style for a single element.

To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

Example:

```
<!DOCTYPE html>
<html>
<body>
<h1 style="color:blue;text-align:center;">This is a heading</h1>
<p style="color:red;">This is a paragraph.</p>
</body>
</html>
```

CSS Colors

CSS Backgroud Colors

CSS / Html supports 140 standard colors names.

You can set the background color for HTML elements by looking at following example:

```
<h1 style="background-color:DodgerBlue;">Hello World</h1>

<p style="background-color:Tomato;">Lorem ipsum...</p>
```

CSS Text Colors

You can set the color of text by looking at following example:

```
<h1 style="color:Tomato;">Hello World</h1>

<p style="color:DodgerBlue;">Lorem ipsum...</p>

<p style="color:MediumSeaGreen;">Ut wisi enim...</p>
```

CSS Border Colors

You can set the color of borders by looking at following example:

```
<h1 style="border:2px solid Tomato;">Hello World</h1>

<h1 style="border:2px solid DodgerBlue;">Hello World</h1>

<h1 style="border:2px solid Violet;">Hello World</h1>
```

CSS Backgrounds

CSS Background Styles

1. Background-color e.g. body { background-color: lightblue;}
2. Background-image e.g. body { background-image: url("paper.gif"); }
3. Background-repeat
4. background-attachment
5. background-position
6. background (shorthand property)

CSS Margins

Margin - Individual Sides

The CSS margin properties are used to create space around elements, outside of any defined borders.With CSS, you have full control over the margins. There are properties for setting the margin for each side of an element (top, right, bottom, and left).
CSS has properties for specifying the margin for each side of an element:

- Margin-top
- margin-bottom
- margin-right
- margin-left

All the margin properties can have the following values:

1. auto - the browser calculates the margin
2. length - specifies a margin in px, pt, cm, etc.
3. % - specifies a margin in % of the width of the containing element
4. inherit - specifies that the margin should be inherited from the parent element

Margin - Shorthand Property

To shorten the code, it is possible to specify all the margin properties in one property.If the margin property has four values:

margin: 25px 50px 75px 100px;

- top margin is 25px
- right margin is 50px
- bottom margin is 75px
- left margin is 100px