

CSS-1

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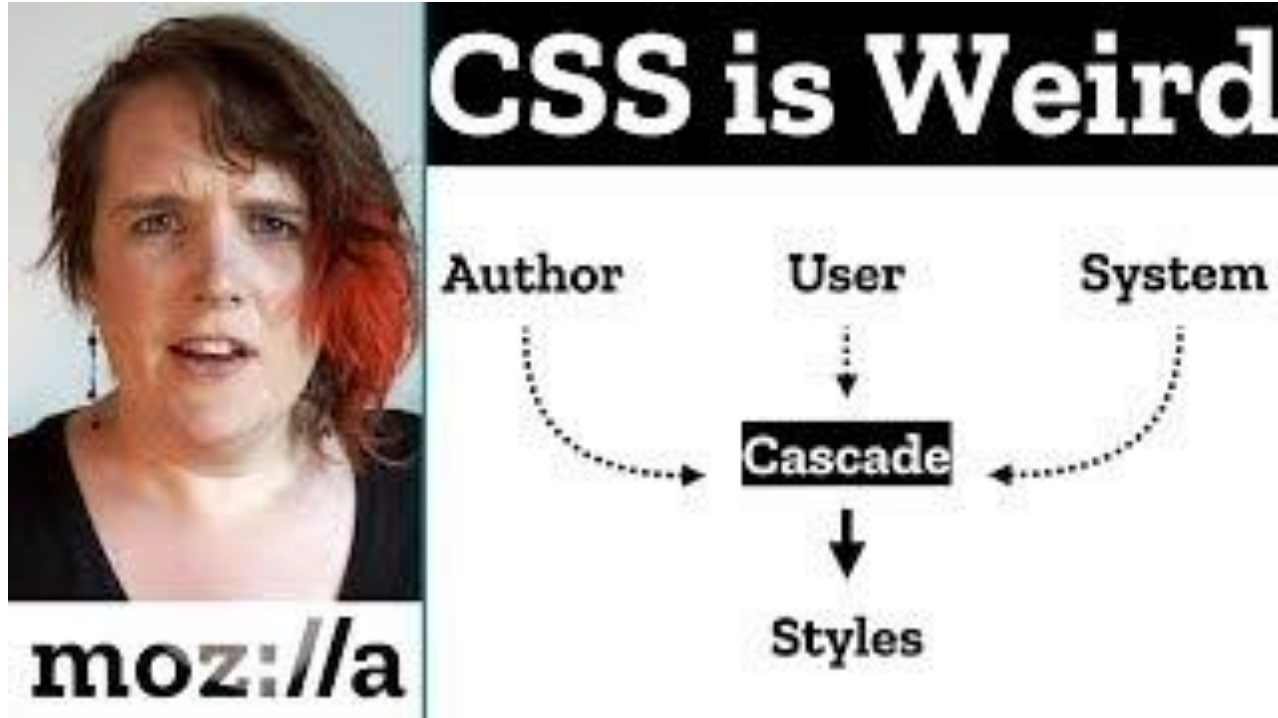
Introduction

- CSS stands for Cascading Style Sheets.
 - The word cascading means that a style applied to a parent element will also apply to all children elements within the parent.
 - If you set the color of the body text to "blue", all headings, paragraphs, and other text elements within the body will also get the same color (unless you specify something else)!
- CSS is used to **style** it and **lay it out**. It handles the look and feel part of a web page.
 - font
 - color
 - size
 - spacing
 - columns
 - animations
 - etc...

Introduction

- HTML is used to define the structure and semantics of your content.
 - HTML was NEVER intended to contain tags for formatting a web page.
 - But, then came HTML3.2: <https://www.htmlhelp.com/reference/wilbur/>
 - Development of large websites, where fonts and color information were added to every single page, became a long and expensive process.
 - CSS removed the style formatting from the HTML page!
 - <http://www.martinrinehart.com/frontend-engineering/engineers/html/html-tag-history.html>
- With an external stylesheet file, you can change the look of an entire website by changing just one file!
 - Example: https://www.w3schools.com/css/css_intro.asp

CSS is Weird



¹<https://youtu.be/aHUtMbJw8iA>

Style in HTML

- CSS can be added to HTML documents in 3 ways:
 - Inline - by using the style attribute inside HTML elements
 - Internal - by using a `<style>` element in the `<head>` section
 - External - by using a `<link>` element to link to an external CSS file

Style in HTML

- CSS can be added to HTML documents in 3 ways:
 - Inline - by using the style attribute inside HTML elements
 - Internal - by using a `<style>` element in the `<head>` section
 - **External - by using a `<link>` element to link to an external CSS file**
- The most common way to add CSS, is to keep the styles in external CSS files.

Style in HTML - Inline

- An inline CSS is used to apply a unique style to a single HTML element, using its `style` attribute.

```
<h1 style="color:blue;">A Blue Heading</h1>  
<p style="color:red;">A red paragraph.</p>
```

A Blue Heading

A red paragraph.

Style in HTML - Internal

- An internal CSS is used to define a style for a single HTML page.
 - It is defined in the `<head>` section of an HTML page, within a `<style>` element.

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      body {background-color: powderblue;}
      h1   {color: blue;}
      p    {color: red;}
    </style>
  </head>
  <body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
  </body>
</html>
```

This is a heading

This is a paragraph.

Style in HTML - External

- An external style sheet is used to define the style for many HTML pages.
 - A link is added to it in the <head> section of each HTML page

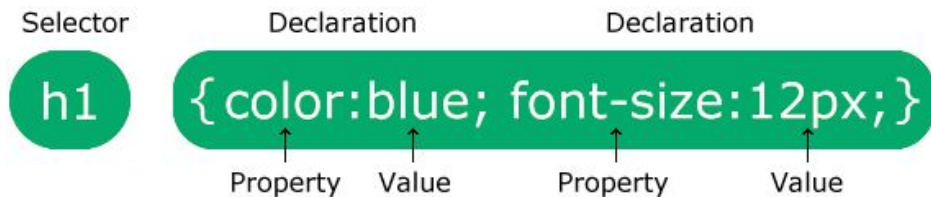
```
<!DOCTYPE html>
<html>
  <head>
    <link rel="stylesheet" href="styles.css">
  </head>
  <body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
  </body>
</html>
```

```
body {
  background-color: powderblue;
}
h1 {
  color: blue;
}
p {
  color: red;
}
```

styles.css

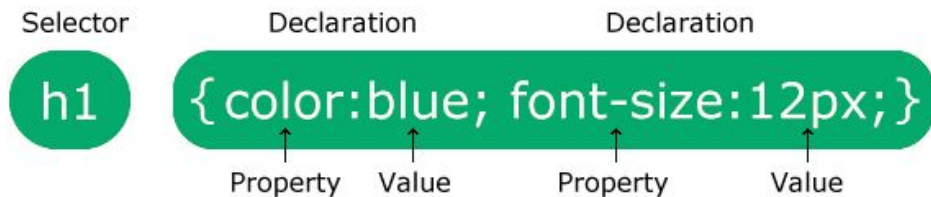
CSS Syntax

- CSS is a rule-based language
 - Rules specify groups of styles that should be applied to particular elements or groups of elements on a web page.
 - CSS properties have different allowable values, depending on which property is being specified.
 - You will find that you quickly learn some values, whereas others you will need to look up.



CSS Syntax

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



CSS Selectors

- CSS selectors are used to "find" (or select) the HTML elements you want to style.
- We can divide CSS selectors into five categories:
 - Simple selectors (select elements based on name, id, class)
 - Combinator selectors (select elements based on a specific relationship between them)
 - Pseudo-class selectors (select elements based on a certain state)
 - Pseudo-elements selectors (select and style a part of an element)
 - Attribute selectors (select elements based on an attribute or attribute value)

Simple selectors

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

id selector

- The id selector uses the id attribute of an HTML element to select a specific element.
 - The id of an element is unique within a page, so the id selector is used to select one unique element!
 - To select an element with a specific id, write a hash (#) character, followed by the id of the element.

Hello World!

How are you doing today?

I missed you a lot!

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      #para1 {
        text-align: center;
        color: red;
      }
    </style>
  </head>
  <body>
    <h>Hello World!</h>
    <p>How are you doing today?</p>
    <p id="para1">I missed you a lot!</p>
  </body>
</html>
```

class Selector

- The class selector selects HTML elements with a specific class attribute.
 - To select elements with a specific class, write a period (.) character, followed by the class name.

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      .center {
        text-align: center;
        color: red;
      }
    </style>
  </head>
  <body>
    <h>Hello World!</h>
    <p>How are you doing today?</p>
    <p class="center">I missed you a lot!</p>
  </body>
</html>
```

Hello World!

How are you doing today?

I missed you a lot!

class Selector

- The class selector selects HTML elements with a specific class attribute.
 - To select elements with a specific class, write a period (.) character, followed by the class name.

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      .center {
        text-align: center;
        color: red;
      }
    </style>
  </head>
  <body>
    <h>Hello World!</h>
    <p class="center">How are you doing today?</p>
    <p class="center">I missed you a lot!</p>
  </body>
</html>
```

Hello World!

How are you doing today?

I missed you a lot!

element Selector

- The element selector selects HTML elements based on the element name.

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      p {
        text-align: center;
        color: red;
      }
    </style>
  </head>
  <body>
    <h>Hello World!</h>
    <p>How are you doing today?</p>
    <p>I missed you a lot!</p>
  </body>
</html>
```

Hello World!

How are you doing today?

I missed you a lot!

element,element Selector

- To style several elements with the same style, separate each element name with a comma.

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      h3,p {
        text-align: center;
        color: red;
      }
    </style>
  </head>
  <body>
    <h3>Hello World!</h3>
    <p>How are you doing today?</p>
    <p>I missed you a lot!</p>
  </body>
</html>
```



element.class Selector

- The element.class selector is used to select the specified element with the specified class.
 - It is referred by the element name followed by a period (.) character and the class name.

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      p.center {
        text-align: center;
        color: red;
      }
    </style>
  </head>
  <body>
    <h class="center">Hello World!</h>
    <p>How are you doing today?</p>
    <p class="center">I missed you a lot!</p>
  </body>
</html>
```

Hello World!

How are you doing today?

I missed you a lot!

Universal Selector

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

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      * {
        text-align: center;
        color: red;
      }
    </style>
  </head>
  <body>
    <h>Hello World!</h>
    <p>How are you doing today?</p>
    <p>I missed you a lot!</p>
  </body>
</html>
```

Hello World!
How are you doing today?
I missed you a lot!

Universal Selector

- The universal selector (*) selects all HTML elements on the page.
- The * selector can also select all elements inside another element

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      div * {
        text-align: center;
        color: red;
      }
    </style>
  </head>
  <body>
    <h>Hello World!</h>
    <div>
      <p>How are you doing today?</p>
    </div>
  </body>
</html>
```

Hello World!

How are you doing today?

Cascading Order

- What style will be used when there is more than one style specified for an HTML element?
- All the styles in a page will "cascade" into a new "virtual" style sheet by the following rules, where number one has the highest priority:
 1. Inline style (inside an HTML element)
 2. External and internal style sheets (in the head section)
 3. Browser default
- So, an inline style has the highest priority, and will override external and internal styles and browser defaults.

Multiple Style Sheets

- What happens if some properties have been defined for the same selector (element) in different style sheets?
- The value from the last read style sheet will be used.

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      h1 {color: blue;}
      h1 {color: red;}
    </style>
  </head>
  <body>
    <h1>This is a heading</h1>
  </body>
</html>
```

This is a heading