CSS Syntax

Lesson Time: 15 Minutes

SELECT SOME HTML. STYLE IT.

CSS Syntax is fairly simple.

Let's look at sample code below.

```css
h1 {
    background-color: crimson;
    color: black;
}

body {
    font-family: Arial, Helvetica, sans-serif;
    background-color: rgb(69, 69, 97);
}
```

CSS is made up of 1. **Selectors** and 2. **Properties**.

In the code above, the first **selector** is h1. The tells CSS to "select" all of the <h1> elements in our HTML. Our second selector is body. Again, this tells CSS to "select" the <body> element of our document.

Properties are the things we want to change. For example, we are "selecting <h1> elements with our selectors and the properties we are changing is the background color and the text color.

CSS always follow this format:

```css
selector {
    property:value;
    property:value;
    property:value;
}
```

Key Terms	

Lesson Files	
Additional Resources	
Further Learning	

Class and ID Attributes

Lesson Time: 15 Minutes

ID IS A UNIQUE HTML ELEMENT.
CLASS IS GROUPED HTML ELEMENTS.

Now we know we can select all HTML elements by just typing the element name in CSS, and it's easy to update all elements of a particular type such as <table> or <p> or <ul>.

But what if we don't want to change EVERY <p> element or <ul> element? What if we want to change only some of them, or just one of them? We use the HTML Class and ID attributes.

HTML	CSS
| ```html
<html>
  <head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=de
    <meta name="keywords" content="html, tr
    <meta lang="en-US">
    ①<link rel="stylesheet" href="4_2_demo.c

    <title>This is the title of my page.</t
  </head>

  <body>
    <h1>4_2 Demo</h1>

    ②<p class="pstyle1"> Lorem ipsum dolor s
    labore et dolore magna aliqua. Adipisci
    <p id="specialpgraph">Mi ipsum faucibus
    ③commo.. sed egestas egestas.</p>
    ④<p class="pstyle1">Sodales neque sodale
``` | ```css
1 ①.pstyle{
2     background-color: darkblue;
3     color: white;
4 }
5
6 ②#specialpgraph{
7     background-color: crimson;
8     color: black;
9
10 }
``` |

In our HTML
1. We link to our .css file in the <head>

2. We assign our first <p> element class="pstyle1". This name can be almost anything we want. *A class name can not start with a number.*

3. We assign the second <p> the id="specialpgraph" This name can be anything we want. *It must be unique to the HTML document.*

4. We want my 3rd paragraph to look like my first, so I also give it class="pstyle1".

In our CSS.

1. We define what pstyle1 means. Because it's a HTML CLASS, we use .pstyle1 to let CSS know it's looking for a class called "pstyle1". I include the properties I want to set, such as color and background-color.

2. We define what "specialpgraph" means. Because it's an HTML ID, we use #specialpgraph I include the properties I want to set.

The results:

4_2 Demo

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor in

Mi ipsum faucibus vitae aliquet nec ullamcorper sit. Et odio pellentesque diam vo

Sodales neque sodales ut etiam sit amet nisl purus.

- HTML elements of class pstyle1 get the CSS styles applied.
- The HTML element with ID specialpgraph get's it's unique style applied.

So to recap.

1. At the highest level, we can select all html elements by type, such as <p> or

2. We can assign groups of elements a class, and select all elements with that class using .classname in CSS

3. We can assign one single element a unique ID, and select it by using #idname in CSS.

Remember
Classes use .
IDs use #
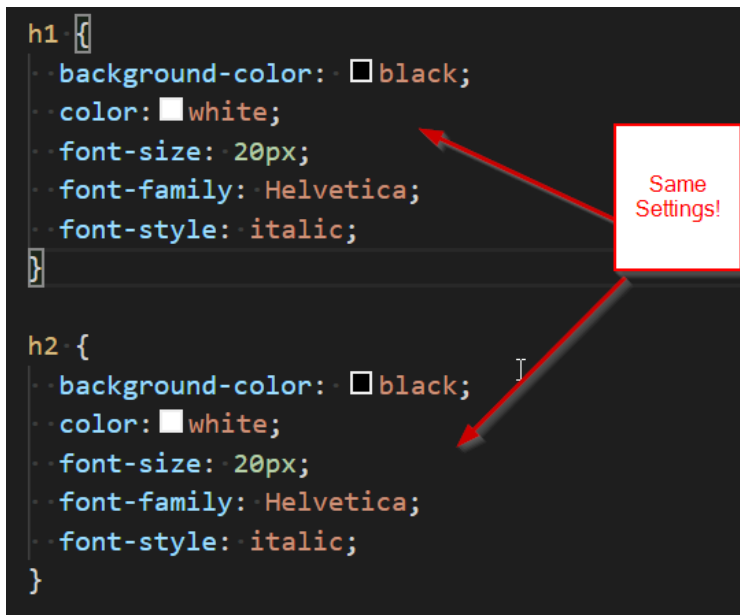Classes and IDs in HTML are used by CSS to select them and apply styles.

Key Terms	
Lesson Files	
Additional Resources	https://www.w3schools.com/css/css_syntax.asp
Further Learning	

CSS Basics

Lesson Time: 15 Minutes

BEGINNER STUFF.

CSS **grouping** allows us to save time by only writing our CSS code once. We can group multiple selectors together by separating them with a comma . Example without grouping:

```css
h1 {
  background-color: black;
  color: white;
  font-size: 20px;
  font-family: Helvetica;
  font-style: italic;
}

h2 {
  background-color: black;
  color: white;
  font-size: 20px;
  font-family: Helvetica;
  font-style: italic;
}
```

Same Settings!

Example with grouping:

```css
h1, h2, h3, .blackandwhite {
    background-color: black;
    color: white;
    font-size: 20px;
    font-family: Helvetica;
    font-style: italic;
}
```

Now <h1>, <h2>, <h3> and everything with the html class "blackandwhite" have the same settings, and I've only written out the CSS code once.

Now let's look at some basic CSS **properties** and what they do.

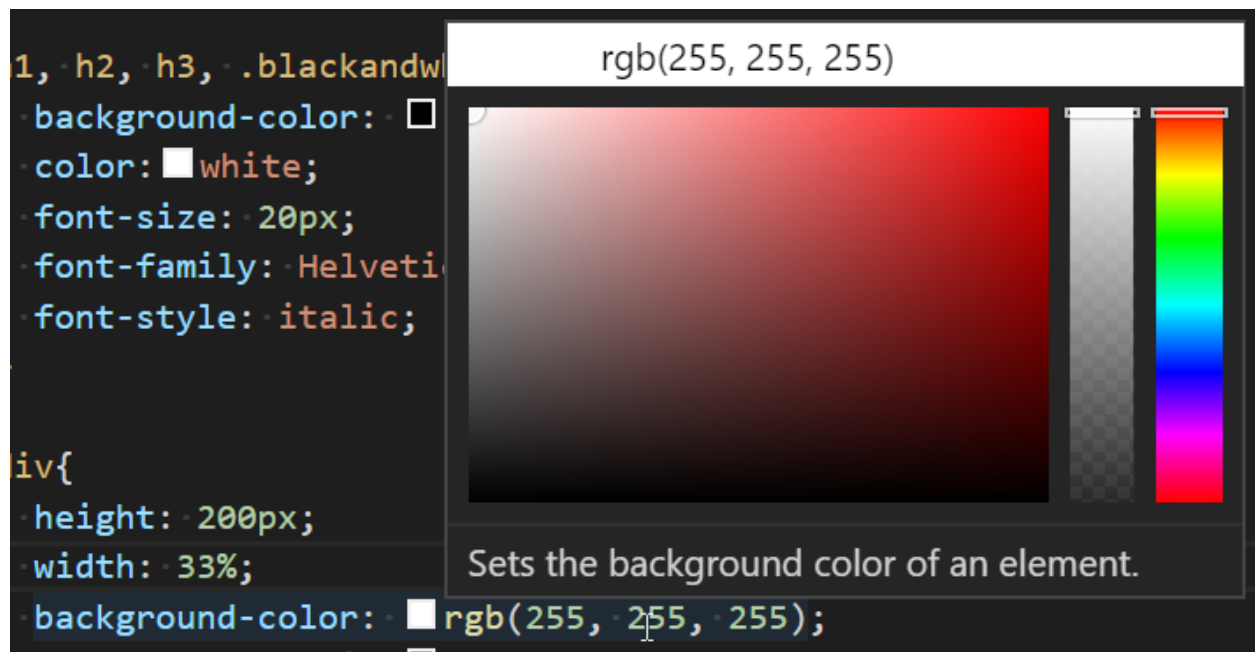| Property Name	What is does	Example Value
background-color	Sets the color of the background	rgb(50,10,20);
color	Sets the color of text	black;
background-image	Set a background image/picture	url(*relativepath*)
border	Create a border line around the element	3px solid red;
height	Sets how tall an element is on the page	200px;
width	Set how wide an element is on the page.	33%;

Colors:

When we are working with color properties, we can type the name of the color or use a **Red Blue Green (rgb)** value. CSS has about 140 preset color names, where you can type 'white', 'black' 'green' and get a preset color. For a custom color, we use a RGB value.

RGB(how much red, how much green, how much blue)

The number value goes from 0 - 255. Examples:
- rgb(255,0,0)   = All Red
- rgb(0,255,0) = All Green
- rgb(0,0,255) = All Blue
- rgb(0,0,0) = All Black
- rgb(255,255,255) = All White
- rgb(100,100,100) = Dark Gray

Visual Studio Code has an excellent feature where hovering the mouse inside the rgb() code allows you to access a color picker to select your colors.

Finally, we can use hex color codes to write color value. A hex code looks like this #5df542. We use color picker tools and graphics programs to get the hex value.

Units

Many CSS properties need a unit of measure to describe it. The units we can use in CSS are

Code Symbol	Meaning
px	pixels
%	Relative percentage to parent element
em	Relative to the font size of the current element
cm	centimeters
in	inches
vw	Relative to the size of the browser window (viewport)

Px, cm, and in are straightforward. If you want a box to be exactly 200 pixels wide, use width: 200px

% is a little harder to understand. Say you have a <body> element, which takes up the full page. In the body, you create a <div> and set the width property to 33%. The div will take up 33% of the full page.

Inside of the <div>, you create another new element, and set it's width property to 50%. It takes up half of the space of the DIV, it's parent.

Em references the size of the font. 2em means "2 times the size of the font."

Pseudo class Keywords

CSS has a special class of key words you can add to a selector to trigger the CSS based on special conditions. Examples are below. A full list is available on MDN

keyword	Example code	Meaning
:hover	table:hover	When a user user hoovers the mouse over the element

:focus	input:focus	When an element gains focus
:before	p:before	Apply before this element
:after	p:after	Apply after this element
:nth-child	table:nth-child(2)	Get the X child of this element

Key Terms	
Lesson Files	
Additional Resources	https://www.hexcolortool.com https://www.color-hex.com/ https://www.sitepoint.com/power-em-units-css/ https://developer.mozilla.org/en-US/docs/Web/CSS/Pseudo-classes
Further Learning	

Combinators

Lesson Time: 20 Minutes

POWERFUL WAYS TO CREATE COMPLEX SELECTIONS.

Consider this example:
I have 3 <div> elements and a child <p> element inside each one. I have not setup a class for the <p> elements nor have I setup IDs. I want to only select with the <p> element inside the Third Div without touching any other <p> elements.

```
<div>
    <p>First Div<p>
</div>
<div>
    <p>Second Div<p>
</div>
<div class="combinator">
    <p>Third Div<p>
</div>
```

We can use a combinator to solve this. A combinator lets use use parent/child relationships when creating selectors.

```
.combinator p{
   color: █green;
   font-size: 22px;

}
```

This reads "Select the p elements that belong to the combinator class". Results:

Second Div

Third Div

There are 4 combinators.

code	Name	Meaning
(spacebar)	Direct descendants	Match **all** elements **inside** of the parent
>	Child	Match all elements **inside** of the parent that are **1st level children**
+	Adjacent	Match the elements **outside** of the parent that come **directly after** it
~	Sibling	Match the elements **outside** of the parent that come **after** it.

This topic can be a little tough to understand. Please see the examples on w3schools to see the examples of each in action.

Key Terms	

Lesson Files	
Additional Resources	https://www.w3schools.com/css/css_combinators.asp
Further Learning	