

CSS Basics Notes

4.1 - 2.5.2020

1.0 CSS Basics

In our projects we will want to use some simple CSS to make our projects more visually appealing with:

Fonts

Colors for text and backgrounds

1.1 CSS References

References:

W3Schools - <https://www.w3schools.com/css/>

Fonts - https://www.w3schools.com/css/css_font.asp

Colors - https://www.w3schools.com/css/css_colors.asp

Box Model - https://www.w3schools.com/css/css_boxmodel.asp

Selectors - http://www.w3schools.com/cssreF/css_selectors.asp

Tools:

coolors.co - <https://coolors.co/>

google fonts - <https://fonts.google.com/>

2.0 Using CSS on our Pages

2.1 How to Use External CSS

We place our CSS rules in a separate file and link that file to our HTML files.

```
<head>

    <link rel="stylesheet" type="text/css" href="css/style.css">

</head>
```

2.2 CSS Rule Set Syntax

In CSS we create "**rule sets**". These rule sets are associated with "**selectors**".

tag	{	color:	yellow; }
SELECTOR		PROPERTY	VALUE


```
<selector> {
    <property>: <value>;
    <property>: <value>;
}
```

"**selectors**" are the things we are selecting on the HTML page to apply our rule set.

"**selectors**" can be **<tags>** or "**classes**" or "**id's**"

Example: center the text and change the color to red

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

The part inside the curly braces is the **declaration**.

The keyword color is a **property**, and red is a **value**.

The semicolon after the property-value pair separates it from other property-value pairs in the same declaration. Do not forget to add this at the end of each rule.

3.0 CSS Selectors

3.1 CSS Selectors - Tags

We can create rule sets and apply them to specific tags.

CSS: apply a rule set to all `p` tags

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

You can also apply rules sets to multiple tags.

CSS: apply a rule set to all `h1`, `h2`, `p`, and `a` tags

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

3.2 CSS Selectors - Classes

Often times you want to create a general, common, or "utility" rule sets that you want to selectively apply to tags in your html.

To do this you use a class selector.

To select elements with a specific class, write a period `.` character, followed by the class name.

CSS: create a utility class to center text and make it red

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

HTML: apply the class to the an html tag

```
<h1 class="center-red">Red and center-aligned heading</h1>  
<p class="center-red">Red and center-aligned paragraph</p>
```

3.3 CSS Selectors - IDs

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 – can only be used **ONCE** on a page.

To select an element with a specific id, write a hash # character, followed by the **id** of the element.

CSS: Create an ID for a section

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

HTML: Use the ID in your html

```
<section id="intro-section">  
....  
</section>
```

Then applies the rules to all the tags, content, within the `<section>` ... `</section>` tag set.

Note, again, that an ID can only be used **ONCE** on a page.

With ID's you can also link to them and the browser will jump to that section of the page. This is useful for creating navigation links on multi-section pages.

Example: for a page named `mypage.html` that has an **about-section** ID

```
<a href="myPage.html#about-section">About Us</a>
```

4.0 Colors

We have already done some very basic CSS. Let's walk through some other examples to get us started.

4.1 Colors

We can set colors for the background and the font color.

Here is snippet to set a background color.

```
body {  
    background-color: green;  
}
```

Here is a snippet to set a font color.

```
body {  
    color: white;  
}
```

A. Setting color by NAME

```
background-color: <colorname>;
```

Example:

```
background-color: white;
```

Step through this to see how to choose a color

<http://www.w3schools.com/colors/default.asp>

B. Setting color by HEX value

```
background-color: #_ _ _ _ _
```

This takes 6 hex values. Hex values for from 0..F.

The first 2 values _ _ are for how much Red to use.

The second 2 values _ _ are for how much Green to use.

The last 2 values _ _ are for how much Blue to use.

Examples:

```
background-color: #ff0000; /* red */
background-color: #00ff00; /* green */
background-color: #0000ff; /* blue */
background-color: #ffffff; /* white */
background-color: #000000; /* black */
```

And there are millions of combinations - checkout this cool Color Selector tool:

<https://coolors.co/>

C. Setting color using rgb()

```
background-color: rgb( __ , __ , __ );
```

Each of these values are from 0..255.

The first value ____ is for how much Red to use.

The second value ____ is for how much Green to use.

The last value ____ is for how much Blue to use.

Examples:

```
background-color: rgb( 255, 0, 0); /* red */
background-color: rgb( 0, 255, 0); /* green */
background-color: rgb( 0, 0, 255); /* blue */
background-color: rgb( 255, 255, 255); /* white */
background-color: rgb( 255, 255, 255); /* black */
```

D. Setting saturation of color using rgba()

There is a version of rgb() that is rgba() that accepts a 4th value.

```
background-color: rgba( __ , __ , __ , __ );
```

Works just like rgb() but the 4th value has a range of 0..1

Setting this value, changes the saturation or opacity of the color.

A value of 1 means full saturation; a value of 0 means no saturation (void).

We usually pick a value between 0..1 - like 0.5 to get 1/2 saturation.

Example: green with 50% saturation

```
background-color: rgb( 0, 255, 0, 0.5);
```

4.2 Simple Text and Color Changes using Classes

Changing the color of text can help make our projects more appealing.

A. Lets add a few classes with rules for a few colors:

```
/* ----- */
/* Font Color Rules */

.red {
    color: #C20114;
}

.green {
    color: #018E42;
}

.blue {
    color: #454E9E;
}

.grey {
    color: #C7D6D5;
}

.black {
    color: #0C120C;
}

.white {
    color: #FFFFFF0;
}
```

B. Now lets use these rule sets in our HTML:

Add:

```
class="red"
```

to a `<p>` tag like:


```
<p class="red">
```

C. Background color examples:

```
/* ----- */
/* Background Color Rules */

.bg-red {
    background-color: #C20114;
}

.bg-green {
    background-color: #018E42;
}

.bg-blue {
    background-color: #454E9E;
}

.bg-white {
    background-color: #FFFFFF0;
}

.bg-black {
    background-color: #0C120C;
}
```

5.0 Fonts

There are built in fonts - see them here:

www.w3schools.com/cssref/css_websafe_fonts.asp

There are also lots of other custom fonts available from google fonts - see here:

www.google.com/fonts/

To use external fonts, you need to do 2 things

- (1) import the font using the `@import` command
- (2) create a rule using the `font-family` property.

Here is an example for the font "Roboto"

- A. Import the font - Add this to the very top of your .css file.

```
@import url(https://fonts.googleapis.com/css?family=Roboto);
```

- B. Apply the font - Add this to the body rule set:

```
body {  
    font-family: 'Roboto', sans-serif;  
}
```

More on more font properties later:

www.w3schools.com/css/css_font.asp

6.0 HTML <div> tag to applying style rules

Sometimes we want to apply CSS rules to a section of a page; a group of tags.

To do this we use the HTML <div> tag.

The <div> tag defines a division or a section in an HTML document.

The <div> tag is used to group block-elements to format them with CSS.

```
<div>
  <h4>This is a heading</h4>
  <p>This is a paragraph</p>
</div>
```

We can apply classes of style rules to this section or <div> of the page.

For example, to apply a background color. Example:

With this CSS:

```
.bg-blue {
  background-color: blue;
  color: white;
}
```

We can apply this rule set to section or <div>

```
<div class="bg-blue">
  <h4>This is a heading</h4>
  <p>This is a paragraph</p>
</div>
```

Note you may need to add some additional rules:

```
padding: 15px;
- to add space around the content in the <div>
```

```
min-height: 300px;
- to allow the <div> to be large enough to hold how you have sized
the image
```

6.1 Using <div> tags to style sections of our page

With this `<div>` and `.bg-xxx` rule technique we can create sections of our pages.

Ex.

In CSS create background and font color combinations

```
.bg-blue {  
  background-color: blue;  
  color: white;  
  padding: 15px;  
  min-height: 320px;  
}
```

```
.bg-green {  
  background-color: green;  
  color: white;  
  padding: 15px;  
  min-height: 320px;  
}
```

And then in HTML use the `<div>` tag to segment your page into sections. And alternatively apply these background and font combo's.

```
<div class="bg-blue">  
  ...  
</div>  
  
<div class="bg-green">  
  ...  
</div>  
  
<div class="bg-blue">  
  ...  
</div>
```

7.0 Background Images

7.1 Add a background image to the entire page

A. Add this to the body style rule:

```
/* background image for the page */  
background: url("images/bg-image-0.jpg"), no-repeat center center  
fixed;  
-webkit-background-size: cover;  
-moz-background-size: cover;  
-o-background-size: cover;  
background-size: cover;
```

But now all our text is gone! Why?