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Exploring Web Design

CSS Introduction

What is CSS?

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 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 Examples

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

```
p {
  font-family: verdana;
  font-size: 2em;
}
```

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

```
#myHeader {
  color: green;
  padding: 20px;
}
```

Why Use CSS?

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>

This is a paragraph.

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, saving developers a lot of work.

How Does CSS Work?

The first steps are to create the CSS file and link it to your HTML page(s).

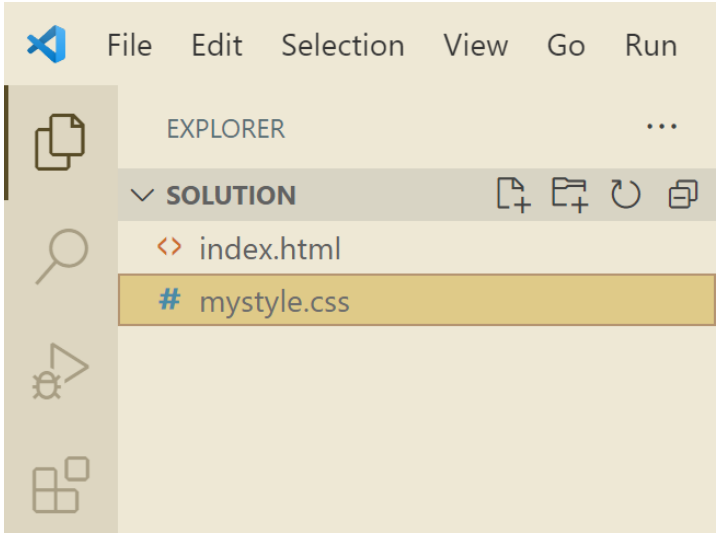
Step 1: Add the CSS File

The best way to add CSS is to save style definitions in an 'external' .css file. By external we simply mean a different file to the HTML file (instead of writing the style properties in the HTML page, which is possible but is not a good practise.)

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

1.1 Create a new file in a project with an extension of .css

The file name can be anything. In the below example, we have created a simple HTML page called index.html and a stylesheet called *mystyle.css*



1.2. Link the HTML and CSS files together.

To add the CSS file into our project, and connect it to your HTML page, between the HTML's <head> tags we add:

```
<link rel="stylesheet" href="mystyle.css">
```

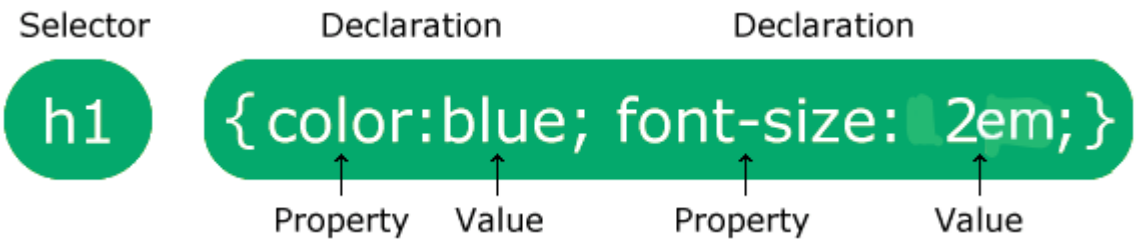
In the full HTML page:

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>

    <link rel="stylesheet" href="mystyle.css">

</head>

<body>

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

</body>

</html>
```

Now that the CSS file is created and connected to our HTML file via a link reference, we can target HTML elements.

CSS Syntax

A CSS rule consists of a selector and a declaration block.



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.

Example

You have an HTML page that contains the following heading:

```
<h1>This is my heading 1<h1>
```

You would like to make the below changes to all heading 1 tags:

1. Change their colour to blue.
2. Center align them.
3. Increase their size to be 1.5 times greater than the default size of a heading 1 tag.

Write the below CSS code into the CSS file would be:

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

Example Explained

- `h1` is a *selector* in CSS (it points to the HTML element you want to style: <p>).
- `color` is a property, and `blue` is the property value
- `text-align` is a property, and `center` is the property value

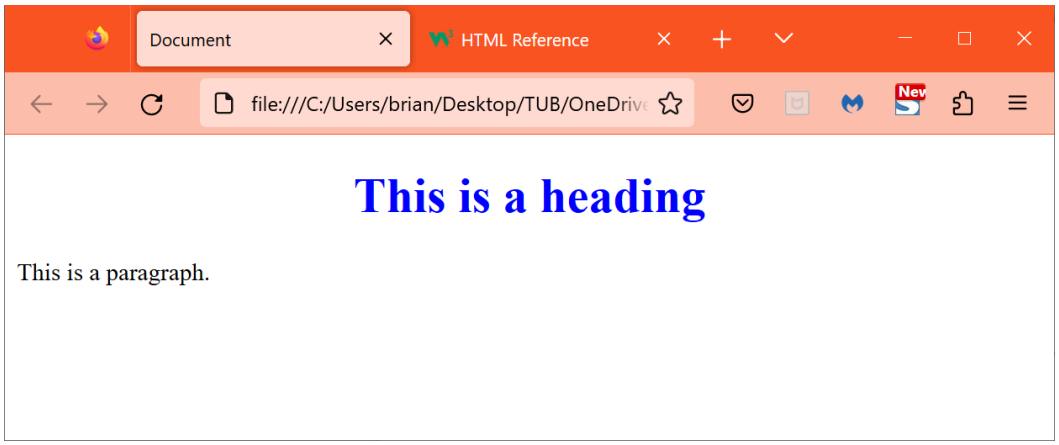
Notice the CSS syntax is different to HTML -

HTML: `<h1>`

CSS: `h1`

Save the HTML and CSS by going to File – Save All as this saves all files in the project at once.

View the webpage in your browser and it should look like the below:



You can make almost any HTML tag a selector like we just did we the <h1> tag. For example, *h2, h3, h4,* etc.*, header, p, article, img, figcaption, footer, div*, and many more. In our first lab in CSS we will look at styling such tags.