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1 0 - What is a Web Browser

Making website for computer is like drawing, except you have to use words to describe the painting. The web browser that you use to go to websites use a language called **HTML** or **Hyper Text Markup Language** to draw the picture using the words you describe.

What does this look like?

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>My Website</title>
  </head>
  <body>
    <h1>Welcome to my Website</h1>
    <p>This is a paragraph with some content</p>
    <p id="second-paragraph">This is my second paragraph</p>
    <p>This is my third paragraph</p>
  </body>
</html>
```

This may look complicated, but it is actually rather simple. You see, **HTML** defines a basic structure of a website. Each part of a website is made up of what is called a **DOM Element**, sometimes just called **Element** for short. To create this element, **HTML** has tags, like you see in the picture above.

<p>A Paragraph</p>

Above is a paragraph tag. You see there is a start and close tag with contain a "p" and a "/" in the closing tag. Between these two "tags" are the content. The tag applies attributes to your content and displays in the web browser.

Lets try some sample code!

2 1 - HTML

Lets create a small website using a few tags. Standard HTML requires at least these four tags: •

- html
- head
- body

Additionally we also add this tag:

```
<!DOCTYPE HTML>
```

What is this for? This basically tells the web browser what version of HTML you are using.

What about the other 3? They define a base structure for your website. The "html" tag marks the beginning of the HTML file. Inside we have the "head" tag.

The "head" tag is for things that run before the website is displayed. Web browsers read HTML files top to bottom, like how you read a book. This will become more important later.

The "body" tag is the most important because it contains the content of your website. Anything you want to be displayed will be put here.

So how do we edit these files? Anything from a simple text editor to a complex IDE can be used. For this, we can just use a text editor, all you have to do is save it as a ".html" file. This tells the computer the file you have created is an HTML file.

So lets create a base structure:

```
<!DOCTYPE HTML>
<html>
  <head>
  </head>
  <body>
  </body>
</html>
```

Of course this is a boring website because it has nothing else on it.

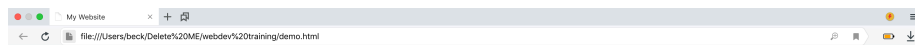
So lets put in some content, we can use the paragraph tag "p" and the heading tag "h1". There is also a tag called "title", can you figure out what it does?

Now save an open in a web browser.

Have you figured out the title tag? The title tag marks the top of the website:

Documentation is the most important thing to any programmer. Documentation is available to web developers as well, ironically through the web itself. Here is a website with documentation for different types of tags: [HTML reference](#)

```
<!DOCTYPE HTML>
<html>
  <head>
    <title>My Website</title>
  </head>
  <body>
    <h1>Welcome to my Website</h1>
    <p>This is a paragraph</p>
    <p>This is also a paragraph</p>
    <p>This is a third pararaph</p>
  </body>
</html>
```



Welcome to my Website

This is a paragraph

This is also a paragraph

This is a third paragraph

3 2 - CSS

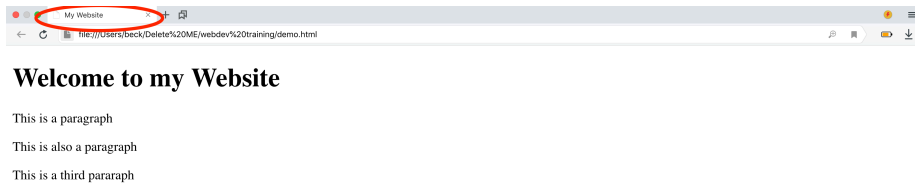
With CSS, several of the tags will become meaningless. But what is **CSS**? **CSS** or **Cascading Style Sheet** is a language we use for adding styling to the website. Like HTML, **CSS** has a special syntax.

CSS has a selector, which could be a HTML element or another selector for something like a class or id. Next are the curlybraces, code inside of here will be applied to the selector. Content in here is an attribute follow by a colon and then the value. Every line is finished with a semi-colon.

It is arranged like this:

```
selector {
    attribute: value;
}
```

So for example, lets change this page to have a black background with white text. We can use the selector for the body, the color attribute, and



the background-color attribute.

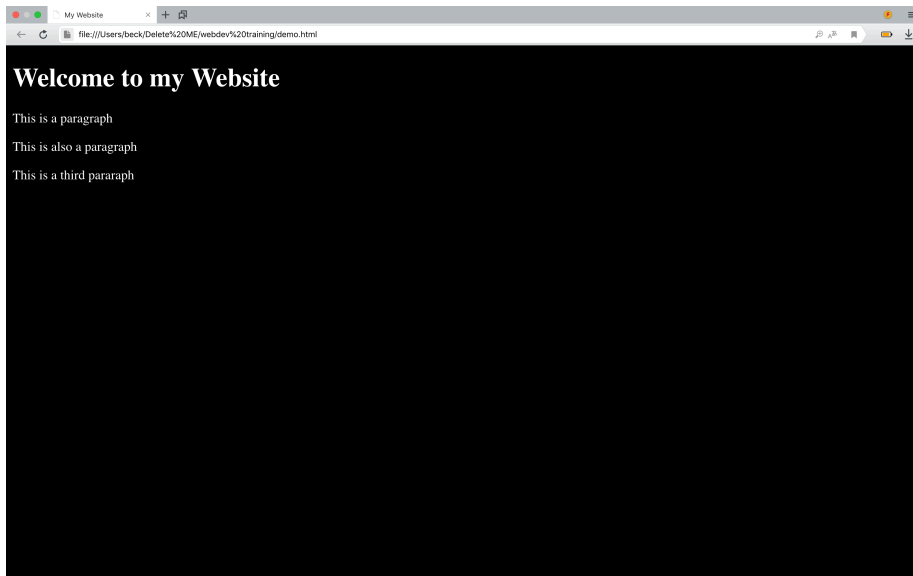
```
body {
    background-color: black;
    color: white;
}
```

Save this as a file with ".css". For example: I will call this "mycss.css".

I can then load the CSS in the "head" tag of the HTML. We want to put this there so that it will be loaded first, that way we don't see an ugly website while it loads. We use a "link" tag for this:

```
<link href="mycss.css" rel="stylesheet" />
<!DOCTYPE HTML>
<html>
  <head>
    <title>My Website</title>
    <link href="mycss.css" rel="stylesheet" />
  </head>
  <body>
    <h1>Welcome to my Website</h1>
    <p>This is a paragraph</p>
    <p>This is also a paragraph</p>
    <p>This is a third pararaph</p>
  </body>
</html>
```

Lets see what we get!



Congradulation! Now we can do some more specific selections.

Lets say we wanted have some highlighted text. We can use the **class** selector and attribute to accomplish this.

In the HTML, we add the attribute to the tag and set it equal to the classes. Such as this:

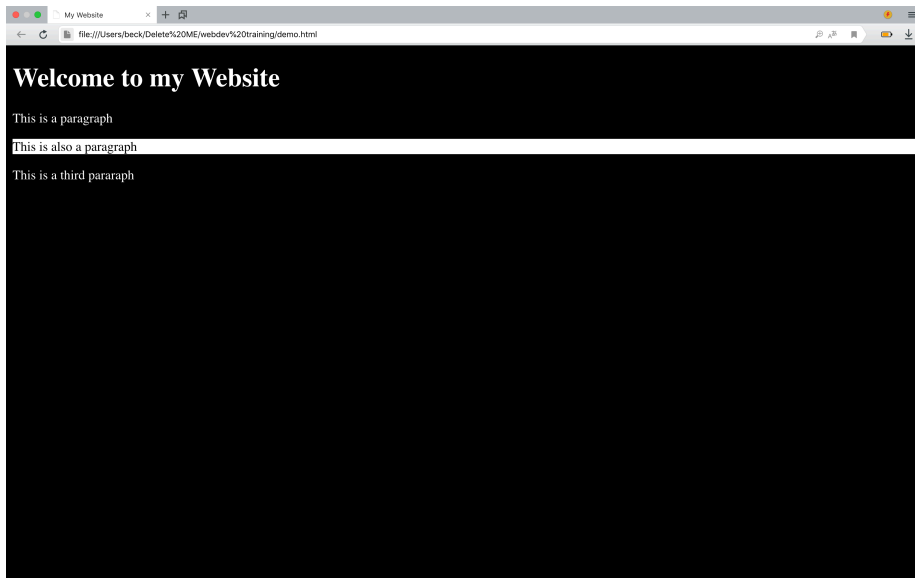
```
<!DOCTYPE HTML>
<html>
  <head>
    <title>My Website</title>
    <link href="mycss.css" rel="stylesheet" />
  </head>
  <body>
    <h1>Welcome to my Website</h1>
    <p>This is a paragraph</p>
    <p class="highlighted">This is also a paragraph</p>
    <p>This is a third pararaph</p>
  </body>
</html>
```

To use the class in CSS we use a "." followed by the class name, as such:

```
body {
  background-color: black;
  color: white;
}

.highlighted {
  background-color: white;
  color: black;
}
```

And lets see what we get:



Congrats! Now you have enough knowledge to do more advanced learning.