Advanced CSS

Section 1: CSS Basics

1.1 What is CSS and How to write CSS?

CSS stands for Cascading Style Sheets. This allows us to create rules that specify how HTML elements should appear. CSS is used to make websites/web apps to appear aesthetically pleasing to the user.

Interesting Facts: CSS1 was first created in 1996. CSS2 was released in 1998. Finally, CSS3 first draft was released in 1999. Since 1999 it has continued developing and is still the current version as at April 2020.
CSS is split in separate modules like colours, backgrounds, animations, flex box, etc. and CSS creators/developers are working on developing those modules instead of creating another version i.e. CSS4. This is why the current CSS3 is hugely different from when it was released in 1999.

There are three methods of writing CSS which are inline, internal CSS and external CSS. It is best practice to use the external CSS method when writing CSS code because it is more readable, reusable and easier to maintain. The external CSS can be used across multiple HTML files by adding a link element tag in the HTML file referencing the .css file location to import the stylesheet.

The syntax below demonstrates how to write CSS:

```
h3 {
  background-color: blue;
  color: white;
}
```

The text represented in red is called the selector. This can be a HTML element and/or element attributes (such as id and classes) and/or pseudo selectors.

The opening and closing brackets wraps all the styles to be applied to the selector.

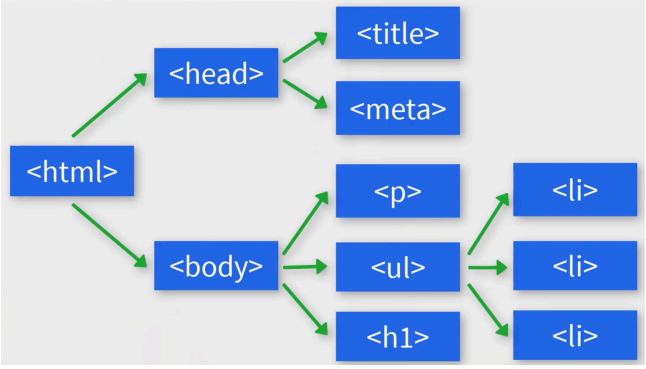
The text in blue is called properties which we want to style for the selector. Finally, the text in yellow is the values for the property.

The property and value pairs are actually called declarations. After each declaration we need to place a semi-colon (exception for the last declaration which does not require a semi-colon but it is recommended to add a semi-colon to all declarations).

1.2 HTML Elements Tree?

The HTML document is represented as a family tree. The family tree describes the relationships between family members and uses terms such as parent, child and sibling. A member of the family can be a parent to other while being a child of another family

member and a sibling of another family member. Below is a example representation of a HTML Elements tree for a .html document.



All HTML documents open with a <html> tag and all other element tags are contained within this element. Therefore, this is a parent element. The <html> element tag has not parents itself as well as no siblings.

Moving one level deeper we have the <head> and <body> element tags. These tags exists side by side which makes them siblings. They both also have the same parent <html> but they also contain children elements which make them parents themselves.

The <head> element has two children <meta> and <title> which are siblings to one another.

The <body> element has children of <p>, <ul> and <h1> which are all siblings of one another. Moving further down a level the <ul> has three children of <li> of its own making it a parent.

This is how we can view the structure of HTML documents as an HTML Element Tree. It is vital to have this knowledge when dealing with different types of selectors in CSS.