Introduction to JavaScript Fundamental

What is JavaScript?

HTML controls the content of the webpage and CSS controls the styling of the webpage. JavaScript controls the behaviour/interactivity of a webpage based on user inputs such as clicking, hovering, scrolling etc.

Unlike HTML and CSS which are markup and styling language, JavaScript is a programming language and was initially a front-end language. JavaScript has developed over the years and is also now used in both front-end and back-end development for web applications. There are many JavaScript framework, however, in this tutorial we will only look at vanilla JavaScript to understand the fundamentals first before diving into frameworks as all frameworks uses vanilla JavaScript. A final point — JavaScript is not the same as Java.

How to Include JavaScript on a Website?

To write JavaScript in the HTML we would use the <script></script> tags and everything within the tags will be seen as JavaScript.

In the past you needed to put the type in our opening script tag for example <script type="text/javascript"></script> however, we no longer need to do this for HTML5.

JavaScript can be embedded in the HTML document and there are two places where we can include our JavaScript code. Where we place the JavaScript in our HTML document will be determined by what the JavaScript is trying to do and the order for loading the code.

JavaScript in the <head></head> tags — this will load the JavaScript first before the rest of the website content. You should only do this if it is crucial for the JavaScript to be run before the rest of the website/webapp.

JavaScript in the <body></body> tags — this will load the JavaScript after the HTML & CSS content load. The beat practice is to place the JavaScript at the bottom of the <body> tags because it allows the website to load everything else first before the JavaScript which will improve the loading of your website.

The placing of the JavaScript within the <head> or <body> of the HTML file will depend on the importance of loading the JavaScript first before the HTML content or after. For example: We will add JavaScript in the <body> of the HTML because it needs to modify the behaviour of an element which needs to be loaded first before the JavaScript.

JavaScript can be added in a separate JavaScript file for example index.js — the .js extension indicates to the browser that the file is a JavaScript file (*and we do not need the <script> tag within the .js file*). However, we will need to provide a link in the HTML to locate the JavaScript file as we do for any other linked filed such as CSS/HTML etc. for example <script src="index.js"></script>

Again the link can be placed in the <head> or <body> of the HTML file depending on the importance of the load for the JavaScript file i.e. before the HTML content or after.