Week 10: Research

Completion requirements

To do: Receive a grade **To do:** Receive a passing grade

Prompts

1. List and explain the JavaScript methods that enable us to select elements from the DOM.

2. What is the document object? What are some other methods available on the document object that don't select elements from the DOM?

3. What is a highlight of what you have learned this week?

Instructions

As developers, research is a constant part of our job. A common saying is that 90% of software development is Googling, and while that is an exaggeration, Google is a highly used tool in the role.

This Research assignment is meant to go beyond the course curriculum and increase your understanding of relevant topics while exposing you to online resources you'll frequently use on the job.

Please write a paragraph for **two (2)** of the above prompts and include URLs from where you found the information to cite your sources. Do not copy and paste text from the internet or any other source; use the information you find in your research, summarize, in your own words, the concepts. Plagiarism will result in a zero for the assignment as well as disciplinary actions.

This assignment is graded based on participation.

1. List and explain the JavaScript methods that enable us to select elements from the DOM.

Three JavaScript methods that enable us to select elements from the DOM are: "document.getElementByClassName", "document.getElementById", and "document.getElementByTagName". The first method uses class names to select Elements. For example, a group of images can have a class of 'thumbnail'. I can select them from JavaScript and change the source of those elements from an array of urls using a for loop, or I can change the source of each image to change every 10 seconds looping them through a for loop. The second Method uses the ID selector. For example, If my H1 (heading 1) has an ID of Title, I can use JavaScript to select it and change it dynamically by add attributes or changing the innerHTML of the element. Since IDs can only be used once, this would only work on one HTML element instead of the previous method which used class name to select it out of the DOM. The third and finaly method, is similar to the class select method, in that it can be multiple elements. Selecting elements by Tag name will select all instances of that element. For example, if I select all anchor elements in the HTML document, it would select all the links. I can then add an attribute to all the links or add a class to them. All these methods are very useful when manipulating the DOM. They are not the only ones, but it is the three that I have used before. They all have their weakness and strengths yet they are all element selectors.

url: ByID   ByClassName   ByTagName

The document object is the HTML document which the JavaScript is running on. For example, if you have an index.html document, and you link it to a index.js file, the document object will be the index.html file. Three methods that are available to the document object are: "appendChild", "createElement", and "addEventListener". The first method, adds a element to the document. For example, if I have a document.getElementByTagName('a').appendChild(img), I can add an image to every link in the document. Appending an element to the selected element. CreateElement, creates an element, then you can append it to the document using AppendChild. For example, I can create a div element using document.createElement('div') and use document.body.appendChild(div) to add it to the document. Finally, I can use addEventListener to change the color of the background of the div if I mouseover the div. For example,

div.addEventListener("mouseover",()=>{div.setAttribute("style","background-color: cyan;");});

Would change the background of the div to cyan. I can add another eventlistener to change the color back to default by stripping the attributes on mouseleave. All these methods go hand in hand with each other to achieve bigger things. Manipulating the dom is fun. Thank you for reading my research. Enjoy the rest of your day.

url: [appendChild()](#)   [createElement()](#)   [addEventListener()](#)