Reflection

One issue I encountered on this website was getting my JavaScript and HTML files to work together. Because they follow an asynchronous programming model, I at first had some difficulty deciding what elements to include in HTML and what elements to include in my JavaScript file. In particular, when I needed to display on the screen a variable that would change according to a JavaScript function, I tried to display it using inline Javascript code in my HTML file. This did not allow me to manipulate the variable the way I wanted, and so I assigned an id to an empty <h2> tag and called that element using document.getElementById() in JavaScript. Using this method, I was able to change my variable yet still control the styling of the text in relation to other elements on my page. To mitigate for this potential error in the future, I will continue to assign specific ids to elements in HTML that are dynamic and change them in the JavaScript file. This separation of JavaScript and HTML is useful in building more complex websites that may have multiple variables interacting with one another, and I felt that I gained a better understanding of how the two elements of the programming model should work together.

Another issue I encountered was storing a variable in local storage and manipulating it in my JavaScript file. I needed to change the total amount of the cart in my JavaScript file, and initially only had one global variable called total to represent this. However, even though I changed the variable total throughout multiple functions, my web page would not update to the new number. After reviewing labs and lecture notes, I was able to store the variable in local storage using localStorage.setItem("total", JSON.stringify(total)); which stored the variable immediately after I had changed the amount. Additionally, to get the stored local variable to display correctly on my webpage, I used the function JSON.parse(localStorage.getItem("total")) to use the JSON syntax in order to get the variable. Local storage of variables was extremely useful for me in being able to display elements as I changed them throughout the website, and I will continue to use functions utilizing local storage in the future to maintain and update dynamic variables.

Programming Concepts

(1) I learned the importance of syntax and precision with function names. An if statement in my JavaScript code read “if amount === false”, and I realized that the correct notation was “if (amount === false).” Although this was a small and easily fixable error, I spent a lot of time trying to change other parts of my code. The importance of being precise with each character I type was something this assignment helped me learn.

(2) I learned how to access the “document” in JavaScript. Using examples from lab, I found that accessing any element in the HTML page that the JavaScript file was manipulating first required that I access the document object, with something such as “document.getElementById().” I was able to learn the importance of communication between the linked JavaScript and HTML files, which helped me gain a better sense of how HTML elements were being called or modified by JavaScript functions.

(3) My understanding of if loops was reinforced with this assignment. I used an if loop to ensure that only one amount was selected when the user tries to purchase a cinnamon roll, and created a true/false variable that would only allow the user to select an amount if the variable was false. In the body of the if statement, I was able to change the styling of the element to show that it had been selected. If the item failed to pass the first part of the if statement, it would execute the code in the else portion, which de-selected the amount.

(4) I learned how to locally store variables in web storage, a local storage within the same domain. I stored a variable recording the total amount that the user would need to pay upon checkout using “localStorage.setItem("total", JSON.stringify(total))” which allowed my variable total to be stored with no expiration even when the session was ended. This helped me understand the use of JSON as well, which was useful in storing objects in web storage.

(5) I learned how to use and change variables in JavaScript to store data values. I used several local variables inside functions; for example, in my cartAmount() function I set a variable using “var cartamt = getTotal().” This would store the value of the getTotal() function as the variable cartamt. I later used the variable cartamt in other lines in my cartAmount() code. I was able to assign the value to a variable inside my function and reuse that variable each time I needed to access the data value.