

1. Reflection

What challenges or bugs did you encounter? How did you overcome these challenges?

As I have a limited background in programming in JavaScript, the most challenging part of the assignment was building the functionality for the Shopping Cart page. I found it highly challenging to figure out making use of the local storage tool for the Cart. In order to familiarize myself with the language and to understand how the tool works to be able to apply it, I went on Code Academy to learn the basics, referred to the lab slides, watched online tutorials and used Chrome debugging tools. As a result, I finally learned how data was transferred from through the local storage, and so was able to populate the data in the cart. Thus, this assignment has led me to have a much better understanding of the language and apply my understanding to create different functionalities. From this, I also realized the variety of tools I can get help from when I encounter challenges.

In addition, I have cultivated a strategy on working on a rather complex project such as this one, especially when I am not so familiar with the tool. I have learned to approach it by breaking down the assignment into smaller parts, identifying different tasks needed to be completed to build the necessary functionalities. This is where I learned that prioritizing certain functionalities becomes important, allowing one to be built upon another, progressing towards completion. Breaking down of the project and prioritizing have really helped me in gaining a deep understanding of important concepts through research and studying tutorials over time, and applying them to work on the smaller tasks to complete building the full functionalities.

2. Programming Concepts

Illustrate at least 5 concepts with an example.

1. Local Storage: I believe this was one of my most important and useful concept I have learned through this assignment. This tool was crucial in building my Shopping Cart to be functional, and so I spent the most time learning how the tool works and how to apply it to properly function on my page. By storing my objects in a value in local Storage, data from different pages such as the menu page could be populated in the target page, the Shopping Cart. An example where I used this tool is keeping track of the items that have been selected to be put in the Shopping Cart, and maintaining this information through navigating and moving to different pages, as well as when the user is navigating away from the website. Understanding this tool has led me to really think about what is actually happening when using this tool from a more abstract point of view.

2. `getElementById`: This is another highly useful tool that I have learned to use. With this tool, I could use HTML elements in the JavaScript code. An example where I used this is for selecting quantity and glazing of the cinnamon buns on the Product Details page. I also used this for the removal of items on the Shopping Cart page.
3. `Functions`: Through the lectures and the labs in the past few weeks, I have learned about functions in JavaScript, how each function should be created with a clear and distinct purpose and a task it serves to complete. I also learned that each function typically should aim to complete one particular task for the code to be easy to follow and be managed. Thus, writing functions in my JavaScript code, I have kept this in mind, and tried to keep each function with a distinct purpose and task. An example of this is having one function to populate data from the Menu page in the Shopping Cart, and having another one to add new element to the Shopping Cart. In addition, as I have learned that loose coupling is necessary for functions to operate independently of each other and easily handle changes. Therefore, I have once again made sure of this in my code, for instance, using one function to populate the cart and another to calculate the subtotal. This would allow for any changes in the subtotal calculating function to be easily handled independently from how the cart is populated, if there were to be changes in how the prices should be calculated.
4. `OnClick`: This tool deals with events and it triggers a function to be run. Thus, I have used this for user selection of type, quantity and glazing of the bun and removal of items on the Shopping Cart page. In the case of removal from the cart, this tool allows the user to click on the remove button to initiate the remove function and delete the item.
5. `If, Else Statements`: Lastly, the tool I have learned to use is `If, Else` statements, which allows to specify instances for different corresponding blocks of code to be run. I have used this for item selection in the cart; through `If Else` statements, the corresponding image of the selected item would be displayed in the cart upon the user's selection.