

One major bug that I encountered is making the shopping cart API able to work on every page. Initially, I implemented my shopping cart object and API in the js file linked to my cart page, that makes the API not working when on other pages. I initially tried duplicating the same code from cart.js to the respective js files that are linked to each page. However, that still didn't work. I then searched for my bug on google and stackoverflow and realized that I would need a separate js file, (in my case, I called it app.js) that implements the functionality of a shopping cart and is called from all pages.

I learned and applied my knowledge of a lot of programming concepts in this assignment.

- The first and most important to my website implementation is **javascript class**. I defined an object called Item and functions that are associated with adding, removing, and updating the items.
- The second concept that I learned was **creating functions using function expressions**. In the app.js file where I created the shopping cart API, a lot of functions that I created are using function expressions, rather than direct function declarations.
- **Storing and retrieving information in JSON format** is also something that I learned. In the app.js file, I parsed information into JSON format and was able to add, remove, modify information.
- I also learned to **change the attributes of html elements in javascript**. My code can modify html data attributes based on the user's selection and subsequently add the selection information to my shopping cart API.
- Last but not least, I learned how to **write html in javascript**. I was able to show the items added on the shopping cart page based on the user's selection in app.js.