## Reflection:

For this assignment, I encountered mainly Javascript bugs but also CSS bugs as well. One Javascript bug I faced was that when I saved items to an array for the shopping cart, it didn't pick up the other attributes of that item. What was happening was upon refreshing the page, the Javascript would run and pick up the empty attributes, running my cartAdd function. It wouldn't care or notice that I had checked the boxes for the proper attributes. To figure this out I just used a lot of console.log() and TA help.

Another JS issue I faced was that I was unable to remove items from cart as my functions did not interact properly. To resolve this, at a high level, I had to rewrite the functions so that the variable relationships made sense (e.g. the "item" in the cart array vs. the "item" in the showProductinCart function).

Finally, I faced a lot of CSS issues, usually because I was cobbling together flexbox. I finally decided to use CSS grid for my shopping cart page, but honestly that was probably the page that needed it least.

In future, I see the power of using console.log() to debug and I also now have a clearer understanding of how object constructors relate to functions using them.

5 programming concepts I learned in JS:

- 1. Object constructors. The building block of the shopping cart items were objects I initialized with a function. I learned how to use JS objects.
- 2. Event listeners. I used event listeners in JS directly to initialize certain functions like removing shopping cart items with a button-press, for instance.
- 3. How to loop through JS arrays. I learned some syntax in for loops, using for(item in cart) as shorthand rather than using counter variables.
- 4. How localStorage works, using it to save my cart persistently across pages and then parse it to display the cart on the screen. This is probably the most valuable/novel thing I learned.
- 5. How to clone templates and nodes. I didn't know this was possible in JS (although it's still hard to understand so I might avoid this in the future).