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PUI A6B Reflection

ACCOMPLISHMENTS:
In the 6b portion, I added a lot more JS code and functionality to improve user experience and freedom. For instance, I made the shopping cart page fully functional such as adding items to the cart, being able to see your own choices, and removing unwanted items. I also adapted the product page so that multiple products could be displayed based on their own information. I learned and implemented JS objects and local storage. I also implemented functions to load the cart properly onto the screen which include displaying choices and a delete button. Other loading functions include loading the quantity count on all pages and accurate details on the product page.

BUGS/CHALLENGES + FIXES:
- I did not properly retrieve values within a Javascript object. I didn't know how to access the values and faced a lot of NULL, Nan, and "object Object" text. I did a lot of research to properly understand the structure of JavaScript objects and how things were stored in local storage. I used developer tools to look at what is currently stored and knew how to solve the code. Previous labs also helped me understand things like getItem and setItem which is crucial for local storage. In the future, I will properly and carefully analyze structures to get the value I need!
- Sometimes, I would create functions but not understand why they were not working. After going through the thought process and logical flow, I realized that the function was not being called in the right place such as loadCart() in the HTML files. Previous lab and going through the logic helped me understand what was missing. In the future, I will check for the correct function name and where it is being called to make sure they line up correctly and are linked in the right place.
- I had a bug where an item would show up multiple times in the shopping cart but listed separately. However, the item should only be listed once and the quantity should represent how many items there were. I spent a lot of time understanding how I was calculating the quantity count as well as how I was adding things to the cart. I then used my knowledge from previous CS courses to create a dictionary so that I can recalculate the correct count and display the precise information on the shopping cart table. In the future, I will plan out the data structures and logic of calculating things like the total number of items so that I won't be stuck and my logic is smooth and double-checked.

PROGRAMMING CONCEPTS
- The first programming concept I learned in this assignment was **sending parameters** to functions. I didn't want to hard code my functions and I wanted it to work for multiple items. I then realized that I needed to send in parameters when I call a function so that it can work for multiple items. Thus, I would send details such as name, price, and company when an item is clicked.
- A second programming concept I learned was **commenting my code**. Once I started adding a lot of code and functionality to my JS file, things got really messy and unorganized. It was hard to tell what was working or not and it wasn't clear how some things worked. Thus, I spent the time to document, clean up my code, and truly understand how the pieces fit together.
- A third programming concept I learned was **JSON concepts**. I haven't worked with JSON objects much and didn't understand the structure but creating and retrieving data across pages helped me understand the concept. Especially since local storage was such a large part of this assignment, I really learned how to access properly access and set values.
- A fourth programming concept I learned was using **developer tools to debug**. By clicking on buttons and adding things to the cart, I could take a look at my local storage using developer tools on Google Chrome. I could see what I was storing and also clear the local storage to keep testing my work.
- A fifth programming concept I learned was **testing my work**. After each change, I played around with my website a lot to look for bugs and see how the user would interact with the pages.