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Programming Usable Interfaces
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Assignment 6B: Reflection

GitHub Site: <https://amy-designs.github.io/HW6/>

GitHub Repository: <https://github.com/amy-designs/HW6>

New Hi-Fi Prototype Page: <https://amy-designs.github.io/HW6/signin.html>

1. Issues & Bugs

The main issues I faced in this stage of the assignment was in implementing the shopping cart function correctly and effectively. One particularly problematic issue was in regards to updating the item quantity in the cart icon: while I was able to change the number effectively on the detail page, I was unable to get it to show on the cart page as well. I was able to resolve this problem by the onload event to update the cart number. The next and more time-intensive issue I encountered was in spacing and formatting items in the cart. I initially created separate DIVs for each product color using Flexbox, without realizing that multiple added items of the same color with different criteria (ie. size, materials) would all be added into the same row. I then addressed this by using createElement to add each cart item in a separate DIV.

Another bug I encountered in my code at this stage was in validating selections for product color, size, material, and quantity before adding them to the cart. I realized as I was initially implementing the code that my site allowed users to add items to their cart without having selected all fields (in the detail page radio button form), which led to errors and blanks when the item was added to the cart. To address this, I used if/else statements in Javascript to identify which fields the user had not selected and created an alert that would notify the user which specific fields needed to be selected. I used similar methods to also have a DIV on the cart page be shown if there were no items in the cart, notifying users that the cart was empty.

Other issues I addressed in this assignment were in regards to the corrections I needed to make from HW5. I had mistakenly used static images from my Figma prototype in that assignment, and I replaced them (where applicable) with code.

2. Programming Concepts

The most significant concept I learned in this assignment was how to correctly and effectively implement local storage in my code. This would apply to the shopping cart functionality I created, where I saved product selections across different criteria into an array and then presented them on the cart page. It was through this process that I was able to gain a better understanding of, for instance, the other techniques that I described above (ie. form validation, formatting, etc.).

Overall, one of the most helpful concepts I was able to learn was how to identify and resolve errors in JavaScript. Through this assignment, I was able to gain a better understanding of how to recognize errors more efficiently, such as in improving my ability to recognize syntax errors as I became more familiar with JavaScript, and using alerts to pinpoint where issues were in my code. Then, in terms of resolving issues, I learned how to more efficiently search for the answers I needed via online resources (ie. W3Schools, StackExchange, etc.).

In this way, I also learned the concept of manipulating inputs from HTML forms in JavaScript: my product page had three sets of radio buttons for color, size, and material, in addition to a quantity selector where users could increment quantity via typed input or plus/minus buttons, and I used JavaScript to pull these inputs into a constructor function before adding them to an array that I then stored in local storage.

In turn, as I improved my understanding of the relationship between JavaScript and HTML, I was able to gain clearer insights into how to manipulate HTML DIVs through JavaScript. I used this concept to create new DIVs in JavaScript for newly added items in the cart and to then add them to the existing container DIV in my HTML code.

Through this process, I also learned how to use interrelationships across functions in JavaScript that built upon one another, given that for the most part, the functions I created all interacted with the same product array. I saw how my code essentially passed that same product array through different functions based: this applies, for instance, to my updateCartNumber function, which would update the cart number as I called it in the functions that added or removed items from the product array.