Assignment 6B Deliverable

Reflection

The biggest bug I encountered (which resulted in many smaller issues) was the delete function that removed an item from the cart. My function worked within a for loop that iterated over the cart array and dynamically built the cart elements. However, because the loop dynamically built the elements, they didn't have an identifier for the function to know which element to delete. So to fix that, I added an id to the div containers. In addition, I originally used the keyword **delete** to remove the item, but that wasn't working so I tried **splice()**, which did work after I attached an id to the relevant div container. But after addressing that problem, I realized that my function was deleting the wrong element which resulted in an error in the cart counter. I was using an **onclick()** function that would be triggered by pressing the delete button on my html page, so I thought this problem was due to the fact that the onclick event was happening in a for loop and maybe the for loop was executing the function even without the onclick event happening. So I moved the body of the delete function outside of the for loop and called it within the loop. But the problem persisted and eventually, I realized that since the way I was identifying the div container was based on an ID that was equal to "i", the function was not removing the correct div since "i" incremented every time the for loop ran through the array. So to address that problem, I created a new variable "num" and assigned it to "i" and this variable would be passed through my delete function.

Another general problem I encountered was that throughout my code, I created multiple variables that referenced the same thing, which created a bit of confusion for me as my code got more complex. I used to have two arrays, one for the items and another for the quantity. However, I didn't need the second array, I could get that information from the first array (which has the quantity attribute attached to each object). So I got rid of the second array which reduced the number of variables I needed to call on throughout my code. In the future, I will try to declare as few variables as possible in order to keep my code clean and organized. In addition, working through the delete function gave me a better understanding of the relationship between for loops and how functions can be called within the loops. I am also reminded of how important printing statements is for locating the bug.

Programming Concepts

1. **Alert**: One programming concept I learned was how to use **alert()** to enforce user actions I wanted. For example, my code only works if a user chooses a glaze and quantity. If they don't select either of those attributes, then the objects would not be stored correctly. So in order to prevent users from making incomplete orders, the **alert()** would display whenever a user tries to add an item to their cart with the quantity or glaze selected.
2. **Modal popup**: I also learned how to create my own popups. The alert() function doesn't allow me to create my own buttons (I think) so I made my own modal popups and designed them the way I had in my Figma prototype. I created a modal div container that

disables the entire window and then added a popup window on top. I used this CSS/HTML code for two popups. One popup navigates the user to the cart page from the product page and another appears on the cart page to notify the user when they have no more items in their cart and to navigate the user to the order page via a button.

3. **CreateElement**: Through this assignment, I learned how to dynamically create HTML elements using Javascript through createElement. Each of my items were heavily styled with div containers and layouts, so I had to create many HTML elements dynamically. It was interesting figuring out how to lay out the HTML page through JavaScript. I used my original cart.html code to organize my JavaScript code when creating each element. Through the process, it reminded me of drawing a rough sketch (i.e. the html page) and using that to create a more polished sketch (i.e. the javascript code).
4. **Local storage**: One of the most important things I learned from this assignment is using local storage. I learned how to store data and retrieve it on a separate web page. In addition, I learned that in order to retrieve data from an array, it's important to use parse().
5. **Parent and child elements**: When creating elements dynamically, I learned the distinction between parent and child elements. In order to establish a hierarchy of elements, it's important to keep track of what child elements are appended to what parent elements. This concept was crucial when helping me organize and ensure that the html elements for the cart item container were created correctly.

Links

Github repo: https://github.com/Jenny-xin/PUI2020/tree/master/homework_6b

Github page: https://jenny-xin.github.io/PUI2020/homework_6b/