Link to website: https://animeshsinghjay.github.io/PUI-HW6B/

Link to source code: https://github.com/animeshsinghjay/PUI-HW6B

a. Challenges:

1. While attempting assignment 6A, I had tried using local storage but couldn't figure it out. In my attempt for this assignment, after going through the concepts discussed in the lab, I could figure out that it is done in two steps - (i) stringify-ing my object array into a JSON string, and (ii) then storing it as a value for a chosen key in the local storage through the setItem function.
2. Adding elements to the cart was relatively simple, but I spent a considerable amount of time figuring out the correct way to delete objects from the cart. The challenge was that there was no way for me to distinguish which delete button is clicked in the cart. I solved the issue by associating an id with each item in the cart as I put it in for displaying. I identified the clicked delete button through that id. I delete that element by splicing my cart array and then reload the entire cart, associating fresh ids to items as I display them again.
3. For attempting extra credit for this assignment, I encountered a lot of problems while trying to get owlCarousel.js to work. The biggest challenge was to figure out the correct js, css, and html to put in the correct places in the project. I got help from the author's documentation (for owlCarousel) on Github. I had to include jquery, learn how to use jquery selectors, and finally, I could figure out how to implement the carousel on my home page.

b. New Programming Concepts:

1. localStorage: I learnt the concept of local storage through this assignment, and how it can be used to store variables for using across the website. Specifically, in this project I used it to store an array of objects which I utilized as a data structure storing the cart on my website. I used the same array throughout my webpage because I could access & update it on any page using local storage.
2. addEventListener/Click: I learnt how to attach "click" event listeners to elements in HTML through which I could detect if a particular element was clicked. Once this was triggered, I could execute functions like addToCart or removeFromCart. This was extremely useful as I now had the agency to perform actions on my webpages according to user's actions.
3. addEventListener/Change: I learnt about another useful event listener in JavaScript which could detect "change" in input fields. Through this, I could detect change in quantity of an item on the cart page, update it's price, and also update the total price value of the cart dynamically which was pretty cool.
4. inserting HTML code through JS: I learnt that I could basically inject code in any div in my HTML. Utilizing this, I could display all the elements in my cart in a dynamic way, update whenever something was deleted or quantity changed, and my cart worked exactly like a cart on an e-commerce website.
5. owlCarousel2: For extra credit, I decided to implement a carousel on my home page. I used owlCarousel2 (https://owlcarousel2.github.io/OwlCarousel2/) for this project. I had to also learn jquery as it was a requirement for this js library. Through this, I could make a dynamic auto updating carousel for my homepage.