Challenges:

Since I was not very familiar with JavaScript, when I first started to work on assignment 6b, I had a hard time even just figuring out where to start. The task looked very complicated to me, and I could not think of a clear path on how to solve the problem. To overcome this challenge, I talked to people who had more coding experience and realized the most important thing as the first step of solving the problem should be sorting out the logic of the problem and then trying to write pseudocode first. I followed the suggestion and it worked well! I realize that I know the logic of the problem and my panic are mostly coming from how to translating my logic into code.

In the processing of translating pseudocode to actual JavaScript code, I have encountered another major challenge, which is how to combine the quantity of items in the shopping cart when they have the same size and color. I was stuck on how to make this work on the shopping cart page with information I extract from the local storage. After several different try, I realized that the best way to solve the problem was to add an if statement when a new object was being added to the cart list, which was before the list is even being saved in local storage. I learned a lot through this challenge because I realize that I should not tie fixate a problem in only a section of the code. I should think more broadly on how to solve a problem.

Programming Concepts:

The programming concepts I have utilized in my assignments are as follows:

1) Object

In this assignment, we need to add many items to our shopping cart. So, I used the Object constructor concepts in the code to make the process more efficient and conform with the coding convention. Object in JavaScript is a container that have many proprieties. By using Object, we could pass my different values to a certain variable. For example, in my code, I created an object "Product" and passed many different items to it. In this way, I can reference their information so much more efficiently and easily.

2) Local Storage

To save shopping cart information without losing it when web is refreshed, I need to use the concept of local storage, which allows me to save key and value pairs in the browser and use it for later reference. In my code, I used syntax "localStorage.setItem" to save my selected items into local storage. Then I used "localStorage.getItem" to get the information I need and put it in the places where I need to show the information on the website. In this example, I utilized local storage so user would be able to find their shopping items information even when they refreshed the page or navigated to another page.

3) HTML Template

HTML template is a tag that allows you save invisible html section in the file and use it later using JavaScript when needed. Also using html template and JavaScript allows you to change the content of the template and customize it to what you read from your storage or other information source. In this assignment, I used HTML template in the shopping cart item section. Whenever a new item is being added to the cart, the html template would be triggered and used to show the information.

4) Array

To save multiple values in one container, I used the concept of Array. Array is basically a special type of variable that could hold more than one value. For example, in this assignment, I created an array "Cart" to save all the purchased items' information. In this way, I could easily do for loop with the array, which is so much more efficient for organizing and sorting information.

5) EventListner

In this assignment, we need to implement many functions that are triggered by specific user inputs such as a click of the button. Therefore, I need to use the concept of event listener, which is a procedure in JavaScript that waits for an event to occur. For example, in my coding, once the "Add to Bag" button is being clicked by the user, related functions will be triggered, and item information will be saved into local storage. EventLisener is one of the most fundamental concepts that allow us to make our website interactive.

Extra Credit:

I added the Add-To-Wish List function to the website.