Programming Concepts

1. Storage: I had the most difficulty with this part of the assignment. I created an empty array cart to store all of the objects (cinnamon roll information) I wanted and then stored it in the web storage. With this structure, I can loop through the array in order to track items, push the array to add items, or find the index of an item that I want to remove and slice it from the array.
2. Loops: I found that using loops can minimize the amount of effort to accomplish a task, specifically for various functions within the shopping cart functionality (checking, adding, removing). The resulting code is cleaner and more efficient. As an example, I loop through the length of the cart array and access every item with the index to manipulate it as I want.
3. Local vs. Global Variables: I learned that some information should be available throughout the entire program, so I stored various global variables that would do so. I also learned to limit some information to within a scope of a function with local variables. For example, knowing the information about the glaze and quantity selections of the rolls is important and required input parameters for some of the functions I needed, so I made global variables for that information. Other information such as the cart array may not be needed for every function, so I initialized that variable locally within the functions that needed that information.
4. Helper Functions: I realized that some of my code got bulky and difficult to read, so I split up some of the content into helper functions that I call within the parent function. Having helper functions is useful when I need to utilize the same function multiple times within other functions since I can save time and lines of code. To extend further, if I make an error within the helper function, I wouldn't have to make the same change in several different areas. As an example, I made a helper function called checkItemInCart() that checks for items in the cart before returning a value that is captured in the function addToCart which adds a new item into the cart upon checking for the return value from checkItemInCart().
5. Constructors: I used a constructor to create objects to store information about the item like glazing and quantity selection. It helps to organize my information this way since it's clear how to access these items within other functions, which is less confusing than defining local variables several times throughout other functions, which can become confusing.