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Programming Usable Interfaces
October 30, 2018

Assignment 6B Programming Concepts

1. The first Javascript concept I learned through this assignment was how to write a function then call it in my HTML file. For this assignment, I wrote multiple Javascript functions including ones to update the product image on the product page, update the product's price, and remove the item from the shopping cart. An example function I wrote for updating the product image is:

```
function chooseglaze() {
        var x = document.getElementById('glaze').value;
        if (x == "none") {
                document.getElementById('cinnaroll').src= 'https://i.ibb.co/DL7QkWd/noglaze.png';
        }
        if (x == "sugar milk") {
                document.getElementById('cinnaroll').src= 'https://i.ibb.co/09v1H1S/psroll.png';
        }
        if (x == "vanilla milk") {
                document.getElementById('cinnaroll').src= 'https://i.ibb.co/09v1H1S/psroll.png';
        }
        if  (x == "double chocolate") {
                document.getElementById('cinnaroll').src= 'https://i.ibb.co/FH8PJFn/chocolate.png';
        }
}
```

   In order to call it in my HTML file, in the dropdown menu for glaze, I added onchange="return chooseglaze()" following "section" so that when the user selects their glaze flavor from the dropdown menu, the image to the left changes to reflect the glaze.

2. The second concept I learned was how to use an if loop so that depending on the flavor chosen, the image changes to reflect that. In order to use the if loop, I set a variable to be equal to the value of the element with id "glaze." Then depending on what the variable was equal to, the image changes accordingly. For example:

```
if (x == "none") {
        document.getElementById('cinnaroll').src= 'https://i.ibb.co/DL7QkWd/noglaze.png';
}
```

3. The third concept I learned was how to set existing elements to new images or text using the function "document.getElementById().src =" or "document.getElementById().innerHTML =." For example, when the user selects a quantity, the text displayed for "total price" updates.

```
if (x == "1") {
        document.getElementById('price').innerHTML= "TOTAL PRICE: $6";
```

4. The next concept I learned was how to store an object to local storage so that it can be called on a later page using the functions “localStorage.setItem()” and “JSON.parse.” These concepts were straightforward to me in terms of their purpose, but the implementation of them in functions were more difficult, in terms of keeping my variables straight between the variables used for the HTML files and the ones used for the Javascript files. For example on the shopping cart page I called the saved details like below:

```
function loadroll() {
        var details = localStorage.getItem("productDetails");
        details = JSON.parse(details);

        document.getElementById('description').textContent = "PUMPKIN SPICE CINNAMON ROLL
        WITH" + " " + details.glaze;
        document.getElementById('quant').value = details.quantity;
}
```

5. The final concept I learned was to convert an object to a string and how to convert a string back to an object using JSON.stringify and JSON.parse. For example, when storing the information about the cinnamon rolls from the product page, I first saved the variables as an object, then stringified them to save them to local storage.

```
var selectedGlaze  = document.getElementById("glaze").selectedIndex;
var actualGlaze = document.getElementById("glaze").options[selectedId].innerHTML;

var selectedQuantity  = document.getElementById("quantity").selectedIndex;
var actualQuantity = document.getElementById("quantity").options[selectedId].innerHTML;

cartItems = {glaze: actualGlaze, quantity: ActualQuantity};

localStorage.setItem("productDetails", JSON.stringify(cartItems));
```