PUI Homework 6 Reflection

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This homework was surprisingly challenging for me, even though I've been coding for years. I think it's because I had to get used to the relationship between html/css/js. I always thought it was simple, but there's a lot of intricacies. There were several bugs I encountered.

Bug	What I learned	How did I resolve
Cart not updating properly	Needed to track cart items	Used an array to hold all cart items and saved in localStorage.
Needed to show all items in cart	Needed to loop through items in cart array	Used a table to display items in the area, and updated both
Delete button wasn't working	I wasn't updating the area correctly	Used the splice function to update the array in the right place.
Selecting color and material of pillow wouldn't work until second click	Function was called at wrong time, so it would only update the second time.	Refactored code to be cleaner with easier to understand functions that were all called at onload.

All of these issues were all unpreventable, because this homework was a learning experience. Now I'll know how to encounter these errors in the future (Thereby mitigating the chance they occur again). I thank Google and console.log() for assisting me in all of my error messages.

Programming Concepts

There were 5 programming concepts that I learned and used in this assignment.

1. classes
2. localStorage
3. switch statements
4. jquery
5. createElement

Classes:

To save cart items with a their attributes, I had an array store all of the objects created with the CartItem class. Here is what I had in my code:

```
var item = new CartItem(currentItem["name"],
    currentItem["color"],
    currentItem["material"],
    currentItem["price"])
    for (i = 0; i< amount; i++) {
      cart.push(item)
                                                    }
```

This was an easy way for me to call on the item's attributes later when I had to display the cart, or delete items in the array.

localStorage:

I never knew how websites temporarily saved my data, but now I realize it was through localStorage. I used this to save the cart and display how many items were in the cart on all the pages in the website. Here's a snippet of code from my homework:

```
function saveCart(){
  localStorage.setItem("cart", JSON.stringify(cart));
}

 function getCart(){
  return JSON.parse(localStorage.getItem("cart"));

 }
```

I used these functions as a shortcut to retrieve the cart as I needed.

Switch Statements:

When I was filling up the cart table, I needed to fill the columns depending on which one it was, or when I needed to assign a name to a color depending on what was clicked. The statement was perfect for what I needed in this situation. Here is how I used it.

```
switch(this.getAttribute("class")) {
    case "dot red selected":
```

```
    currentItem["color"] = "After School Special";
    break;
  case "dot yellow selected":
    currentItem["color"] = "Morning Hazel";
    break;
  case "dot blue selected":
    currentItem["color"] = "Cozy Denim";
    break;
    case "dot green selected":
      currentItem["color"] = "Rainy Day";
      break;
    }
```

JQuery:
I was able to learn a bit about JQuery for when I needed to select a color or material. My old function wasn't updating properly due to the time that it was called, so I used JQuery to call with document.ready(), which isn't available in regular JavaScript.

```
function selectFluff(){ //tracks material selected
  $(document).ready(function () {
  $(".material").click(function () {
  $(".material").removeClass("sel");
  $(this).addClass("sel");
  currentItem["material"] = this.alt

  });
  });

 }
```

I made sure to call the jquery source code In my cart.html file.

createElement:
For the cart, I needed to create a button for each row of the table in order to delete that row. It took me a long time to figure it out, but then I realized I could create a button element. Here is how I did it:

```
case 4:
    var btn = document.createElement("BUTTON");
```

```
btn.onclick = function() { deleteItem(this) };
btn.id = "delete_" + i;
btn.innerHTML = "X";
console.log(btn)
td.appendChild((btn));
tr.appendChild(td)
```

It looks easy after the fact, but this was truly a challenging part of the homework for me.

Overall , this assignment pushed me to really learn about the nature of JavaScript and implement a (rather fantastic) shopping cart.