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Creative Coding
Professor Bennett
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Final Project Documentation

Short Project Video: https://www.youtube.com/watch?v=RY2RBuZK09k&feature=youtu.be

Code Highlights:

```
// LOCATION CLASS //
class Location {
    constructor(cityJSON, xCoord, yCoord) {
        this.name = cityJSON.name;
        this.x = xCoord;
        this.y = yCoord;
        this.json = cityJSON;
        this.temp = cityJSON.main.temp;
        this.windSpeed = cityJSON.wind.speed;
        this.weather = cityJSON.weather[0].description;
        this.isActive = false;
        this.displayCase = "";
  }
```

I was proud of this code because I was able to figure out how to initialize member variables of a class to JSON values. This was important because I needed to have a lot of class instantiations that each had specific pieces of data. It was easy to code it this way because all I needed to do was load the JSON to a variable, pass it into the class constructor, and let that do all the work for me.

```
// look through all City objects, check if the weather description is already in the dictionary: if it is, increment number
// of occurances by 1, if it isn't, add it to the dictionary. this code ensures that even if there is a weather description
// that isn't in my array of known descriptions (the weatherNameLibrary array), there will still be a button created for that
// type of weather (even though i would not have made an animation for it).
for (i = 0; i < cityArray.length; i++){
    if (weatherNames[cityArray[i].weather] == undefined) {
        weatherNames[cityArray[i].weather] = 1;
    } else {
        weatherNames[cityArray[i].weather] += 1;
    }
}

// look through array of all known weather descriptions, add to dictionary if it isn't ready there, otherwise increment number of
// occurances. this code ensures that any weather that I did create an animation for is included and can be viewed by using the
// weather buttons on the right side of the screen
for (i = 0; i < weatherNameLibrary.length; i++){
    if (weatherNames[weatherNameLibrary[i]] == undefined) {
        weatherNames[weatherNameLibrary[i]] = 0;
    } else {
        weatherNames[weatherNameLibrary[i]] += 1;
    }
}
```

This code was also important because it addressed the issue I had with the map not showing all of the weather types at any given time (i.e. a place could be experiences “heavy intensity rain” one day, and none of the cities would be experiencing it the next day). This code accounts for that, looping through all of the cities I included to look for any new types of weather, then looping though an array of all known types of weather, just to make sure that everything I had a weather animation for could be displayed.

Concept Paragraph:

The name of my project is “Dynamic Weather Map” until I can think of something more creative. It is a real-time weather map with animations for the different weather (weathers?) at state capitals across the country (sorry Salem). Its interactivity includes temperature-colored buttons for each capital, as well as an array of buttons for on-demand weather in case your favorite type of weather is not happening at that moment and you want to see it on your screen. The concept is to show how different parts of the country get different types of weather during any given time of the year and is meant to give us some larger scope of things than what we have from our homes as we are stuck in quarantine.