**Day 1:**

**Goal:** My goal entering the BlueStamp Engineering Camp for the first day was to finish my starter project.

**What I Learned:**

* The process and technique of soldering
* Simple Parts/Functions of a circuit board
* How all the parts relate to each other

**Documentation (Problems Encountered/Solution):**

* Solder got stuck to circuit board while using Soldering Iron/Used the Soldering Iron and applied pressure on the connection points in the circuit board making it a liquid which in result made it easier to pull the solder of

I didn’t do any coding today. I will start tomorrow. Today was just to learn about the process of soldering.

**Plan for tomorrow:** My plan for tomorrow is to make my video for completing my starter project. I will talk about the functions of each part in my starter project and will discuss the process of assembling it. I will also put all this information up on my website. I want to start my main project also tomorrow. My goal is to have the first milestone done by Wednesday (Thursday latest).

**Day 2:**

**Goal:** My goal today was to make my video for completing my starter project. It was also to finish at least 25% of the way to my first milestone.

**What I Learned:**

* I learned about the function of a piezo buzzer
* Learned about how a capacitor works
* Found out what a printed circuit board is

**Documentation (Problems Encountered/Solution):**

* Was using the wrong momentary push button switch/ The one I was using was to big for the breadboard

I started assembling the breadboard of my weather IoT device today. I attached a couple of wires and connected the photon.

**Plan for tomorrow:** My plan for tomorrow is to be close to or finish the full breadboard and maybe if I have time start coding.

**Day 3:**

**Goal:** My goal today was to finish wiring everything on the breadboard. If I had time I also wanted to start coding for the neopixel ring to flash different colors.

**What I Learned:**

* I learned about the function of a momentary push button switch
* Learned about how a breadboard works

**Documentation (Problems Encountered/Solution):**

* Was unsure on how to connect the momentary push button switch to the Particle/ You have to connect a wire into the breadboard in the same row as the momentary push button switch

I finished assembling the breadboard of the Weather IoT device today.

**Plan for tomorrow:** My plan for tomorrow is to try to finish or at least get 75% of the code down for making the neopixel ring flash colors.

**Day 4:**

**Goal:** My goal was to finish most of the code and see if the neopixel could display the colors.

**What I Learned:**

* Why the particle has its own wifi
* Voltage, Resistance, Current, and all their relation with each other

**Documentation (Problems Encountered/Solution):**

* Code was unsuccessful giving an error saying that the neopixel was undefined/Was missing the declaration of the neopixel library

I finished coding today. Their were some few hardware issues involving the switches which I am going to fix tomorrow. The neopixel should switch colors then while pressing the buttons.

**Plan for tomorrow:** My plan for tomorrow is to fix the few hardware issues involving the switches. The code should then work and my first milestone should be achieved. I plan to film my first Milestone Video tomorrow also. I then want to start the process of getting the weather from the cloud and change color according to that.

**Day 5:**

**Goal:** My goal was to fix the slight hardware/wiring issues today in order to get the neopixel to change colors with the usage of the buttons. It was also to mostly finish the process of getting the weather IoT device to change color according to the weather.

**What I Learned:**

* How to properly wire all the parts to the breadboard

**Documentation (Problems Encountered/Solution):**

* The button that was supposed to turn the LED light on and off wasn’t functioning/ The reason was because the connection between the two buttons was loose which in result prevented the current to flow through to that button

I finished my first milestone today. The neopixel successfully changes color while pressing the buttons.

**Plan for tomorrow:** My plan for tomorrow is to film my first milestone video. It’s also to put the finishing touches to my second milestone, which is getting the IoT device to change color by the weather, so I can film that on Tuesday.

**Day 6:**

**Goal:** My goal entering was to film my first milestone video and to put the finishing touches to my second milestone.

**What I Learned:**

* Difference between Digital and Analog pins
* How the Neopixel works

**Documentation (Problems Encountered/Solution):**

* Blackout

Due to the blackout today I wasn’t able to accomplish any of my goals.

**Plan for tomorrow:** My plan for tomorrow is to complete whatever I wanted to do today. In addition, I want to finish my demo-night script.

**Day 7:**

**Goal:** My goal today was to film my first milestone. I also wanted to put the finishing touches for my project to get the device to change color according to the weather instead of me manualing changing it.

**What I Learned:**

* I learned why I had to make a new type of applet in order to make my device show color instead of me manually changing it

**Documentation (Problems Encountered/Solution):**

* With the applet saying if current condition changes to “so and so” then call a function the device wasn’t changing according to the weather. This was because the weather never changed here so nothing was triggering it/ I made a new applet asking it to display the color of a weather at a certain time. This ended up working.

My second milestone is done. I will film it on Thursday.

**Plan for tomorrow:** My plan for tomorrow is to memorize my demo night script and become completely fluent in it as I’m presenting tomorrow.

**Day 8:**

**Goal:** My goal today was to become fluent in my demo night script as I am presenting today.

**What I Learned:**

* Revised everything I learned

**Documentation (Problems Encountered/Solution):**

* No Problems

I presented at Demo Night today.

**Plan for tomorrow:** My plan for tomorrow is to film my second milestone video. It is also to make the majority of modifications in order to film my modification milestone video.

**Day 9:**

**Goal:** My goal today was to film my final milestone video. I also wanted to make some modifications.

**What I Learned:**

* How to use a drill
* How to use a dremel

**Documentation (Problems Encountered/Solution):**

* When I used the drill on the lid it kept moving/ I used a place holder in order to prevent the lid from moving

I filmed my final milestone.

**Plan for tomorrow:** My plan for tomorrow is to see if I can possibly finish all the modifications I have in mind in order to possibly film a modification milestone.

**Day 10:**

**Goal:** My goal today was to see if I could possibly finish all of the modifications I had in mind in order to film a modification milestone

**What I Learned:**

* Types of LCD Screens
* How an LCD Screen with an I2C Backpack saves a lot of time wiring compared to a normal LCD Screen

**Documentation (Problems Encountered/Solution):**

* I was trying to wire the LCD screen to the photon, but there was too much wiring and not enough space/ I learned that there is a special type of LCD screen with something called an I2C backpack that simplifies all the wiring into 4 cables. I will use this instead.

I was not able to finish all the modifications I had in mind so therefore I didn’t film a video for that.

**Plan for future:** As the 2 week program in BlueStamp comes to an end I definitely enjoyed working on my project and will continue to do so. As there was no LCD screen with an I2C backpack leftover I decided to finish this modification myself I will buy that part and then wire it and code it accordingly in order for it to display the weather condition and other types of information. Once all of this happens the modification that I have in mind will be complete.