

The background of the slide is a circular image showing three small potted plants in white pots. The plants are arranged in a row on a light-colored surface. The plant on the left has long, pointed leaves. The middle plant has thick, rounded leaves. The plant on the right has small, dense leaves. The text 'Mini Garden' is centered over the image.

Mini Garden

By Malik, Taiwu, Jemmson, Younnus

Contents

- Plants
- Model
- Coding/Circuit





Observations:

- Water is strongly needed
- Grow in the direction where there is sunlight

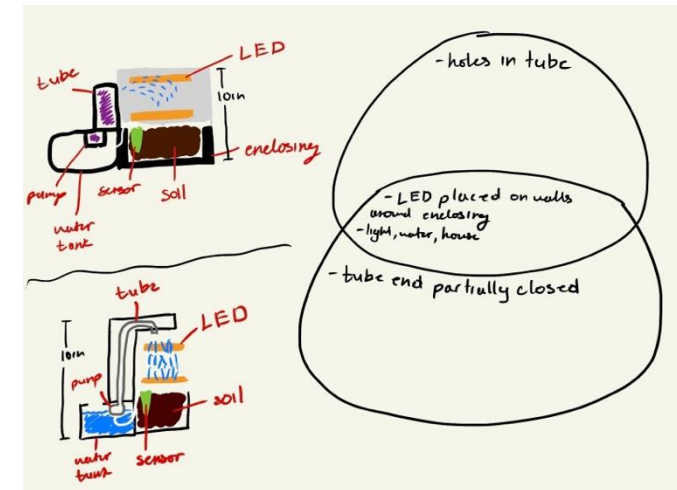
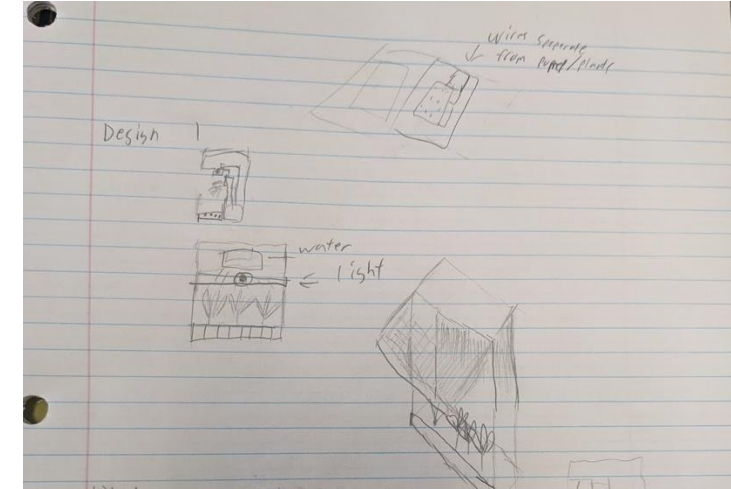
A row of five seedlings of increasing size growing from soil, with a bright light source in the top left corner.

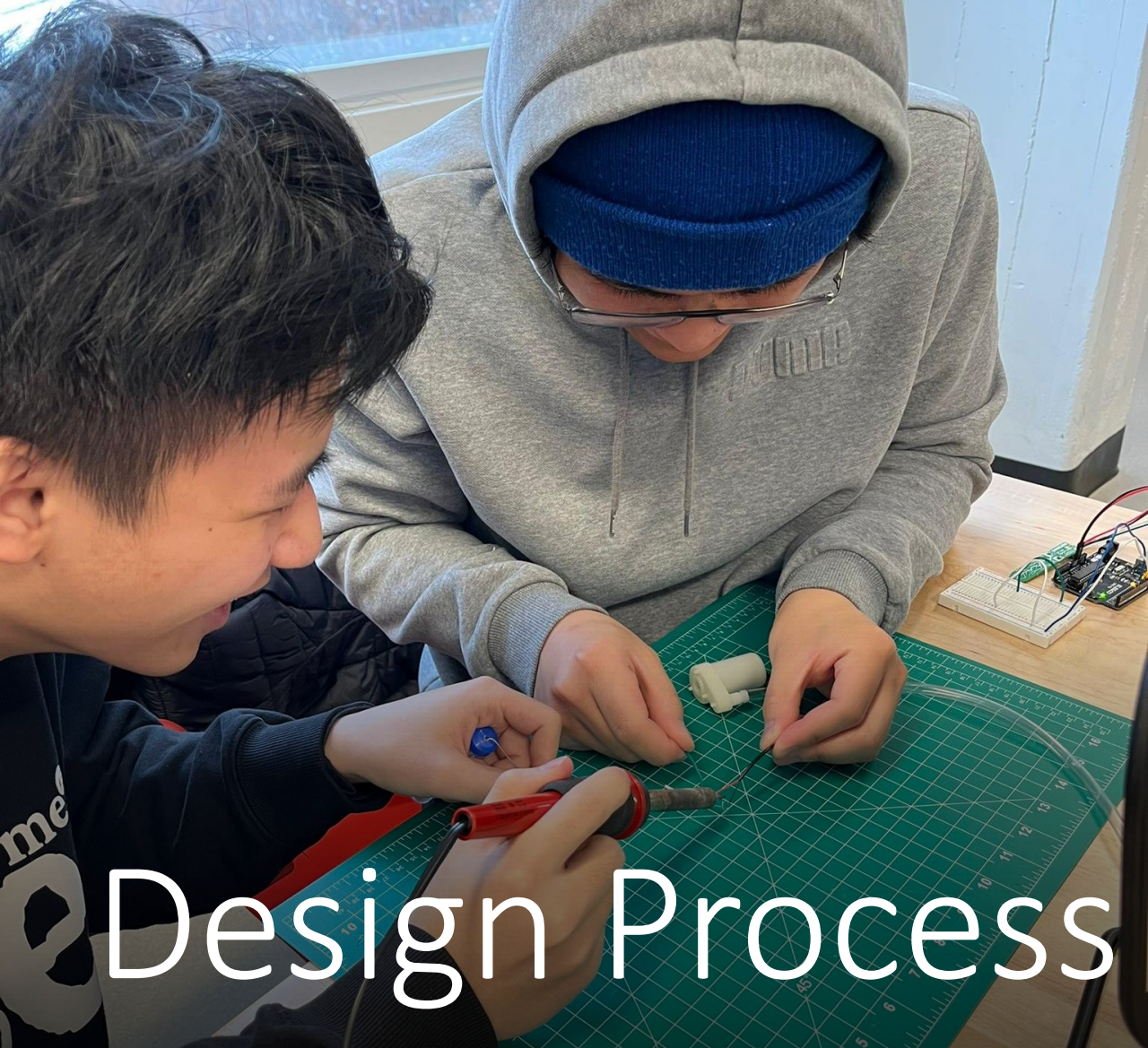
Conditions

- 1. Enough Water
- 2. Enough Sunlight

Design Process

- Went through multiple different models
- Analyse possible problems and choose the best for the project.
- Greatly considered the plant's needs.

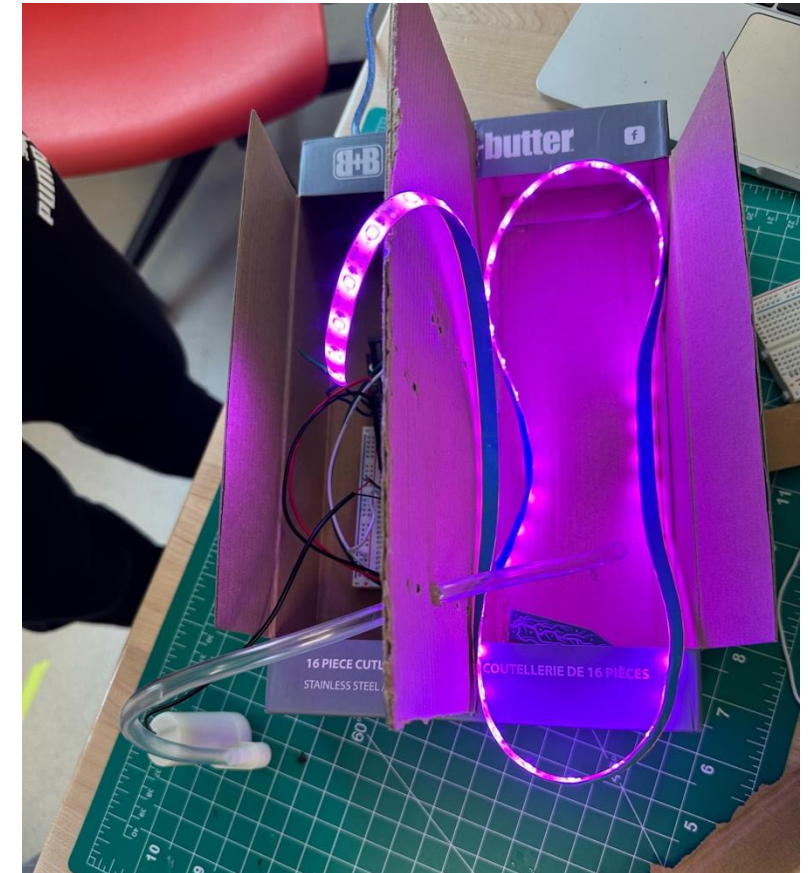
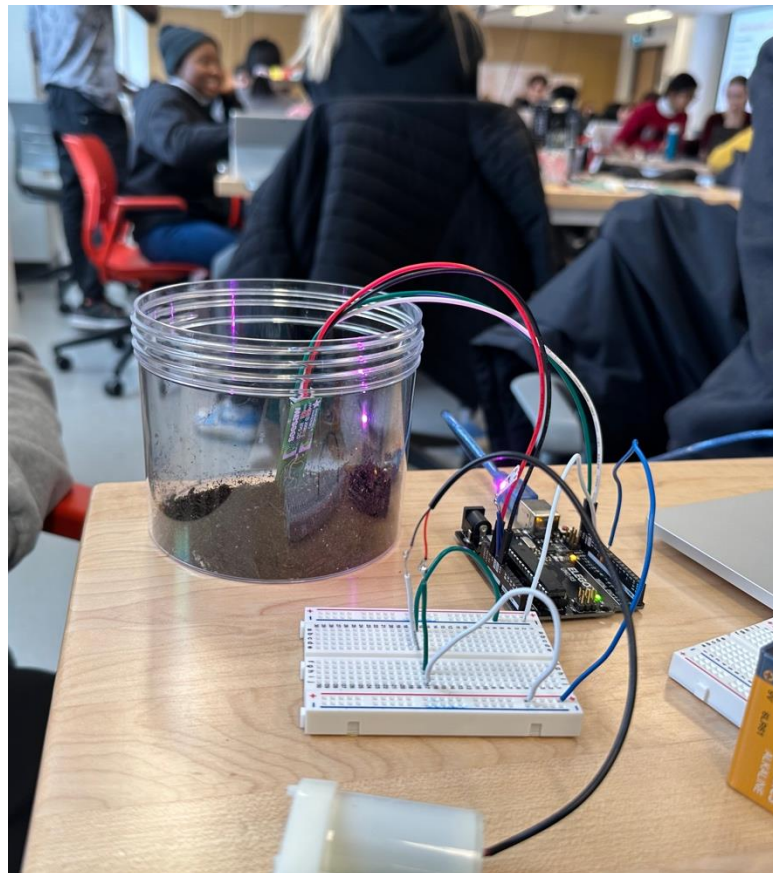
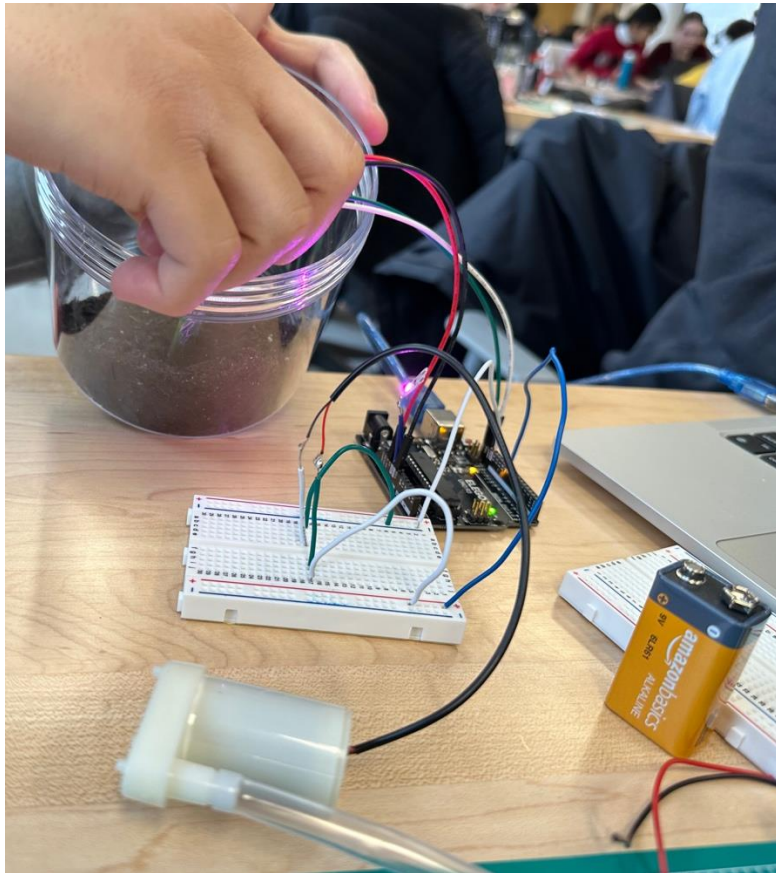




Design Process

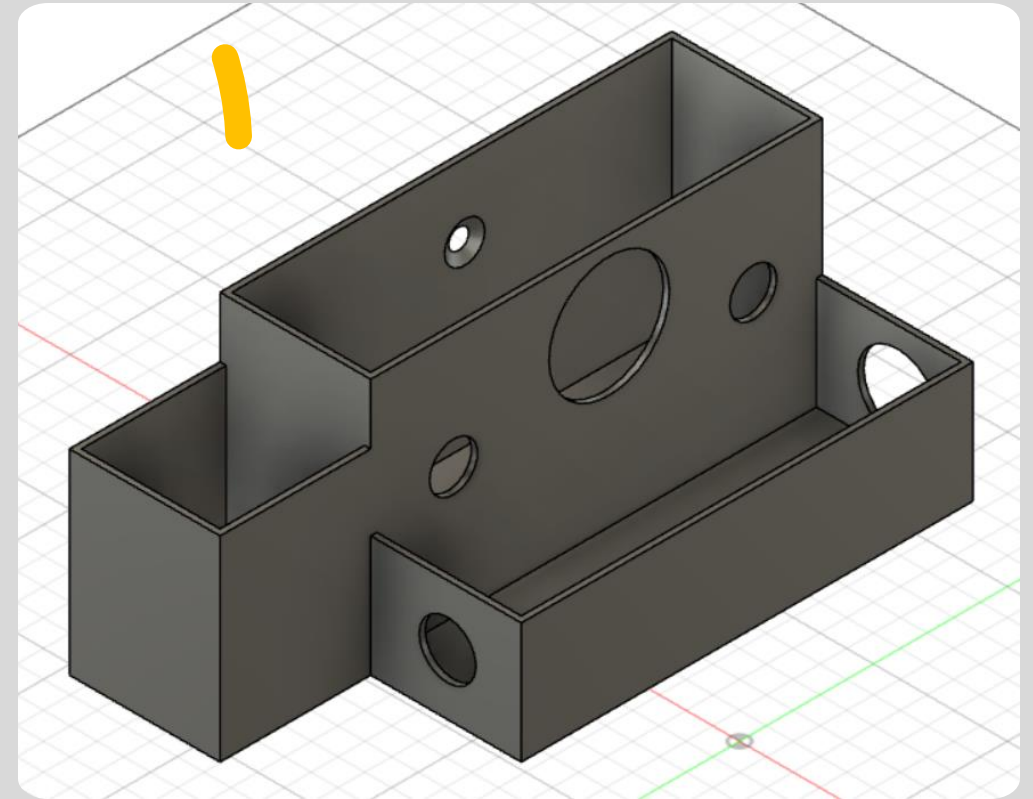


Design Process



Model

- Incorporated multiple design ideas.
- Electronics completely safe from water.
- Open for the plant to grow.





Code.
and wiring




```
#include "Adafruit_seesaw.h"
Adafruit_seesaw ss;
```

```
int pump = 9;
int on = 255;
int off = 0;
int pvalue;
const int pResistor = A0;
const int ledPin=8;
```

```
void setup() {
  Serial.begin(115200);

  pinMode(ledPin, OUTPUT);
  pinMode(pResistor, INPUT);

  Serial.println("seesaw Soil Sensor example!");
  if (!ss.begin(0x36)) {
    Serial.println("ERROR! seesaw not found");
    while(1) delay(1);
  } else {
    Serial.print("seesaw started! version: ");
    Serial.println(ss.getVersion(), HEX);
  }
  pinMode(pump, OUTPUT);
}
```

```
    int tempC = ss.getTemp();
    int16_t capread = ss.touchRead(0);

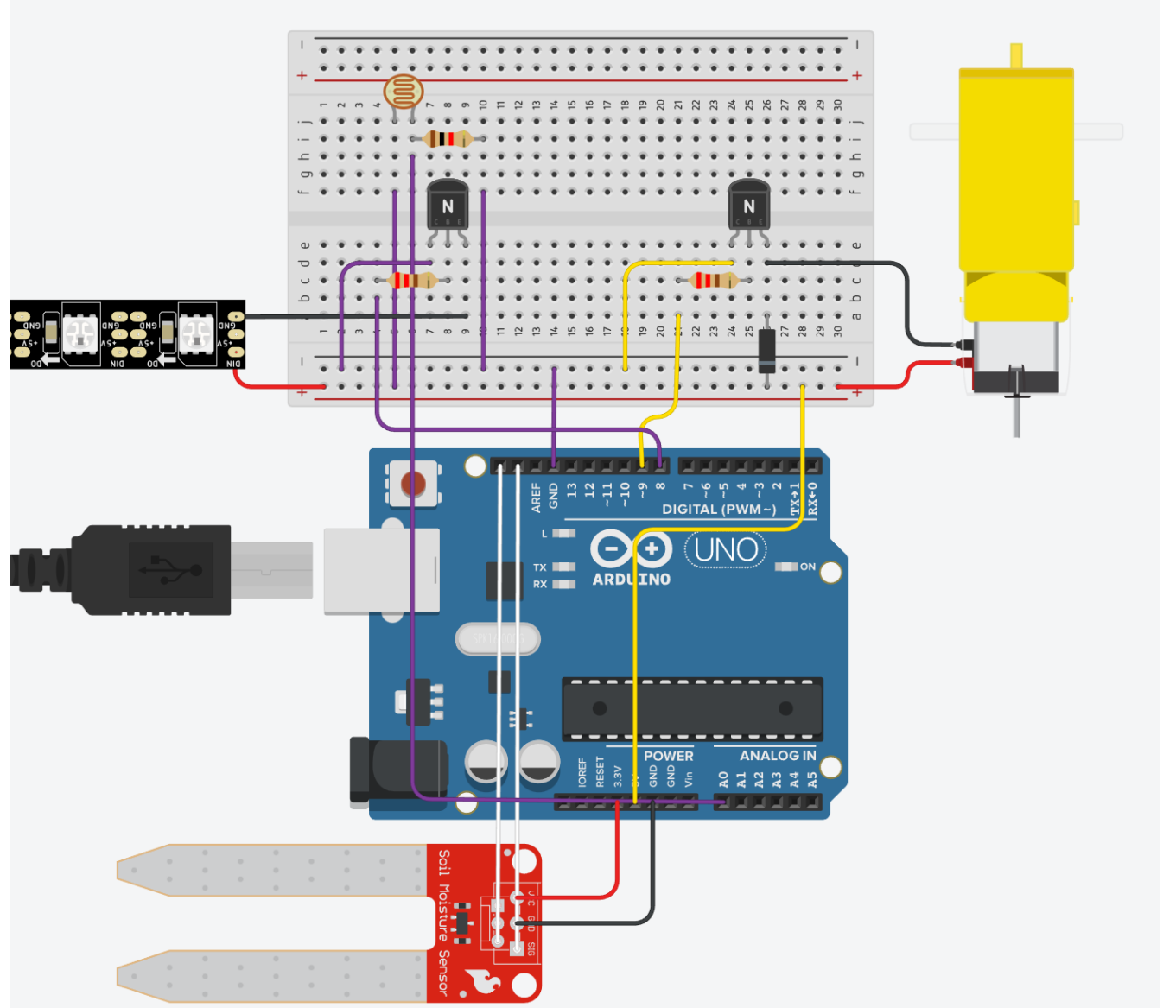
    Serial.print("Temperature: "); Serial.print(tempC); Serial.println("*C");
    Serial.print("Capacitive: "); Serial.println(capread);
    delay(400);

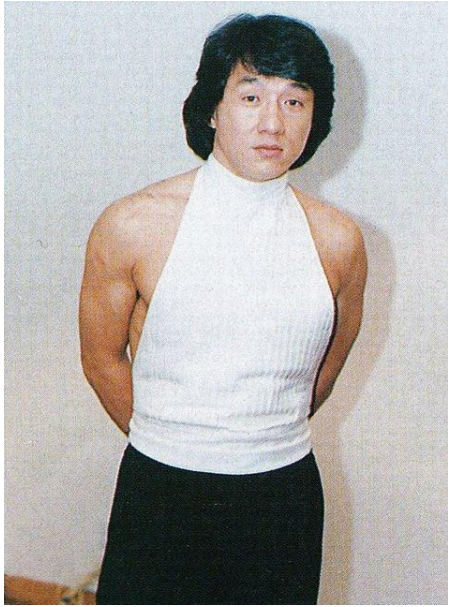
    if (capread <= 400){
      analogWrite(pump, on);
    }
    else{
      analogWrite(pump, off);
    }

    pvalue = analogRead(pResistor);
    Serial.print("\n Photoresistor: "); Serial.println(pvalue);

    if (pvalue > 800){
      digitalWrite(ledPin, LOW);
    }
    else{
      digitalWrite(ledPin, HIGH);
    }
    delay(500);
}
```


Wiring





Taiwu Chen

Xie xie ni!



Jemmson Coronel



Younnus Iman



Malik Mahdivika