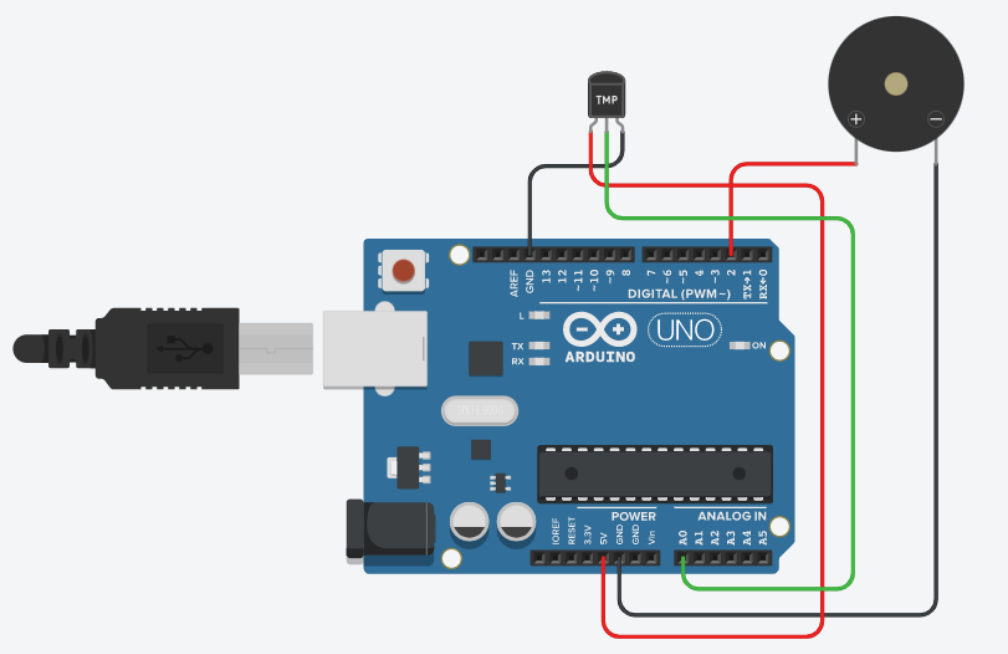
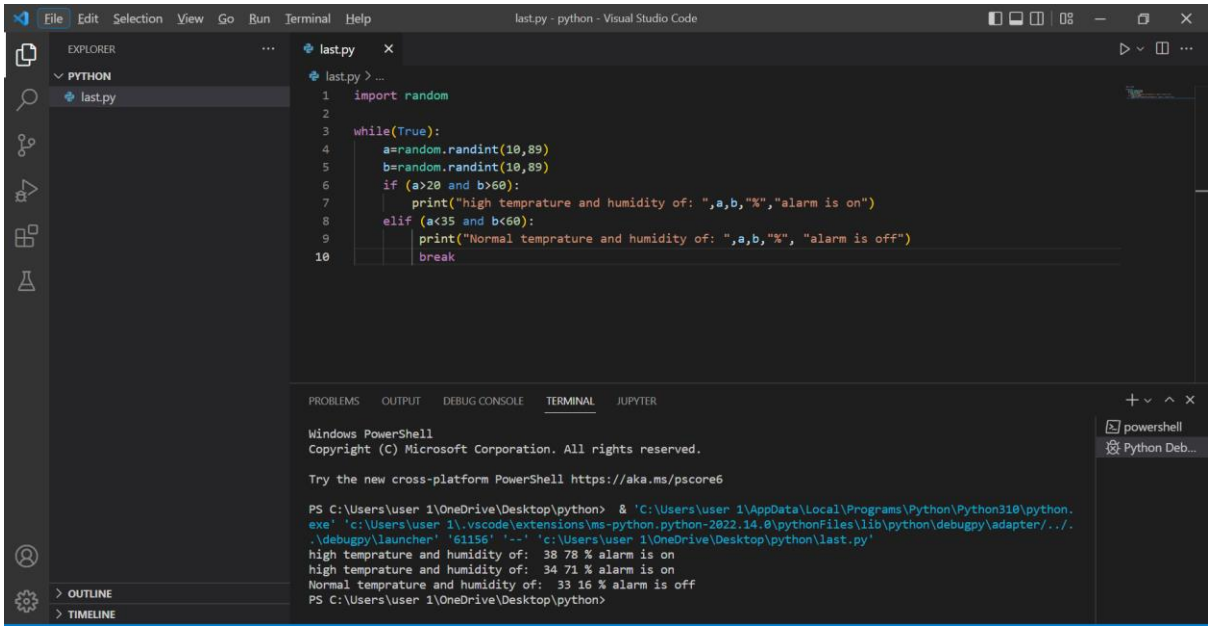
IBM IoT Assignment – 2

1. **Build a python code, assume u get temperature and humidity values (generated with random function to a variable) and write a condition to continuously detect alarm in case of high temperature.**



Python code:

```
import random
while(True):
    a=random.randint(10,89)
    b=random.randint(10,89)
    if (a>20 and b>60):
        print("high temprature and humidity of: ",a,b,"%","alarm is on")
    elif (a<35 and b<60):
        print("Normal temprature and humidity of: ",a,b,"%", "alarm is off")
        break
```



Arduino Code:

```
/*
Temperature and Humidity Sensor with an Alarm
*/


void setup()
{
  pinMode(2,OUTPUT);
  Serial.begin(9600);
}
void loop()
{
  unsigned int value=analogRead(A0);
  Serial.println(value);
  float voltage=value*5000.0/1023.0;  //converts A0 reading to mV
  Serial.println(voltage);
```

```
 if(voltage>500)     //only measures form 0 deg. C and higher
{
  unsigned int temperature=(voltage-500.0);
  Serial.println(temperature);
  if(temperature>35)      //temperature > 35, beep buzzer once
  {
    digitalWrite(2,HIGH);
    delay(100);
    digitalWrite(2,LOW);
    delay(100);
  }
}
  else
  {
    Serial.println("below 0 deg Celcius");
  }
  delay(2000);
}
```

Link:

https://www.tinkercad.com/things/ccTWw2cUsHO-copy-of-temperature-and-humidity-sensor/editel?sharecode=L-y6SXNFFRC0PDzjdB2mezcv8DMSo5hmFdqr5Z6u1Tg