

Date: 12.09.2022

ASSIGNMENT 1

Create a circuit with piezo alarm, PIR sensor, Temperature sensor consisting following features

- 1. Alarm when temperature is above 60 degree celcius, and**
- 2. Alarm when motion detected using Passive Infrared sensor**

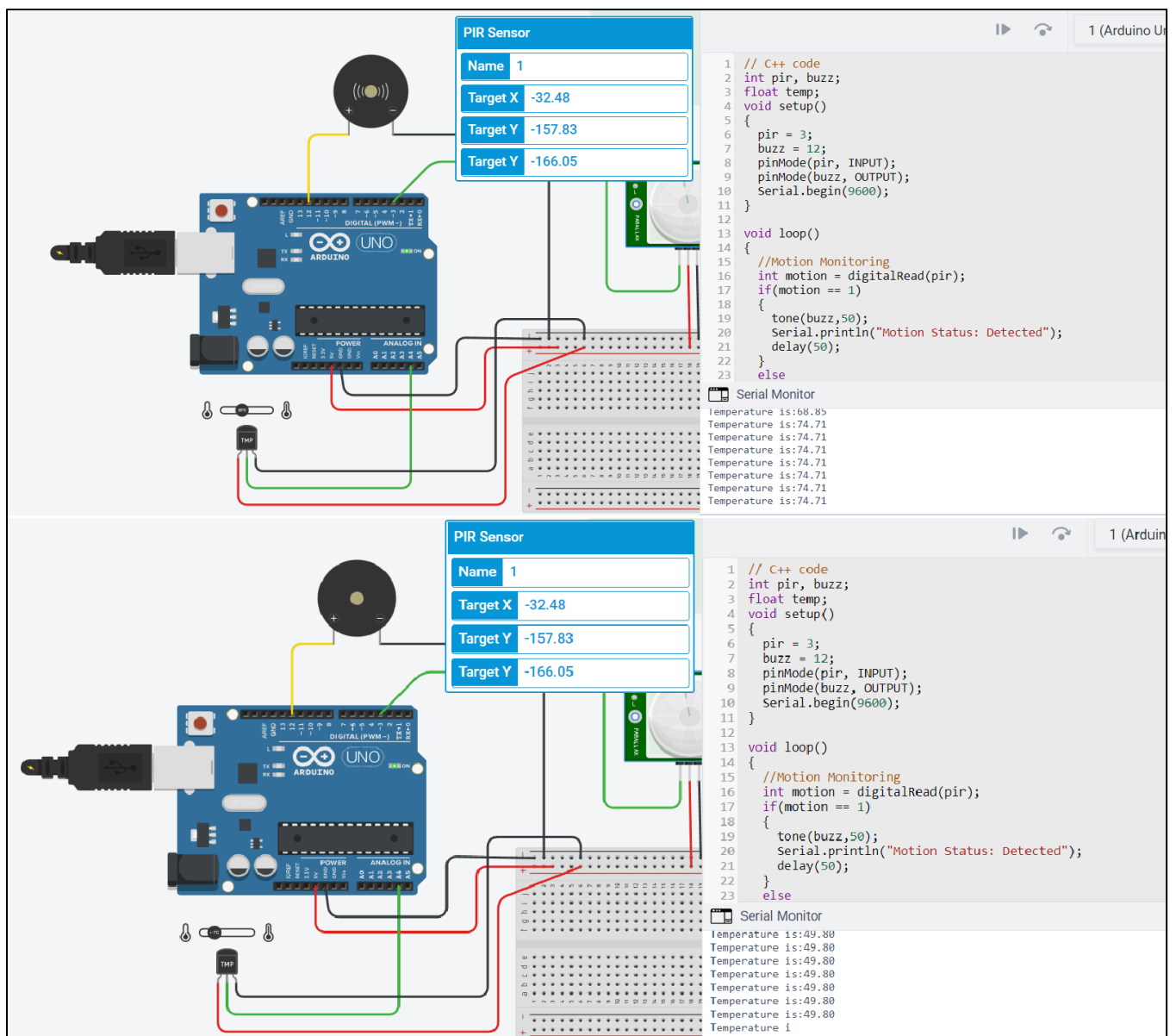
PROGRAM:

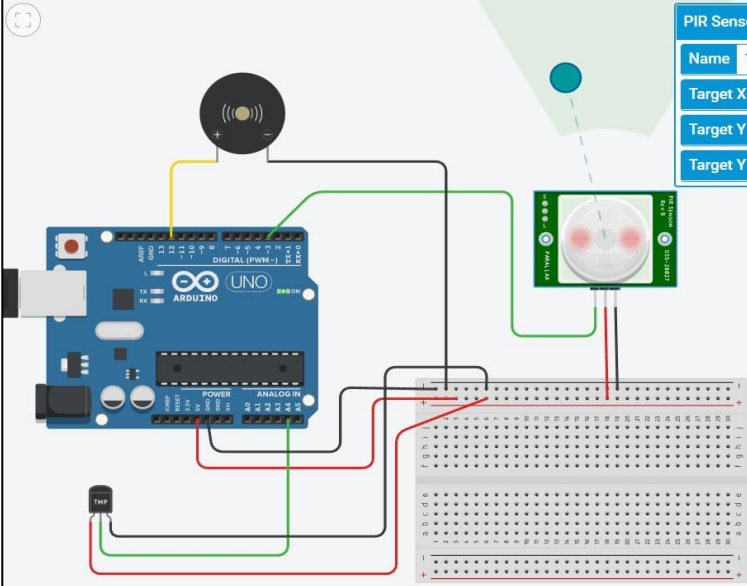
```
int pir, buzz; float
temp; void setup()
{
    pir = 3;
    buzz = 12; pinMode(pir,
    INPUT); pinMode(buzz,
    OUTPUT); Serial.begin(9600);
}

void loop()
{
    //Motion Monitoring
    int motion = digitalRead(pir); if(motion ==
    1)
    {
        tone(buzz, 50);
        Serial.println("Motion Status: Detected"); delay(50);
    }
    else
    {
        noTone(buzz);
        Serial.println("Motion Status: Not Detected");
    }

    //Temperature Measurement float data =
    analogRead(A4);
    float temp = (((data/1024.0)*5)*100);
```

OUTPUT:





PIR Sensor

Name	1
Target X	-32.48
Target Y	-157.83
Target Z	-166.05

```

1 // C++ code
2 int pir, buzz;
3 float temp;
4 void setup()
5 {
6   pir = 3;
7   buzz = 12;
8   pinMode(pir, INPUT);
9   pinMode(buzz, OUTPUT);
10  Serial.begin(9600);
11 }
12
13 void loop()
14 {
15   //Motion Monitoring
16   int motion = digitalRead(pir);
17   if(motion == 1)
18   {
19     tone(buzz,50);
20     Serial.println("Motion Status: Detected");
21     delay(50);
22   }
23   else
24   {
25     //Temperature Measurement
26     float data = analogRead(A4);
27     float temp = (((data/1024.0)*5)*100);
28     Serial.print("Temperature is:");
29     Serial.println(temp);
30     if(temp>60)
31     {
32       tone(buzz,200,200);
33       delay(500);
34     }
35     else{
36       noTone(buzz);
37     }
38   }
39 }

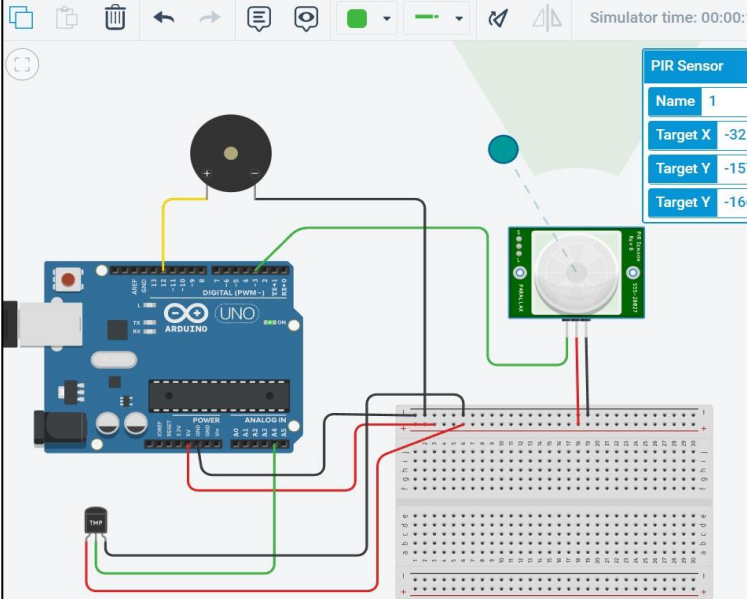
```

Serial Monitor

```

Temperature is:37.11
Motion Status: Detected
Temperature is:37.11
Motion Status: Detected
Temperature is:37.11
Motion Status: Detected
Temperature is:37.11
Motion Status

```



PIR Sensor

Name	1
Target X	-32.48
Target Y	-157.83
Target Z	-166.05

```

20 Serial.println("Motion Status: Detected");
21 delay(50);
22 }
23 else
24 {
25   noTone(buzz);
26   Serial.println("Motion Status: Not Detected");
27 }
28
29 //Temperature Measurement
30 float data = analogRead(A4);
31 float temp = (((data/1024.0)*5)*100);
32 Serial.print("Temperature is:");
33 Serial.println(temp);
34 if(temp>60)
35 {
36   tone(buzz,200,200);
37   delay(500);
38 }
39 else{
40   noTone(buzz);
41 }
42 }

```

Serial Monitor

```

Motion Status: Not Detected
Temperature is:40.04
Motion Status: Not Detected
Temperature is:40.04
Motion Status: Not Detected
Temperature is:40.04
Motion Status: Not Detected
Temperature

```