ASSIGNMENT 1

Date: 12.09.2022

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

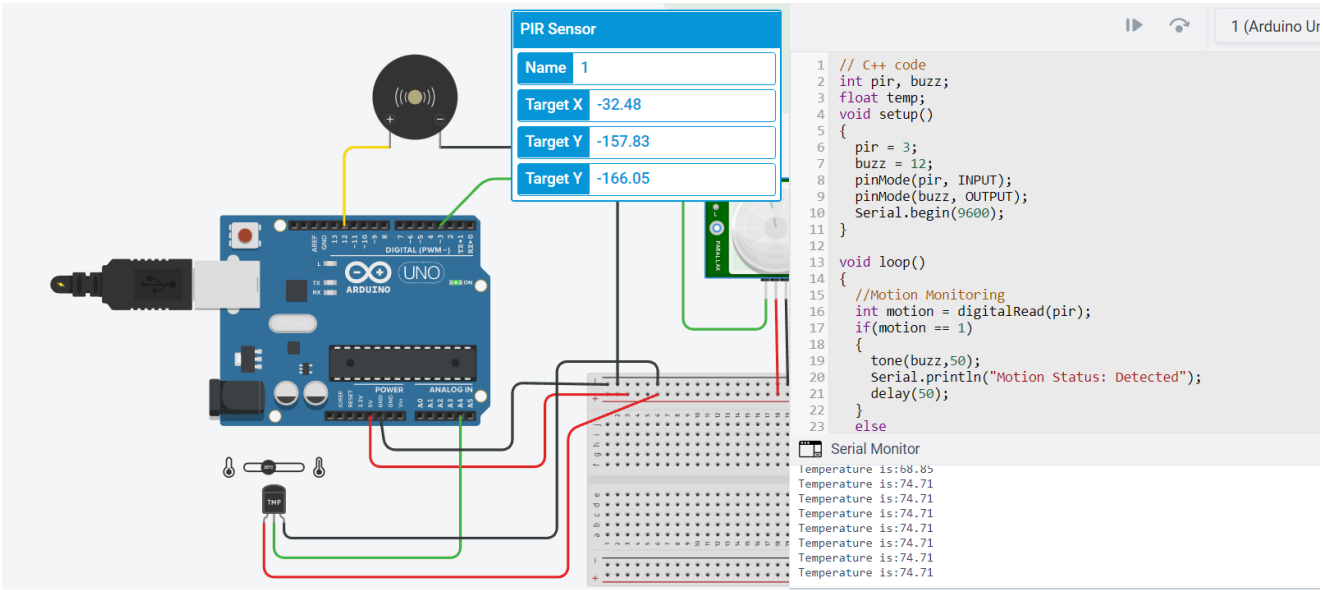
1. Alarm when temperature is above 60 degree celcius, and
2. Alarm when motion detected using Passive Infrared sensor

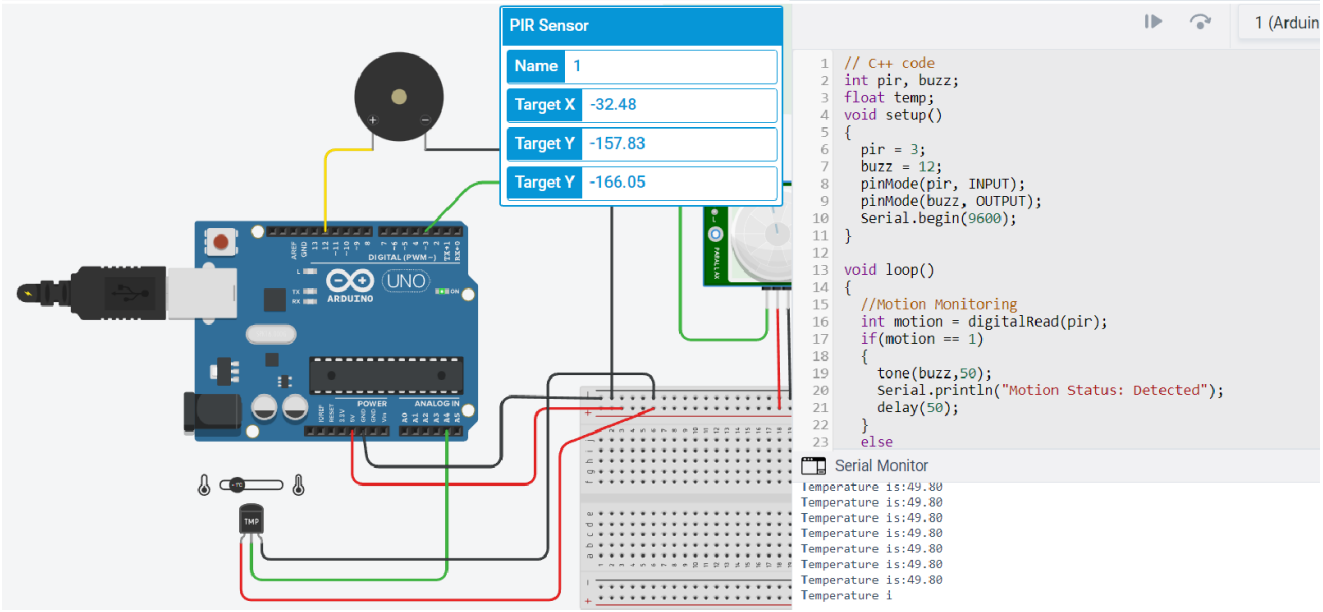
PROGRAM:

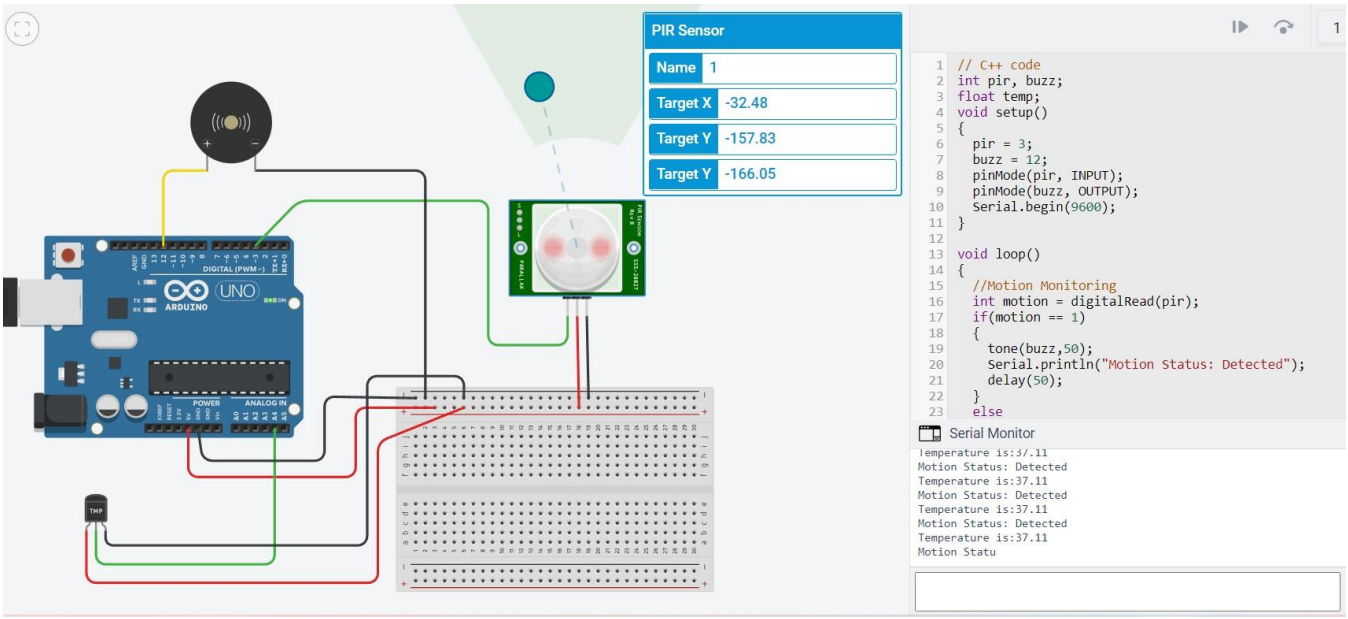
```
// C++ code
int pir, buzz;
float temp;
void setup()
{
  pir = 3;
  buzz = 12;
  pinMode(pir, INPUT);
  pinMode(buzz, OUTPUT);
  Serial.begin(9600);
}

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);
```

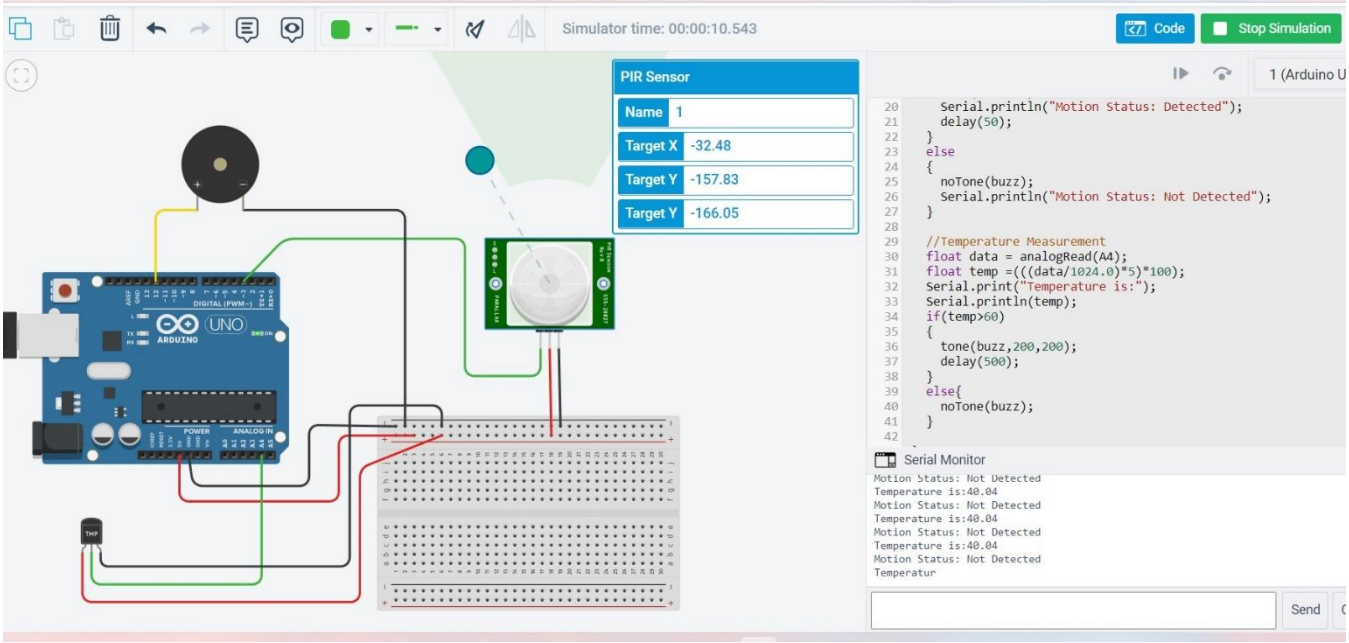
```
  Serial.print("Temperature is:");
  Serial.println(temp);
  if(temp>60)
  {
    tone(buzz,200,200);
    delay(500);
  }
  else{
    noTone(buzz);
  }
}
```

OUTPUT:






PIR Sensor
Name 1
Target X -32.48
Target Y -157.83
Target Y -166.05
// C++ code
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
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 Statu


Simulator time: 00:00:10.543
Code
Stop Simulation
PIR Sensor
Name 1
Target X -32.48
Target Y -157.83
Target Y -166.05
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);
Serial.print("Temperature is:");
Serial.println(temp);
if(temp>60)
{
tone(buzz,200,200);
delay(500);
}
else{
noTone(buzz);
}
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
Temperatur
Send