# ASSIGNMENT 1

**Date: 12.09.2022**

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

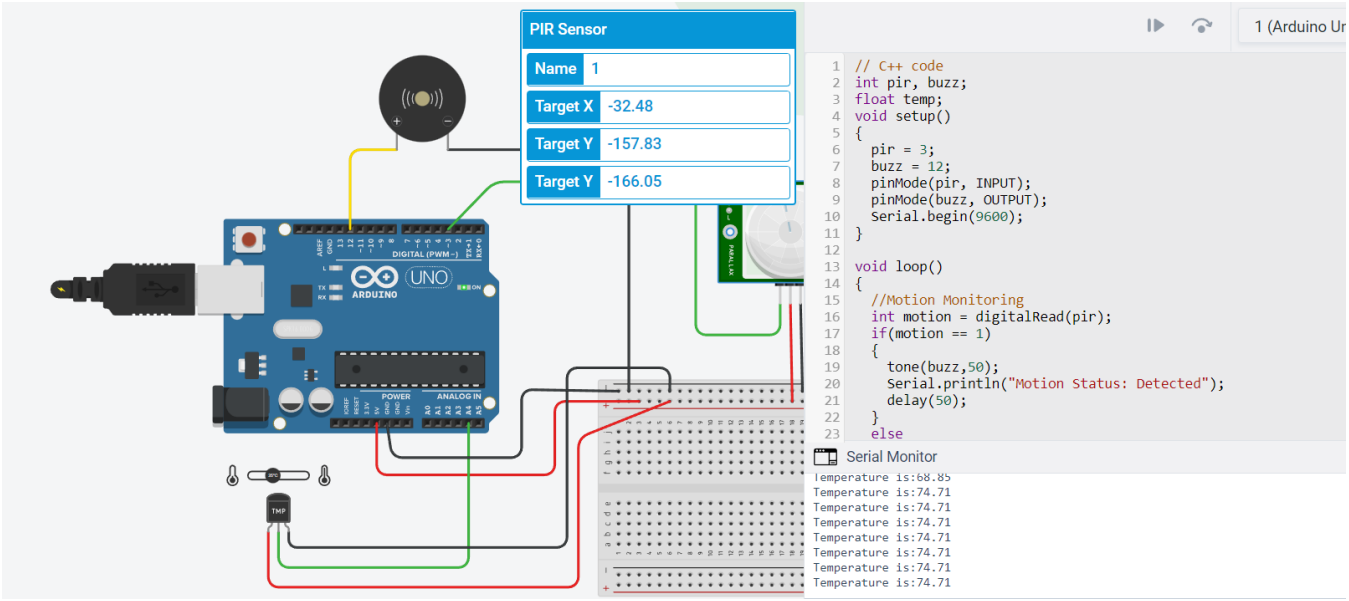
**1. Alarm when temperature is above 60 degree celcius, and**
**2. Alarm when motion detected using Passive Infrared sensor**

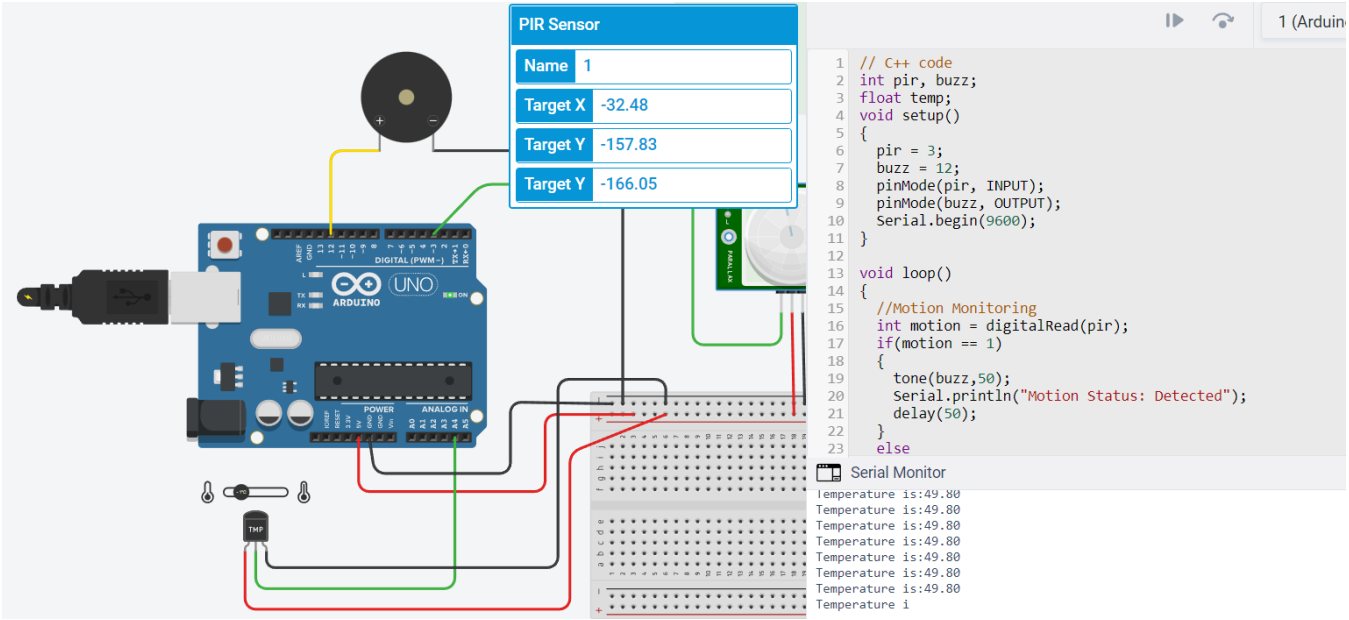
**PROGRAM:**

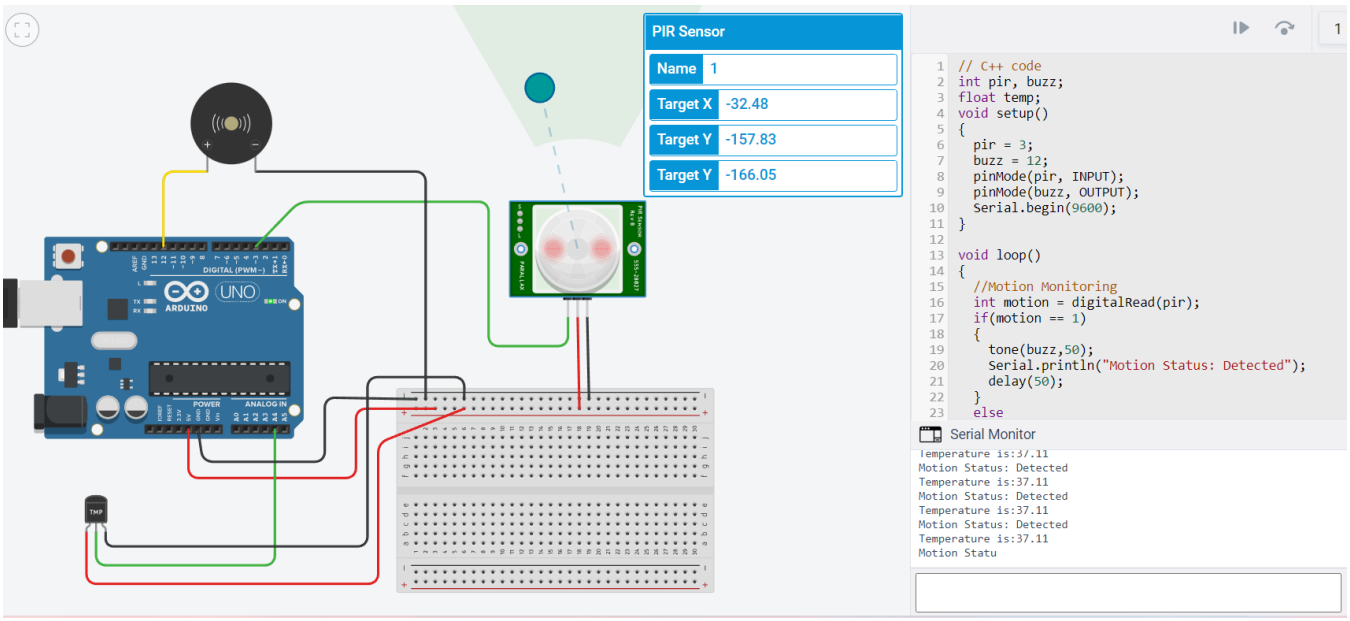
```
// C++ code
int pir, buzz;
float temp;
void setup()
{
  pir = 3;
  buzz = 12;
  pinMode(pir, INPUT);
  pinMode(buzz, OUTPUT);
  Serial.begin(9600);
}

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);
```

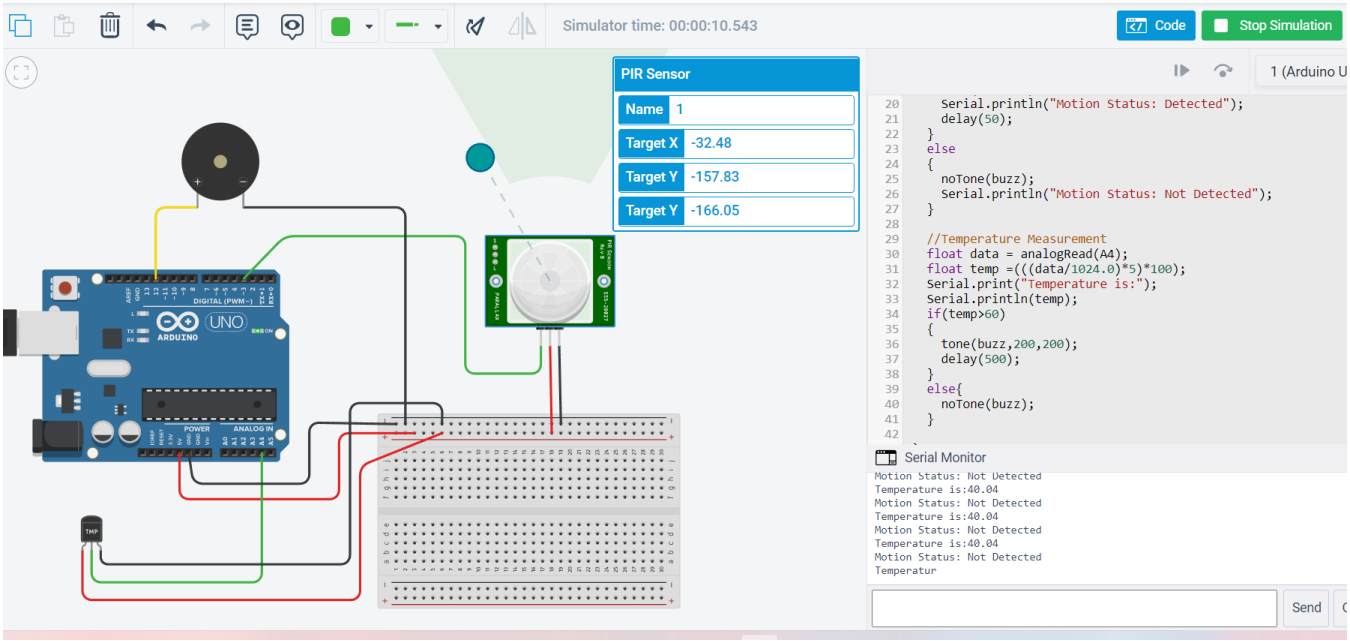
```
  Serial.print("Temperature is:");
  Serial.println(temp);
  if(temp>60)
  {
    tone(buzz,200,200);
    delay(500);
  }
  else{
    noTone(buzz);
  }
}
```

**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