

# **IBM ASSIGNMENT-IOT**

Team Members : SUBIKA M  
PEMALATHA S  
SELENA CLARA M  
SNEHA L

Degree : B.Tech

Branch : Information Technology

College Name : V.S.B Engineering College, Karur.

## **Topic:**

To design a circuit using PIR sensor, Temperature sensor and Piezo alarm and to perform the following operations:

- Alarm should sound in one manner if the temperature is above “60 C”.
- Alarm should sound with another frequency if motion is detected using PIR sensor.

# Circuit:

← → ↻ 🔒 tinkercad.com/things/f9yhwpVyfNr-glorious-bruticus/editel?tenant=circuits

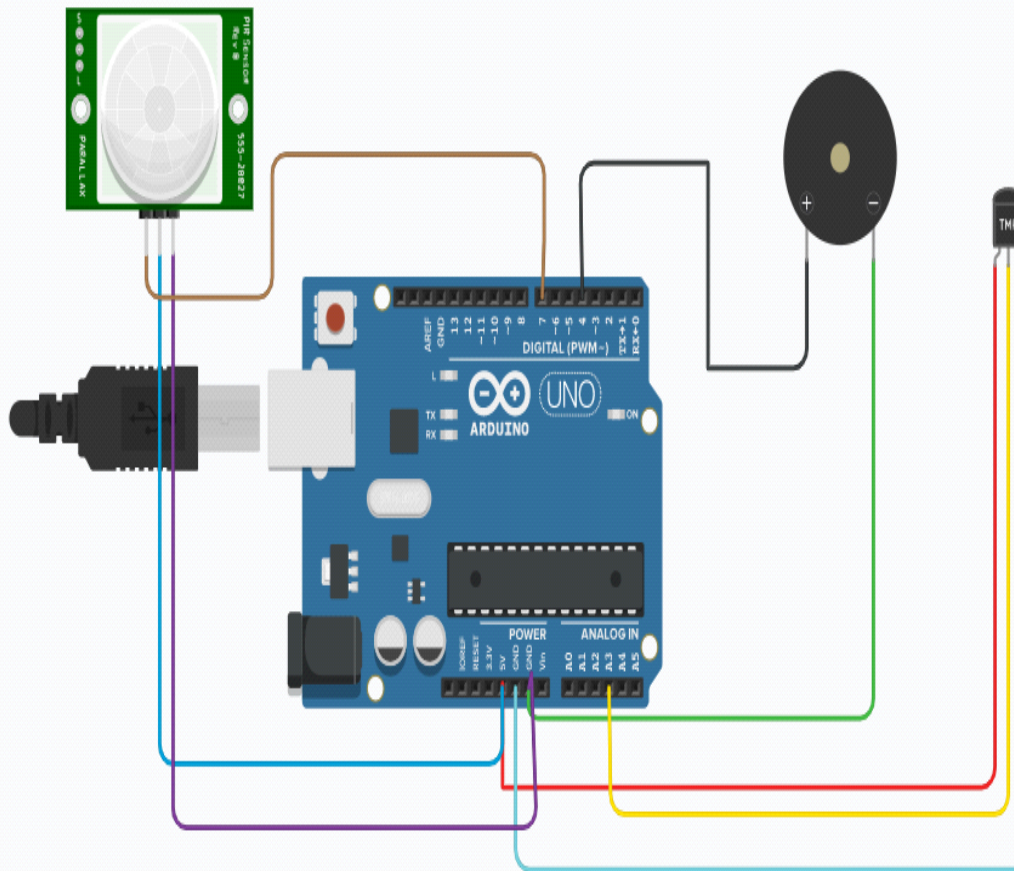


Glorious Bruticus

All changes saved



Code Start Simulation



Components  
Basic

pir



PIR Sensor

> Starters



PIR Sensor



Alarm

## **Code:**

```
void setup()
{
  Serial.begin(9600);
  pinMode(4,OUTPUT);
  pinMode(7,INPUT);
}

void loop()
{
  int mov=digitalRead(7);
  double dt=analogRead(A3);
  double n=dt/1024;
  double volt=n*5;
  double offset=volt-0.5;
  double temp=offset*100;
  Serial.print("Temperature Detected: ");
  Serial.println(temp);
  if(mov==0){
    Serial.println("No Motion Detected");
  }
  if(mov==1){
    Serial.println("Motion Detected");
    tone(4,100,1000);
  }
}
```

```
if(temp>60){  
    tone(4,400,1000);  
}  
}
```

# Output:

tinkercad.com/things/f9yhwpyfNr-glorious-bruticus/editel?tenant=circuits

TINKERCAD  
Glorious Bruticus

All changes saved

Code Start Simulation

PIR Sensor  
Name 1

```
15 double volt=n*5;
16 double offset=volt-0.5;
17 double temp=offset*100;
18 Serial.print("Temperature Detected: ");
19 Serial.println(temp);
20 if(mov==0){
```

Serial Monitor

No Motion Detected  
Temperature Detected: 96.00  
No Motion Detected  
Temperature Detected: 96.00  
No Motion Detected  
Temperature Detected: 96.00  
No Motion Detected  
Temperature Detected: 96.00  
No Motion Detected  
Temperature Detected: 96.00  
Motion Detected  
Temperature Detected: 96.00  
Motion Detected  
Temperature Detected: 96.00  
Motion Detected  
Temperature Detected: 96.00  
Motion Detected  
Temperature Detected: 96.00  
Motion Detected  
Temperature Detected: 96.00  
Motion Detected

