

PRIYADHARSHINI.G 210519104076

Assignment question::

Using PIR sensor and tmp36(Temperature sensor), piezo alarm, please create a circuit with ArduinoUno with below functionalities.

1. Alarm should give one sound when there is a motion near PIR sensor
2. Alarm should sound with different sound when the temperature is above 60 degrees.

Arduino code :

```
float temp;

int Buzz=A2;

int sensor=12;

int transistor=2;

void setup()
{
  Serial.begin(9600);

  pinMode(2,INPUT);

  pinMode(12,OUTPUT);

  Serial.println("waiting for motion");

}

void loop()
{
  double data=analogRead(A2);

  double n=data/1024;

  double vout=n*5;

  double off=vout-0.5;
  double temperature=off*100;
```

```
Serial.print("Temperature data: ");
```

```
Serial.println(temperature);
```

```
if(temp>60)
```

```
{
```

```
    digitalWrite(Buzz,HIGH);
```

```
    Serial.println("temperature detected");
```

```
    tone(12,100);
```

```
    delay(1000);
```

```
    tone(12,200);
```

```
    delay(1000);
```

```
}
```

```
int val = digitalRead(2);
```

```
if(val ==HIGH)
```

```
{
```

```
    digitalWrite(transistor, HIGH);
```

```
    Serial.println("Motion Detected");
```

```
    tone(12,100); //pin number, frequency, delay(optional) delay(1000);
```

```
    tone(12,200);
```

```
    delay(1000);
```

```
}
```

```
if(temp <= 60)
```

```
{
```

```
    digitalWrite(Buzz,LOW);
```

```
    Serial.println("No temperature detected");
```

```
    noTone(12);
```

```
    delay(500);
```

```
}
```

```
if(val == LOW)
```

```
{
```

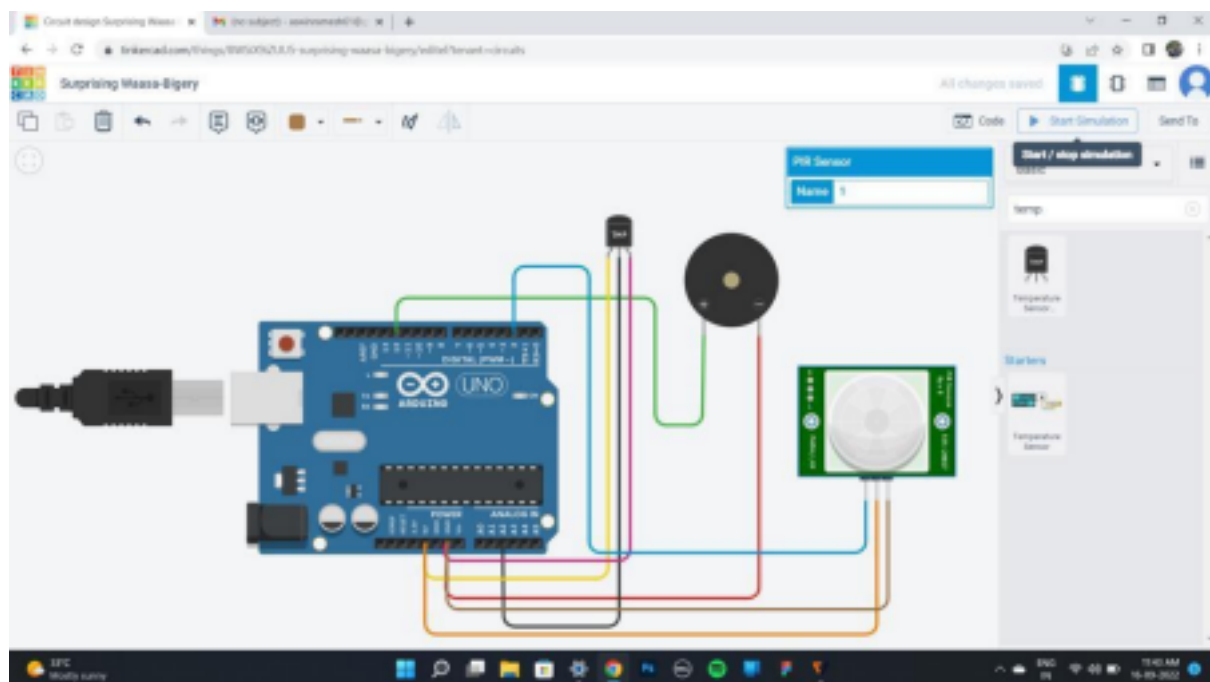
```

digitalWrite(transistor, LOW);
Serial.println("NO Motion");
noTone(12);
delay(500);
}
delay(1000);
}

```

SCREENSHOT :

Screenshot 1::



Screenshot 2 ::

Circuit design: Surprising Waasa-Gigery

Linkencad.com/things/RS5XONDA5-surprising-waasa-gigery/index

Surprising Waasa-Gigery

All changes saved

Code Start Simulation Send To

Test 1 (Arduino-Uno R3)

```
20 tone(12, 1000);
21 delay(1000);
22 tone(12, 2000);
23 delay(1000);
24 }
25 int val = digitalRead(12);
26 if (val == HIGH)
27 {
28   digitalWrite(transistor, HIGH);
29   Serial.println("Motion Detected");
30   tone(12, 1000); //pin number, frequency, delay(optional)
31   delay(1000);
32   tone(12, 2000);
33   delay(1000);
34 }
35 if (temp <= 40)
36 {
37   digitalWrite(buzz, LOW);
38   Serial.println("No temperature detected");
39   noTone(12);
40   delay(1000);
41 }
42 if (val == LOW)
43 {
44   digitalWrite(transistor, LOW);
45 }
```

Serial Monitor

No temperature detected
No Motion
Temperature data: 26.75
No temperature detected
No Motion
Temperature data: 26.75
No temperature detected
No Motion

Send Clear

