

## ASSIGNMENT 1

ASSIGNMENT DATE	15-SEP-2022
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STUDENT ROLL NUMBER	111519106071
MAXIMUM MARK	2MARK

### QUESTION:

\*) Using PIR sensor and tmp36(Temperature sensor),piezo alarm. Create a circuit with Arduino Uno 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.

### Solution:

CODE:

```
void setup()
{
  Serial.begin(9600);
  pinMode(13,INPUT);
  pinMode(12,OUTPUT);
}

void loop()
{
  double
  data=analogRead(A2); double
  n=data/1024; double
  volt=n*5; double off=volt-0.5;
  double temperature=off*100;
  int motion=digitalRead(13);
  for(int freq=4;freq<=5;freq++)
  {
    if(temperature>=60)
    {
```

```
    Serial.println("Temperature is above 60");
tone(12,freq);    delay(100);
}
else
{
    Serial.println("Temperature is below 60");
noTone(12);
}
}
for(int freq=2;freq<=3;freq++)
{
    if(motion==1)
    {
        Serial.println("Motion Detected");
tone(12,freq);    delay(200); }
else
{
    Serial.println(" No Motion");
noTone(12);
}
}
}
```

### **Circuit:**

Brave Turing-Fyyran

Simulator time: 00:00:10.714

Code Stop Simulation Send To

1 (Arduino Uno R3)

```

4 pinMode(13,INPUT);
5 pinMode(12,OUTPUT);
6 }
7
8 void loop()
9 {
10 double data=analogRead(A2);
11 double n=data/1024;
12 double volt=n*5;
13 double off=volt-0.5;
14 double temperature=off*100;
15 int motion=digitalRead(13);
16 for(int freq=4;freq<=5;freq++)
17 {
18 if(temperature>=60)
19 {
20 Serial.println("Temperature is above 60");
21 tone(12,freq);
22 delay(100);
23 }
24 else
25 {
26 Serial.println("Temperature is below 60");
27 noTone(12);
28 }
29 }

```

Serial Monitor

IBM YASWANTH.docx Show all

Brave Turing-Fyyran

Simulator time: 00:00:11.286

Code Stop Simulation Send To

1 (Arduino Uno R3)

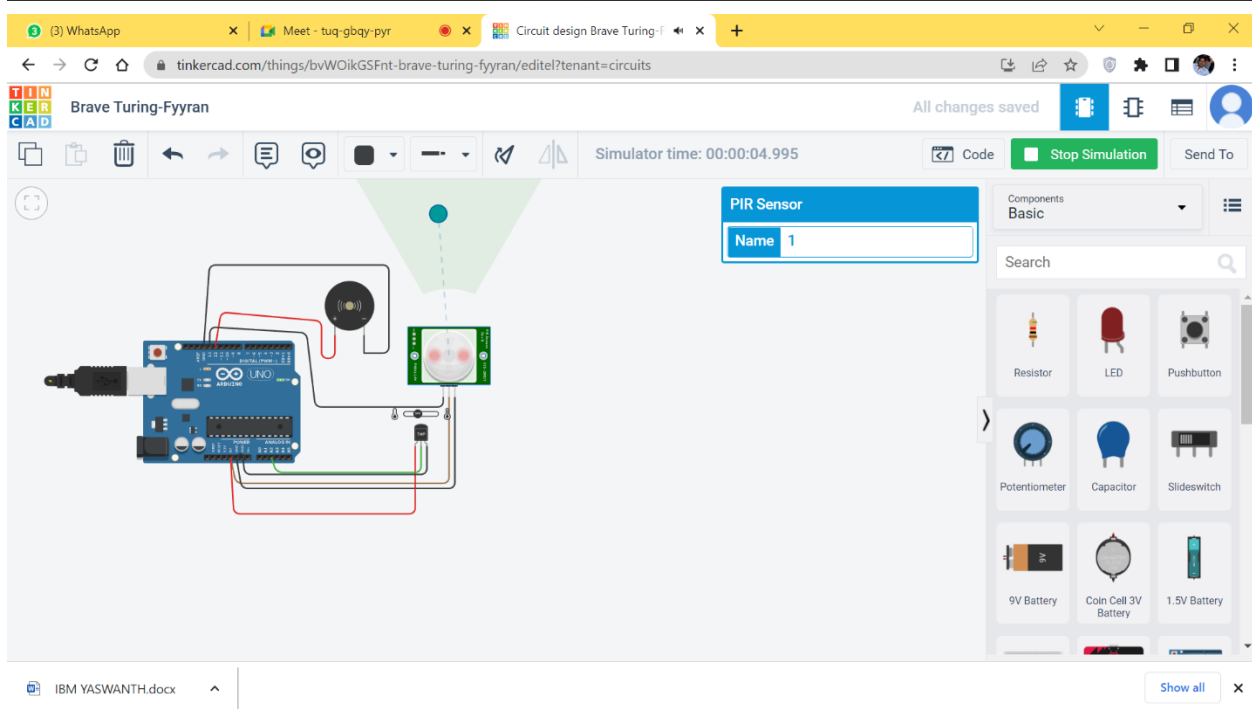
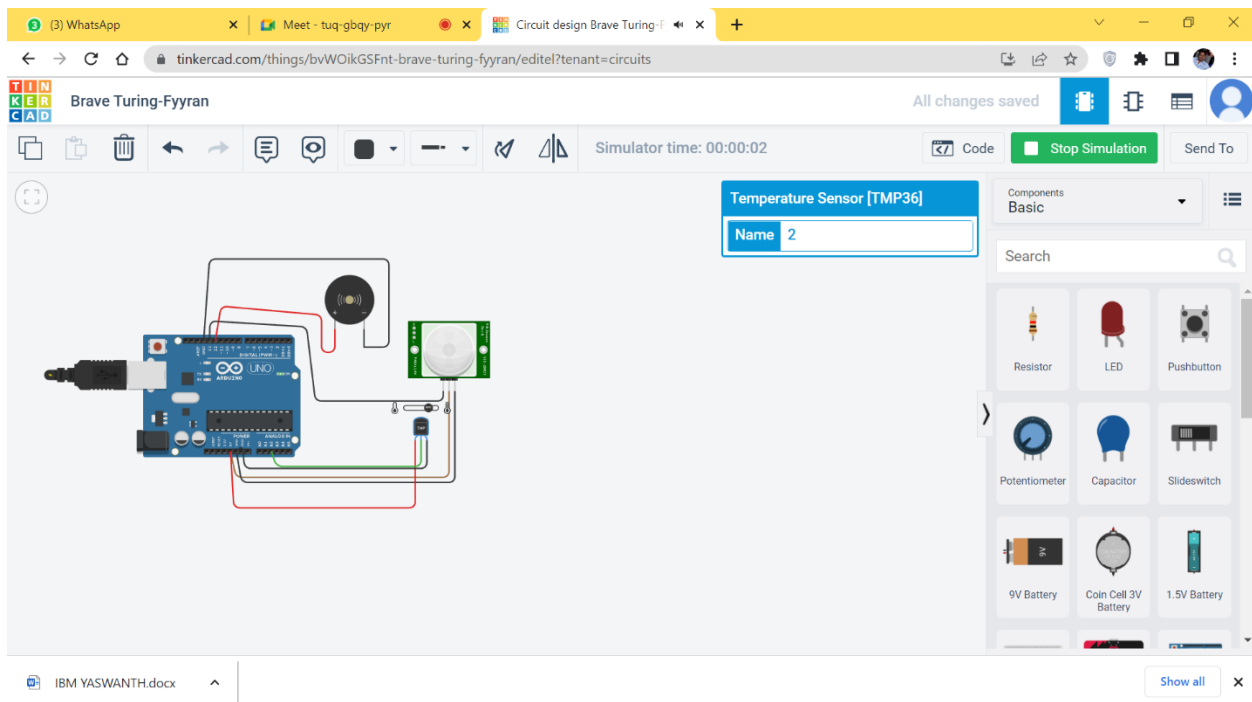
```

19 {
20 Serial.println("Temperature is above 60");
21 tone(12,freq);
22 delay(100);
23 }
24 else
25 {
26 Serial.println("Temperature is below 60");
27 noTone(12);
28 }
29 }
30 for(int freq=2;freq<=3;freq++)
31 {
32 if(motion==1)
33 {
34 Serial.println("Motion Detected");
35 tone(12,freq);
36 delay(200);
37 }
38 else
39 {
40 Serial.println(" No Motion");
41 noTone(12);
42 }
43 }
44 }

```

Serial Monitor

IBM YASWANTH.docx Show all



## COMPONENTS

Quantity	Component
1	Arduino Uno R3
Few	Connecting Wires
1	Buzzer
1	Temperature Sensor [TMP36]
1	Ultrasonic Distance Sensor

**Video Link:**

<https://drive.google.com/file/d/13kJuYyThnE3OSLqkCUEqsTi-GTq8dxvN/view?usp=sharing>