

ASSIGNMENT-1

NAME: RAJALAKSHMI G

REGISTER NUMBER: 111519106132

TEAM ID: PNT2022TMID15088

MAXIMUM MARKS: 2 Marks

QUESTION : Using TinkerCad, build a circuit with temperature sensor such that if the temperature is above 60 Celsius, the buzzer rings.

PROGRAM:

```
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);  
    }  
  }  
}
```

OUTPUT:

TINKER CAD ASSIGNMENT 1

All changes saved

Code Start Simulation Send To

1 (Arduino Uno R3)

```

1 void setup()
2 {
3   Serial.begin(9600);
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  }
30 }

```

Serial Monitor

Temperature is below 60
Temperature is below 60
No Motion
No Motion
Temperature is below 60
Temperature is below 60
No Motion

TINKER CAD ASSIGNMENT 1

All changes saved

Code Start Simulation Send To

1 (Arduino Uno R3)

```

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 }
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

Temperature is below 60
Temperature is below 60
No Motion
No Motion
Temperature is below 60
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No Motion