

IBM ASSIGNMENT-IOT

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Degree :B.Tech

Branch :Information Technology

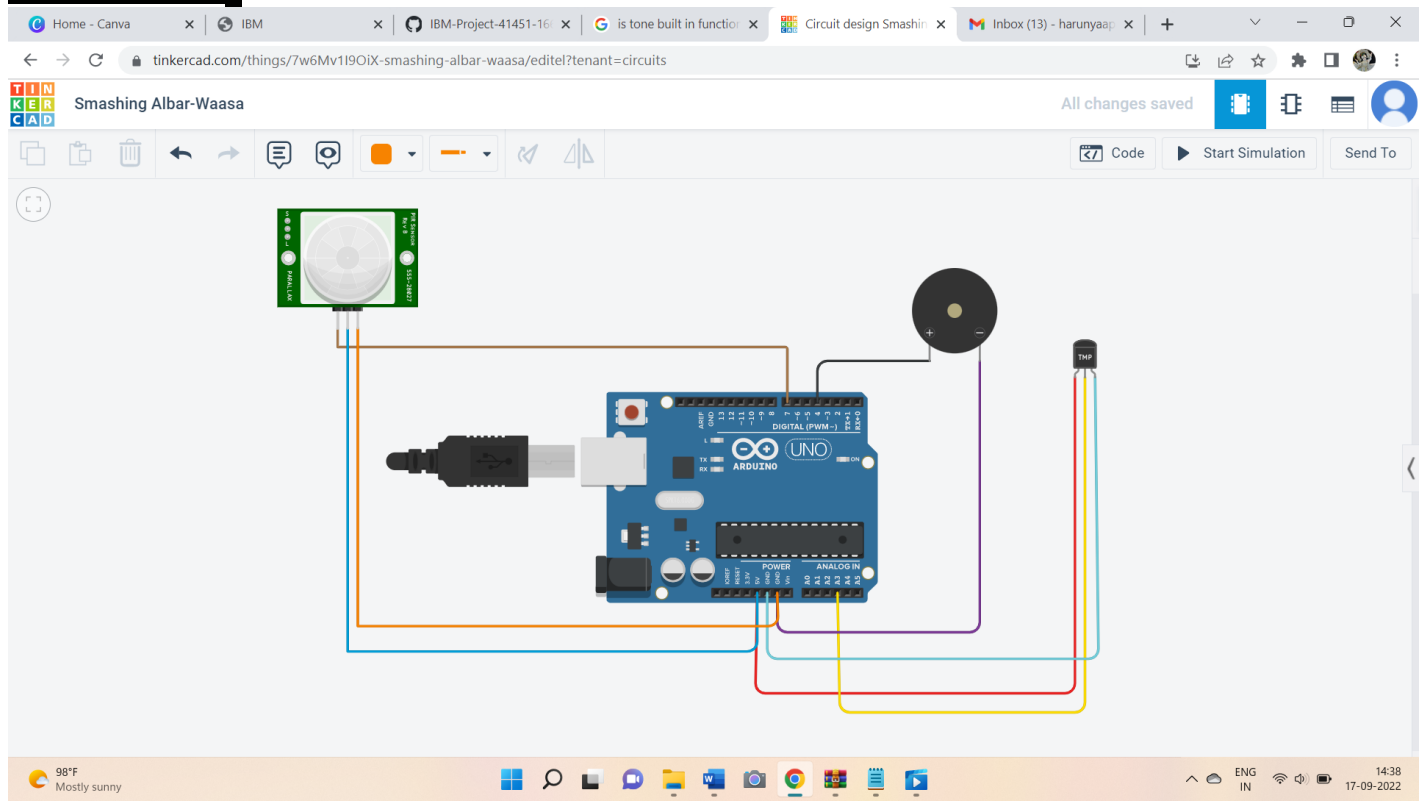
College Name :V.S.B Engineering College,Karur.

Topic:

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

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

Circuit:



Code:

```
void setup()
{
  Serial.begin(9600);
  pinMode(4,OUTPUT);
  pinMode(7,INPUT);
}
void loop()
{
  int tem=digitalRead(7);
  double d=analogRead(A3);
  double n=d/1024;
  double voltage=n*5;
  double offset=voltage-0.5;
  double temp=offset*100;
  Serial.print("Temperature Detected:");
  Serial.println(temp);
  if(tem==0){
    Serial.println("No Motion Detected");
  }
  if(tem==1){
    Serial.println("Motion Detected");
    tone(4,100,1000);
  }
  if(temp>60){
    tone(4,400,1000);
  }
}
```

Output:

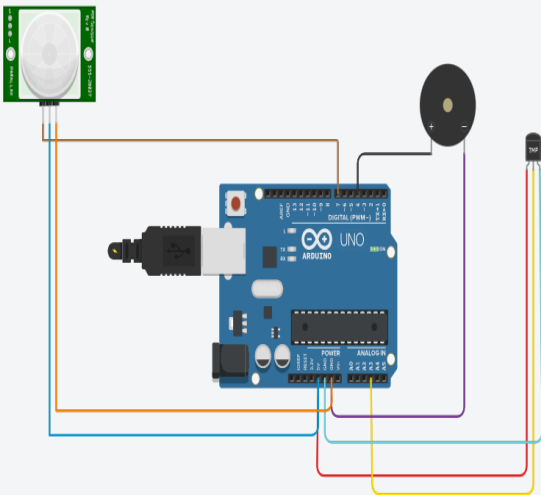
Home - Canva x IBM x IBM-Project-41451-16 x G is tone built in function x Circuit design Smashing x Inbox (13) - harunyaa x +

tinkercad.com/things/7w6Mv19OIx-smashing-albar-waasa/editel?tenant=circuits

TINKERCAD Smashing Albar-Waasa All changes saved

Simulator time: 00:00:53.457 Code Stop Simulation Send To

1 (Arduino Uno R3)



```
1 void setup()
2 {
3   Serial.begin(9600);
4   pinMode(4,OUTPUT);
5   pinMode(7,INPUT);
6 }
7 void loop()
8 {
9   int tem=digitalRead(7);
10  double d=analogRead(A3);
11  double n=d/1024;
12  double voltage=n*5;
13  double offset=voltage-0.5;
14  double temp=offset*100;
15  Serial.print("Temperature Detected:");
16  Serial.println(temp);
17  if(tem==0){
18    Serial.println("No Motion Detected");
19  }
20  if(tem==1){
```

Serial Monitor

No Motion Detected
Temperature Detected:39.84
No Motion Detected
Temperature Detected:39.84
No Motion Detected
Temperature Detected:39.84
No Motion Detected
Temperature Detected:39.84

Send Clear

98°F Mostly sunny 14:34 17-09-2022