

Assignment -1

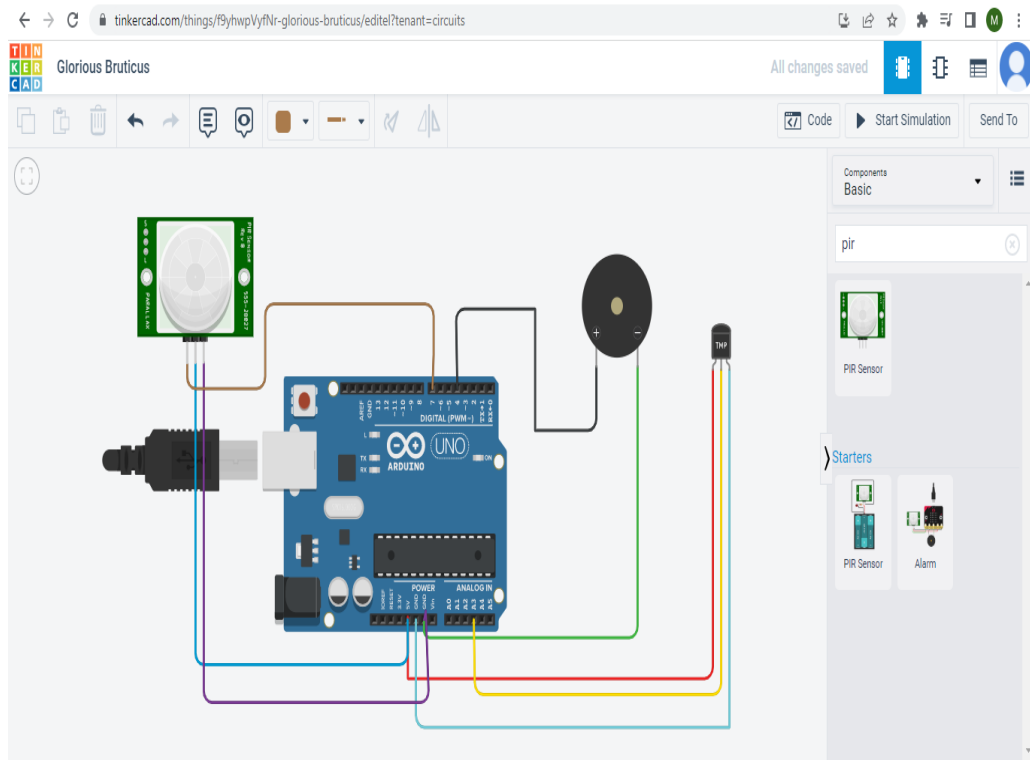
Assignment Date	27 September 2022
Student Name	N.Surya Kumar
Student Roll Number	922519205114
Maximum Marks	2 Marks

Question-1:

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.

Solution:



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/f9yhwVvfNr-glorious-bruticus/edit?tenant=circuits

TINKERCAD Glorious Bruticus All changes saved

PIR Sensor
Name 1

Code Start Simulation Send To

```
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
Temperature Detected: 96.00
Motion Detected

Send Clear

