

## Assignment -1

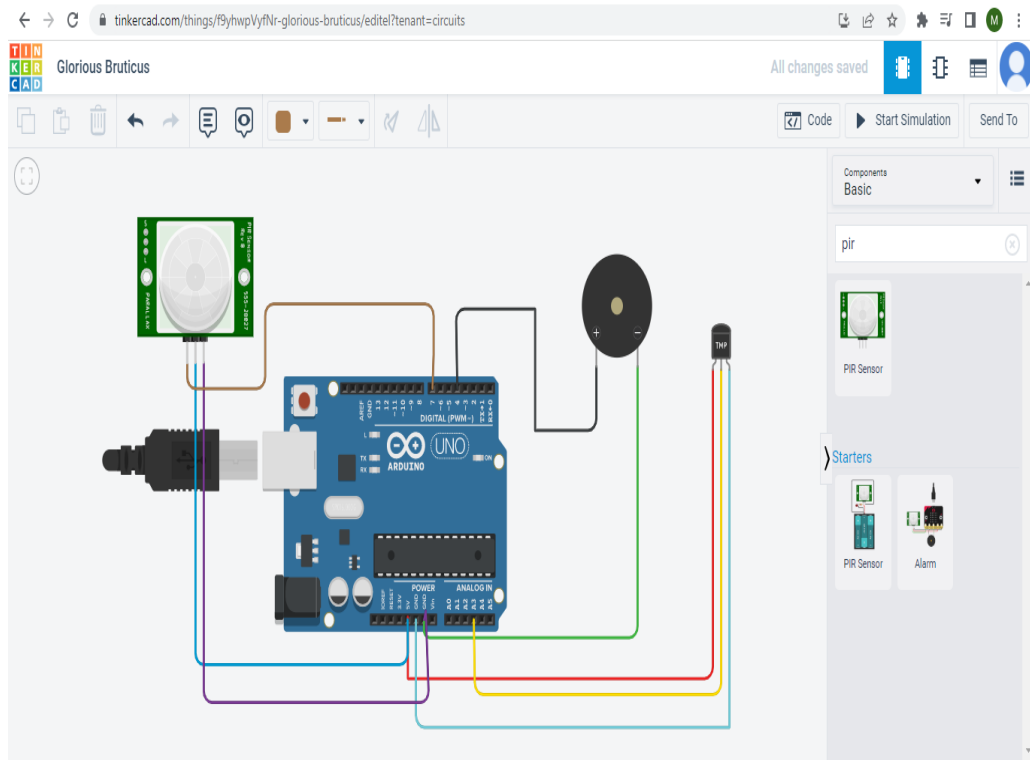
Assignment Date	27 September 2022
Student Name	S.Prakash
Student Roll Number	922519205077
Maximum Marks	2 Marks

### 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);
  }
}
```

The screenshot shows the Tinkercad web interface. At the top, the URL is [tinkercad.com/things/f9yhwpyfNr-glorious-bruticus/edit?tenant=circuits](https://tinkercad.com/things/f9yhwpyfNr-glorious-bruticus/edit?tenant=circuits). The page title is "Glorious Bruticus". The interface includes a toolbar with various components and a "Code" button. A "PIR Sensor" component is placed on the breadboard, with its name set to "1". The sensor is connected to an Arduino Uno board. The Arduino is connected to a breadboard with a 10k resistor and a 5V regulator. The Serial Monitor shows the output: "Temperature Detected: 96.00" and "Motion Detected".

