

IBM ASSIGNMENT-IOT

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Degree :B.Tech

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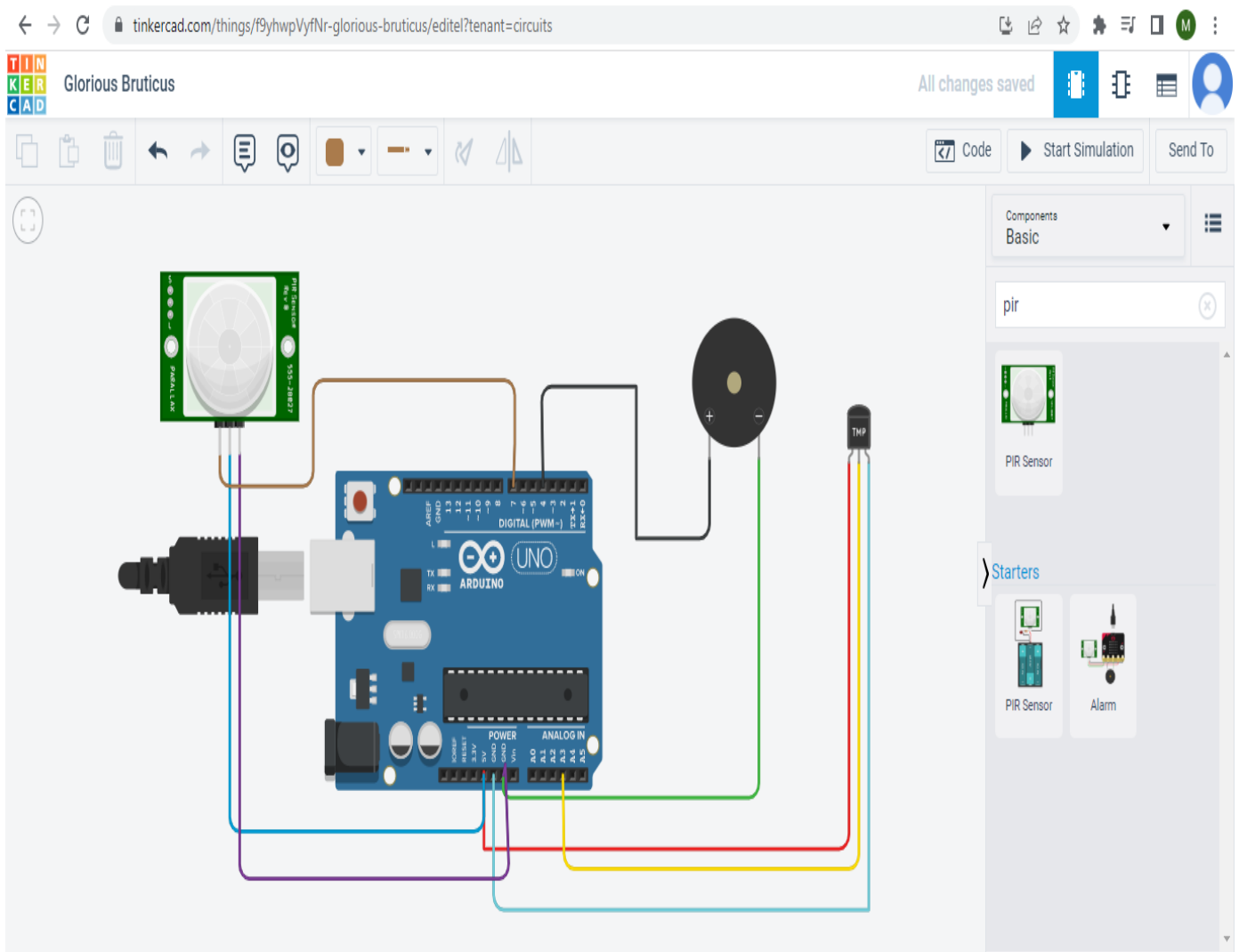
College Name :V.S.B Engineering College,Karur.

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 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:

The screenshot displays the Tinkercad web interface for a circuit simulation. The circuit consists of a PIR sensor module connected to an Arduino Uno R3. The sensor's VCC pin is connected to the 5V pin on the Arduino, its GND pin to a ground pin, and its output pin to digital pin 7. The Arduino is also connected to a speaker. The code editor shows the following script:

```

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){

```

The serial monitor shows the output of the code, alternating between "No Motion Detected" and "Temperature Detected: 96.00".

