

## **IBM ASSIGNMENT-I**

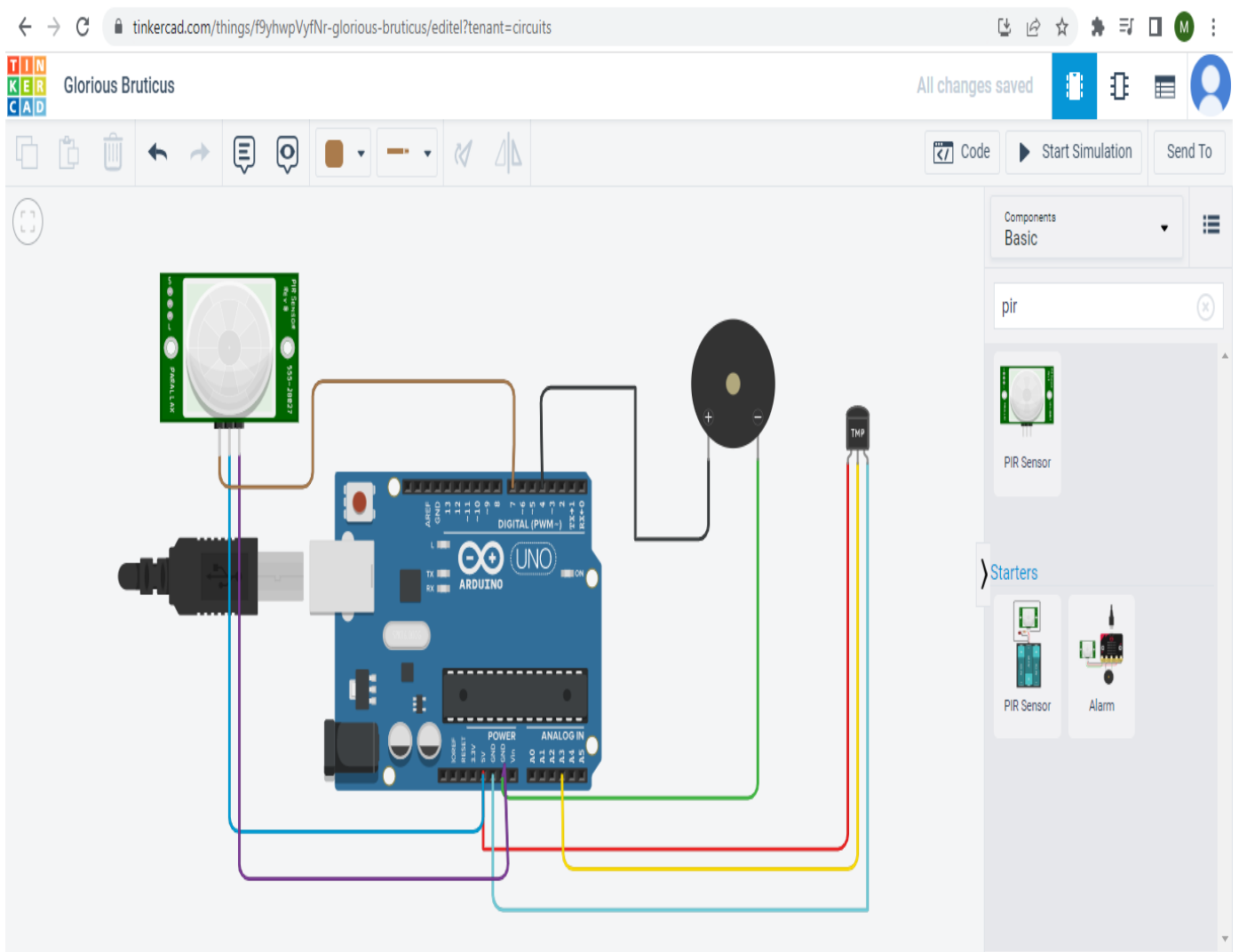
Assignment Date	16 September 2022
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Student Roll Number	922519205111
Maximum Marks	4 Marks

## Question

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 a=digitalRead(7);
  double td=analogRead(A3);
  double n=td/1024;
  double volt=n*5;
  double offset=volt-0.5;
  double temperature=offset*100;
  Serial.print("Temperature Detected: ");
  Serial.println(temperature);
  if(a==0){
    Serial.println("No Motion Detected");
  }
  if(a==1){
    Serial.println("Motion Detected");
    tone(4,100,1000);
  }
}
```

```

if(temperature>60){
  tone(4,400,1000);
}
}

```

## Output:

The screenshot displays the Tinkercad web interface for a project named "Glorious Bruticus". The circuit consists of an Arduino Uno R3 connected to a PIR Sensor. The PIR sensor is connected to the Arduino's digital pins: VCC to 5V, GND to GND, and the output pin to digital pin 2. A buzzer is connected to the Arduino's power pins: VCC to 5V and GND to GND.

The code editor shows the following code:

```

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 program, alternating between "No Motion Detected" and "Temperature Detected: 96.00".