

ASSIGNMENT 1

1. Alarm should sound in one manner if Temperature is about 60 C

```
void setup()
{
  Serial.begin(9600);
}

void loop()
{
  double data=analogRead(A1);
  double n=data/1024;
  double volt=n*5;
  double off=volt-0.5;
  double temperature=off*60;
  Serial.print ("Temperature data : ");
  Serial.println(temperature);
}
```

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ker
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All changes saved

Code Start Simulation Send To

Text 1 (Arduino Uno R3)

```
1 void setup()
2 {
3   Serial.begin(9600);
4 }
5 void loop()
6 {
7   double data=analogRead(A1);
8   double n=data/1024;
9   double volt=n*5;
10  double off=volt-0.5;
11  double temperature=off*60;
12  Serial.print ("Temperature data : ");
13  Serial.println(temperature);
14 }
```

Serial Monitor

The screenshot shows the Tinkercad web interface. On the left, an Arduino Uno R3 is connected to a temperature sensor. The sensor's red wire is connected to analog pin A1, its black wire to GND, and its green wire to VCC. On the right, a 'Text' component contains the following code:

```
1 void setup()
2 {
3   Serial.begin(9600);
4 }
5 void loop()
6 {
7   double data=analogRead(A1);
8   double n=data/1024;
9   double volt=n*5;
10  double off=volt-0.5;
11  double temperature=off*60;
12  Serial.print ("Temperature data : ");
13  Serial.println(temperature);
14 }
```

Below the code is a 'Serial Monitor' tab. The top of the interface shows the user 'Brilliant Jaban' and a toolbar with icons for undo, redo, delete, and other functions. The bottom of the interface shows a Windows taskbar with the search bar and system tray.

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Components Basic

Search

Hobby Gearmotor NPN Transistor... LED RGB

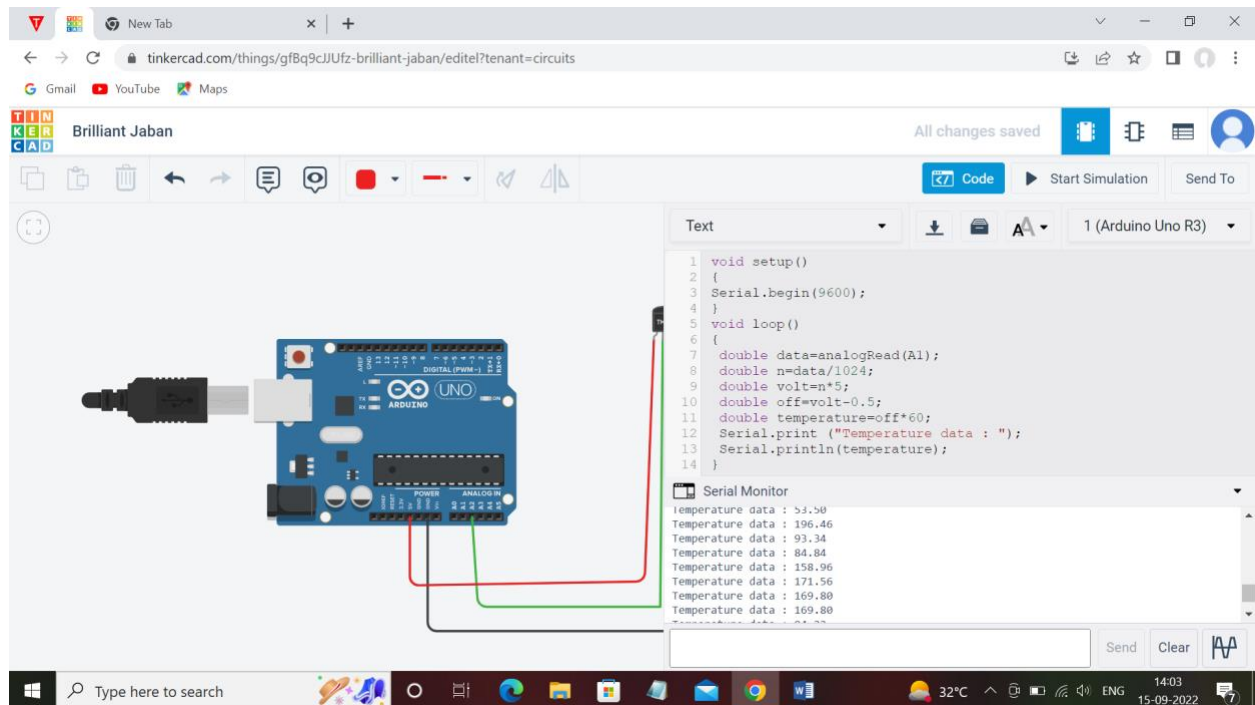
Diode Photoresistor Soil Moisture Sensor

Ultrasonic Distance... PIR Sensor Piezo

TMP 125.0 mHA

The screenshot shows the Tinkercad web interface with the 'Components' panel open on the right. The panel is set to 'Basic' components. A search bar is visible above a grid of components. The components shown include: Hobby Gearmotor, NPN Transistor..., LED RGB, Diode, Photoresistor, Soil Moisture Sensor, Ultrasonic Distance..., PIR Sensor, Piezo, TMP, and 125.0 mHA. The main workspace shows the same Arduino Uno R3 circuit as in the first image, with the temperature sensor connected to A1, GND, and VCC. The code in the Text component remains the same.

OUTPUT:



The screenshot displays a Tinkercad simulation environment. On the left, an Arduino Uno R3 is connected to a temperature sensor module. The sensor's red wire is connected to the 5V pin, the green wire to the GND pin, and the black wire to the A1 pin. The right side of the interface shows the code editor and the Serial Monitor.

Code:

```
1 void setup()
2 {
3   Serial.begin(9600);
4 }
5 void loop()
6 {
7   double data=analogRead(A1);
8   double n=data/1024;
9   double volt=n*5;
10  double off=volt-0.5;
11  double temperature=off*60;
12  Serial.print ("Temperature data : ");
13  Serial.println(temperature);
14 }
```

Serial Monitor Output:

```
Temperature data : 53.50
Temperature data : 196.46
Temperature data : 93.34
Temperature data : 84.84
Temperature data : 158.96
Temperature data : 171.56
Temperature data : 169.80
Temperature data : 169.80
Temperature data : 169.80
```

The Windows taskbar at the bottom shows the system clock as 14:03 on 15-09-2022, with a temperature of 32°C.