

**Name** J S MEGHANA

**USN** 1BM18CS039

**Program no** Week-4 2<sup>nd</sup> -Question

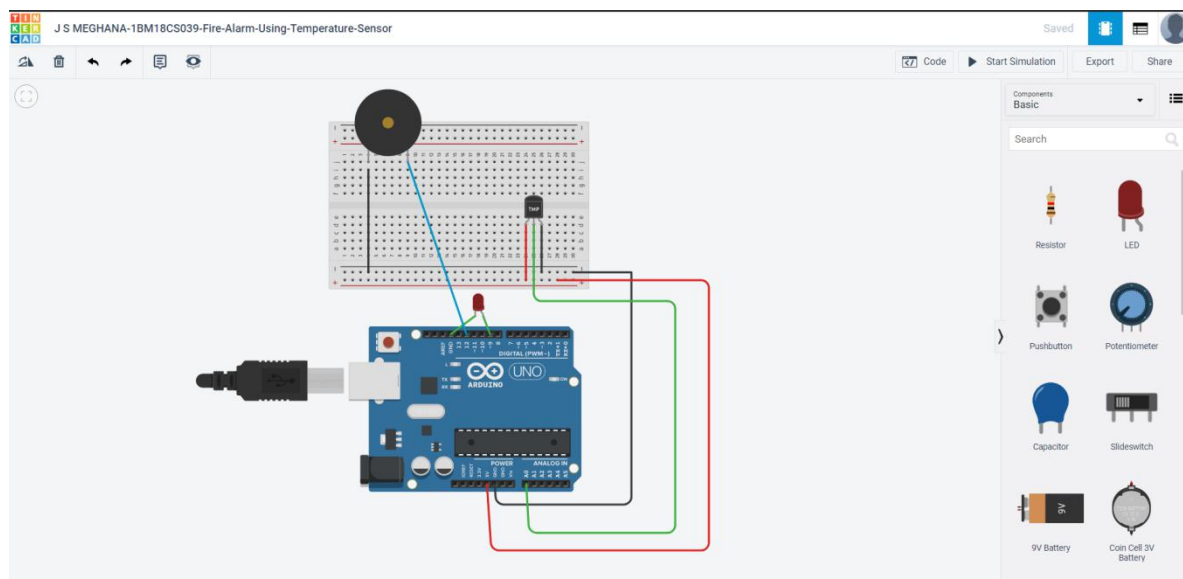
**Program Title** Fire-Alarm-Using-Temperature-Sensor

**Aim:** Design an alert system using flame sensor(use temp sensor for experiment in tinkercad )

### Hardware Required

1. Arduino Uno Board
2. LED
3. Piezo
4. Temperature Sensor

### Circuit Diagram



### Code:

```
int Temp_Pin = A0;
int Temp_Pin_Value = 0;
int led = 9;
int buzzer = 12;
void setup()
{
  pinMode(led, OUTPUT);
  pinMode(buzzer, OUTPUT);
  Serial.begin(9600);
}
void loop()
{
  Serial.println("Flame Alarm Using Temperature Sensor");
  Temp_Pin_Value = analogRead(Temp_Pin);
  Serial.println(Temp_Pin_Value);
  if (Temp_Pin_Value > 100)
  {
    Serial.println("Fire Detected");
```

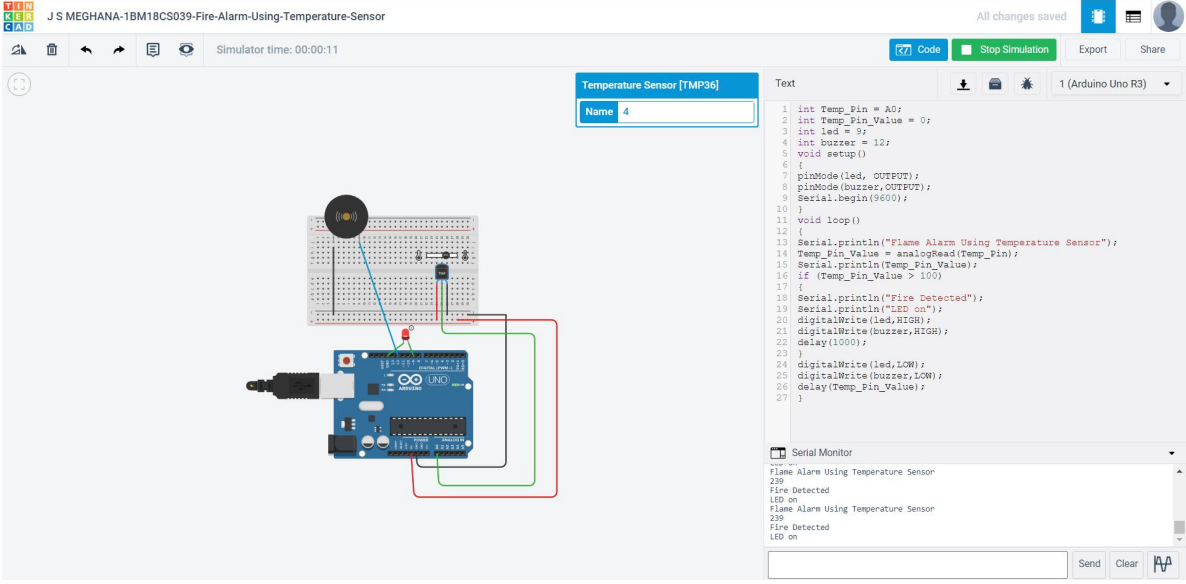
```

Serial.println("LED on");
digitalWrite(led,HIGH);
digitalWrite(buzzer,HIGH);
delay(1000);
}
digitalWrite(led,LOW);
digitalWrite(buzzer,LOW);
delay(Temp_Pin_Value);
}

```

## Observation /Output

### Output-1



The screenshot shows the Arduino IDE simulator interface. The top bar indicates the project name "J S MEGHANA-1BM18CS039-Fire-Alarm-Using-Temperature-Sensor" and the simulator time "00:00:11". The code editor displays the following code:

```

1 int Temp_Pin = A0;
2 int Temp_Pin_Value = 0;
3 int led = 9;
4 int buzzer = 12;
5 void setup()
6 {
7   pinMode(led, OUTPUT);
8   pinMode(buzzer,OUTPUT);
9   Serial.begin(9600);
10 }
11 void loop()
12 {
13   Serial.println("Flame Alarm Using Temperature Sensor");
14   Temp_Pin_Value = analogRead(Temp_Pin);
15   Serial.println(Temp_Pin_Value);
16   if (Temp_Pin_Value > 100)
17   {
18     Serial.println("Fire Detected");
19     Serial.println("LED on");
20     digitalWrite(led,HIGH);
21     digitalWrite(buzzer,HIGH);
22     delay(1000);
23   }
24   digitalWrite(led,LOW);
25   digitalWrite(buzzer,LOW);
26   delay(Temp_Pin_Value);
27 }

```

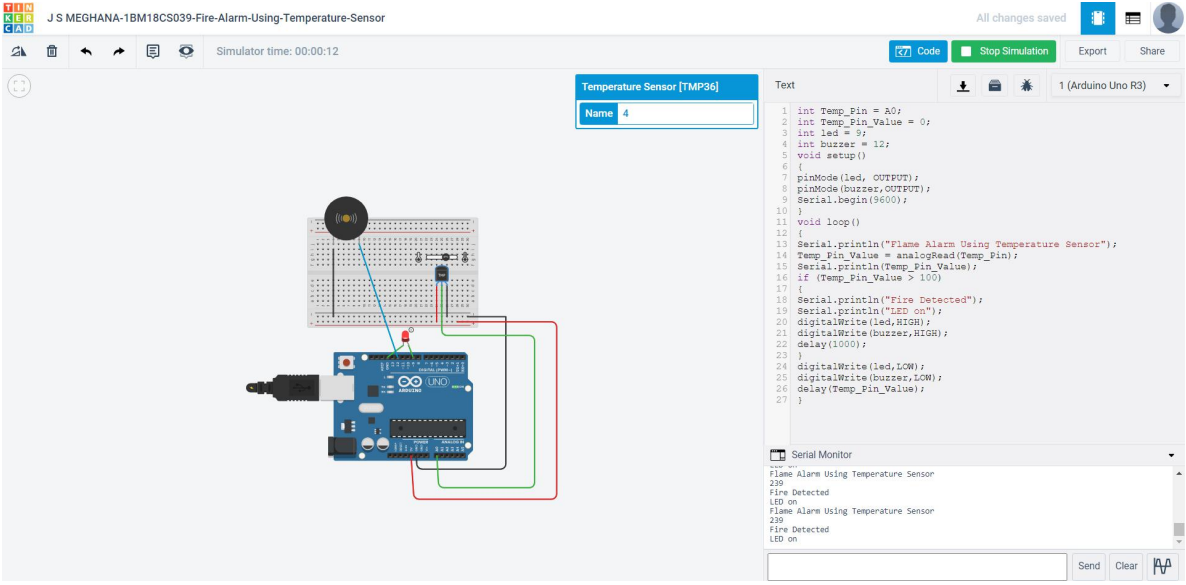
The serial monitor shows the following output:

```

Flame Alarm Using Temperature Sensor
239
Fire Detected
LED on
Flame Alarm Using Temperature Sensor
239
Fire Detected
LED on

```

### Output-2



The screenshot shows the Arduino IDE simulator interface. The top bar indicates the project name "J S MEGHANA-1BM18CS039-Fire-Alarm-Using-Temperature-Sensor" and the simulator time "00:00:12". The code editor displays the following code:

```

1 int Temp_Pin = A0;
2 int Temp_Pin_Value = 0;
3 int led = 9;
4 int buzzer = 12;
5 void setup()
6 {
7   pinMode(led, OUTPUT);
8   pinMode(buzzer,OUTPUT);
9   Serial.begin(9600);
10 }
11 void loop()
12 {
13   Serial.println("Flame Alarm Using Temperature Sensor");
14   Temp_Pin_Value = analogRead(Temp_Pin);
15   Serial.println(Temp_Pin_Value);
16   if (Temp_Pin_Value > 100)
17   {
18     Serial.println("Fire Detected");
19     Serial.println("LED on");
20     digitalWrite(led,HIGH);
21     digitalWrite(buzzer,HIGH);
22     delay(1000);
23   }
24   digitalWrite(led,LOW);
25   digitalWrite(buzzer,LOW);
26   delay(Temp_Pin_Value);
27 }

```

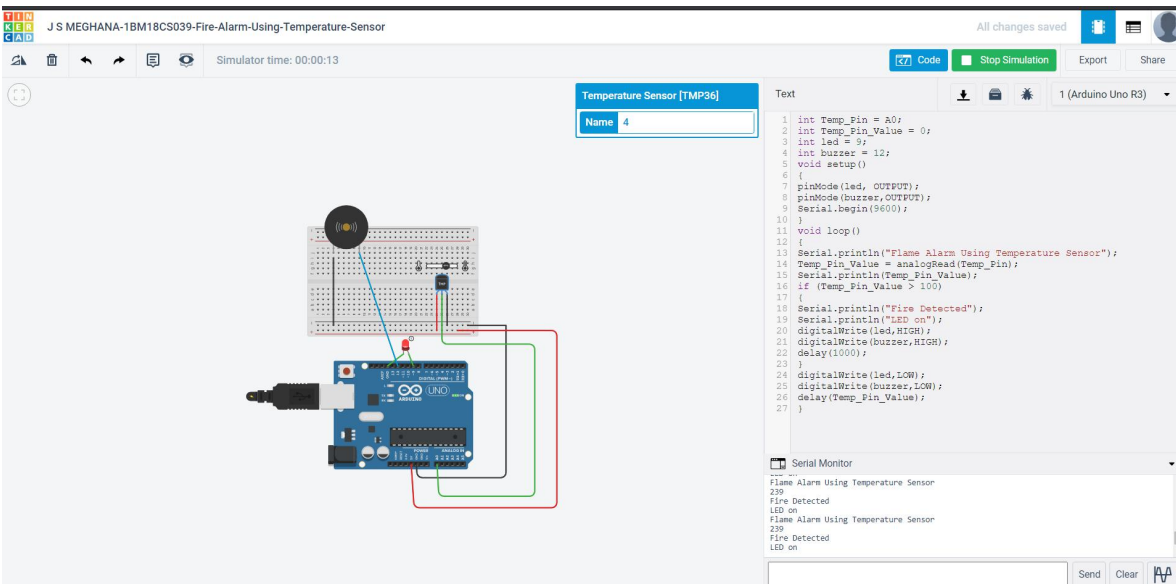
The serial monitor shows the following output:

```

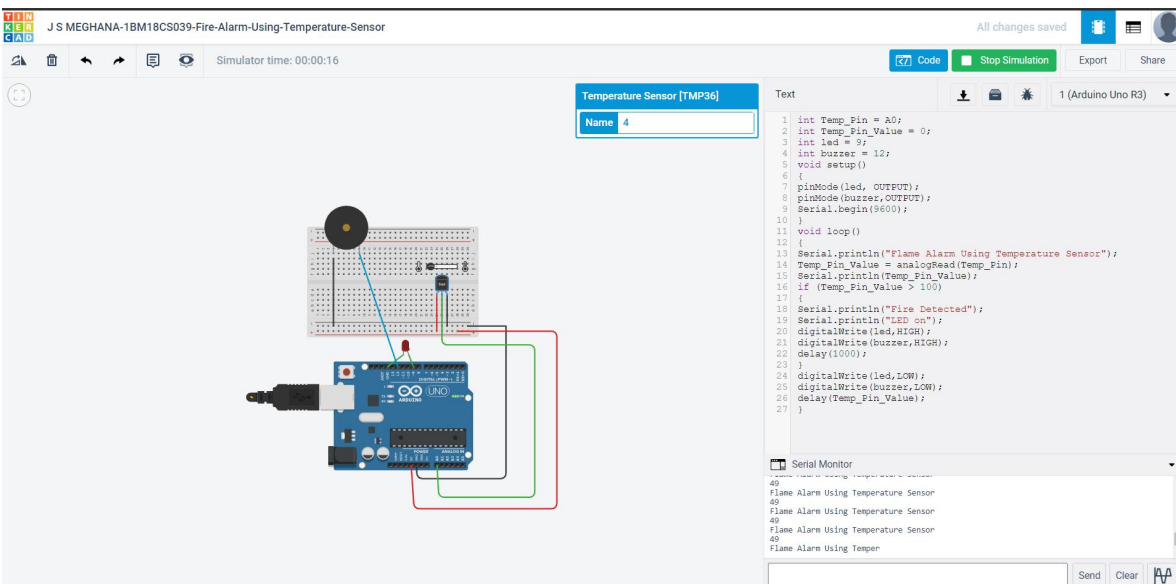
Flame Alarm Using Temperature Sensor
239
Fire Detected
LED on
Flame Alarm Using Temperature Sensor
239
Fire Detected
LED on

```

### Output-3



## Output-4



## Output-5

