

# Sakshi Srivastava

## 1BM18CS090

### PROGRAM TITLE: FLAME SENSOR

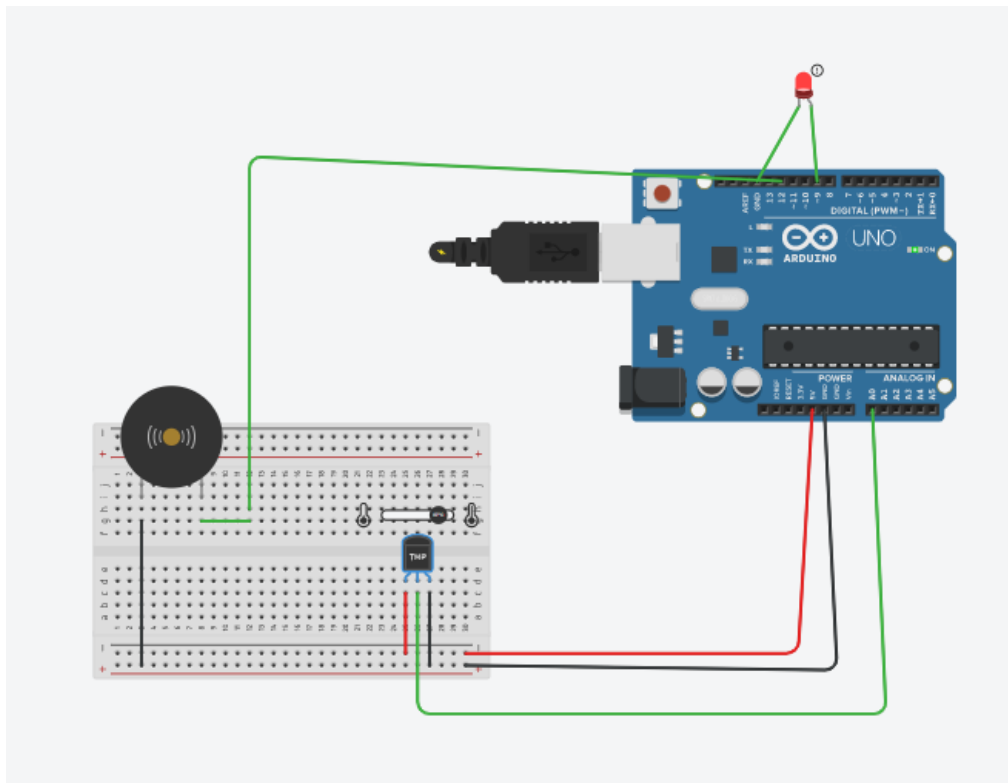
---

Aim: DESIGN AN ALERT SYSTEM USING FLAME SENSOR

#### Hardware Required:

- Arduino Board
- LED
- Breadboard
- Temperature Sensor(LM35)
- Buzzer

#### Circuit Diagram:



## Write-Up:

Name: Nakshi Srivastava (18M18CS090) Date: 7/10/2020  
Expt. No. 10 Page No. 15

Aim: Design an alert system using flame sensor.

HARDWARE REQUIRED :-

- Arduino Board
- LED
- Breadboard
- Temperature sensor (LM35)
- Buzzer

CODE

```
const int temperaturePin = 0;
int buzzer = 12;
void setup()
{
  Serial.begin(9600);
  pinMode(buzzer, OUTPUT);
  pinMode(9, OUTPUT);
}
float getVoltage(int pin)
{
  return (analogRead(pin) * 0.004882814);
}
```

Expt. No. 10 Date: 7/10/2020  
Page No. 16

```
void loop()
{
  float voltage, degreeC;
  voltage = getVoltage(temperaturePin);
  degreeC = (voltage - 0.5) * 100.0;
  digitalWrite(9, LOW);
  if (degreeC < 37)
  {
    Serial.print(degreeC);
    Serial.print(" SAFE");
  }
  if (degreeC > 37)
  {
    Serial.print(degreeC);
    Serial.println(" ALERT!!");
    digitalWrite(buzzer, LOW);
    digitalWrite(9, HIGH);
    tone(12, 1000, 100);
    delay(100);
  }
}
```

## CODE:

```
const int
temperaturePin=0;

int buzzer = 12;

void setup()
{
  Serial.begin (9600);
  pinMode(buzzer, OUTPUT);
  pinMode(9,OUTPUT);
}
float getVoltage(int pin)
{
  return (analogRead(pin) * 0.004882814);
}
void loop()
{
  float voltage, degreesC;
  voltage = getVoltage(temperaturePin);//gets temp in 5v
  degreesC = (voltage-0.5)*100.0;//converts the temp to
celcius
  digitalWrite(9,LOW);
  if(degreesC < 37)
  {
    Serial.print(degreesC);
    Serial.println(" IT IS SAFE!");
  }
  if(degreesC > 37)
  {
    Serial.print(degreesC);
    Serial.println(" ALERTTTTTTT!");
    digitalWrite(buzzer, LOW);
    digitalWrite(9,HIGH);
    tone(12, 10000,100);
    delay(100);
  }
}
```

**OUTPUT/OBSERVATION:**

The temperature is being measured and accordingly the message is being displayed after sensing it.