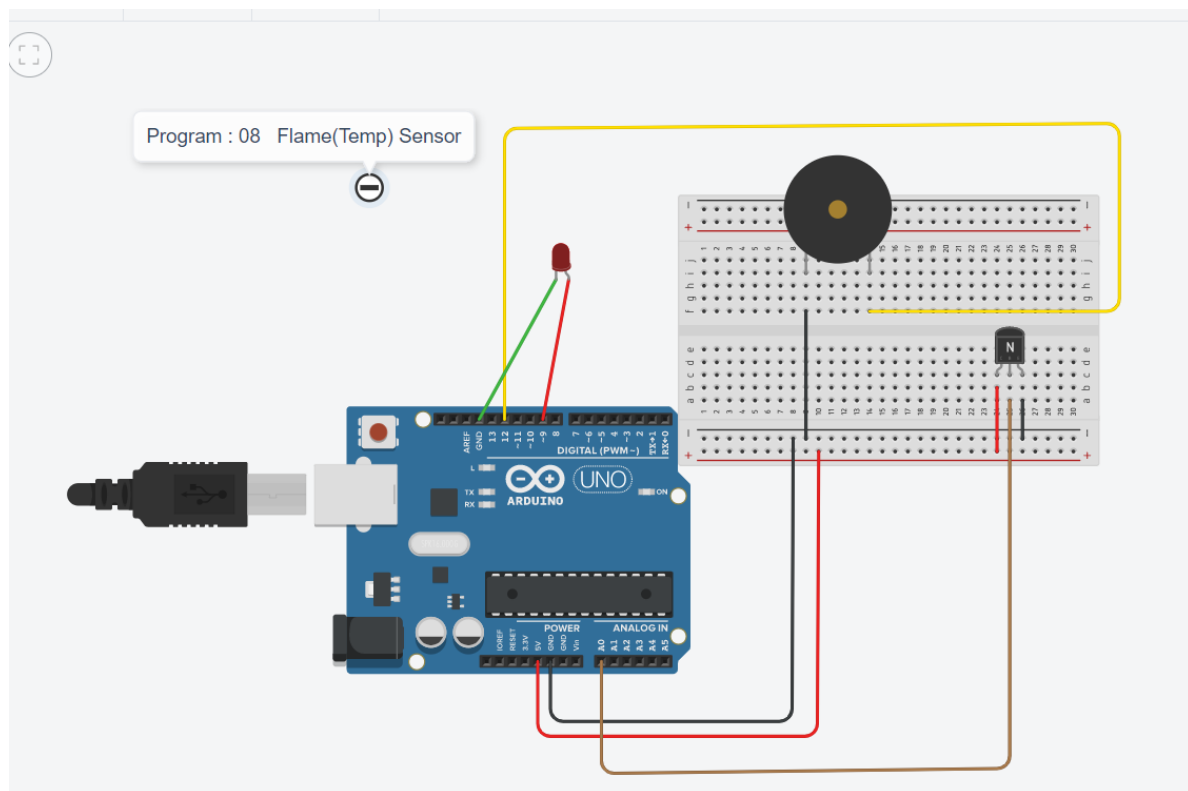# Program no__09__

Program Title__ Flam(Temp) Sensor

Aim : To turn on LED and make the piezo buzzer upon the temperature alert

Hardware Required

- Arduino Board
- Wires
- LED
- Piezo
- Temp Sensor
- Bread board

Circuit Diagram

Code:

```
Program — 09                              Pramod D.Y
    Flam - or - temp Sensor.               1BM19CS405

const. int  temparaturepin = 0;
  int led = 9;
  int USa = 12;
  void setup()
  {
          PinMode (led, OUTPUT);
          PinMode (USa, OUTPUT);
          Serial. begin (9600);
  }
  void loop()
  {
      float Voltage, degree SC, degree nF;
      Voltage = get Voltage (temparature Pin);
      degreeC = (voltage - 0.5) * 100.0;
      degreeF = degree C * (9.0/5.0) * 32.0;
          Serial. Print ("Voltage : ");
          Serial. Print (voltage);
          Serial. print ("deg c: ");
          Serial. print (degreeC );
          Serial. print ("deg F: ");
          Serial . print ( degreenF );      Pramod
Page no - 01
```

```
if (degree C >26)
    {    digitalWrite (led, HIGH);
         delay (1000);
         digital Write (led, Low);
         delay (500);
         tone (12, 10000, 200);


    }
    }

float getValue (int Pin)
    {   return (analogRead (Pin) * 0.004882814);

    }
```

Observation /Output

Temperature Sensor [TMP36]
Name 2

```
1  const int temperaturePin = 0;
2  int led = 9;
3  int usa = 12;
4  void setup()
5  {
6  pinMode(led, OUTPUT);
7  pinMode(usa, OUTPUT);
8    Serial.begin(9600);
9  }
10 void loop()
11 {
12    float voltage, degreesC, degreesF;
13    voltage = getVoltage(temperaturePin);
14    degreesC = (voltage - 0.5) * 100.0;
15    degreesF = degreesC * (9.0/5.0) + 32.0;
16    Serial.print("voltage: ");
```

Serial Monitor

```
voltage: 0.75  deg C: 24.71  deg F: 76.47
voltage: 0.75  deg C: 24.71  deg F: 76.47
voltage: 0.87  deg C: 36.91  deg F: 98.45
voltage: 1.62  deg C: 111.62  deg F: 232.92
voltage: 1.62  deg C: 111.62  deg F: 232.92
voltage: 1.62  deg C: 111.62  deg F: 232.92
voltage: 1.17  deg C: 66.70  deg F: 152.06
voltage: 1.17  deg C: 66.70  deg F: 152.06
```