Program no : 9

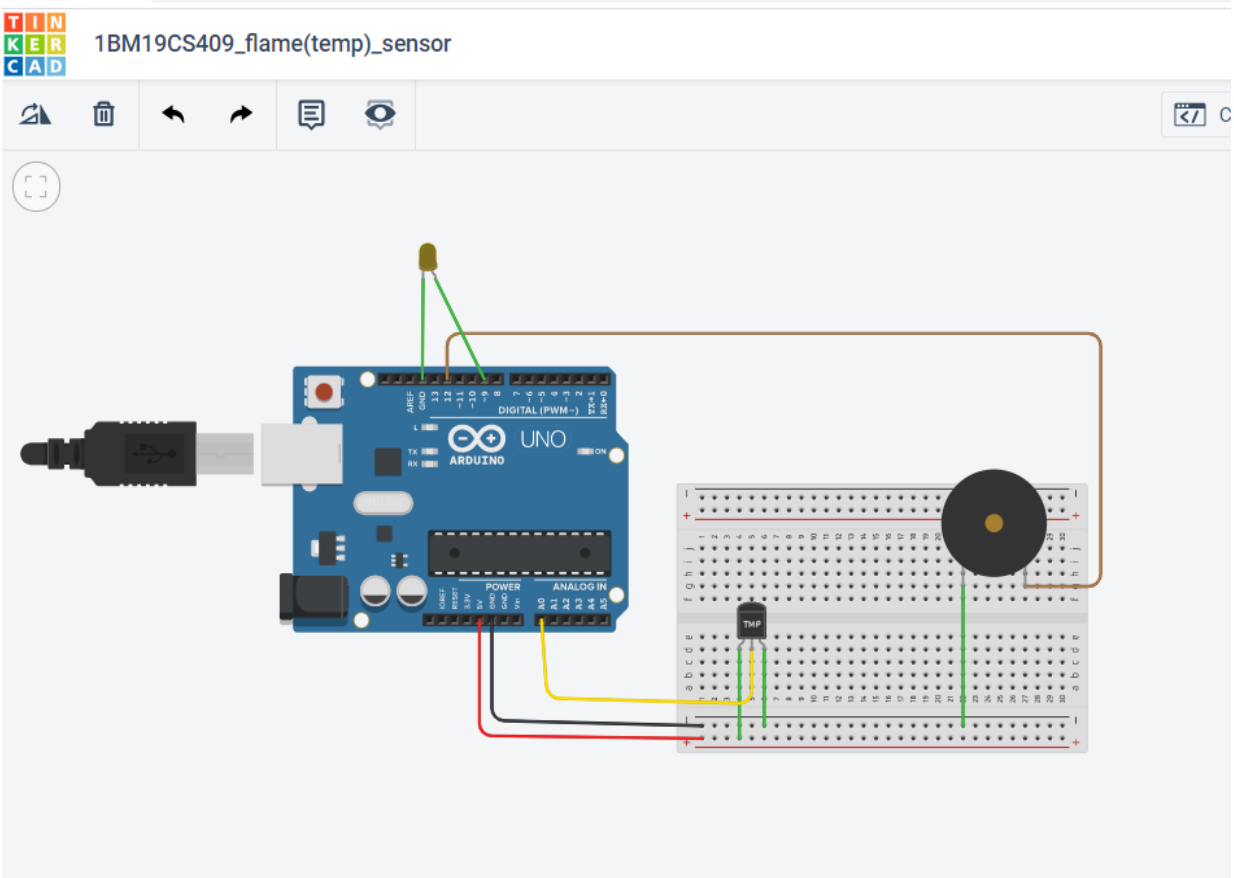
Program Title : Flame (Temp) Sensor

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

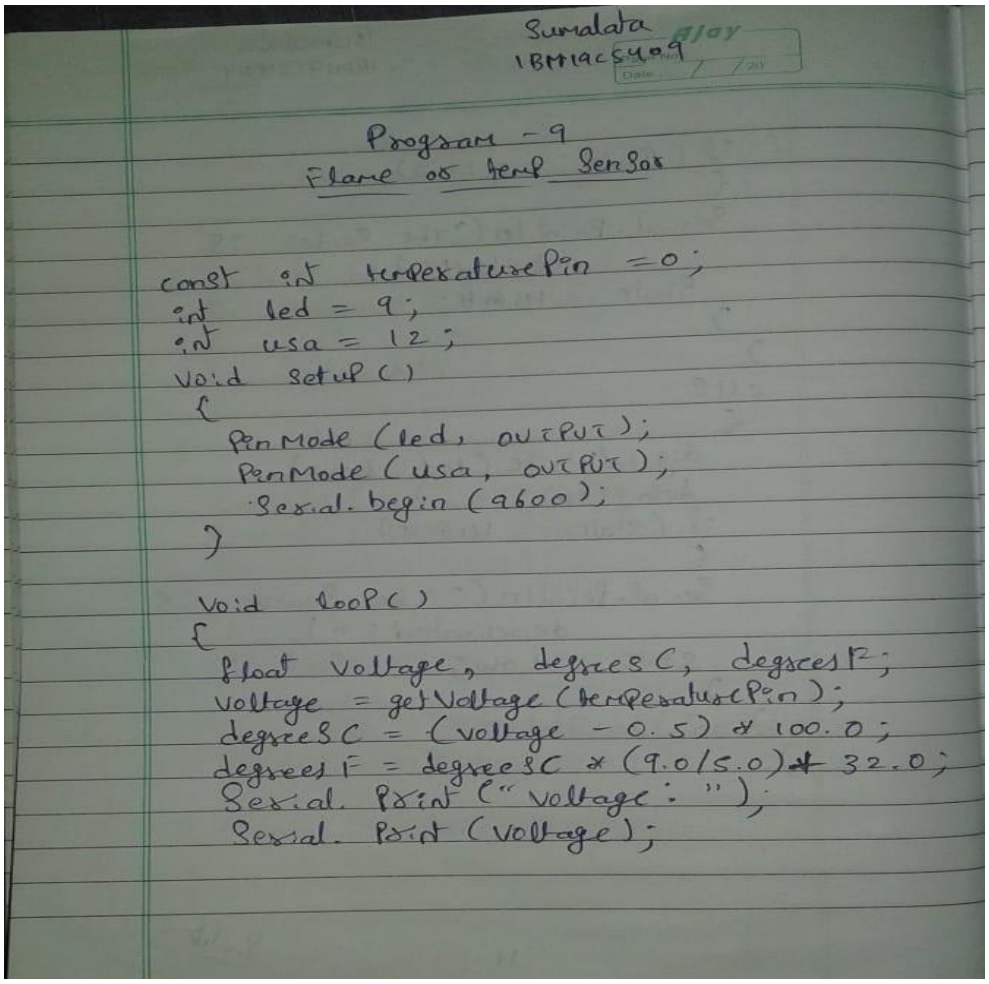
Hardware Required

- Arduino Board
- Breadboard
- Wires
- LED
- Piezo
- Temp Sensor

Circuit Diagram :



Code:

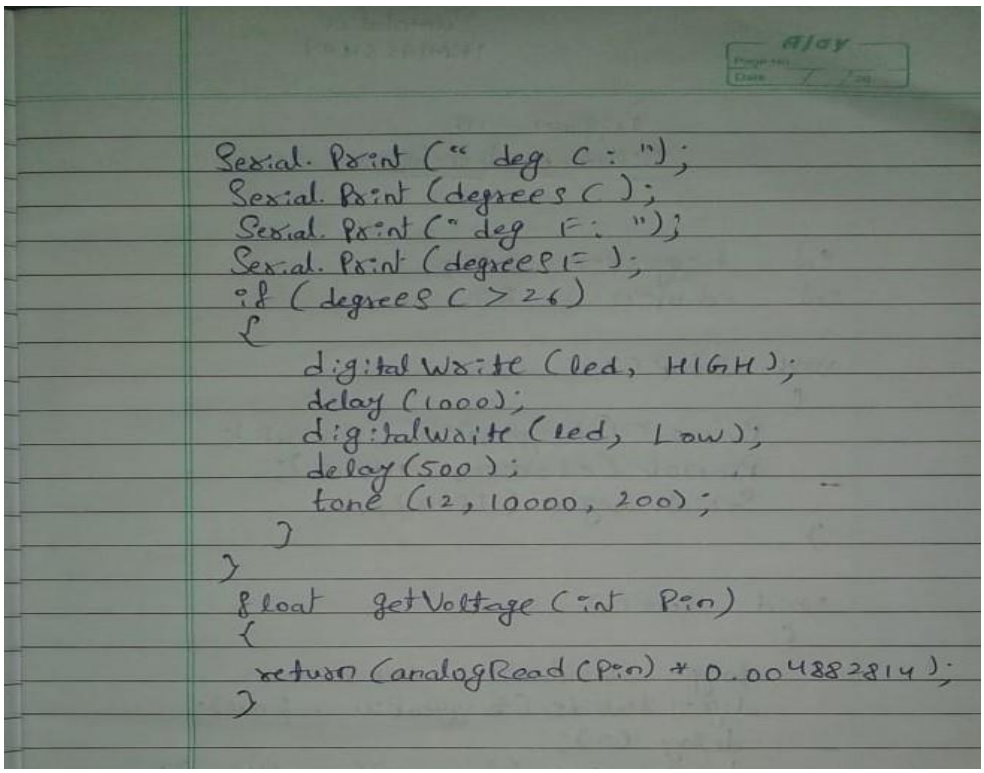


Sumalata
1BM19CS409

Program - 9
Flame or temp Sensor

```
const int temperaturePin = 0;
int led = 9;
int usa = 12;
void setup()
{
  PinMode (led, OUTPUT);
  PinMode (usa, OUTPUT);
  Serial.begin (9600);
}

Void loop()
{
 float voltage, degreesC, degreesF;
 voltage = getVoltage (temperaturePin);
 degreesC = (voltage - 0.5) * 100.0;
 degreesF = degreesC * (9.0/5.0) + 32.0;
 Serial.Print (" voltage: ");
 Serial.Print (voltage);
```



```
Serial.Print (" deg C: ");
Serial.Print (degreesC);
Serial.Print (" deg F: ");
Serial.Print (degreesF);
if (degreesC > 26)
{
    digitalWrite (led, HIGH);
    delay (1000);
    digitalWrite (led, LOW);
    delay (500);
    tone (12, 10000, 200);
  }
}
float getVoltage (int Pin)
{
 return (analogRead (Pin) * 0.004882814);
}
```

Observation /Output :