Program code:

#define FLAME\_SENSOR A0 // Pin connected to the flame sensor

#define LED\_PIN 2 // Pin connected to an LED for indicating fire detection

#define THRESHOLD 400 // Threshold value for flame detection

void setup() {

pinMode(FLAME\_SENSOR, INPUT);

pinMode(LED\_PIN, OUTPUT);

Serial.begin(9600);

}

void loop() {

int sensorValue = analogRead(FLAME\_SENSOR);

Serial.print("Sensor value: ");

Serial.println(sensorValue);

if (sensorValue > THRESHOLD) {

digitalWrite(LED\_PIN, HIGH); // Turn on the LED to indicate fire detection

Serial.println("Fire detected!");

} else {

digitalWrite(LED\_PIN, LOW); // Turn off the LED

}

delay(1000); // Delay for stability

}