```
// Final working code

// Pin definitions

#define FLAME_PIN 8

#define BUZZER_PIN 9

#define MQ2_PIN A0


// Smoke threshold (based on your readings)

#define SMOKE_THRESHOLD 180


void setup() {

  pinMode(FLAME_PIN, INPUT);

  pinMode(BUZZER_PIN, OUTPUT);
```

```
  Serial.begin(9600);
  Serial.println("Fire & Smoke Detection Started");
}

void loop() {
  int flameStatus = digitalRead(FLAME_PIN); // LOW
= fire detected
  int smokeValue  = analogRead(MQ2_PIN);

  // Print sensor values
  Serial.print("Flame: ");
  if (flameStatus == LOW)
    Serial.print("FIRE");
  else
```

```
    Serial.print("NO FIRE");


  Serial.print(" | Smoke Value: ");
  Serial.print(smokeValue);


  // Alert condition
  if (flameStatus == LOW || smokeValue >
SMOKE_THRESHOLD) {
    Serial.println(" | ALERT!");


    // Beeping buzzer
    digitalWrite(BUZZER_PIN, HIGH);
    delay(200);
    digitalWrite(BUZZER_PIN, LOW);
```

```
    delay(200);

  } else {

    Serial.println(" | SAFE");

    digitalWrite(BUZZER_PIN, LOW);

    delay(500);

  }

}
```