

### ◆ Overview:

This project **monitors temperature and gas levels** to detect fire hazards and trigger an alarm system using an **Arduino**, a **temperature sensor (LM35)**, and a **gas sensor (MQ-2/MQ-135)**.

### ◆ Components Used:

- **Arduino Uno** (Microcontroller)
- **LM35** (Temperature Sensor)
- **MQ-2/MQ-135** (Gas Sensor)
- **Buzzer** (Alarm)
- **LED** (Visual Alert)

### ◆ Working Principle:

1. **Temperature Monitoring:**
  - Reads data from **LM35**.
  - If the **temperature exceeds 80°C**, the **LED turns ON**.
  - If it goes above **100°C**, the **buzzer activates** (fire warning).
2. **Gas Detection:**
  - Reads gas levels from **MQ-2**.
  - If gas concentration is high, it can trigger an alarm.
3. **Serial Monitoring:**
  - Displays **temperature and gas values** on the **Serial Monitor**.

### ◆ Possible Enhancements:

- ✓ **WiFi Alert (ESP8266/ESP32)** – Send alerts via email/SMS.
- ✓ **LCD Display** – Show real-time sensor values.
- ✓ **Relay for Fire Suppression** – Automatically trigger a fire extinguisher system.