Dataintelliage

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# PANIC ALARM USING GAS SENSOR

## Project Overview

A panic alarm using a gas sensor is designed to detect hazardous gas levels in the environment and trigger an immediate alarm to alert individuals of potential danger. The system typically consists of a arduino a gas sensor, a buzzer, and a led light. When the gas sensor detects a concentration of gas beyond a predetermined threshold, the microcontroller activates the panic alarm, which can include loud sirens, flashing lights, or notifications. This setup is commonly used in residential, industrial, and commercial settings to enhance safety by providing early warnings of gas leaks. Regular calibration and maintenance are crucial, and user training on emergency procedures is essential for effective implementation.

## Components

| 1 | 2 | 3 | 4 | 5 |
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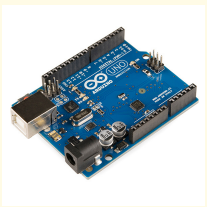
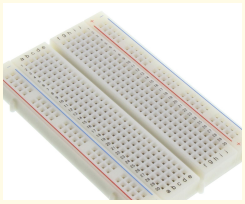
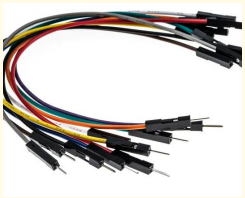
|  |  |  |  |  |

1. **Arduino UNO**
2. **MQ2 Sensor**
3. **LED Light**
4. **Breadboard**
5. **Jumper Wire**

## Connections

- Arduino UNO - Breadboard

  **GND - +ve**

**5V - -ve**

- **MQ2 Gas Sensor - Arduino UNO**

  **A0 - A1**

  **GND - -ve**

  **VCC - +ve**

- **Buzzer - Arduino UNO**

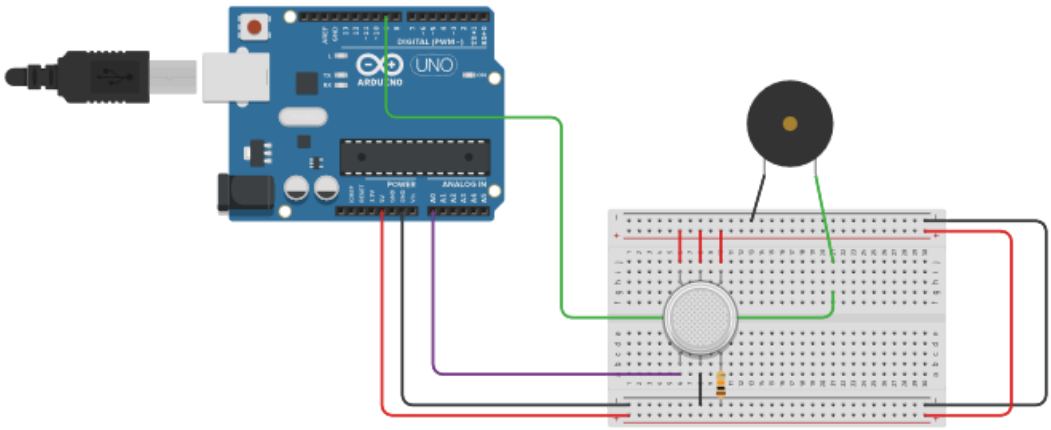
  **+ve - D3**

  **-ve - GND**

- **LED Light - Arduino UNO**

  **+ve - D2**

  **-ve - GND**

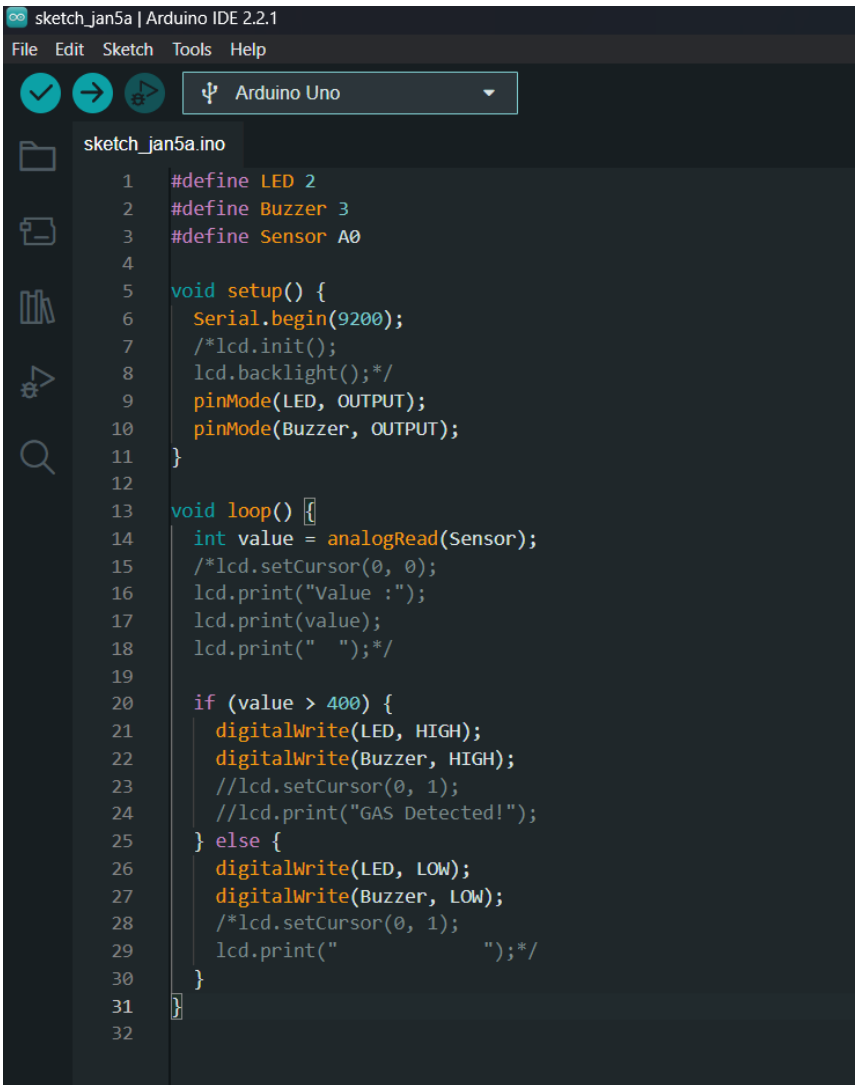


# Usage

A panic alarm system with a gas sensor can be a crucial safety feature in environments where the presence of hazardous gases poses a risk. Here's a basic overview of how such a system might work:

- **Residential Safety:** Gas sensors with panic alarms are commonly used in homes to detect leaks from natural gas or propane, providing an early warning to residents.
- **Industrial Settings:** In industrial environments where various gases are used or produced, panic alarms with gas sensors are employed to ensure the safety of workers.
- **Commercial Buildings:** Similar to residential applications, commercial buildings can benefit from gas sensors integrated with panic alarms to safeguard occupants.
- **Laboratories:** Laboratories dealing with potentially hazardous gases may use panic alarms to ensure the safety of personnel and prevent accidents.

# Code


sketch_jan5a | Arduino IDE 2.2.1
File Edit Sketch Tools Help
Arduino Uno
sketch_jan5a.ino
#define LED 2
#define Buzzer 3
#define Sensor A0
void setup() {
Serial.begin(9200);
/*lcd.init();
lcd.backlight();*/
pinMode(LED, OUTPUT);
pinMode(Buzzer, OUTPUT);
}
void loop() {
int value = analogRead(Sensor);
/*lcd.setCursor(0, 0);
lcd.print("Value :");
lcd.print(value);
lcd.print(" ");*/
if (value > 400) {
digitalWrite(LED, HIGH);
digitalWrite(Buzzer, HIGH);
//lcd.setCursor(0, 1);
//lcd.print("GAS Detected!");
} else {
digitalWrite(LED, LOW);
digitalWrite(Buzzer, LOW);
/*lcd.setCursor(0, 1);
lcd.print(" ");*/
}
}