INTRODUCTION:

I am going to make the Gas sensor using ATMEGA328P and MQ-2 gas sensor Gas sensor MQ-2 is used here with ATmega32 microcontroller to detect gas presence and display the level of the gas on LCD.

MQ-2 gas sensor can detect LPG, smoke and hydrogen gas, butane, CO2, alcohol etc so you can use it in many projects.

Here we will simply display the level of LPG gas and Smoke in PPM(Parts Per Million) on LCD.

4W'S AND 1H:

Where:

Gas sensor system is use this in real time environments like hospitals, schools and shopping malls etc..

When:

Gas sensor is activated when the gas is leak in and the lcd screen and buzzer activate automatically

throught micro controller atmega8

What:

Gas sensor system using microcontroller Atmega8 and gas sensor, here gas sensor play a vital role

Why:

Gas sensor system is use this in real time environments like hospitals schools and shopping malls they are used

How:

Gas sensor is independent device it not dependent on external user it work on micro controller

High Level Requirements:

HLR Description:

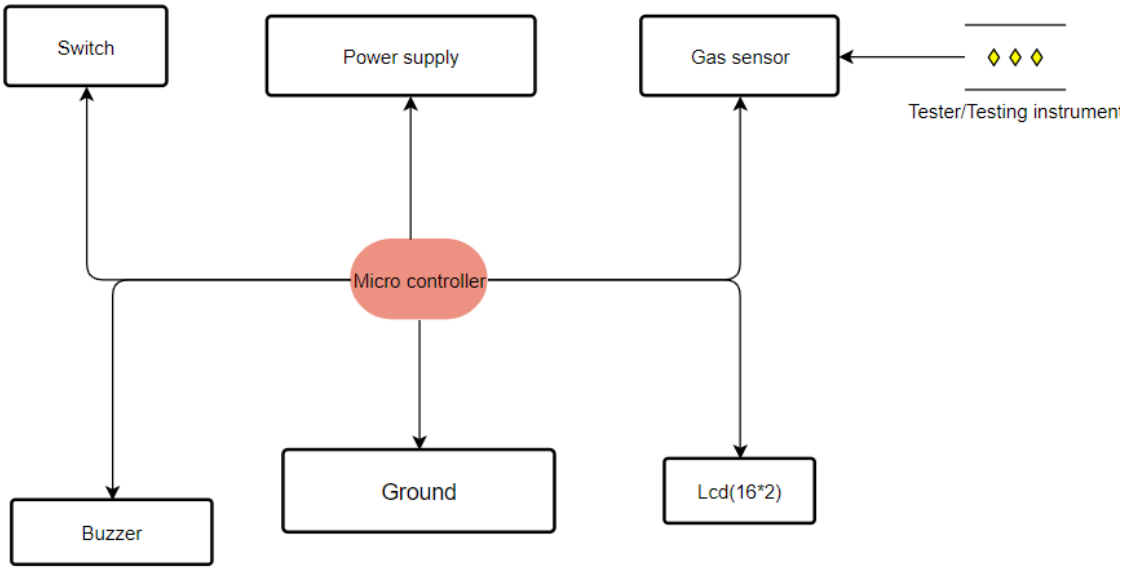
HLR	Description

HLR-1	It work when gas is detected.
HLR-2	Buzzer will strat work when gas is detects.
HLR-3	We need to reset buzzer after work done.
HLR-4	Fire alarm need to work perfectly.

Low Level Requirements:

LLR	Description
LLR-1	Fire sensor is needed
LLR-2	Lcd screen and buzzer is need and connects to microcontroller.
LLR-3	Reset button is need to install
LLR-4	Microcontroller need to install.

Architecture:



components used in fire alarm:

power supply:

It is used give power supply to circuit

ATMEGA328:

It is used to control the all circuit and send commands and operate buzzer

BUZZER:

Buzzer is used to make sound and it a output to the circuit

Gas sensor:

The MQ-2 module contains the MQ-2 gas sensor, some chip that performs signal conditioning,

resistors, potentiometer for adjusting the sensitivity.

The MQ-2 gas sensor itself contains gas sensitive conductive Tin Dioxide (SnO_2) layer whose conductivity increases, that is, resistivity decreases when the gas concentration near it increases.

This increase in conductivity or decrease in resistivity is translated into output voltage via the voltage divider that is formed by the internal SnO_2 and the potentiometer and some resistors and capacitors 10KΩ resistor, 10KΩ resistor, 22uF capacitor.

Conclusion:

Thus, the conclusion is that we can be aware of any danger that can be caused by gas leakage and further catching fire and causing more damage and danger. It's SMS technique can also be used with GSM technology to send messages to emergency services. We can also use it to detect various other gases other than LPG and CNG.

It will be helpful in public places like Mall's, hospital's, hotel's etc. In such places there is a huge rush of people, women and small children.helpful in public places like Mall's, hospital's, hotel's etc. In such places there is a huge rush of people, women and small children.