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Gas Monitoring System

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PROBLEM STATEMENT

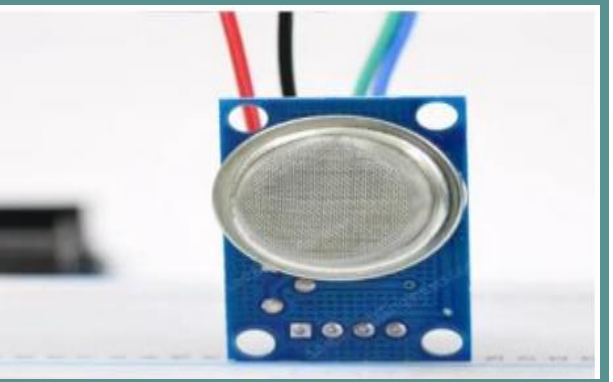
A gas detector is to ease humans on detecting the presence of those dangerous gases within an area to prevent disaster.

Nowadays, the gas detector has been innovated into various ways of detection, for example infrared thermal imaging gas leak detection, gas leakage detection with monitoring system, and wireless gas sensor network.

This project has designed and developed a wireless gas monitoring system by using Arduino and ThingSpeak

System Description

1. MQ2 Sensor :
   MQ2 is one of the commonly used gas sensors in MQ sensor series

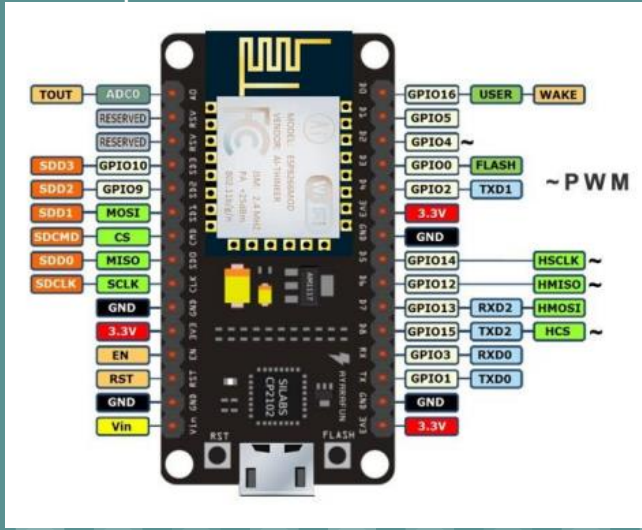


Pin No:	Pin Name:	Description
1	Vcc	This pin powers the module, typically the operating voltage is +5V
2	Ground	Used to connect the module to system ground
3	Digital Out	You can also use this sensor to get digital output from this pin, by setting a threshold value using the potentiometer
4	Analog Out	This pin outputs 0-5V analog voltage based on the intensity of the gas

System Description Continue

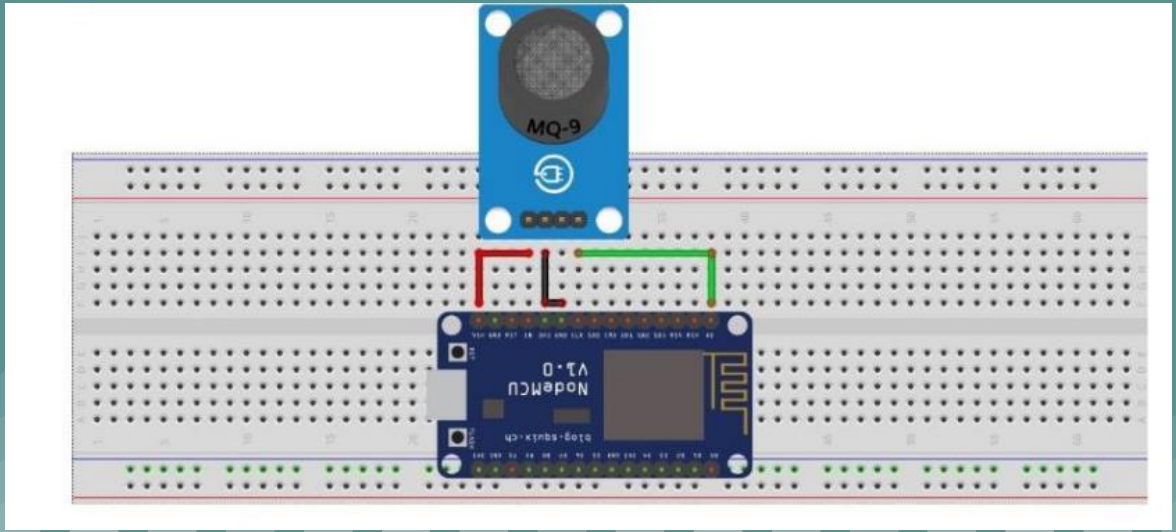
NodeMCU ESP8266

NodeMCU WIFI Serial Wireless Module The development board equips the ESP-12E module containing ESP8266 chip having Tensilica Xtensa® 32-bit LX106 RISC microprocessor which operates at 80 to 160 MHz adjustable



CIRCUIT DIAGRAM

- Connect VCC pin of MQ-2 Gas Sensor module to Vin pin of NodeMCU ESP8266-12E Board.
- Connect GND pin of MQ-2 Gas Sensor module to GND pin of NodeMCU pin of ESP8266-12E Board.
- Connect D0 pin of MQ-2 Gas Sensor module to the A0 pin of NodeMCU ESP8266-12E board



Conclusion

Gas monitoring system is essential to prevent accidents and to save human lives. When you have a gas detection system, you can monitor the amount of gases in your environment. Because of this, you can tell when there is a higher chance of poisoning, explosion, fire or asphyxiation. From this we can clearly understand the importance of IOT in the coal and gas industries. It will make the continuous monitoring of gas level very easy.

THANK YOU !