Thank you Anik……..

Now, here is our circuit diagram. In the circuit diagram,

We can see a switch at top middle, this switch is used to turn off and on the whole system.
at the middle of the circuit diagram, is the Arduino uno R3. Which is the microcontroller board,

At bottom left corner, MQ2 gas sensor with logic Toggle.

At top right corner we see the LCD which will show the current state.

And finally, at the bottom right corner we see the LEDs, RED and green LED.

Now, when the system turn off/on switch is on, the smoke detector sensor tries to detect the gas. If the gas is detected then the sensor sends high voltage to pin 9 of Arduino UNO.
but here for the simulation purpose we used a logic Toggle to show the system that there is gas.

Which mean if the logic toggle is set to 1 then the smoke sensor act as it found gas and when the logic toggle is set to zero then the smoke sensor act as there is no gas.

So, when there is a signal of detecting gas, then in the LCD display a message "Gas Detected" will be displayed and the red led will turn on.

And, when there is No signal of detecting gas, then in the LCD display a message "No Gas Detected" will be displayed and the green led will turn on.

!……!

Now,

What was the motivation behind this project:

On Friday 4september 2020 , a massive explosion took place in Baitus Salah Jame Masjid in Narayanganj, killing 24 people and injuring dozens more.

Primary inspections by the fire services found that a Titas Gas pipeline is situated underneath the mosque floor and caused a gas leak. As the windows were shut, the gas had accumulated inside the mosque, causing the fire, possibly when the power was triggered.

So here what we could do:

We could implement a pipeline gas (Methane) leakage detector. By which we could detect the gas and take necessary precaution. Then we could inform the Titas to solve the problem. In that case, there might be no life sacrificed.

So, if we can implement it (Smoke Detection using MQ-2 Gas Sensor) in many sensitive places, then we may have the precaution and we can save many lives.

!.....!

Now, the

Conclusion:

This project is just about the simulation of a smoke detecting sensor(MQ2).

But we tried to do much better than it. Like,

We tried to implement a buzzer. Which can create sound when the smock is detected.

Also, we tried to implement a servo motor to act as the system forcing to turn off the gas line.
but when we tried to implement those, our proteus crashing over and over.

So, we had to make it simple because of the Platform and system limitations.

!..... !

So that's all about.

Thank you.