



SMOKE DETECTOR

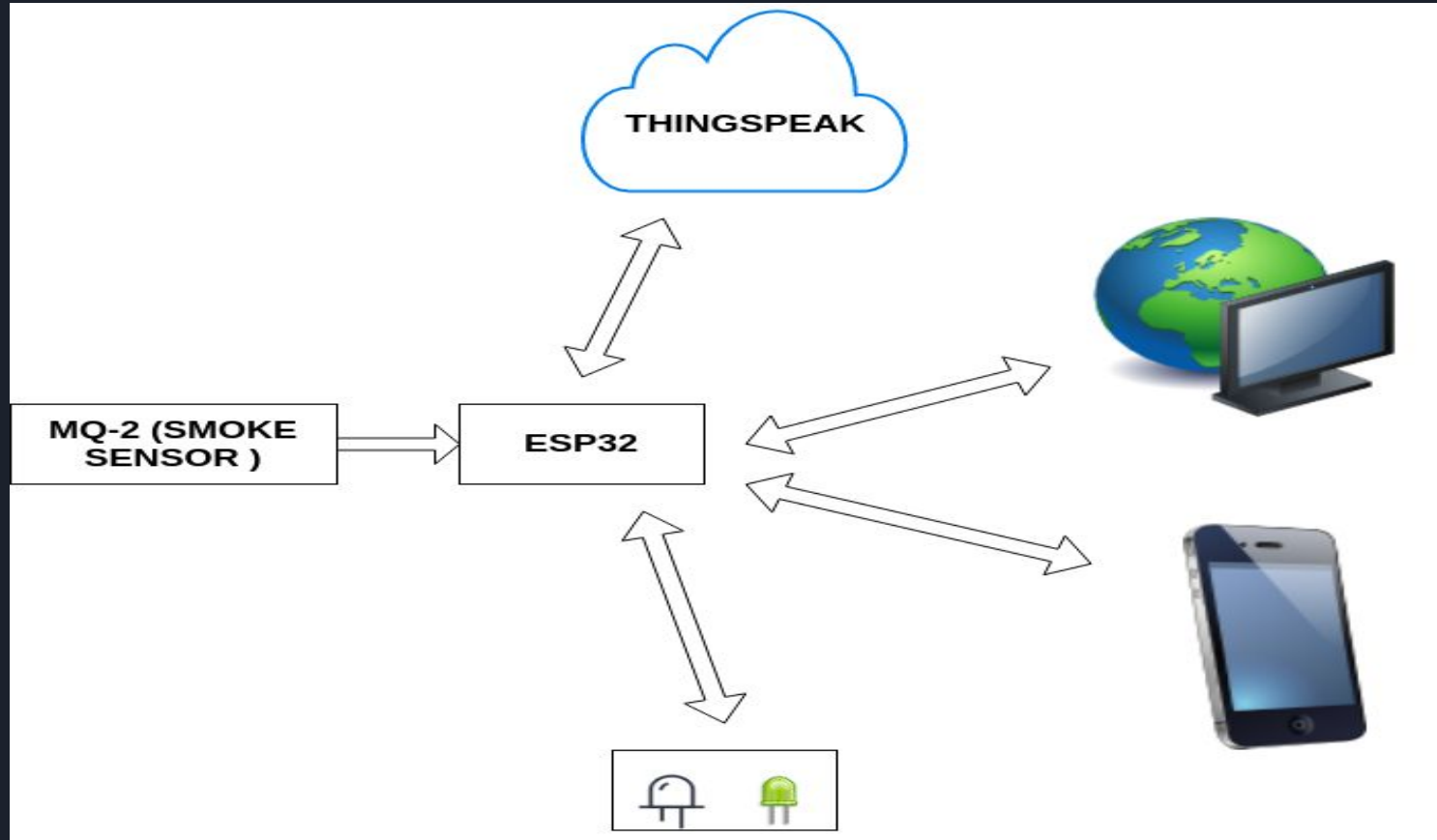
Raja Mavullu Kumar V - 2018102032
Mohith G - 2018102016
Siddarth pavan E - 2018102033
Gowthami G - 2018102048



Motivation

- ★ The key motivation was real life situation which happened during the course. Recently our server room caught fire which caused a big loss.
- ★ We at the same time thought of a immediate alerting system which could respond in a small fraction of time and alert the officials in all possible effective ways, so that it doesn't turn out into a big one.
- ★ This course had given us a very good idea to solve this problem.

Block Diagram



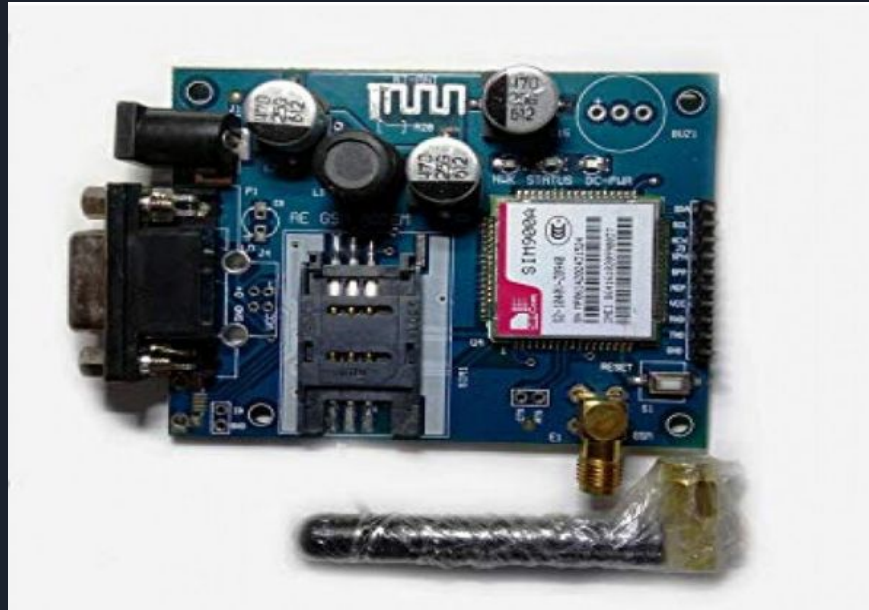


Components

- Esp32
- MQ2 (smoke sensor)
- GSM-SIM900A Module
- LED's (green , red)
- Jumper cables

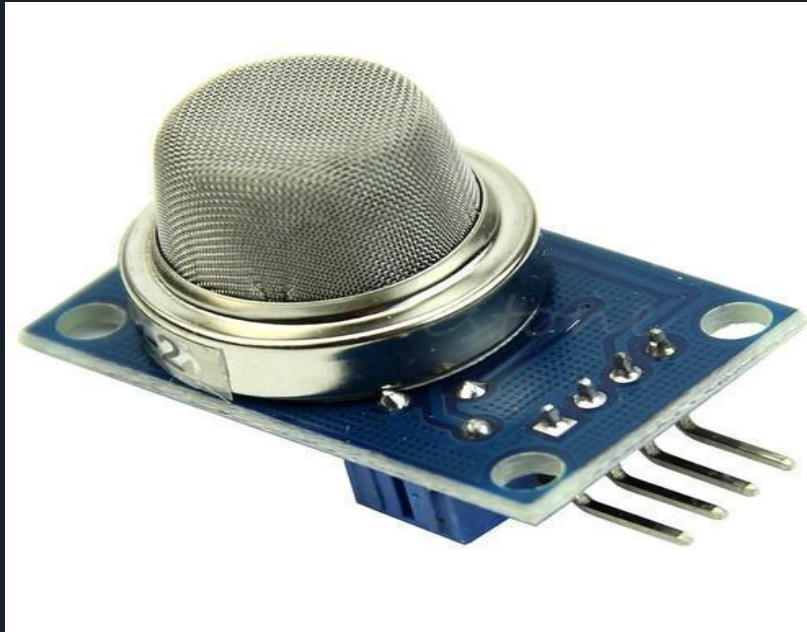
GSM-SIM900A :

GSM module or a GPRS module is a chip or circuit that is used to establish communication between a mobile device or a computing system and a GSM system .



MQ-2 SENSOR :

This is sensitive to LPG,Hydrogen,Smoke,Methane,Propane,Alcohol,Butane and other industrial combustible gases.It has two electrodes one is Aluminium Oxide (Al_2O_3) and a heating element made of Tin Oxide (SnO_2) which acts as a main sensing layer.





Top View of Working

- First the sensor readings are received from the MQ-2 sensor by Esp32 board.
- The readings were then processed and the result is displayed in glowing Red LED for danger signal and Green LED for safe region.
- This data is uploaded to cloud . we used Thingspeak as our cloud
- And in case of danger an alert call will be alerted.

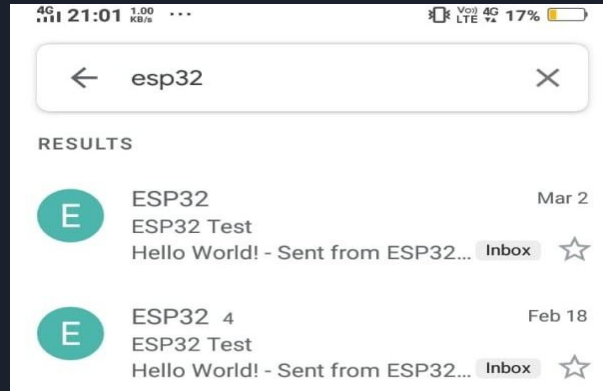
Features and Results

- **Thingspeak** : The sensor readings are uploaded to the Thingspeak cloud. The following is the link to it.

Result : <https://thingspeak.com/channels/920842>

- **Mail Alert** : An alert mail feature is provided such that when the smoke levels suggest danger then immediately a mail is sent to the respective authorities.

Result :





Features and Results

- **Call Alert :** An emergency call alert is given to registered mobile number in case of any danger.

Result : A proof for the call is not available in current situation but it worked successfully.

- **LED Display :** An alert in form of display is made by use of LEDS (Red , Green) .Red glows in case of danger and Green glows when surroundings are in safer way.

Thank you!