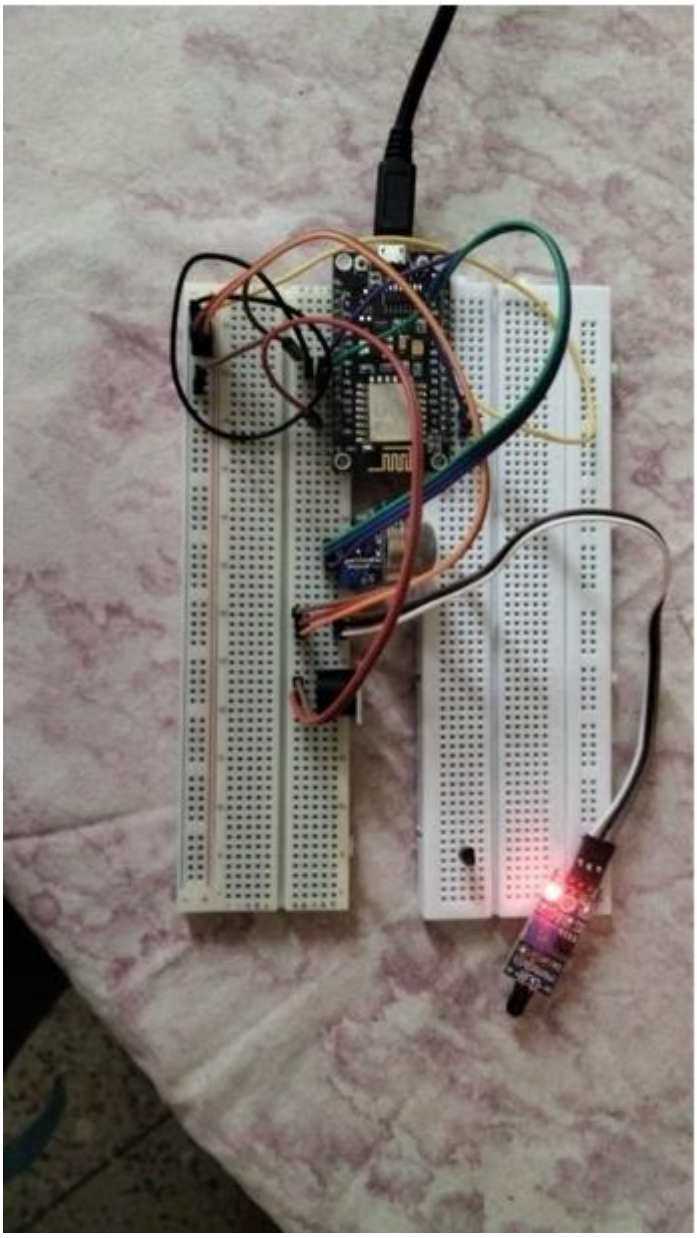
Fire Alarm SYSTEM

###Supplies
- ESP8266 NodeMCU
- Flame Sensor
- MQ2 Smoke Sensor
- Jumper cables
- Breadboard

Environment Setup
Connect the NodeMCU with Power Supply.
Provide Wifi with given Credentials.

FIRE ALARM SYSTEM SETUP



VIDEO LINK:

Part1:
https://drive.google.com/file/d/1yK15Q0bOVXASR5BVvDsL2p2j8kEwUQps/view?usp=sharing
Part2:

https://drive.google.com/file/d/1aLFdjgRMifjsO5URJTRmNAkVEUaaAyxI/view?usp=sharing

Working of the Code

Since code already flashed in the microcontroller hence It will sense data from the sensors and send It to spreadsheet through the Internet and update the spreadsheet in real time, Afterwards from spreadsheet we will send it to Firebase server and through that we will be showing on the Website and triggering Alarm. Whenever we detect fire, the admin and accessible people can see the dashboard and get notified as the indication of fire. Additionally we can also mail fire departments and police station about the same. The newly registered people who can't access the dashboard will send the request. Whenever the request is granted by the admin, he/she can now view the dashboard.

Installation

1. Create/Activate virtual environment
   pip install virtualenv
   virtualenv myproject
   (go to myproject) \Scripts\activate

2. Installing Dajngo
   pip install django

3. Then, clone the Github Project

4. Install Dependencies
(go to requirements directory) pip install -r requirements.txt

5. To run the code
python manage.py runserver

GITHUB LINK:
https://github.com/iit2019234/fire_alarm_system_version_3.0

###Testing the code
In the dashboard.html we are allowed to change the threshold values according to our wish.
For now we have set threshold value of smoke sensor is 70 to 100 and flame sensor when it's **zero**, then we can say that fire is lit and then we send all the detailed information about the fire through mail

Mapped values for different smoke and flame values:

		SMOKE VALUE	FLAME VALUE
Agarbatti smoke	**->**	**120-170**	**1**
LPG	**->**	**400-600**	**1**