Liquefied Petroleum Gas (LPG) is a major fuel for cooking in INDIA. LPG is dispensed into cylinders which are in various sizes and storage capacities. Multiple cases of household fires, injuries and fatalities due to LPG leakage and explosion have been recorded in *ALL PLACES*. This undesirable trend persists majorly because households in INDIA don't have gas leakage detection systems, and at best only smoke detectors are available in selected high class homes. The proactive safety approach is to detect gas leakage and evacuate the gas before it is ignited. In this study, a model gas leakage detector and evacuation system are presented. The implemented, microcontroller-based system, activates a buzzer when a gas leak is detected, it shuts the gas supply solenoid valve to stop the gas flow, and also, it evacuates the gas by switching on evacuator fans. To ensure that the house occupant is adequately notified when there is a gas leakage; the system sends a text via short message service (SMS) to a stored mobile number. The status of the system can be remotely determined by the user, by sending codes to prompt the device via SMS.

LPG gas detection projects main idea is to implement security system for detecting leakage of gas in closed environment. In this project gas leakage is identified by using sensors which works only in closed environment. In present situation there are many cases related to gas leakage which cause innocent people lives and property damage. Implementing this application can be useful for companies, houses, which can save lives of people.

We use ARDUINO UNO Based project to perform the desired task by interfacing Gas sensor, Buzzer. The output of the Gas sensor which works automatically and turn off the regulator form which can be converted into digital form using MCP3201 which is an ADC (Analog to Digital Converter). Initially when there is a leak the Gas sensor detects it and gives voltage related to the amount of gas that is getting escaped from the apparatus. We create a set-point to the microcontroller so as if the Gas sensor gives the output above the set-point the controller drives the buzzer ON as an indication to the user.

This can be used as an application in chemical and hazardous industries where there is a continuous need of monitoring the gas leaks. By using different kinds of sensors for every gas we can almost identify leaks for every kind of gases.

**Need** :-The total number of accidental deaths by cooking gas cylinder/stove burst in India was 3525 during 2014. The top 10 states/UTs in terms of accidental deaths by cooking gas cylinder/stove burst in India during 2014 were: Gujarat, Karnataka, Tamil Nadu, Maharashtra, Telangana, Rajasthan, Andhra Pradesh, West Bengal, Haryana and Madhya Pradesh.

The total number of accidental deaths by cooking gas cylinder/stove burst in Gujarat was 750 during 2014, which was 21.28% of the total number of accidental deaths by cooking gas cylinder/stove burst in India during the year. The total number of accidental deaths by cooking gas cylinder/stove burst in Karnataka was 627 during 2014, which was 17.79% of the total number of accidental deaths by cooking gas cylinder/stove burst in India during the year. The total number of accidental deaths by cooking gas cylinder/stove burst in Tamil Nadu was 444 during 2014, which was 12.6% of the total number of accidental deaths by cooking gas cylinder/stove burst in India during the year.

The total number of accidental deaths by cooking gas cylinder/stove burst in Maharashtra was 324 during 2014, which was 9.19% of the total number of accidental deaths by cooking gas cylinder/stove burst in India during the year. The total number of accidental deaths by cooking gas cylinder/stove burst in Telangana was 179 during 2014, which was 5.08% of the total number of accidental deaths by cooking gas cylinder/stove burst in India during the year. In fact, these top 5 states accounted for almost two-third i.e. 65.94% of the total number of accidental deaths by cooking gas cylinder/stove burst in India during 2014.

Note: All figures are in numbers; Accidental Deaths and Suicides in India 2014, National Crime Records Bureau (NCRB).

More than the lifetime Arduino has been a reason that thousands of projects from everyday bodies to complicated scientific mechanism. Worldwide societies of scholars, performers, programmers, and specialists have assembled around this open-source program. Their knowledge about the said matter contributions a lot to help the society in this subject area.

The project entitled “LPG Leakage Detector using Arduino with SMS Alert and Sound Alarm”, will be a great help in terms of preventing any danger caused by gas leakage.

The purpose of this project is to detect the presence of LPG leakage as a part of a safety system. Apart from sound alarm, an SMS alert will inform the authorized person and the solenoid valve will be triggered to shut down the gas supply to prevent any harmful effects due to gas leakage.

Descriptively, we use a gas sensor to monitor the LPG if the gas leak reaches beyond the normal level. This proposed project will trigger the sound alarm. In addition, the authorized person will be informed about the leakage via SMS alert and the gas supply will be automatically shut down. The people can be saved from a potential explosion caused by gas leakage.