GASGUARD

V.LOHITHA
23P61A12B9

IT Department

M.SUMANA SRI
23P61A1273

IT Department

V.SAI RAM
23P61A12C2

IT Department

OBJECTIVE:

To develop a gas leakage alert system using a gas sensor and Arduino UNO that can detect hazardous gas leaks and send automated alerts via calls and SMS to predefined contacts, ensuring safety and prompt action.

ABSTRACT: Title: GASGUARD is a gas leakage alert system using gas sensor and Arduino uno. Gas leakage is a serious hazard that can lead to explosions, poisoning, and severe environmental damage. This project aims to design and implement a gas leakage detection and alert system using an MQ-series gas sensor, Arduino UNO, and a GSM module. When the sensor detects a gas concentration exceeding a predefined threshold, the Arduino processes the data and triggers an alert. The system then sends an SMS notification and makes an emergency call to predefined contacts, such as homeowners, safety officers, or emergency services. This real-time alert mechanism enhances safety by enabling quick responses to gas leaks in homes, industries, and laboratories. The system is cost-effective, easy to implement, and scalable for various applications.

EXISTING SYSTEM: The existing system uses an MQ-series gas sensor and Arduino UNO to detect gas leaks, triggering a local alarm (buzzer/LED) when gas levels exceed a threshold. How However, it lacks remote notification features.

PROPOSED SYSTEM: The proposed system enhances this by integrating a GSM module (SIM800L/SIM900A) to send SMS alerts and make automated calls to predefined numbers when a leak is detected.

TECHNOLOGIES USED:
Hardware requirements:

• Arduino Uno

• GSM SIM 800 C Module

• Gas Sensor

• 12V Adapter

• Connecting Cable

• Lighter

Software requirements :

• Arduino Uno IDE

Name of the Guide: Mr K.Venkat Reddy

Signature with Date:

Date of verification:

Date of submission: