#include <LiquidCrystal.h> //allows an arduino board to control liquid control displays

LiquidCrystal lcd(2,3,4,5,6,7); //lcd is an object RS-register\_selection(pin2),EN-enable(pin3),D4(pin4),D5(pin5),D6(pin6),D7(pin7)

#include <SoftwareSerial.h>//helps to communicate with the other digital pins

SoftwareSerial mySerial(9, 10);//mySerial is an object,9 and 10 are the digital pins used to communicate.

int gasValue = A0; // smoke / gas sensor connected with analog pin A1 of the arduino / mega.

int data = 0;

int buzzer = 13; //choose the pin for buzzer

int G\_led = 8; // choose the pin for the Green LED

int R\_led = 9; // choose the pin for the Red Led

void setup()

{

pinMode(buzzer,OUTPUT); //declare buzzer as output

pinMode(R\_led,OUTPUT); // declare Red LED as output

pinMode(G\_led,OUTPUT); // declare Green LED as output

randomSeed(analogRead(0));//randomize using noise from analog pin 5

mySerial.begin(9600); // Setting the baud rate of GSM Module

Serial.begin(9600); // Setting the baud rate of Serial Monitor (Arduino)

lcd.begin(16,2); //lcd is configured as having 16 columns and 2 rows

pinMode(gasValue, INPUT);//takes the input from the gas sensor

lcd.print (" Gas Leakage ");//display on LED

lcd.setCursor(0,1);//it tells about the position of the LED,which tells 0th column and 1st row.

lcd.print (" Detector Alarm ");//display on LED

delay(3000);//delay of 3 seconds

lcd.clear();

}

void loop()

{

data = analogRead(gasValue);

Serial.print("Gas Level: ");

Serial.println(data);

lcd.print ("Gas Scan is ON");

lcd.setCursor(0,1);

lcd.print("Gas Level: ");

lcd.print(data);

delay(1000);

if ( data > 90) //

{

digitalWrite(buzzer, HIGH);

digitalWrite(R\_led, HIGH); // Turn LED on.

digitalWrite(G\_led, LOW); // Turn LED off.

SendMessage();

Serial.print("Gas detect alarm");

lcd.clear();

lcd.setCursor(0,0);

lcd.print("Gas Level Exceed");

lcd.setCursor(0,1);

lcd.print("SMS Sent");

delay(1000);

}

else

{

digitalWrite(buzzer, LOW);

digitalWrite(R\_led, LOW); // Turn LED off.

digitalWrite(G\_led, HIGH); // Turn LED on.

Serial.print("Gas Level Low");

lcd.clear();

lcd.setCursor(0,0);

lcd.print("Gas Level Normal");

delay(1000);

}

lcd.clear();

}

void SendMessage()

{

Serial.println("I am in send");

mySerial.println("AT+CMGF=1"); //Sets the GSM Module in Text Mode

delay(1000); // Delay of 1000 milli seconds or 1 second

mySerial.println("AT+CMGS=\"+91xxxxxxxxxx\"\r"); // Replace x with mobile number

delay(1000);

mySerial.println("Excess Gas Detected.");// The SMS text you want to send

mySerial.println(data);

delay(100);

mySerial.println((char)26);// ASCII code of CTRL+Z

delay(1000);

}