GAS LEAKAGE MONITORING AND ALERT SYSTEM FOR INDUSTRIES

Code :

```
#include <LiquidCrystal.h>

LiquidCrystal lcd(2,3,4,5,6,7);

#include <SoftwareSerial.h>

SoftwareSerial mySerial(9, 10);

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

int data = 0;

int buzzer = 13;

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);

 pinMode(R_led,OUTPUT); // declare Red LED as output
 pinMode(G_led,OUTPUT); // declare Green LED as output

randomSeed(analogRead(0));

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);

pinMode(gasValue, INPUT);

lcd.print (" Gas Leakage ");

lcd.setCursor(0,1);

lcd.print (" Detector Alarm ");

delay(3000);

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);
}
```