**CODE**

#include<LiquidCrystal\_I2C.h>

LiquidCrystal\_I2C lcd(32, 16, 2);

int green = 2;

int yellow = 3;

int red = 4;

int siren = 5;

int gas = A0;

int sensorValue = 0;

void setup()

{

Serial.begin(9600);

lcd.init();

lcd.clear();

lcd.backlight();

lcd.setCursor(3,0);

lcd.print("GAS LEAKAGE");

lcd.setCursor(4,1);

lcd.print("DETECTION");

delay(3000);

lcd.clear();

lcd.setCursor(0,0);

lcd.print("Gas Value: ");

pinMode(green, OUTPUT);

pinMode(yellow, OUTPUT);

pinMode(red, OUTPUT);

pinMode(siren, OUTPUT);

digitalWrite(red, LOW);

digitalWrite(yellow, LOW);

digitalWrite(green, LOW);

}

void loop()

{

sensorValue = analogRead(gas);

Serial.println(sensorValue);

lcd.setCursor(11,0);

lcd.print(sensorValue);

if(sensorValue > 500)

{

lcd.setCursor(0,1);

lcd.print("GAS DETECTED");

digitalWrite(red, HIGH);

digitalWrite(yellow, LOW);

digitalWrite(green, LOW);

tone(siren, 200);

}

else if(sensorValue > 281 && sensorValue < 500)

{

lcd.setCursor(0,1);

lcd.print(" ");

digitalWrite(yellow, HIGH);

digitalWrite(red, LOW);

digitalWrite(green, LOW);

noTone(siren);

}

else

{

lcd.setCursor(0,1);

lcd.print(" ");

digitalWrite(green, HIGH);

digitalWrite(red, LOW);

digitalWrite(yellow, LOW);

noTone(siren);

}

delay(1000);

}