PROJECT DEVELOPMENT PHASE

SPRINT 1

Date	29 October 2022
Project Title	Gas Leakage Monitoring and Alerting System
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In Sprint 1, the sensor reads the gas value , and if it is above the threshold, the RED led will glow and Buzzer will ON.

If the sensor value is between the low level and threshold, Yellow color LED will glow.

Otherwise, if it is very lower than threshold, the Green color LED will glow.

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);
}
```

Thus Sprint 1 is successfully completed.