Gas Leakage monitoring & Alerting system for Industries

Project development phase

Delivery of sprint-3

Date	25 October 2022
Team ID	PNT2022TMID00248
Project Name	Gas Leakage Monitoring And Alerting System For Industries

Program:

```
#include <LiquidCrystal.h>


 LiquidCrystal lcd(6, 7, 8, 9, 10, 11);
 float gasPin = A0;
 float gasLevel;
 int ledPin = 2;
 int buttonPin = 3;
 int buzzPin = 4;
 int buttonState;
 int fan = 5;


 void setup()
 {
   pinMode(ledPin, OUTPUT);
```

```
  pinMode(buttonPin, INPUT);
  pinMode(gasPin,INPUT);
  pinMode(fan,OUTPUT);
  Serial.begin(9600);
  lcd.begin(16, 2);
  lcd.setCursor(0,0);
  lcd.print(" Welcome");
  lcd.setCursor(0,2);
  lcd.print(" Youtube");
  delay(500);
  lcd.clear();
}

void loop(){
  // Read the value from gas sensor and button
  gasLevel = analogRead(gasPin);
  buttonState = digitalRead(buttonPin);

  // call the function for gas detection and button work
  gasDetected(gasLevel);
  buzzer(gasLevel);
  exhaustFanOn(buttonState);
```

```
}

// Gas Leakage Detection & Automatic Alarm and Fan ON
void gasDetected(float gasLevel){
  if(gasLevel >= 300){
   digitalWrite(buzzPin,HIGH);
    digitalWrite(ledPin,HIGH);
    digitalWrite(fan,HIGH);
    lcd.setCursor(0,0);
   lcd.print("GAS:");
    lcd.print(gasLevel);
   lcd.setCursor(0,2);
   lcd.print("FAN ON");
   delay(1000);
   lcd.clear();
  }else{
   digitalWrite(ledPin,LOW);
    digitalWrite(buzzPin,LOW);
    digitalWrite(fan,LOW);
    lcd.setCursor(0,0);
   lcd.print("GAS:");
    lcd.print(gasLevel);
```

```
   lcd.setCursor(0,2);
   lcd.print("FAN OFF");
   delay(1000);
   lcd.clear();
  }
}
//BUZZER
void buzzer(float gasLevel){
if(gasLevel>=300)
  {
  for(int i=0; i<=30; i=i+10)
  {
  tone(4,i);
  delay(400);
  noTone(4);
  delay(400);
  }
  }
}
// Manually Exhaust FAN ON
void exhaustFanOn(int buttonState){
  if(buttonState == HIGH){
```

```
    digitalWrite(fan,HIGH);
    lcd.setCursor(0,0);
   lcd.print("Button State:");
    lcd.print(buttonState);
    lcd.setCursor(0,2);
    lcd.print("FAN ON");
    delay(10000);
    lcd.clear();
  }
}
```