GAS LEAKAGE MONITORING AND ALERTING SYSTEM FOR INDUSTRIES

PROJECT DEVELOPMENT – DELIVERY OF SPRINT 2

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```
#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 ONvoid
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();
```

```
  }
}
```