GAS LEAKAGE MONITORING AND ALERTING SYSTEM FOR INDUSTRIES

PROJECT DEVELOPMENT–DELIVERY OF SPRINT4

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Project Name: **Gas Leakage Monitoring & Alerting System for Industries**

```
#include<LiquidCrystal.h>

 LiquidCrystallcd(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);pin
   Mode(fan,OUTPUT);Serial.b
   egin(9600);lcd.begin(16,2);lc
   d.setCursor(0,0);
```

```
  lcd.print("Welcome");
  lcd.setCursor(0,2);lcd.
  print("Youtube");

  delay(500);
  lcd.clear();
}

voidloop(){
  //Read the value from gas sensor and button
  gas Level = 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(floatgasLevel){
  if(gasLevel>=
   300){digitalWrite(buzzPin,HIGH);
   digitalWrite(ledPin,HIGH);digital
   Write(fan,HIGH);
```

```
    lcd.setCursor(0,0);lcd.print("GAS
    :");lcd.print(gasLevel);lcd.setCurs
    or(0,2);lcd.print("FANON");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(floatgasLevel) {
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();
        }
}
```

```
  {
  tone(4,i);de
  lay(400);no
  Tone(4);de
  lay(400);
  }
  }
}
//ManuallyExhaustFANON
void
  exhaustFanOn(intbuttonState){if(bu
  ttonState
  ==HIGH){digitalWrite(fan,HIGH);l
  cd.setCursor(0,0);lcd.print("ButtonS
  tate:");lcd.print(buttonState);lcd.set
  Cursor(0,2);
    lcd.print("FANON");
    delay(10000);lcd.clea
    r();
  }
}
```