

Gas Leakage Monitoring and Alerting System for Industries

PROJECT NAME	GAS LEAKAGE MONITORING & ALERTING SYSTEM FOR INDUSTRIES
TEAM ID	PNT2022TMID13097
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BRANCH	Information Technology

CODE:

```
#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("PNT2022TMID13097");
  delay(500);
  lcd.clear();
}

void loop(){
  gasLevel = analogRead(gasPin);
  buttonState = digitalRead(buttonPin);
  gas_Detected(gasLevel);
  Alert(gasLevel);
  Fan_on(buttonState);
}

void gas_Detected(float gasLevel){
  if(gasLevel >= 200){
    digitalWrite(buzzPin,HIGH);
    digitalWrite(ledPin,HIGH);
    digitalWrite(fan,HIGH);
  }
```

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    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(100);
    lcd.clear();
}
}

void Alert(float gasLevel){
if(gasLevel>=200)
{
    for(int i=0; i<=30; i=i+10)
    {
        tone(4,i);
        delay(400);
        noTone(4);
        delay(400);
    }
}
}

void Fan_on(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();
}
}
}

```