

FINAL DELIVERABLES

Team ID	PNT2022TMID21380
Project Name	Project – Gas Leakage Monitoring and Alerting System for Industries
Team Members	<div>1. Mahalakshmi C – 19D047</div> <div>2. Laila B G – 19D043</div> <div>3. Raji Santhoshi T G – 19D070</div> <div>4. Durga Devi G – 19D117</div>

Final 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("PNT2022TMID21445");
delay(500);
lcd.clear();
}
void loop(){
// Read the value from gas sensor and buttongasLevel =
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 >= 200){
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(100);  
lcd.clear();  
}  
}  
  
//BUZZER  
void buzzer(float gasLevel){  
if(gasLevel>=200)  
{  
for(int i=0; i<=30; i=i+10)  
{  
tone(4,i);  
delay(300);
```

```
noTone(4);
delay(4300);
}
}
}

// 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();
  }
}
```