```
#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(“PNT2022TMID51246”);
  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 >= 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(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();
```

```
  }
}
```