

SPRINT-3

Team ID: PNT2022TMID04358

```
#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 You");
```

```
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 ON  
void 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();
  }
}

```