TEAM ID:PNT2022TMID13124

PROJECT DEVELOPMENT PHASE
SPRINT-2

```
#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(" Youtube");
        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 workgasDetected(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);
```

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        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();
        }
}
```