

## Sprint 2

Project Name	Gas Leakage Monitoring And Alerting System For Industries
Team ID	PNT2022TMID26613

```
#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 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();  
}  
}
```