

PROJECT DEVELOPMENT PHASE

DELIVERY OF SPRINT-2

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Project Name	Gas Leakage Monitoring System and Alerting System

```
#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();
```

```
}
```