GASLEAKAGEMONITORINGANDALERTSYSTEMFORINDUSTRIES

PROJECTDEVELOPMENTPHASE

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SPRINT-3

```
#include
<LiquidCrystal.h>LiquidCrystallcd
(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;
voidsetup(){pinMode(ledPin,
  OUTPUT);
```

```
  pinMode(buttonPin,
  INPUT);pinMode(gasPin,IN
  PUT);pinMode(fan,OUTPUT
  );Serial.begin(9600);lcd.begi
  n(16, 2);lcd.setCursor(0,0);
  lcd.print("
  Welcome");lcd.setCur
  sor(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);exhaustFa
  nOn(buttonState);
}
//Gas LeakageDetection&AutomaticAlarmandFanONvoid
gasDetected(float gasLevel){
  if(gasLevel >=
   300){digitalWrite(buzzPin,H
   IGH);digitalWrite(ledPin,HI
   GH);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);di
  gitalWrite(buzzPin,LOW);di
  gitalWrite(fan,LOW);lcd.set
  Cursor(0,0);lcd.print("GAS:"
  );lcd.print(gasLevel);lcd.set
  Cursor(0,2);lcd.print("FAN
  OFF");delay(1000);
  lcd.clear();
 }
}
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);
  }
  }
}
//ManuallyExhaustFANON
void exhaustFanOn(int
  buttonState){if(buttonState ==
  HIGH){digitalWrite(fan,HIGH);lc
  d.setCursor(0,0);lcd.print("Button
  State:");lcd.print(buttonState);lcd.s
  etCursor(0,2);
    lcd.print("FAN
    ON");delay(10000);lc
    d.clear();
  }}
```