**GAS DETECTION SYSTEM**

**CODE**

#include <LiquidCrystal\_I2C.h>  
#include <Wire.h>  
#include <SoftwareSerial.h>  
LiquidCrystal\_I2C lcd(0x27, 16, 2);  
SoftwareSerial mySerial(2, 3);  
  
int gasValue = A0;  
int data = 0;  
int Red = 6;  
int Green = 7;  
void setup() {  
  randomSeed(analogRead(0));  
  mySerial.begin(9600);  
  Serial.begin(9600);  
  lcd.init();  
  lcd.backlight();  
  pinMode(gasValue, INPUT);  
  pinMode(Red, OUTPUT);  
  pinMode(Green, OUTPUT);  
  lcd.print("   WELCOME TO");  
  lcd.setCursor(0, 1);  
  lcd.print("GAS LEAKAGE DETECTOR");  
  delay(3000);  
  lcd.clear();  
  lcd.print(" Gas Leakage ");  
  lcd.setCursor(0, 1);  
  lcd.print(" Detector Alarm ");  
  delay(3000);  
  lcd.clear();  
}  
  
void loop() {  
  
  data = analogRead(gasValue);  
  
  Serial.print("Gas Level: ");  
  Serial.println(data);  
  lcd.print("Gas Scan is ON");  
  lcd.setCursor(0, 1);  
  lcd.print("Gas Level: ");  
  lcd.print(data);  
  delay(1000);  
  
  if (data > 80) {  
    SendMessage();  
    Serial.print("Gas detect alarm");  
    lcd.clear();  
    lcd.setCursor(0, 0);  
    lcd.print(" Gas Leakage");  
    lcd.setCursor(0, 1);  
    lcd.print(" SMS Sent");  
    delay(1000);  
    digitalWrite(Red, HIGH);  
    digitalWrite(Green, LOW);  
    delay(3000);  
  
  }  
    Serial.print("Gas Level Low");  
    lcd.clear();  
    lcd.setCursor(0, 0);  
    lcd.print("Gas Level Normal");  
    digitalWrite(Red, LOW);  
    digitalWrite(Green, HIGH);  
    delay(1000);  
   
  lcd.clear();  
}  
  
void SendMessage() {  
  Serial.println("I am in send");  
  mySerial.println("AT+CMGF=1");  
  delay(1000);  
  mySerial.println("AT+CMGS=\"+919047440900\"\r");  
  mySerial.println("Hi Gas Detected plz Open Windows And Check Your Gas Cylinder");  
  delay(100);  
  mySerial.println((char)26);  
  delay(1000);  
}