Final Stage code for GAS LEAKAGE MONITORING AND ALERTING SYSTEM

```
#include <LiquidCrystal_I2C.h>
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x3F,16,2);
#include <SoftwareSerial.h>
SoftwareSerial mySerial(9, 10);
#include<Servo.h>
Servo s1;
int buzzer = 13;
int green = 7;
int red = 6;
int fan = 5;
int GASA0 = A0;
int gasvalue;

void setup() {

 lcd.init();                    // initialize the lcd
 lcd.init();
 lcd.backlight();
 mySerial.begin(9600);
 Serial.begin(9600);
 lcd.setCursor(3,0);
 lcd.print("welcome to");
 delay(2000);
 lcd.setCursor(6,1);
```

```
 lcd.print("Home");
 delay(2000);
 lcd.clear();
 pinMode(buzzer, OUTPUT);
 pinMode(green, OUTPUT);
 pinMode(red, OUTPUT);
 pinMode(fan, OUTPUT);
 s1.attach(9);



}

void loop() {
  int analogSensor = analogRead(GASA0);
  int gasvalue=(analogSensor-50)/10;

  lcd.setCursor(0,0);
  lcd.print("GAS Level:");
  lcd.setCursor(10,0);
  lcd.print(gasvalue);
  lcd.setCursor(12,0);
  lcd.print("%");

  // Checks if it has reached the threshold value



  if (gasvalue >= 40)
  {
```

```
  SendTextMessage();
  lcd.setCursor(0,1);
lcd.print("!!!!!DANGER!!!!!");        // functions when gas exceeds
digitalWrite(7,LOW);
digitalWrite(6,HIGH);
digitalWrite(5,HIGH);
s1.write(180);
delay(2000);




/*for(int i=0; i<180;i+=1){
  s1.write(i);
  delay(15);
}*/

  digitalWrite(13,HIGH);
  delay(300);
  digitalWrite(13,LOW);
  delay(300);

   }




else
{
```

```
 lcd.setCursor(0,1);
 lcd.print("--NORMAL level--");      // gas in normal level
 digitalWrite(5,LOW);//fan
digitalWrite(6,LOW);//red
digitalWrite(13,LOW);//buzzer
digitalWrite(7,HIGH); //green

   /*s1.write(0);
   delay(2000);*/


   /*for(int i=180; i<0;i-=1){
   s1.write(i);
   delay(15);
 }*/


  }

}


void SendTextMessage()
{
  mySerial.println("AT+CMGF=1");    //To send SMS in Text Mode
  delay(1000);
  mySerial.println("AT+CMGS=\"+916301638529\"\r");
  delay(1000);
  mySerial.println("Gas Leaking!! in Home");//the content of the message
```

```
  delay(200);
  mySerial.println((char)26);//the stopping character
  delay(1000);

}
```