ASSIGNMENT 1

TEAM ID: PNT2022TMID52298

NAME : M J Vaishnavi

REGISTER NUMBER: 963519106036

PROJECT TITLE: Gas leakage monitoring and alarting system

SOURCE CODE :

```
//LDR sensor-----------------------------------


int sensorReading = 0;



//LDR sensor-----------------------------------

//Ultrasonic sensor-------------------------------------
int inches = 0;
int cm = 0;
int triggerPin = 13;
int echoPin = 12;
int defult = 0;
long readUltrasonicDistance(int triggerPin,int echoPin)
{
  pinMode(triggerPin, OUTPUT);
```

```
    digitalWrite(triggerPin, LOW);

    delayMicroseconds(2);

    digitalWrite(triggerPin, HIGH);

    delayMicroseconds(10);

    digitalWrite(triggerPin, LOW);

    pinMode(echoPin, INPUT);

    return pulseIn(echoPin, HIGH);

}
//Ultrasonic sensor-----------------------------------


//Gas sensor----------------------------------
int adcPin = 0;

int adcValue = 0;

float v;

float rs,ppm;



int buttonState = 0;

void setup() {


  //LDR sensor-----------------------------------
        pinMode(8, OUTPUT);

        pinMode(A0, INPUT);


        Serial.begin(9600);
  //LDR sensor-----------------------------------


  //Ultrasonic sensor-----------------------------------
    pinMode(2, OUTPUT);

    cm = 0.01723*readUltrasonicDistance(triggerPin, echoPin);
```

```
    defult = cm;

        Serial.print(defult);
//Ultrasonic sensor----------------------------------
//PIR sensor------------------------------------------

        pinMode(3, INPUT);

        pinMode(9, OUTPUT);
//PIR sensor------------------------------------------


//Motor-----------------------------


        pinMode(5, OUTPUT);

        pinMode(4, INPUT);


//Motor-----------------------------
  pinMode(7, OUTPUT);

  pinMode(A1, INPUT);
}


void loop() {//############################################################
//LDR sensor----------------------------------

        sensorReading = analogRead(A0);


  if(sensorReading < 900){
    digitalWrite(8, HIGH);
  }else{
    digitalWrite(8, LOW);
  }
//LDR sensor----------------------------------


//Ultrasonic sensor----------------------------------
```

```
    cm = 0.01723*readUltrasonicDistance(triggerPin, echoPin)   ;

  if(cm < defult){

     digitalWrite(2,HIGH);

     delay(50);

         digitalWrite(2,LOW);

  }else{

    digitalWrite(2,LOW);


  }
//Ultrasonic sensor----------------------------------


//PIR sensor--------------------------------
        int value = digitalRead(3);

        if (value == 1)

        {

        tone(9, 440, 1000);

  }
//PIR sensor--------------------------------


//Motor-------------------------------------------
        buttonState = digitalRead(4);

  if(buttonState == 1){

        digitalWrite(5,0);

  }

  else{

   digitalWrite(5,HIGH);

  }
//Motor-------------------------------------------


//Gas sensor--------------------------------
```

```
  int sensor_gas = analogRead(A1);


  if(sensor_gas >= 400){
          digitalWrite(7,HIGH);
  }
  else{
    digitalWrite(7,LOW);

  }



  //----------------------------------------


  delay(1000);
}
```