SmartHomeAutomation

Assignment -1

Team ID
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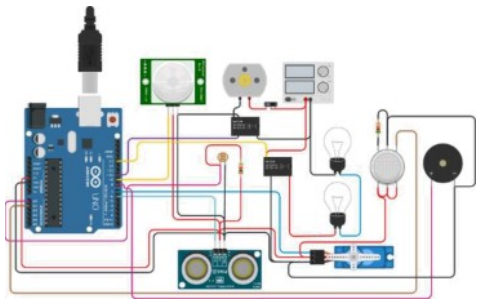
Components:

1. Arduino unoR3
2. Led
3. Resistor
4. Pirsensor
5. Buzzer
6. Relay
7. Gassensor
8. Dcmotor
9. Microservo
10. Photoresistor

SmartHome-CircuitConnection:



Code:

```
#incIude <Servo.h>

int output1Value =0;
int sen1Value =0;
intsen2Value=0;
```

```
int const gas sensor = A1;
int const LDR = AO;
int limit = 400;

long readUltrasonicDistance(int triggerPin, int echoPin)

  pinMode(triggerPin, OUTPUT); // Clear the trigger
  digitalWrite(triggerPin, LOW);
  delayMicroseconds(2);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);
  pinMode(echoPin, INPUT);


Servo servo 7;

void setup()

   Serial.begin(9600); //initialize serial
  communication pinMode(AO, INPUT); //LDR
  pinMode(A1,INPUT);      //gas sensor
  pinMode(13,OUTPUT);//connectedtorelay
  servo7.attach(7,500,2500);//servomotor

  pinMode(8,OUTPUT);       //signaltopiezobuzzer
  pinMode(9, INPUT); //signal toPIR
  pinMode(10,OUTPUT);//signaltonpnasswitch
  pinMode(4, OUTPUT); //RedLED
  pinMode(3, OUTPUT); //Green LED



void loop()


    int val1 = analogRead(LDR); if
  (val1 > 500)

     digitalWrite(13, LOW);
    Serial.print("Bulb ON = ");
    Serial.print(val1);
```

```
 else

   digitalWrite(13, HIGH);
  Serial.print("Bulb OFF = ");
  Serial.print(vall);


   sen2Value = digitalRead(9);
 if (sen2Value == 0)

   digitalWrite(10, LOW); //npn as switch OFF
   digitalWrite(4,HIGH);//RedLEDON,indicatingnomotion
   digitalWrite(3,LOW);//GreenLEDOFF,sincenoMotiondetected
  Serial.print("    ||NOMotionDetected      ");


 if (sen2Value == 1)

   digitalWrite(10,HIGH);//npnasswitchON
  delay(3000);
   digitalWrite(4, LOW); // RED LED OFF
   digitalWrite(3, HIGH);//GREEN LED ON , indicating motion detected
   Serial.print("    | |MotionDetected!      ");

 delay(300);


intval=analogRead(gassensor);
  Serial.print(val); //Printing in serial monitor
 (val >limit)

   tone(8, 650);

 delay(300); noTone(8);


 sen1Value = 0.01723 * readUltrasonicDistance(6, 6);

 if(sen1Value<100)

   servo7.write(90);
  Serial.print("   ||DoorOpen!;Distance=");
  Serial.print(sen1Value);
 Serial.print("\n");


 else

   servo7.write(0);
  Serial.print("   ||DoorClosed!;Distance=");
  Serial.print(sen1Value);
  Serial.print("\n");

 delay(10);
```