```cpp
#include <Servo.h>
int output1Value = 0;
int sen1Value = 0;
int sen2Value = 0;
int const gas_sensor = A1;
int const LDR = A0;
int limit = 400;
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);
}
Servo servo_7;
void setup()
{
Serial.begin(9600);
pinMode(A0, INPUT);
pinMode(A1,INPUT);
pinMode(13, OUTPUT);
servo_7.attach(7, 500, 2500);
pinMode(8,OUTPUT);
pinMode(9, INPUT);
pinMode(10, OUTPUT);
pinMode(4, OUTPUT);
pinMode(3, OUTPUT);
}
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(val1);
}
sen2Value = digitalRead(9);
if (sen2Value == 0)
{
```

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digitalWrite(10, LOW);
digitalWrite(4, HIGH);
digitalWrite(3, LOW);
Serial.print(" || NO Motion Detected " );
}
if (sen2Value == 1)
{
digitalWrite(10, HIGH);
delay(3000);
digitalWrite(4, LOW);
digitalWrite(3, HIGH);
Serial.print(" || Motion Detected! " );
}
delay(300);
int val = analogRead(gas_sensor);
Serial.print("|| Gas Sensor Value = ");
Serial.print(val);
val = map(val, 300, 750, 0, 100);
if (val > limit)
{
tone(8, 650);
}
delay(300);
noTone(8);
sen1Value = 0.01723 * readUltrasonicDistance(6, 6);
if (sen1Value < 100)
{
servo_7.write(90);
Serial.print(" || Door Open! ; Distance = ");
Serial.print(sen1Value);
Serial.print("\n");
}
else
{
servo_7.write(0);
Serial.print(" || Door Closed! ; Distance = ");
Serial.print(sen1Value);
Serial.print("\n");
}
delay(10);
}
```