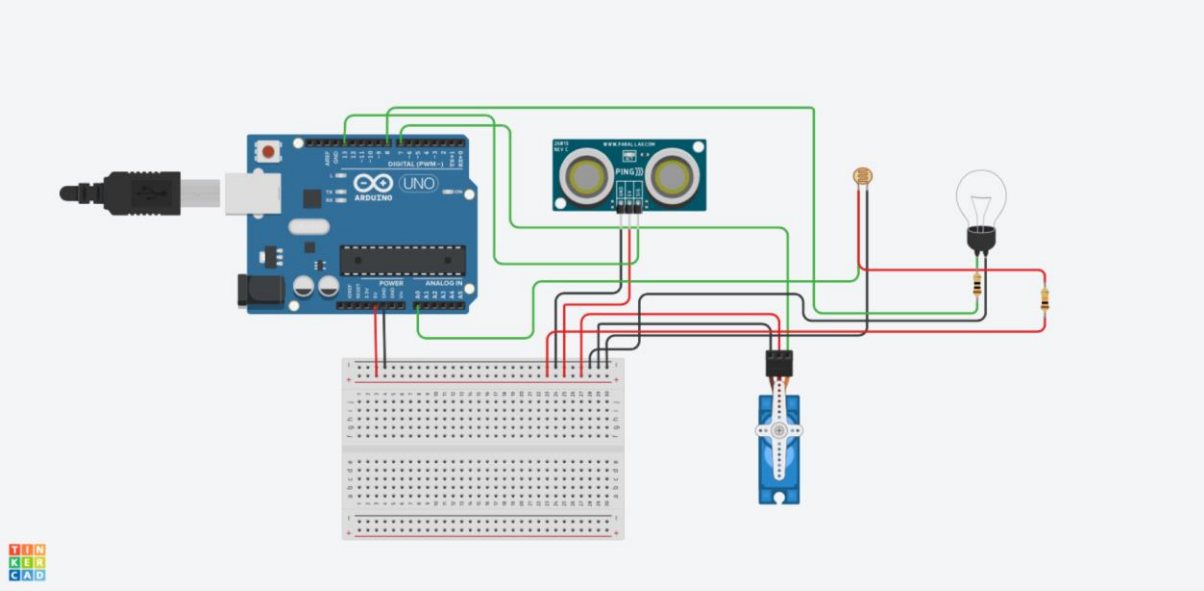
Assignment Date	14 September 2022
Student Name	Abishek R
Student Roll Number	2019504503
Maximum Marks	2 Marks

ASSIGNMENT-1

SMART HOME AUTOMATION

Circuit Design:



Source code:

```
#include <Servo.h>

int output1Value = 0;
int sen1Value = 0;
int sen2Value = 0;
int const LDR = A0;


int USdis(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(13, INPUT);
        servo_7.attach(7, 500, 2500);
        pinMode(8,OUTPUT);
}

void loop()
{
    int val1 = analogRead(LDR);
        if (val1 > 90)
        {
        digitalWrite(8, HIGH);
        Serial.print("Bulb OFF = ");
        Serial.print(val1);
        }
        else
        {
        digitalWrite(8, LOW);
        Serial.print("Bulb ON = ");
        Serial.print(val1);
        }

        sen1Value = 0.01723 * USdis(6, 6);
        if (sen1Value < 100)
        {
        servo_7.write(90);
        Serial.print("Door is Open: Distance = ");
        Serial.print(sen1Value);
        Serial.print("\n");
        delay(1000);
        servo_7.write(0);
```

```
Serial.print("Door is Closed: 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);
```