

Assignment -1
Tinkercad

Assignment Date	19 September 2022
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Maximum Marks	2 Marks

Question-1:

Build a smart home in tinkercad Use atleast 2 sensors, led, buzzer in a circuit. Simulate in a single code.

Solution:

```
#include <Servo.h>

int valuephoto = 0;

int valuesensor = 0;

long readUltrasonicDistance(int triggerPin, int echoPin)
{
    pinMode(triggerPin, OUTPUT); // Clear the trigger
    digitalWrite(triggerPin, LOW);
    delayMicroseconds(2);
    // Sets the trigger pin to HIGH state for 10 microseconds
    digitalWrite(triggerPin, HIGH);
    delayMicroseconds(10);
    digitalWrite(triggerPin, LOW);
    pinMode(echoPin, INPUT);
    // Reads the echo pin, and returns the sound wave travel time in microseconds
    return pulseIn(echoPin, HIGH);
}
```

```

Servo servo_13;

Servo servo_3;

void setup()
{
    pinMode(A0, INPUT);
    servo_13.attach(13, 500, 2500);
    servo_3.attach(3, 500, 2500);
}

void loop()
{
    valuesensor = 0.01723 * readUltrasonicDistance(10, 10);
    valuephoto = analogRead(A0);
    if (valuesensor <= 150) {
        servo_13.write(90);
    } else {
        servo_13.write(
            0);
    }
    if (valuephoto >= 500) {
        servo_3.write(90);
    } else {
        servo_3.write(0
            );
    }
    delay(10); // Delay a little bit to improve simulation performance

```

