

# ASSIGNMENT-I

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UCE THIRUKUVALAI  
III- YEAR ECE

Build a smart home in wokwi with minimum 2 sensors, LED, buzzer.

EXAMPLE: Pirsensor for home security, servo motor for door lock system.

HINT: replicate tinkercad code and connections in wokwi and integrate both codes to a single code

Wokwi - Visual Arduino and ESP8266

wokwi.com/projects/362878786738937505

WOKWI

home

Docs

Sketch Manager

```
1 //define variables
2 #define triggerPin 12
3 #define echoPin 13
4 #define ledPin 2
5 #define speakerPin 10
6 #define pitch 262
7
8 double duration,distance;
9
10 void setup() {
11   //setup for Sensor
12   Serial.begin(9600);
13   pinMode(triggerPin, OUTPUT);
14   pinMode(echoPin, INPUT);
15
16   //setup for LED
17   pinMode(ledPin, OUTPUT);
18
19   //set for speaker
20   pinMode(speakerPin, OUTPUT);
21
22 }
23
24 void loop() {
25   //looping sensor
```

Simulation

35°C  
Monthly summary

ENG  
IN

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23-04-2023

```
25 void loop() {
26   //looping sensor
27   digitalWrite(triggerPin, LOW);
28   delayMicroseconds(2);
29   digitalWrite(triggerPin, HIGH);
30   delayMicroseconds(10);
31   digitalWrite(triggerPin, LOW);
32   delayMicroseconds(2);
33
34   //get duration
35   duration=pulseIn(echoPin,HIGH);
36
37   //calculate distance
38   distance=(duration/2)*0.0343;
39
40   //consider maximum width of the door=200 cm
41
42   if(distance<200){
43     digitalWrite(ledPin, HIGH);
44     tone(speakerPin,pitch);
45     delay(300);
46
47     digitalWrite(ledPin, LOW);
48     noTone(speakerPin);
49     delay(300);
50 }
```



sketch.ino diagram.json Library Manager Simulation

```
41  
42 if(distance<200){  
43   digitalWrite(ledPin, HIGH);  
44   tone(speakerPin,pitch);  
45   delay(300);  
46  
47   digitalWrite(ledPin, LOW);  
48   noTone(speakerPin);  
49   delay(300);  
50 }  
51 else{  
52   digitalWrite(ledPin, LOW);  
53   noTone(speakerPin);  
54 }  
55 }  
56
```

Wokwi Arduino and ESP8266 IDE

wokwi.com/projects/362878786738837505

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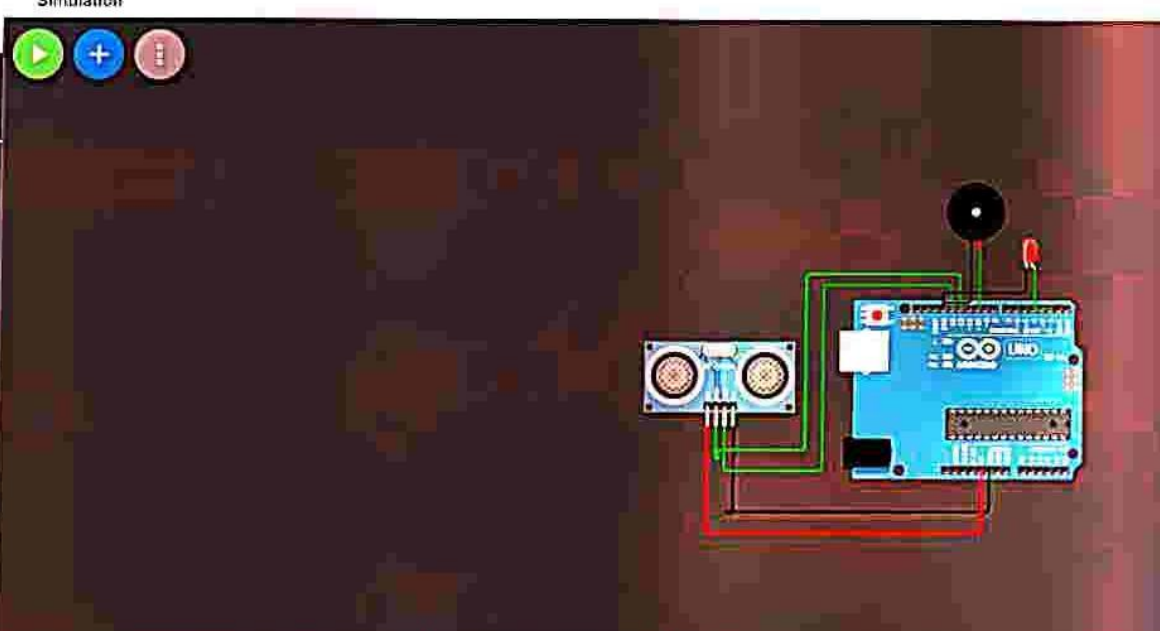
WOKWI SAVE SHARE home Docs

sketch.ino diagram.json

Library Manager

```
8
9 double duration,distance;
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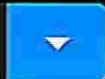
Simulation



35°C Mostly sunny

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WOKwi



Simulation

Code



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