

smart home -ramya

assignment-<https://wokwi.com/projects/363271777298462721>

```
//define variables
#define triggerPin 12
#define echoPin 13
#define ledPin 2
#define speakerPin 10
#define pitch 262

double duration,distance;

void setup() {
  //setup for sensor
  Serial.begin(9600);
  pinMode(triggerPin,OUTPUT);
  pinMode(echoPin,INPUT);

  //setup for LED
  pinMode(ledPin,OUTPUT);

  //setup for speaker
  pinMode(speakerPin,OUTPUT);
}

void loop() {
  //looping sensor(create sound wave)
  digitalWrite(triggerPin,LOW);
  delayMicroseconds(2);
  digitalWrite(triggerPin,HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin,LOW);
  delayMicroseconds(2);

  //getduration
  duration = pulseIn(echoPin,HIGH);

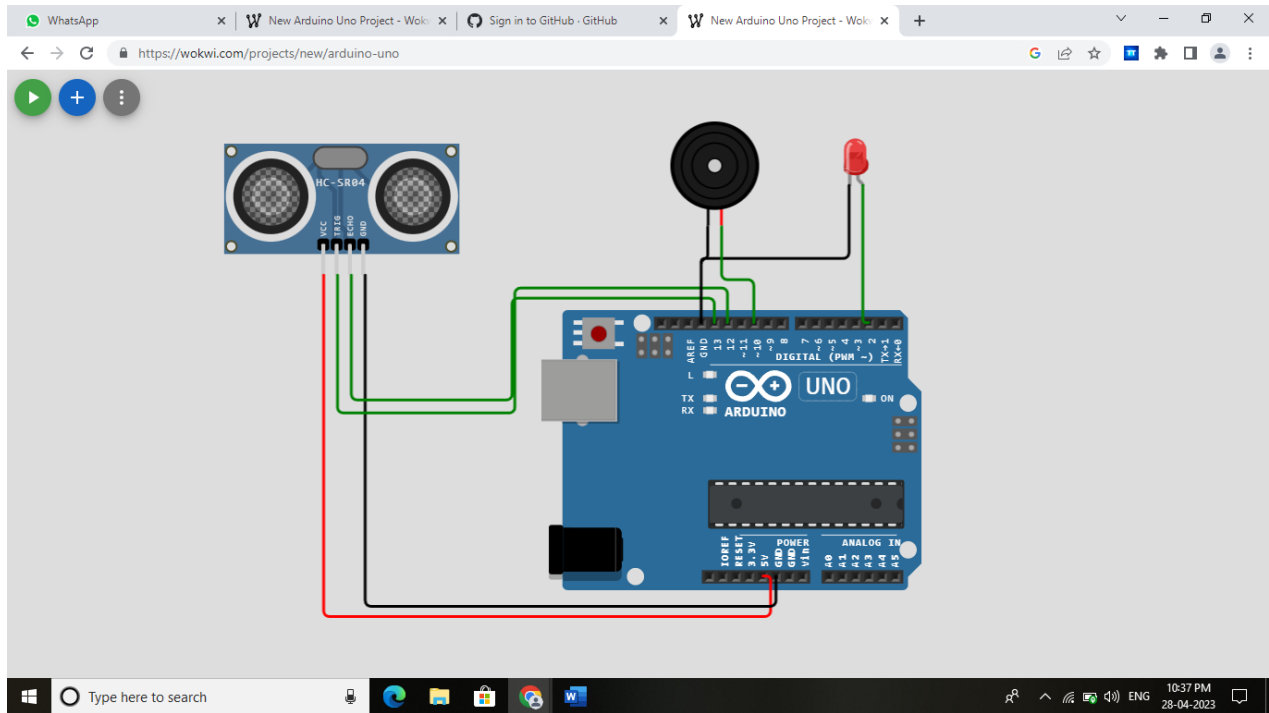
  //caculate distance
```

```
distance = (duration/2) * 0.0343;

//consider maximum width of the door = 200 cm

if(distance<200){
    digitalWrite(ledPin,HIGH);
    tone(speakerPin, pitch);
    delay(300);

    digitalWrite(ledPin, LOW);
    noTone(speakerPin);
    delay(300);
}
else{
    digitalWrite(ledPin,LOW);
    noTone(speakerPin);
}
}
```



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wokwi.com/projects/3632717

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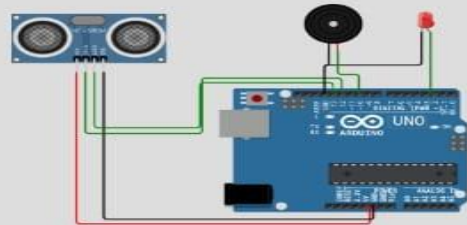
sketch.ino

diagram.json

Library Manager

Simulation

```
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 //setup for speaker
20 pinMode(speakerPin,OUTPUT);
21
22 }
23
24 void loop() {
25 //looping sensor(create sound wave)
26 digitalWrite(triggerPin,LOW);
27 delayMicroseconds(2);
28 digitalWrite(triggerPin,HIGH);
29 delayMicroseconds(10);
30 digitalWrite(triggerPin,LOW);
31 delayMicroseconds(2);
32
33 //getduration
34 duration = pulseIn(echoPin,HIGH);
35
36 //caculate distance
37 distance = (duration/2) * 0.0343;
38
39 //consider maximum width of the door = 200 cm
40
41 if(distance<200){
42 digitalWrite(ledPin,HIGH);
43 tone(speakerPin, pitch);
44 delay(300);
45
46 digitalWrite(ledPin, LOW);
47 noTone(speakerPin);
48 delay(300);
49 }
50 else{
51 digitalWrite(ledPin,LOW);
52 noTone(speakerPin);
53 }
54 }
55 void setup() {
56 // put your setup code here, to run once:
57
58 }
59
60 void loop() {
61 // put your main code here, to run repeatedly:
62
63 }
64
```



English

Tamil

