

smart home -priyatharshini

assignment-<https://wokwi.com/projects/363269572902190081>

```
//define variables
#define trigerPin 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(trigerPin,OUTPUT);
  pinMode(echoPin,INPUT);

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

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

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

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

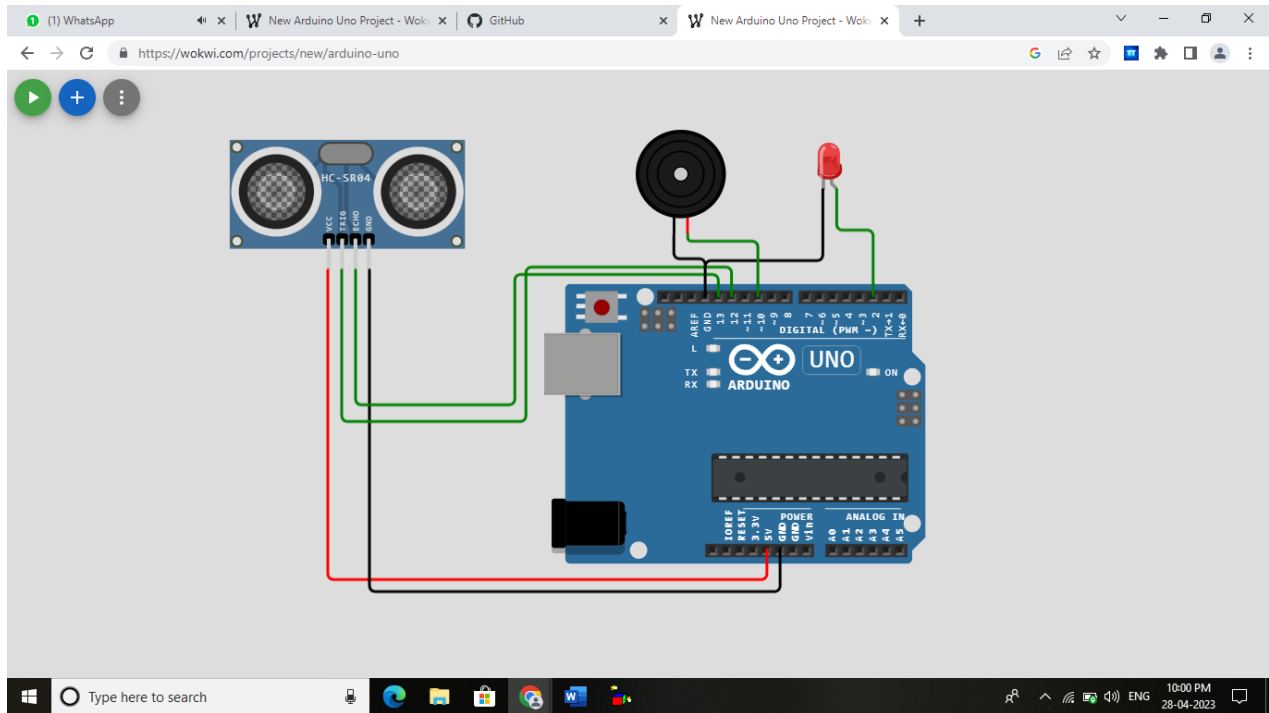
  //caculate distance
```

```
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/3632695

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sketch.ino

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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
```

