

smart home -akshaya

assignment- <https://wokwi.com/projects/363146419518924801>

```
//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
```

```

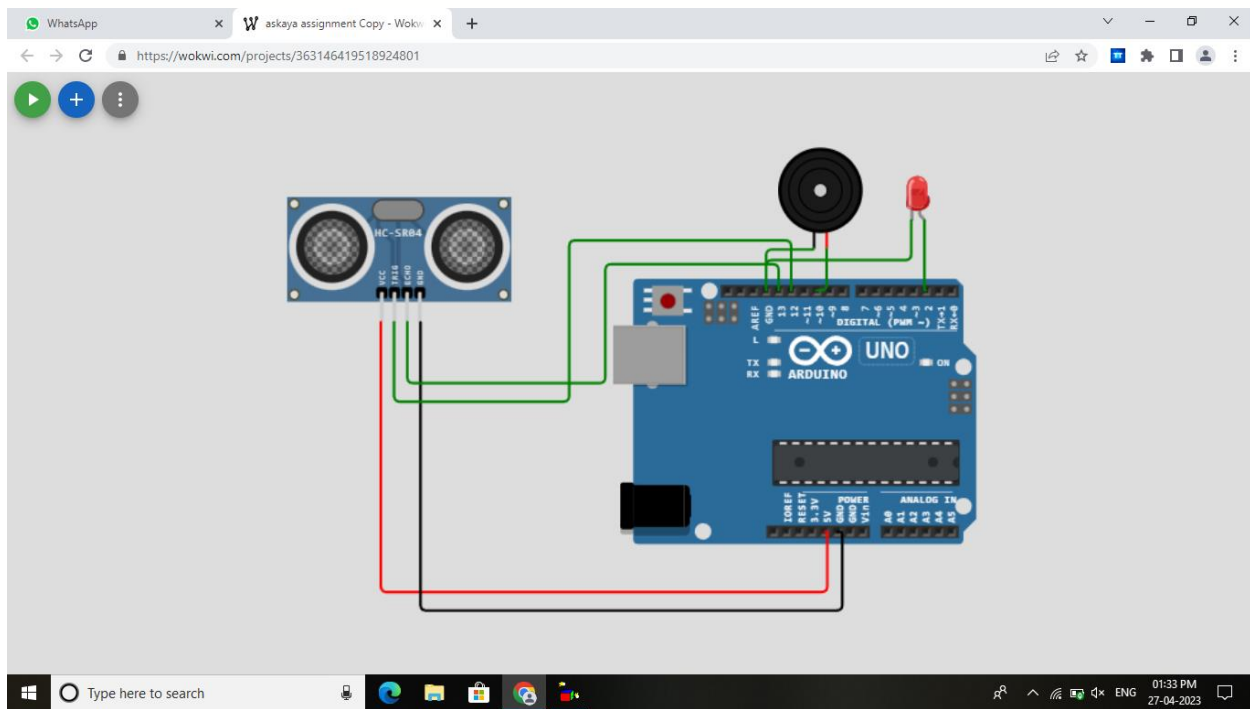
distance = (duration/2) * 0.0343;

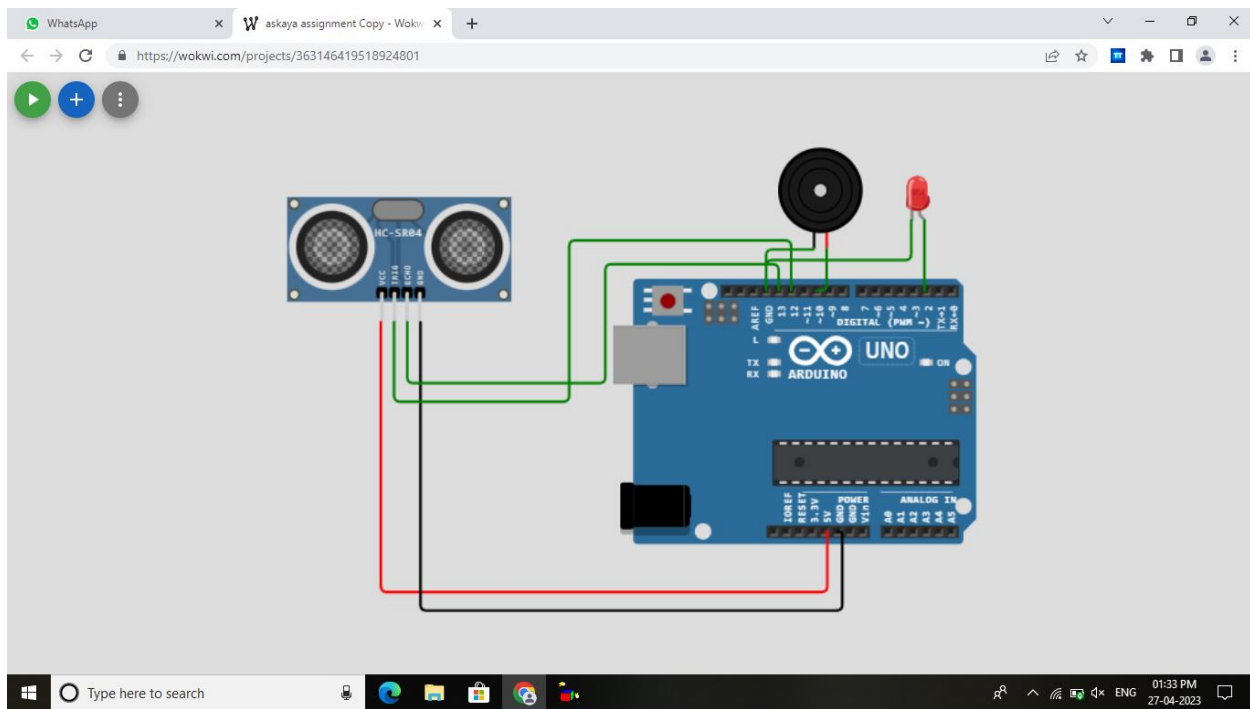
//consider maximum width of the door = 200 cm

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

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

```





1:39 PM | 101KB/s

VoLTE 4G+ 51



wokwi.com/projects/3631464

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WOKWI

SAVE

SHARE



Docs



sketch.ino

diagram.json

Library Manager

Simulation



```
1 |
2 //define variables
3 #define triggerPin 12
4 #define echoPin 13
5 #define ledPin 2
6 #define speakerPin 10
7 #define pitch 262
8
9 double duration,distance;
10
11 void setup() {
12   //setup for sensor
13   Serial.begin(9600);
14   pinMode(triggerPin,OUTPUT);
15   pinMode(echoPin,INPUT);
16
17   //setup for LED
18   pinMode(ledPin,OUTPUT);
19
20   //setup for speaker
21   pinMode(speakerPin,OUTPUT);
22 }
23
24
25 void loop() {
26   //looping sensor(create sound wave)
27   digitalWrite(triggerPin,LOW);
28   delayMicroseconds(2);
29   digitalWrite(triggerPin,HIGH);
30   delayMicroseconds(10);
31   digitalWrite(triggerPin,LOW);
32   delayMicroseconds(2);
33
34   //getduration
35   duration = pulseIn(echoPin,HIGH);
36
37   //caculate 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   }
51   else{
52     digitalWrite(ledPin,LOW);
53     noTone(speakerPin);
54   }
55 }
56
57
58
```

