

ASSIGNMENT -4

Project link: <https://wokwi.com/projects/290056311044833800>

Code:

```
#define ECHO_PIN 2

#define TRIG_PIN 3

#define organization " rxswes"
#define device type "ultrasonic"
#define deviceId="2710"
#define authmethod="token"
#define authToken="123456789"
void setup() {
  Serial.begin(115200);
  pinMode(LED_BUILTIN, OUTPUT);
  pinMode(TRIG_PIN, OUTPUT);
  pinMode(ECHO_PIN, INPUT);
}
float readDistanceCM() {
  digitalWrite(TRIG_PIN, LOW);
  delayMicroseconds(2);
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
  int duration = pulseIn(ECHO_PIN, HIGH);
  return duration * 0.034 / 2;
}
void loop(){
  float distance=readDistanceCM();
  if(distance<=100)
  {
    Serial.println("person detected");
  }
  else{
    Serial.print("Measured distance:");
    Serial.println(readDistanceCM());
  }
  delay(1000);
}
```

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rxswes.internetofthings.ibmcloud.com/dashboard/devices/browse

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Browse Action Device Types Interfaces

| Device ID | Status | Device Type |
|-----------|--------------|-------------|
| 2710 | Disconnected | ultrasonic |

Identity Device Information Recent Events

Device ID: 2710
Device Type: ultrasonic
Date Added: Oct 28, 2022 10:41 PM
Added By: 613519106050@smartinternz
Connection Status: Disconnected

Items per page 50 | 1-1 of 1 item

Device Type: ultrasonic

Events 1 [New event type](#)

Event type name: event_1 [Send](#) [Delete](#)

Schedule: 1 Every Minute

Payload: Specify the event payload in the editor window or by uploading a [CSV file](#).

```
0 {  
1  "distance": random(27, 100)  
2 }  
3
```

[Upload a CSV file](#)

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Browse Action Device Types Interfaces

The recent events listed show the live stream of data that is coming from the device.

| Event | Value |
|---------|-----------------|
| event_1 | {"distance":45} |
| event_1 | {"distance":77} |
| event_1 | {"distance":93} |
| event_1 | {"distance":42} |
| event_1 | {"distance":68} |

Device Type: ultrasonic

Events 1 [New event type](#)

Event type name: event_1 [Send](#) [Delete](#)

Schedule: 1 Every Minute

Payload: Specify the event payload in the editor window or by uploading a [CSV file](#).

```
0 {  
1  "distance": random(27, 100)  
2 }  
3
```

[Upload a CSV file](#)

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ultrasonic

Line chart

5 minutes now

distance

Device Type: ultrasonic

Events 1 [New event type](#)

Event type name event_1 [Send](#) [Delete](#)

Schedule 1 Every Minute

Payload

Specify the event payload in the editor window or by uploading a [CSV file](#).

```
0 {
1   "distance": random(27, 100)
2 }
3
```

[Upload a CSV file](#)

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```
1 #define ECHO_PIN 2
2 #define TRIG_PIN 3
3 #define organization =" rxswes"
4 #define device type ="ultrasonic"
5 #define deviceId="2710"
6 #define authmethod="token"
7 #define authToken="123456789"
8 void setup() {
9   Serial.begin(115200);
10  pinMode(LED_BUILTIN, OUTPUT);
11  pinMode(TRIG_PIN, OUTPUT);
12  pinMode(ECHO_PIN, INPUT);
13 }
14 float readDistanceCM() {
15   digitalWrite(TRIG_PIN, LOW);
16   delayMicroseconds(2);
17   digitalWrite(TRIG_PIN, HIGH);
18   delayMicroseconds(10);
19   digitalWrite(TRIG_PIN, LOW);
20   int duration = pulseIn(ECHO_PIN, HIGH);
21   return duration * 0.034 / 2;
22 }
23 void loop(){
24   float distance=readDistanceCM();
25   if(distance<=100)
26   {
```

Simulation

00:07.280 99%

Measured distance:177.34
Measured distance:177.24
Measured distance:177.40
Measured distance:177.24
Measured distance:177.33
Measured distance:177.24
Measured distance:177.34

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