

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

program:

```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization = "zmnschy"
#define deviceType = "charu"
#define deviceId = "3012"
#define authMethod = "use-token-auth"
#define authToken = "12345678"

void setup(){
    Serial.begin(9600);
    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);
}
```

History x IBM Watson IoT Platform x +

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

IBM Watson IoT Platform

Browse Action Device Types Interfaces

3012 Disconnected charu

Identity Device Information Recent Events State

The recent events listed show the live stream of data that is coming and going

Event	Value
event_1	{"randomNumber":17,"distance":48}
event_1	{"randomNumber":46,"distance":76}
event_1	{"randomNumber":36,"distance":34}
event_1	{"randomNumber":5,"distance":129}
event_1	{"randomNumber":62,"distance":122}

Device Type: charu

Events 1 [New event type](#)

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

Schedule 20 Every Minute

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

```
0 {
1   "randomNumber": random(0, 100),
2   "distance": random(0, 200)
3 }
4
```

[Upload a CSV file](#)

[Cancel](#) [Save](#)

Type here to search

19:02 28-10-2022

History x IBM Watson IoT Platform x +

zmnshy.internetofthings.ibmcloud.com/dashboard/boards/907448bc-db20-46e9-ab01-48115aaa0744

IBM Watson IoT Platform

abcd

Donut chart

Total
29
cm

Device Type: charu

Events 1 [New event type](#)

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

Schedule 20 Every Minute

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

```
0 {
1   "randomNumber": random(0, 100),
2   "distance": random(0, 200)
3 }
4
```

[Upload a CSV file](#)

[Cancel](#) [Save](#)

Type here to search

19:06 28-10-2022

The screenshot displays the Wokwi IDE interface. The top navigation bar includes links for History, IBM Watson IoT Platform, Wokwi esp32, WhatsApp, and multiple instances of hc-sr04.ino - Wokwi. Below this, the main header shows the project name "hc-sr04.ino" by user "urish", along with "SAVE" and "SHARE" buttons. The left sidebar contains tabs for "hc-sr04.ino", "diagram.json", and "Library Manager".

The central editor area shows the following C++ code:

```
2 HC-SR04 Ultrasonic Sensor Example.
3
4 Turn the LED on when an object is within 100cm range.
5
6 Copyright (C) 2021, Uri Shaked
7 */
8
9 #define ECHO_PIN 2
10 #define TRIG_PIN 3
11 #define organization = "zmnshy"
12 #define deviceType = "charu"
13 #define deviceId = "3012"
14 #define authMethod = "use-token-auth"
15 #define authToken = "12345678"
16
17 void setup(){
18   Serial.begin(9600);
19   pinMode(TRIG_PIN,OUTPUT);
20   pinMode(ECHO_PIN,INPUT);
21 }
22
23 float readDistanceCM(){
24   digitalWrite(TRIG_PIN,LOW);
25   delayMicroseconds(2);
26   digitalWrite(TRIG_PIN,HIGH);
27   delayMicroseconds(10);
28   digitalWrite(TRIG_PIN,LOW);
29   int duration=pulseIn(ECHO_PIN,HIGH);
30   return duration*0.034/2;
31 }
```

On the right side, there are two panels. The top panel, titled "Simulation", features a play button icon and a timer showing "00:26.552" at 101% battery. Below it, a window titled "Editing Ultrasonic Distance Sensor" shows a slider set to "185cm". The bottom panel displays a visual representation of the sensor connected to an Arduino Uno board.

The bottom status bar shows system icons and the time "19:13 28-10-2022".