

Wokwi link:

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

CODE FOR THE FUNCTION:

```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization = "pb6xw8"
#define deviceType = "abcd"
#define deviceId = "12"
#define authMethod = "token"
#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
);
}

```

CLOUD:

The screenshot displays the IBM Watson IoT Platform interface. The main dashboard shows a table of devices with the following columns: Device ID, Status, Device Type, Class ID, and Date. A single device is listed with ID 7868, status Disconnected, and type aakash. Below the table, a detailed view of the device information is shown, including its ID, type, date added, and connection status.

On the right side, a 'Simulations' panel is open, showing '1/50 Simulations Running'. It includes a 'New Simulation' button and a dropdown menu for 'Device Type' set to 'aakash'. Below this, a '1 Device' section shows the device ID 7868 and two buttons: 'Create Simulated Device' and 'Use Registered Device'. At the bottom of the panel, it indicates '5 events sent' and '199 bytes sent'.

Device ID	Status	Device Type	Class ID	Date
7868	Disconnected	aakash	Device	Oct 29, 2022 9:56 AM


Identity	Device Information	Recent Events	State	Logs
Device ID	7868			
Device Type	aakash			
Date Added	Oct 29, 2022 9:56 AM			
Added By	613519106001@smartinternz.com			
Connection Status	Disconnected			

IBM Watson IoT Platform

613519106001@smartinternz.com  
ID: c5dv2a

patrick

Life chart



Device Type: aakash

Events 1

New event type +

Event type name event\_1

Send

Schedule

1

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(50, 200)

3 }

4

Upload a CSV file

Cancel

Save

Device Type: aakash

Events 1

New event type +

Event type name event\_1

Send

Schedule

1

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(50, 200)

3 }

4

Upload a CSV file

Cancel

Save

IBM Watson IoT Platform

613519106001@smartinternz.com  
ID: c5dv2a

Browse Action Device Types Interfaces

All Devices Diagnose

This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID

Device ID	Status	Device Type	Class ID	Date
7868	Disconnected	aakash	Device	Oct 10, 2018

Identity Device Information Recent Events State Logs

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

Event	Value	Format	Last Received
event_1	{"randomNumber":27,"distance":193}	json	a few seconds ago
event_1	{"randomNumber":50,"distance":108}	json	a few seconds ago
event_1	{"randomNumber":71,"distance":185}	json	a few seconds ago

Simulations

Import/Export simulation

1/50 Simulations Running

+ New Simulation

Device Type  
aakash

1 Event

1 Device

7868

1 x Create Simulated Device Use Registered Device

5 events sent 199 bytes sent

WOKWI

SAVE SHARE

hc-sr04.ino by urish

Docs SIGN UP

hc-sr04.ino diagram.json Library Manager

```

1 #define ECHO_PIN 2
2 #define TRIG_PIN 3
3 #define organization = "c5dv2a"
4 #define deviceType = "aakash"
5 #define deviceId = "7868"
6 #define authMethod = "token"
7 #define authToken = "0987654321"
8
9 void setup(){
10   Serial.begin(9600);
11   pinMode(TRIG_PIN, OUTPUT);
12   pinMode(ECHO_PIN, INPUT);
13 }
14
15 float readDistanceCM(){
16   digitalWrite(TRIG_PIN, LOW);
17   delayMicroseconds(2);
18   digitalWrite(TRIG_PIN, HIGH);
19   delayMicroseconds(10);
20   digitalWrite(TRIG_PIN, LOW);
21   int duration=pulseIn(ECHO_PIN, HIGH);
22   return duration*0.034/2;
23 }
24 void loop(){
25   float distance=readDistanceCM();
26
27   if(distance<=100)
28   {
29     Serial.println("person detected");
30   }
31   else
32   {
33     Serial.print("Measured distance:");
34     Serial.println(readDistanceCM());
35   }

```

Simulation

03:08.378 100%

Measured distance:177.57  
Measured distance:177.65  
Measured distance:177.67  
Measured distance:177.65  
Measured distance:177.67  
Measured distance:177.65  
Measured distance:177.57  
Measured distance:177.65

WOKWI

SAVE

SHARE

hc-sr04.ino  
by urish

Docs

SIGN IN

hc-sr04.ino

diagram.json

Library Manager

```
11 // ...
12 pinMode(TRIG_PIN, OUTPUT);
13 pinMode(ECHO_PIN, INPUT);
14
15 float readDistanceCM(){
16     digitalWrite(TRIG_PIN, LOW);
17     delayMicroseconds(2);
18     digitalWrite(TRIG_PIN, HIGH);
19     delayMicroseconds(10);
20     digitalWrite(TRIG_PIN, LOW);
21     int duration=pulseIn(ECHO_PIN, HIGH);
22     return duration*0.034/2;
23 }
24 void loop(){
25     float distance=readDistanceCM();
26
27     if(distance<=100)
28     {
29         Serial.println("person detected");
30     }
31     else
32     {
33         Serial.print("Measured distance:");
34         Serial.println(readDistanceCM());
35     }
36     delay(1000);
37 }
38 }
```

Simulation

03:45.698 100%

Measured distance:177.65  
Measured distance:177.57  
Measured distance:177.65  
Measured distance:177.67  
Measured distance:177.57  
Measured distance:177.65  
Measured distance:177.57