

ASSIGNMENT 4

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

```
#define ECHO_PIN2
#define TRIG_PIN3
#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);  
}
```

IBM CLOUD

The screenshot displays the IBM Watson IoT Platform interface. The browser's address bar shows the URL: `heoh5r.internetofthings.ibmcloud.com/dashboard/devices/browse`. The platform header includes the user ID `613519106003@smartinternz.com` and the user ID `ID: heoh5r`. The main navigation bar contains tabs for `Browse`, `Action`, `Device Types`, and `Interfaces`, along with an `Add Device` button. The `Browse` tab is active, showing a table of devices. A modal window is open, displaying details for a device with ID `8`. The modal has tabs for `Identity`, `Device Information`, `Recent Events`, `State`, and `Logs`. The `Device Information` tab is selected, showing the following details:

Property	Value
Device ID	8
Device Type	AJAYSEKAR
Date Added	Oct 28, 2022 9:14 PM
Added By	613519106003@smartinternz.com
Connection Status	Disconnected

The modal also includes a close button (X) and a status bar at the bottom indicating `Items per page 50` and `1-1 of 1 item`. The system tray at the bottom shows the date and time as `21:46 28-10-2022` and the language as `ENG IN`.

Service Details - IBM Cloud

IBM Watson IoT Platform

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heoh5r.internetofthings.ibmcloud.com/dashboard/devices/browse/add

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IBM Watson IoT Platform

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Browse

Action

Device Types

Interfaces

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Device ID

Status

Device Type

▼

8

Disconnected

AJAYSEKAR

Identity

Device Information

Recent Events

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

Event	Value
eventflow	{"randomNumber":81,"distance":72}
eventflow	{"randomNumber":61,"distance":79}
eventflow	{"randomNumber":50,"distance":86}
eventflow	{"randomNumber":14,"distance":74}
eventflow	{"randomNumber":49,"distance":98}

Device Type: AJAYSEKAR

Events 1

New event type +

Event type name

eventflow

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(60, 100)

3 }

4

Upload a CSV file

json

a few seconds ago

Service Details - IBM Cloud

IBM Watson IoT Platform

Wokwi - Online Arduino and ESP

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heoh5r.internetofthings.ibmcloud.com/dashboard/boards/45c72dbc-c917-4b31-927e-d2355173b42b

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IBM Watson IoT Platform

dynamic boards

Line chart

Time	Distance
21:24	150
21:25	100
21:26	140
21:27	120
21:28	150

5 minutes ▾

now

Device Type: AJAYSEKAR

Events 1

New event type +

Event type name eventflow Send

Schedule

1 Every Minute ▾

Payload

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

```
0 {
1   "randomtumber": random(0, 100)
2   "distance": random(50, 200)
3 }
4
```

Upload a CSV file

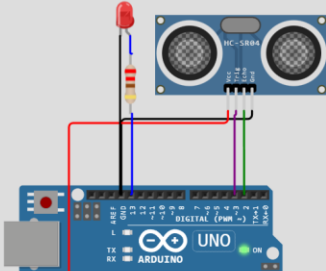
WOKWI

hc-sr04.ino • diagram.json Library Manager

```
1 #define ECHO_PIN 2
2 #define TRIG_PIN 3
3 #define organization ="heoh5n"
4 #define device type ="AJAYSEKAR"
5 #define deviceId="8"
6 #define authmethod="token"
7 #define authToken="0987654321"
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   {
27     Serial.println("person detected");
28   }
29   else{
30     Serial.print("Measured distance:");
```

Simulation

00:10.464 100%



Measured distance:177.24
Measured distance:177.33
Measured distance:177.24
Measured distance:177.34
Measured distance:177.34
Measured distance:177.24
Measured distance:177.38