

SPRINT-2

Date	05 Nov 2022
Team ID	PNT2022TMID43463
Project Name	Smart waste management system
Points	20

Dustbin 1

Code Link: <https://wokwi.com/projects/348318778334904916>

The screenshot displays the Wokwi IoT simulation environment. On the left, the 'sketch.ino' file is open, showing the following code:

```
1 #include <Servo.h>
2
3
4
5 void callback(char* subscribetopic, byte* payload, unsigned int payloadLength)
6
7 //-----credentials of IBM Accounts-----
8
9 #define ORG "7wpj5u"
10 #define DEVICE_TYPE "smarth"
11 #define DEVICE_ID "1213213e2e"
12 #define TOKEN "23456782345"
13
14 String data3;
15 float d,d1,w;
16
17 Servo Myservo;
18 int pos;
19
20 #define trigpin 18
21 #define echopin 5
22
23 #define trigpin1 25
24 #define echopin1 33
25
26 //----- Customise the above values -----
27 char server[] = ORG ".messaging.internetofthings.ibmcloud.com";// Server Name
28 char publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of event
29 char subscribetopic[] = "iot-2/cmd/display/fmt/String";// cmd REPRESENT command
30 char authMethod[] = "use-token-auth";// authentication method
31 char token[] = TOKEN;
32 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id
33
34
35 //-----
```

On the right, the 'Simulation' window shows a 3D model of the hardware setup. It includes an ESP32 microcontroller, two HC-SR04 ultrasonic sensors, and a servo motor. The simulation is running, and the output console shows the following data:

WasteWeight:64.00
Location:
Kinathukadavu,Coimbatore
Sending payload:
{ "DustbinContent":101.41,"WateWeight":64.00,"Location":"AnnaNgar,Chennai"
}
Publish ok

The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar and an 'Add Device' button are also present. The main content area displays a device card for '1213213e2e' with a status of 'Disconnected' and a device type of 'smarth'. Below the device card, the 'Recent Events' tab is active, showing a table of events.

Event	Value	Format	Last Received
Data	{"DustbinContent":101.41,"WateWeight":14,"Loc...	json	a few seconds ago
Data	{"DustbinContent":101.41,"WateWeight":17,"Loc...	json	a few seconds ago
Data	{"DustbinContent":101.41,"WateWeight":56,"Loc...	json	a few seconds ago
Data	{"DustbinContent":101.41,"WateWeight":11,"Loc...	json	a few seconds ago
Data	{"DustbinContent":101.41,"WateWeight":27,"Loc...	json	a few seconds ago

Dustbin 2

Code Link: <https://wokwi.com/projects/348308160332694100>

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← → Cwokwi.com/projects/348308160332694100

WOKWI

SAVE

SHARE

wastema

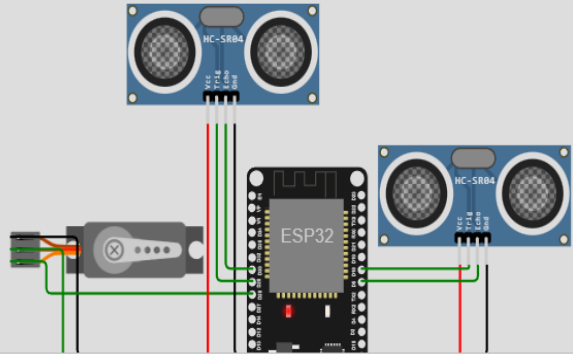
Docs

sketch.inodiagram.jsonlibraries.txtLibrary Manager




```
1 #include <WiFi.h>
2 #include <PubSubClient.h>
3 #include <Servo.h>
4
5 void callback(char* subscribetopic, byte* payload, unsigned int payloadLength)
6
7 //-----credentials of IBM Accounts-----
8
9 #define ORG "woaev0"//IBM ORGANITION ID
10 #define DEVICE_TYPE "abcde"//Device type mentioned in ibm watson IOT Platform
11 #define DEVICE_ID "412345"//Device ID mentioned in ibm watson IOT Platform
12 #define TOKEN "1a2b3c4d"
13 String data3;
14 float d,d1,w;
15
16 Servo Myservo;
17 int pos;
18
19 #define trigpin 18
20 #define echopin 5
21
22 #define trigpin1 25
23 #define echopin1 33
24
25 //----- Customise the above values -----
26 char server[] = ORG ".messaging.internetofthings.ibmcloud.com";// Server Name
27 char publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of even
28 char subscribetopic[] = "iot-2/cmd/display/fmt/String";// cmd REPRESENT comma
29 char authMethod[] = "use-token-auth";// authentication method
30 char token[] = TOKEN;
31 char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id
32
33
```

Simulation

00:01.233 43%



Connecting to .
WiFi connected
IP address:
10.10.0.2
Reconnecting client to woaev0.messaging.internetofthings.ibmcloud.com



career xService xW waste xNode xIBM W xIBM-P xSent I xNode xConnexG tow de xWorki x+
waoev0.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platform19ec005@acetcbe.edu.inID: waoev0

Browse

Action

Device Types

Interfaces

Add Device +

Device ID	Status	Device Type	Class ID	Date Added	
112345	Disconnected	abcde	Device	Nov 9, 2022 8:13 AM	→ ...

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
Data	{"DustbinContent":63.12,"WateWeight":74,"Loca...	json	a few seconds ago
Data	{"DustbinContent":63.12,"WateWeight":5,"Locati...	json	a few seconds ago
Data	{"DustbinContent":63.12,"WateWeight":41,"Loca...	json	a few seconds ago
Data	{"DustbinContent":63.13,"WateWeight":58,"Loca...	json	a few seconds ago
Data	{"DustbinContent":63.12,"WateWeight":95,"Loca...	json	a few seconds ago

