

Sprint - 1

Date	16 November 2022
Team ID	PNT2022TMID36201
Project Name	Smart Waste Management System For Metropolitan Cities

```
#IBM Watson IOT Platform
```

```
#pip install wiotp-sdk
```

```
import wiotp.sdk.device
```

```
import time
```

```
import random
```

```
myConfig = {
```

```
    "identity": {
```

```
        "orgId": "r1nl13",
```

```
        "typeId": "SathyaPriya",
```

```
        "deviceId": "2609"
```

```
    },
```

```
    "auth": {
```

```
        "token": "i5QqQIPGeqAES5iqgy"
```

```
    }
```

```
}
```

```
def myCommandCallback(cmd):
```

```

print("Message received from IBM IoT Platform: %s" % cmd.data['command'])

m=cmd.data['command']


client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)

client.connect()


while True:

    Dust = random.randint(0,100)

    if (Dust > 90):

        print("Dustbin Over Flow")

        myData={'Dustbin1':Dust}

        client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)

        print(myData)

        client.commandCallback = myCommandCallback

        time.sleep(2)

##client.disconnect()

    if(Dust>80):

        print("")

        myData={'Dustbin2':Dust}

        client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)

```

```
print(myData)

client.commandCallback = myCommandCallback

time.sleep(2)

##client.disconnect()

if(Dust>78):

    print("")

    myData={'Dustbin3':Dust}

    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)

    print(myData)

    client.commandCallback = myCommandCallback

    time.sleep(2)

##client.disconnect()

if(Dust>70):

    print("")

    myData={'Dustbin4':Dust}

    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)

    print(myData)

    client.commandCallback = myCommandCallback

    time.sleep(2)

client.disconnect()
```

PYTHON SCRIPT:

File Edit Format Run Options Window Help

```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "rln113",
        "typeId": "SathyaPriya",
        "deviceId": "2609"
    },
    "auth": {
        "token": "i5QqQIPGeqAES5iqgy"
    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:
    Dust = random.randint(0,100)
    if (Dust > 90):
        print("Dustbin Over Flow")
    myData={'Dustbin1':Dust}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print(myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
##client.disconnect()
    if (Dust>80):
        print("")
    myData={'Dustbin2':Dust}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print(myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
```

```

##client.disconnect()
    if (Dust>78):
        print("")
        myData={'Dustbin3':Dust}
        client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
        print(myData)
        client.commandCallback = myCommandCallback
        time.sleep(2)
##client.disconnect()
    if (Dust>70):
        print("")
        myData={'Dustbin4':Dust}
        client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
        print(myData)
        client.commandCallback = myCommandCallback
        time.sleep(2)
client.disconnect()

```

OUTPUT:

```

Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 20:34:20) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\SRI RAJAM\Documents\Demo.py =====
2022-11-19 12:32:42,119 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:rlnl13:SathyaPriya:2609
{'Dustbin1': 41}
2022-11-19 12:32:44,025 wiotp.sdk.device.client.DeviceClient ERROR Unexpected disconnect from IBM Watson IoT Platform: 7
2022-11-19 12:32:45,947 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:rlnl13:SathyaPriya:2609
{'Dustbin2': 41}
{'Dustbin3': 41}
{'Dustbin4': 41}
{'Dustbin1': 80}
{'Dustbin2': 80}
2022-11-19 12:32:54,634 wiotp.sdk.device.client.DeviceClient ERROR Unexpected disconnect from IBM Watson IoT Platform: 7
2022-11-19 12:32:56,743 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:rlnl13:SathyaPriya:2609
{'Dustbin3': 80}
2022-11-19 12:32:58,681 wiotp.sdk.device.client.DeviceClient ERROR Unexpected disconnect from IBM Watson IoT Platform: 7
2022-11-19 12:33:00,540 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:rlnl13:SathyaPriya:2609
{'Dustbin4': 80}
{'Dustbin1': 5}
{'Dustbin2': 5}
{'Dustbin3': 5}
{'Dustbin4': 5}
2022-11-19 12:33:09,930 wiotp.sdk.device.client.DeviceClient ERROR Unexpected disconnect from IBM Watson IoT Platform: 7
2022-11-19 12:33:12,599 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:rlnl13:SathyaPriya:2609
{'Dustbin1': 69}
{'Dustbin2': 69}
{'Dustbin3': 69}
{'Dustbin4': 69}
2022-11-19 12:33:20,614 wiotp.sdk.device.client.DeviceClient ERROR Unexpected disconnect from IBM Watson IoT Platform: 7
2022-11-19 12:33:27,786 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:rlnl13:SathyaPriya:2609
{'Dustbin1': 44}
{'Dustbin2': 44}
2022-11-19 12:33:30,520 wiotp.sdk.device.client.DeviceClient ERROR Unexpected disconnect from IBM Watson IoT Platform: 7
2022-11-19 12:33:32,552 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:rlnl13:SathyaPriya:2609
{'Dustbin3': 44}

```

Data in IBM CLOUD Platform:

The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains icons for various functions. The main content area displays details for a device named 'SathyaPriya' (ID: 2609), which is 'Connected'. The 'Recent Events' tab is active, showing a table of events:

Event	Value	Format	Last Received
status	["Dustbin2":77]	json	a few seconds ago
status	["Dustbin1":77]	json	a few seconds ago
status	["Dustbin4":81]	json	a few seconds ago
status	["Dustbin3":81]	json	a few seconds ago
status	["Dustbin2":81]	json	a few seconds ago

Below the table, it indicates '0 Simulations running'.

The screenshot shows the IBM Watson IoT Platform interface with a list of devices. The 'Browse' tab is active, displaying a table of devices:

Device ID	Status	Device Type	Class ID	Date Added
09032000	Disconnected	5STEAM	Device	Nov 17, 2022 9:55 PM
2609	Disconnected	SathyaPriya	Device	Nov 5, 2022 2:56 PM

The device '2609' is expanded, showing the 'Recent Events' tab. It displays a message 'Showing Raw Data | No Interfaces Available' and a table of raw data:

Property	Value	Type	Event	Last Received
Dustbin1	5	Number	status	a few seconds ago

At the bottom, it indicates 'Items per page 50' and '1 of 1 page'.