

SPRINT 2:

Date	17 th November 2022
Team ID	PNT2022TMID15034
Project Name	IOT Based Real-Time River Water Quality Monitoring and Control System
Maximum Marks	4 Mark

Python Code :

```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "93eqjp",
        "typeId": "MyDeviceType",
        "deviceId": "12345"
    },
    "auth": {
        "token": "12345678"
    }
}
```

```

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" %
cmd.data['command'])
    m=cmd.data['command']
    if(m=="LIGHT ON"):
        print("*****//////// LIGHTS ARE ON")
    else:
        print("*****//////// LIGHTS ARE OFF")
client = wiotp.sdk.device.DeviceClient(config=myConfig,
logHandlers=None)
client.connect()

while True:
    tur=random.randint(0,1000)
    ph=random.randint(1,14)
    myData={'turbidity':tur, 'Ph_Value':ph}
    client.publishEvent(eventId="status", msgFormat="json",
data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(2)
client.disconnect()

```

pythonProject1 - main.py

pythonProject1 main.py

Run: main

```
Published data Successfully: %s {'turbidity': 66, 'Ph_Value': 8}
Published data Successfully: %s {'turbidity': 1000, 'Ph_Value': 7}
Published data Successfully: %s {'turbidity': 213, 'Ph_Value': 8}
Published data Successfully: %s {'turbidity': 95, 'Ph_Value': 13}
Published data Successfully: %s {'turbidity': 342, 'Ph_Value': 4}
Published data Successfully: %s {'turbidity': 894, 'Ph_Value': 1}
Published data Successfully: %s {'turbidity': 835, 'Ph_Value': 11}
Published data Successfully: %s {'turbidity': 867, 'Ph_Value': 6}
Published data Successfully: %s {'turbidity': 877, 'Ph_Value': 1}
Published data Successfully: %s {'turbidity': 920, 'Ph_Value': 6}
Published data Successfully: %s {'turbidity': 946, 'Ph_Value': 5}
Published data Successfully: %s {'turbidity': 548, 'Ph_Value': 4}
Published data Successfully: %s {'turbidity': 749, 'Ph_Value': 10}
Published data Successfully: %s {'turbidity': 489, 'Ph_Value': 14}
Published data Successfully: %s {'turbidity': 139, 'Ph_Value': 3}
Message received from IBM IoT Platform: LIGHT ON
*****LIGHTS ARE ON
Message received from IBM IoT Platform: LIGHT ON
*****LIGHTS ARE ON
Message received from IBM IoT Platform: LIGHT OFF
*****LIGHTS ARE OFF
Message received from IBM IoT Platform: LIGHT OFF
*****LIGHTS ARE OFF
Published data Successfully: %s {'turbidity': 809, 'Ph_Value': 1}
Message received from IBM IoT Platform: LIGHT ON
*****LIGHTS ARE ON
Message received from IBM IoT Platform: LIGHT OFF
*****LIGHTS ARE OFF
Message received from IBM IoT Platform: LIGHT ON
*****LIGHTS ARE ON
Message received from IBM IoT Platform: LIGHT OFF
*****LIGHTS ARE OFF
Message received from IBM IoT Platform: LIGHT OFF
*****LIGHTS ARE OFF
Message received from IBM IoT Platform: LIGHT ON
*****LIGHTS ARE ON
Published data Successfully: %s {'turbidity': 814, 'Ph_Value': 6}
Published data Successfully: %s {'turbidity': 149, 'Ph_Value': 14}
```

```
1 #IBM Watson IoT Platform
2 #pip install wiotp-sdk
3 import wiotp.sdk.device
4 import time
5 import random
6 myConfig = {
7     "identity": {
8         "orgId": "93egig",
9         "typeId": "MyDeviceType",
10        "deviceId": "12345"
11    },
12    "auth": {
13        "token": "12345678"
14    }
15 }
16
17 def myCommandCallback(cmd):
18     print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
19     m=cmd.data['command']
20     if(m=="LIGHT_ON"):
21         print("*****LIGHTS ARE ON")
22     else:
23         print("*****LIGHTS ARE OFF")
24
25 client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
26 client.connect()
27
28 while True:
29     tur=random.randint(0,1000)
30     ph=random.randint(1,14)
31     myData={'turbidity':tur, 'Ph_Value':ph}
32     client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
33     print("Published data Successfully: %s", myData)
34     client.commandCallback = myCommandCallback
35     time.sleep(2)
36     client.disconnect()
```

while True

Version Control TODO Problems Terminal Python Packages Python Console

Packages installed successfully: Installed packages: 'wiotp-sdk' (today 17:24)

28:30 CRLF UTF-8 4 sp

PUBLISH DATA TO IBM CLOUD:

93eqjp.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platform

?

sprateekcs01@gmail.com

ID: 93eqjp

Browse

Action

Device Types

Interfaces

Add Device

Search by Device ID

Device Simulator

	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By	
	12345	Connected	MyDeviceType	Device	19 Nov 2022 15:09		sprateekcs01@gmail.com	

Identity

Device Information

Recent Events

State

Logs

Device ID

Device Type

Date Added

Added By

Connection Status

12345

MyDeviceType

19 Nov 2022 15:09

sprateekcs01@gmail.com

Connected

Connection Time: 19 Nov 2022 19:14

Client Address: 49.205.83.237 SecureToken

93eqjp.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platform

?

sprateekcs01@gmail.com

ID: 93eqjp

Browse

Action

Device Types

Interfaces

Search by Device ID

Device S

	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By	
	12345	Connected	MyDeviceType	Device	19 Nov 2022 15:09		sprateekcs01@gmail.com	

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
status	{"turbidity":55,"Ph_Value":3}	json	a few seconds ago
status	{"turbidity":47,"Ph_Value":5}	json	a few seconds ago
status	{"turbidity":52,"Ph_Value":1}	json	a few seconds ago
status	{"turbidity":9,"Ph_Value":9}	json	a few seconds ago
status	{"turbidity":73,"Ph_Value":14}	json	a few seconds ago

0 Simulations running