

Team ID	PNT2022TMID15172
Project Name	Project : Smart Waste Management System For Metropolitan Cities

Develop A Python Script: Location (latitude & longitude) data

PYTHON CODE:

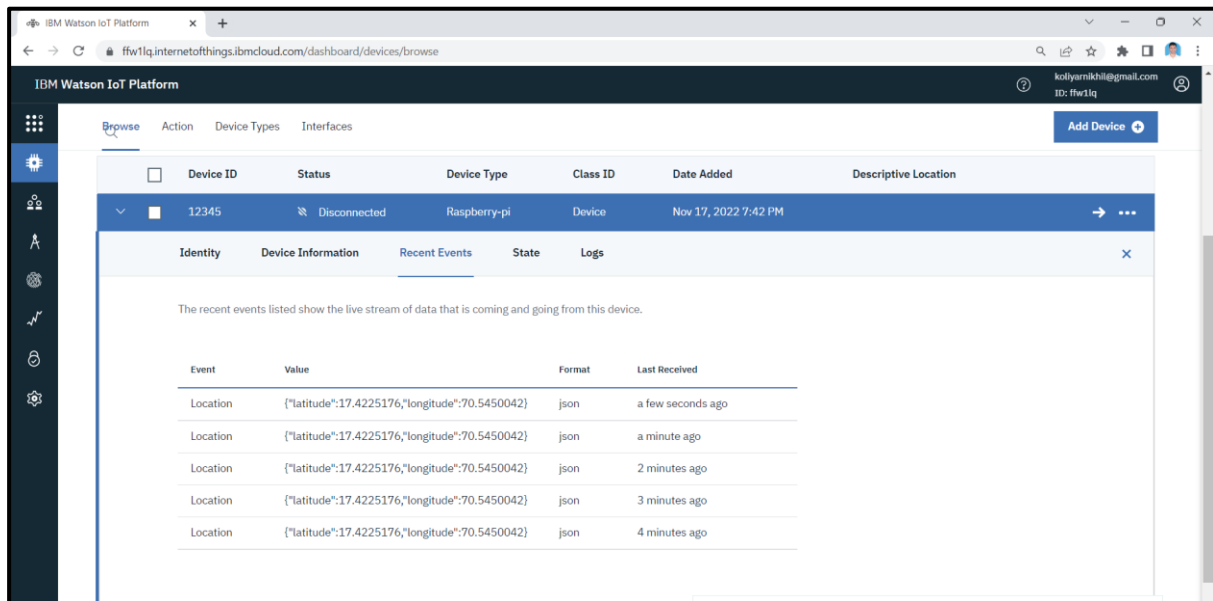
```
import wiotp.sdk.device
import time
import json
myConfig = {
    "identity": {
        "orgId": "ffw1lq",
        "typeId": "Raspberry-pi",
        "deviceId": "12345"
    },
    "auth": {
        "token": "12345678"
    }
}
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
while True:
    name="smartbridge"
    latitude=17.4225176
    longitude=70.5450042
    myData={'name': 'name', 'lat': latitude, 'lon': longitude}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
        onPublish=None)
```

```
client.disconnect ()
```

```
Location Data.py - E/Koliyar Nikhil Durairaj/IBM/Location Data.py (3.7.0)
File Edit Format Run Options Window Help
import wiotp.sdk.device
import time
import json
myConfig = {
    "identity": {
        "orgId": "ffwllq",
        "typeId": "Raspberry-pi",
        "deviceId": "12345"
    },
    "auth": {
        "token": "12345678"
    }
}
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
while True:
    name="smartbridge"
    latitude=17.4225176
    longitude=70.5450042
    myData={'name': 'name', 'lat': latitude, 'lon': longitude}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print ("Published data to IBM iot platform: %s", myData)
    time.sleep (5)
client.disconnect ()
```

[illegible]

Publishing values to the IBM IoT Platform:



Develop A Python Script: Random Sensor data

PYTHON CODE:

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

```
import time
```

```
import random
```

```
myConfig = {
```

```
    "identity": {
```

```
        "orgId": "ffw1lq",
```

```
        "typeId": "Raspberry-pi",
```

```
        "deviceId": "12345"
```

```
    },
```

```
    "auth": {
```

```
        "token": "12345678"
```

```
    }
```

```
}
```

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

```
client.connect()
```

```
while True:
```

```
    temp=random.randint(-20,125)
```

```
    hum=random.randint(0,100)
```

```
    myData={'temperature':temp, 'humidity':hum}
```

```

client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
print("Published data Successfully: %s", myData)
client.commandCallback = myCommandCallback
time.sleep(5)
client.disconnect()

```



```

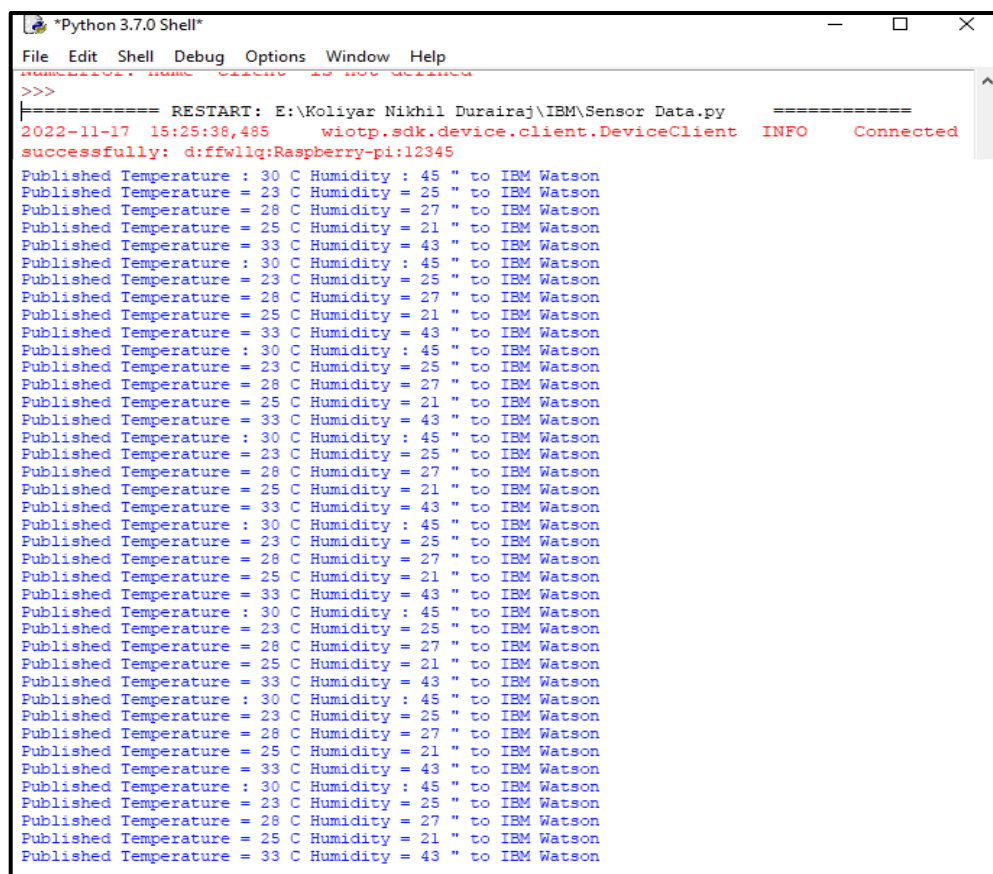
Sensor Data.py - E:\Koliyar Nikhil Durairaj\IBM\Sensor Data.py (3.7.0)
File Edit Format Run Options Window Help
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "ffwllq",
        "typeId": "Raspberry-pi",
        "deviceId": "12345"
    },
    "auth": {
        "token": "12345678"
    }
}

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:
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData={'temperature':temp, 'humidity':hum}
    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()

```



```

Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
>>>
===== RESTART: E:\Koliyar Nikhil Durairaj\IBM\Sensor Data.py =====
2022-11-17 15:25:38,485 wiotp.sdk.device.client.DeviceClient INFO Connected
successfully: d:ffwllq:Raspberry-pi:12345

Published Temperature : 30 C Humidity : 45 " to IBM Watson
Published Temperature = 23 C Humidity = 25 " to IBM Watson
Published Temperature = 28 C Humidity = 27 " to IBM Watson
Published Temperature = 25 C Humidity = 21 " to IBM Watson
Published Temperature = 33 C Humidity = 43 " to IBM Watson
Published Temperature : 30 C Humidity : 45 " to IBM Watson
Published Temperature = 23 C Humidity = 25 " to IBM Watson
Published Temperature = 28 C Humidity = 27 " to IBM Watson
Published Temperature = 25 C Humidity = 21 " to IBM Watson
Published Temperature = 33 C Humidity = 43 " to IBM Watson
Published Temperature : 30 C Humidity : 45 " to IBM Watson
Published Temperature = 23 C Humidity = 25 " to IBM Watson
Published Temperature = 28 C Humidity = 27 " to IBM Watson
Published Temperature = 25 C Humidity = 21 " to IBM Watson
Published Temperature = 33 C Humidity = 43 " to IBM Watson
Published Temperature : 30 C Humidity : 45 " to IBM Watson
Published Temperature = 23 C Humidity = 25 " to IBM Watson
Published Temperature = 28 C Humidity = 27 " to IBM Watson
Published Temperature = 25 C Humidity = 21 " to IBM Watson
Published Temperature = 33 C Humidity = 43 " to IBM Watson
Published Temperature : 30 C Humidity : 45 " to IBM Watson
Published Temperature = 23 C Humidity = 25 " to IBM Watson
Published Temperature = 28 C Humidity = 27 " to IBM Watson
Published Temperature = 25 C Humidity = 21 " to IBM Watson
Published Temperature = 33 C Humidity = 43 " to IBM Watson
Published Temperature : 30 C Humidity : 45 " to IBM Watson
Published Temperature = 23 C Humidity = 25 " to IBM Watson
Published Temperature = 28 C Humidity = 27 " to IBM Watson
Published Temperature = 25 C Humidity = 21 " to IBM Watson
Published Temperature = 33 C Humidity = 43 " to IBM Watson

```

Publishing values to the IBM IoT Platform:

The screenshot displays the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present, and an 'Add Device' button is in the top right. The main content area shows a list of devices. The selected device, ID 12345, is a 'Raspberry-pi' with status 'Disconnected', added on 'Nov 17, 2022 7:42 PM'. Below the device list, the 'Recent Events' tab is active, showing a table of events. The table has columns for 'Event', 'Value', 'Format', and 'Last Received'. The events are DHT11 sensor readings in JSON format. A status box at the bottom right indicates '1 Simulation running'.

Event	Value	Format	Last Received
DHT11	{"Temperature":30,"Humidity":45}	json	a few seconds ago
DHT11	{"Temperature":23,"Humidity":25}	json	a few seconds ago
DHT11	{"Temperature":28,"Humidity":27}	json	a few seconds ago
DHT11	{"Temperature":25,"Humidity":21}	json	a few seconds ago
DHT11	{"Temperature":33,"Humidity":43}	json	a few seconds ago

1 Simulation running