

Real-Time River Water Quality Monitoring and Control System

Develop a python script to publish random sensor data to the IBM IoT platform

Date	29/10/2022
Team ID	PNT2022TMID20460
Project Name	Real-Time Water Quality Monitoring And Control System

Code:

```
import json
import random
import wiotp.sdk.device
import time
myConfig = {
    "identity": {
        "orgId": "85kdo8",
        "typeId": "ESP32",
        "deviceId": "Temperature_Sensor"
    },
    "auth": {
        "token": "1911078abcdefgh"
    }
}
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
```

```
while True:

    turb = random.randrange(0,100)

    pH = random.randrange(0,14)

    temperature = random.randrange(0,100)

    # latitude=17.4225176
    # longitude=78.5458842

    #out area location

    # latitude=17.4219272
    # longitude=78.5488783

    myData={'Temperature': temperature, 'pH': pH, 'Turbidity': turb}

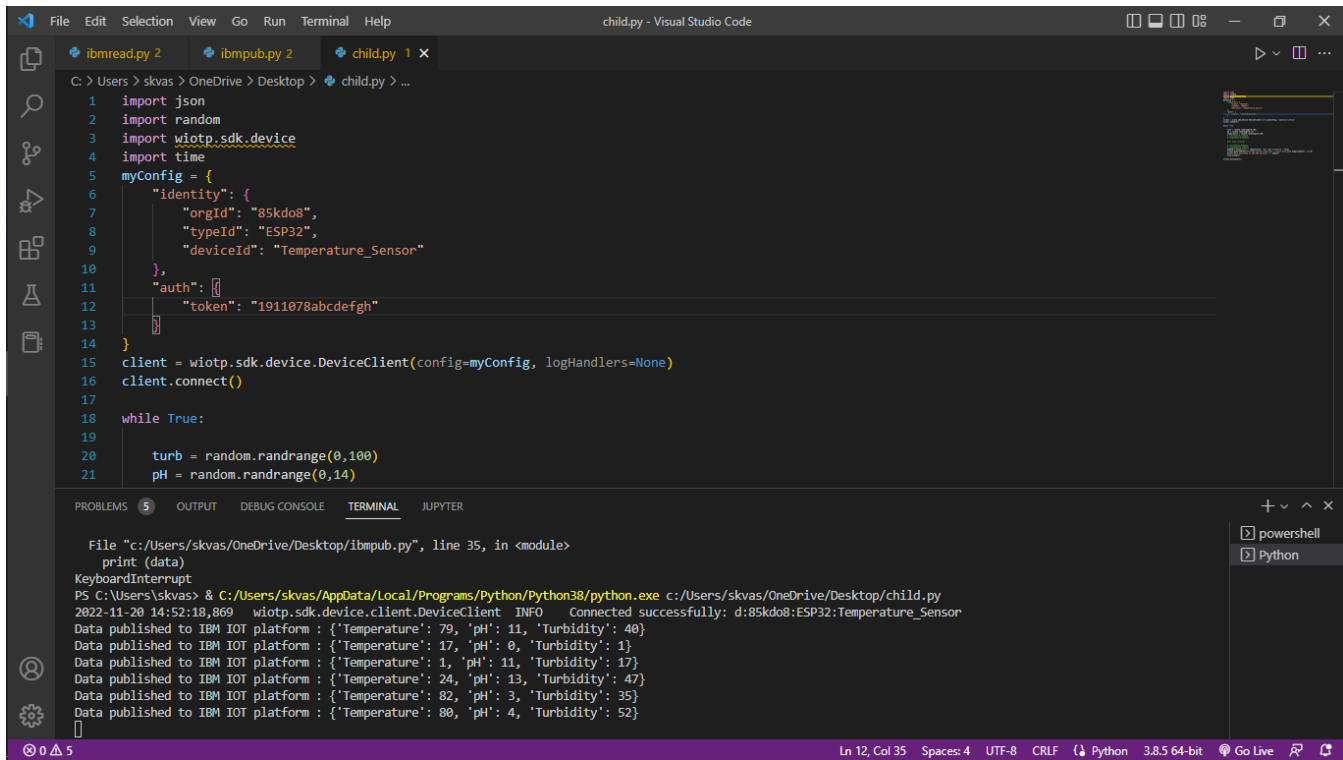
    client.publishEvent(eventId="status",msgFormat =
"json",data=json.dumps(myData), qos=0)

    print("Data published to IBM IOT platform :", myData)

    time.sleep(5)

client.disconnect()
```

PYTHON OUTPUT:



The screenshot shows a Visual Studio Code window with a Python script named `child.py` and its terminal output. The script uses the `wiotp.sdk.device` module to connect to an IBM IoT platform and publish data. The terminal output shows the successful connection and the publication of five data points.

```
1 import json
2 import random
3 import wiotp.sdk.device
4 import time
5 myConfig = {
6     "identity": {
7         "orgId": "85kdo8",
8         "typeId": "ESP32",
9         "deviceId": "Temperature_Sensor"
10    },
11    "auth": {
12        "token": "1911078abcdefgh"
13    }
14 }
15 client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
16 client.connect()
17
18 while True:
19     turb = random.randrange(0,100)
20     pH = random.randrange(0,14)
```

File "c:/Users/skvas/OneDrive/Desktop/ibmpub.py", line 35, in <module>
print (data)
KeyboardInterrupt
PS C:\Users\skvas> & C:/Users/skvas/AppData/Local/Programs/Python/Python38/python.exe c:/Users/skvas/OneDrive/Desktop/child.py
2022-11-20 14:52:18,869 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:85kdo8:ESP32:Temperature_Sensor
Data published to IBM IOT platform : {'Temperature': 79, 'pH': 11, 'Turbidity': 40}
Data published to IBM IOT platform : {'Temperature': 17, 'pH': 0, 'Turbidity': 1}
Data published to IBM IOT platform : {'Temperature': 1, 'pH': 11, 'Turbidity': 17}
Data published to IBM IOT platform : {'Temperature': 24, 'pH': 13, 'Turbidity': 47}
Data published to IBM IOT platform : {'Temperature': 82, 'pH': 3, 'Turbidity': 35}
Data published to IBM IOT platform : {'Temperature': 80, 'pH': 4, 'Turbidity': 52}

IBM CLOUD OUTPUT:

IBM Watson IoT Platform?ID: 85kdo8

Browse

Action

Device Types

Interfaces

Add Device

+

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	{"type":"Buffer","data":[34,123,92,34,84,101,10...	json	a few seconds ago
status	{"type":"Buffer","data":[34,123,92,34,84,101,10...	json	a few seconds ago
status	{"type":"Buffer","data":[34,123,92,34,84,101,10...	json	a few seconds ago
status	{"type":"Buffer","data":[34,123,92,34,84,101,10...	json	a few seconds ago
status	{"type":"Buffer","data":[34,123,92,34,84,101,10...	json	a few seconds ago