

DEVELOP A PYTHON SCRIPT

Team ID	PNT2022TMID48312
Project Name	Real-Time River WaterQuality Monitoring and Control System

Python code:

```
import json
import wiotp.sdk.device
import time
import random
import ibmiotf.application
import ibmiotf.device

myConfig = {
    "identity": {
        "orgId": "bb0w3d",
        "typeId": "Sensor_River_UP",
        "deviceId": "1234"
    },
    "auth": {
        "token": "123456780"
    }
}

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="motoron":
        print ("motor is on")
    elif status == "motoroff":
        print ("motor is off")
    else :
        print ("please send proper command")
client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

while True:
    turb=random.randint(1,100)
    ph=random.randint(0,15)
    temp=random.randint(-20,125)
    myData={'Turbidity':turb,'PHvalue':ph,'temperature':temp}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: ", myData)
    time.sleep(20)

    client.commandCallback = myCommandCallback

client.disconnect()
```

Python code output:

```
python code48312.py - C:\Users\Administrator\AppData\Local\Programs\Python\Python37\python code48312.py (3.7.4)
File Edit Format Run Options Window Help

*Python 3.7.4 Shell*
File Edit Shell Debug Options Window Help

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\Administrator\AppData\Local\Programs\Python\Python37\python code48312.py
2022-11-19 12:05:26,710 wiotp.sdk.device.client.DeviceClient INFO Connected successfully: d:bb0w3d:Sensor_River_UP:1234
Published data Successfully: {'Turbidity': 68, 'PHvalue': 0, 'temperature': 118}
Published data Successfully: {'Turbidity': 80, 'PHvalue': 12, 'temperature': 109}
Published data Successfully: {'Turbidity': 45, 'PHvalue': 5, 'temperature': 113}
```