

Smart Waste Management System for Metropolitan Cities

Project Objectives - Develop The Python Script:

Develop a python code for publishing the location data along with bin values to the IBM IOT Platform.

Code:

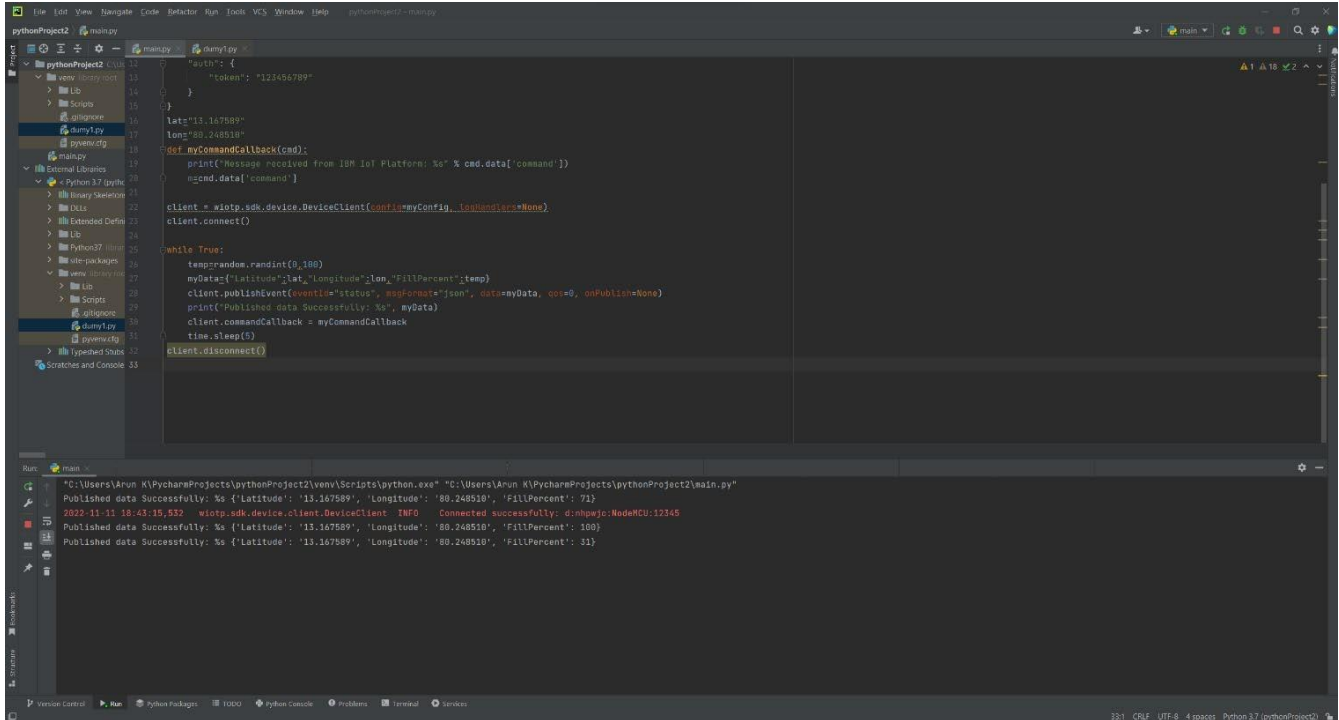
```
import wiotp.sdk
import time
import random
myConfig = {
    "identity": {
        "orgId": "nhpwjc",
        "typeId": "NodeMCU",
        "deviceId": "12345"
    },
    "auth": {
        "token": "123456789"
    }
}
lat="13.167589"
lon="80.248510"
name="point1"
icon="fa-trash-o"
def myCommandCallback(cmd):
    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(0,100)
    if temp>60:
        icon="fa-trash"
    else:
        icon = "fa-trash-o"

myData={"Name":name,"Latitude":lat,"Longitude":lon,"Icon":icon,"FillPercent":temp}
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()
```

Output:



The screenshot displays a VS Code editor with a Python script named `main.py` in the `pythonProject2` workspace. The script defines an IoT client that connects to a platform, receives commands, and publishes data. The `Run` and `Console` panels at the bottom show the execution output.

```
pythonProject2 \main.py
pythonProject2 \venv\Scripts\python.exe "C:\Users\Arun K\PycharmProjects\pythonProject2\main.py"
Published data Successfully: %s {'Latitude': '13.167589', 'Longitude': '80.248510', 'FillPercent': 71}
2022-11-11 18:43:15.532  wiotp.sdk.device.client.DeviceClient INFO    Connected successfully: d:mhpjw:Nodemcu:12345
Published data Successfully: %s {'Latitude': '13.167589', 'Longitude': '80.248510', 'FillPercent': 100}
Published data Successfully: %s {'Latitude': '13.167589', 'Longitude': '80.248510', 'FillPercent': 31}
```

```
12 auth: {
13     "token": "123456789"
14 }
15
16 lat="13.167589"
17 long="80.248510"
18
19 def myCommandCallback(cmd):
20     print("Message received from IBM IoT Platform: %s" % cmd.data["command"])
21     cmd.data["command"]
22
23 client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandler=None)
24 client.connect()
25
26 while True:
27     temp=random.randint(0,100)
28     myData={"Latitude":lat,"Longitude":long,"FillPercent":temp}
29     client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
30     print("Published data Successfully: %s" % myData)
31     client.commandCallback = myCommandCallback
32     time.sleep(5)
33
34 client.disconnect()
```