

DATE	14 NOVEMBER 2022
TEAM ID	PNT2022TMID11512
PROJECT NAME	SMART WASTE MANAGEMENT FOR METROPOLITAN CITIES-IOT

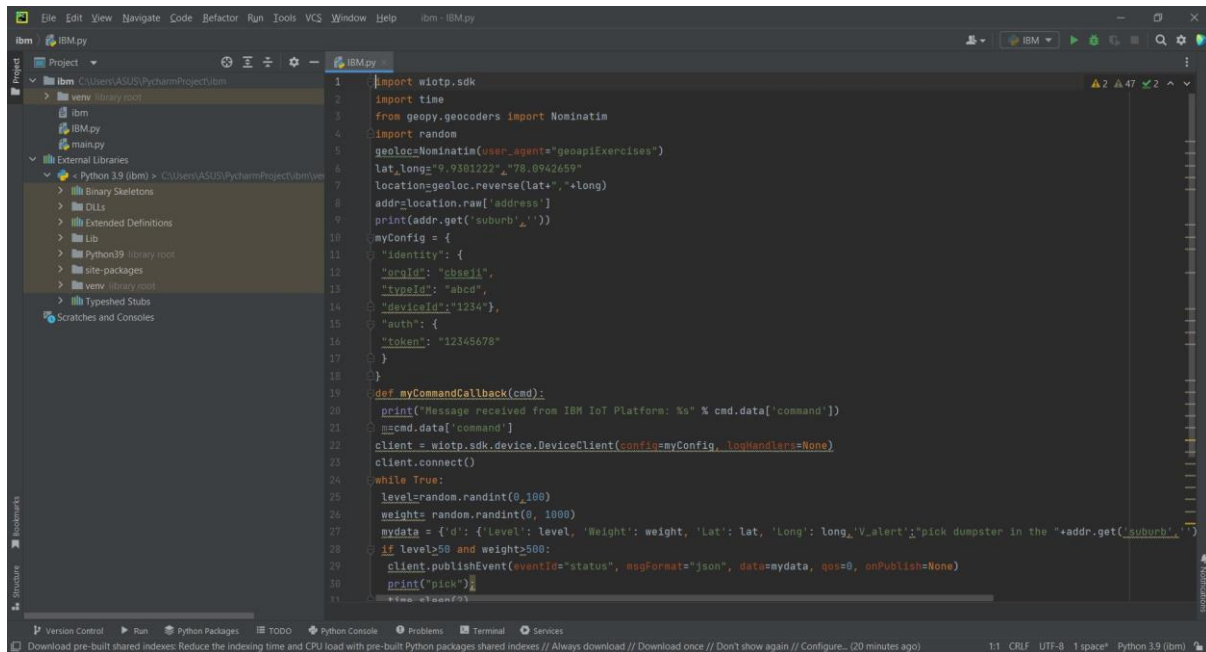
PYTHON CODE :

```

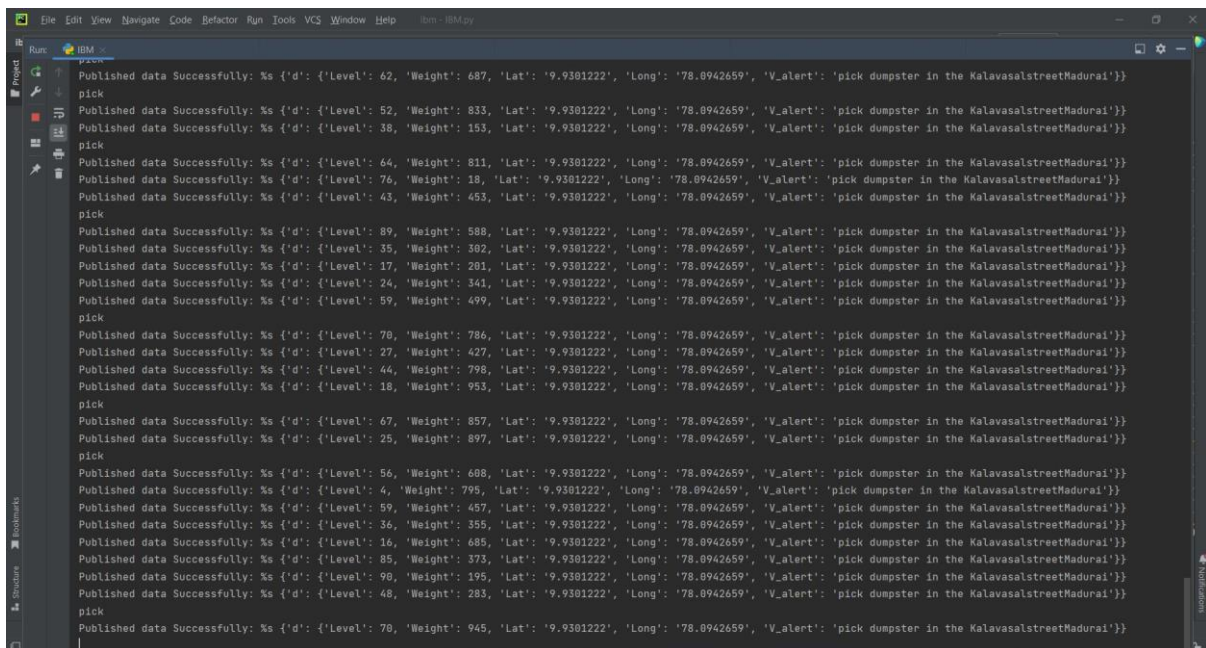
import wiotp.sdk
import time
from geopy.geocoders import Nominatim
import random
geoloc=Nominatim(user_agent="geoapiExercises")
lat,long="9.9301222","78.0942659"
location=geoloc.reverse(lat+","+long)
addr=location.raw['address']
print(addr.get('suburb',''))
myConfig = {
    "identity": {
        "orgId": "cbseji",
        "typeId": "abcd",
        "deviceId": "1234"},
    "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:
        level=random.randint(0,100)
        weight= random.randint(0, 1000)
        mydata = {'d': {'Level': level, 'Weight': weight, 'Lat': lat, 'Long': long, 'V_alert':"pick dumpster in the
"+addr.get('suburb','')+"street"+addr.get('city','')}}
        if level>50 and weight>500:
            client.publishEvent(eventId="status", msgFormat="json", data=mydata, qos=0, onPublish=None)
            print("pick");
            time.sleep(2)
            client.publishEvent(eventId="status", msgFormat="json", data={'d': {'Level': level, 'Weight': weight,
'Lat': lat, 'Long': long, 'V_alert':""}}, qos=0,onPublish=None)
            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()

```

OUTPUT :



```
1 import wiotp.sdk
2 import time
3 from geopy.geocoders import Nominatim
4 import random
5 geoloc=Nominatim(user_agent="geopliExercises")
6 lat, long="9.9301222","78.0942659"
7 location=geoloc.reverse(lat+"," +long)
8 addr=location.raw['address']
9 print(addr.get('suburb',''))
10 myConfig = {
11     "identity": {
12         "orgId": "cbseaii",
13         "typeId": "abcd",
14         "deviceId": "1234",
15         "auth": {
16             "token": "12345678"
17         }
18     }
19 }
20 def myCommandCallback(cmd):
21     print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
22     mycmd.data['command']
23 client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandler=None)
24 client.connect()
25 while True:
26     level=random.randint(0,100)
27     weight= random.randint(0, 1000)
28     mydata = {'d': {'Level': level, 'Weight': weight, 'Lat': lat, 'Long': long, 'V_alert': "pick dumpster in the "+addr.get('suburb','')}}
29     if level>50 and weight>500:
30         client.publishEvent(eventId="status", msgFormat="json", data=mydata, qos=0, onPublish=None)
31     print("pick")
```



```
Published data Successfully: %s {'d': {'Level': 62, 'Weight': 687, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
pick
Published data Successfully: %s {'d': {'Level': 52, 'Weight': 833, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 38, 'Weight': 153, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
pick
Published data Successfully: %s {'d': {'Level': 64, 'Weight': 811, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 76, 'Weight': 18, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 43, 'Weight': 453, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
pick
Published data Successfully: %s {'d': {'Level': 89, 'Weight': 588, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 35, 'Weight': 302, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 17, 'Weight': 201, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 24, 'Weight': 341, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 59, 'Weight': 499, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
pick
Published data Successfully: %s {'d': {'Level': 70, 'Weight': 786, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 27, 'Weight': 427, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 44, 'Weight': 798, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 10, 'Weight': 953, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
pick
Published data Successfully: %s {'d': {'Level': 67, 'Weight': 857, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 25, 'Weight': 897, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
pick
Published data Successfully: %s {'d': {'Level': 56, 'Weight': 608, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 4, 'Weight': 795, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 59, 'Weight': 457, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 36, 'Weight': 355, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 16, 'Weight': 685, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 85, 'Weight': 373, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 90, 'Weight': 195, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
Published data Successfully: %s {'d': {'Level': 48, 'Weight': 283, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
pick
Published data Successfully: %s {'d': {'Level': 70, 'Weight': 945, 'Lat': '9.9301222', 'Long': '78.0942659', 'V_alert': 'pick dumpster in the KalavasalstreetMadurai'}}
|
```