

TEAM ID:PNT2022TMID29748

PROJECT TITLE:IoT based smart waste management in metropolitan cities

Python script:

Python script

```
import time
```

```
import sys
```

```
import ibmiotf.application
```

```
import ibmiotf.device
```

```
import random
```

```
organization="7lnn7p"
```

```
devicetype="preethi"
```

```
deviceid="1436"
```

```
authMethod="token"
```

```
authToken="09876543211"
```

```
def myCommandCallback(cmd):
```

```
    print("Command received:%s"%cmd.data['command'])
```

```
    status=cmd.data['command']
```

```
    if status == "lighton":
```

```
        print("led in on")
```

```
else:
```

```
    print("led is off")
```

```
try:
```

```
deviceOptions={"org":organization,"type":devicetype,"id":deviceid,"  
auth-method":authMethod,"auth-token":authToken}
```

```
    deviceCli=ibmiotf.device.Client(deviceOptions)
```

```
except Exception as e:
```

```
    print("Caught exception connecting device:%s"%str(e))
```

```
    sys.exit()
```

```
deviceCli.connect()
```

```
while True:
```

```
    time.sleep(5)
```

```
    Ultrasonic=random.randint(0,80)
```

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

```
    lat=round(random.uniform(11.03,11.50),6)
```

```
    long=round(random.uniform(76.80,76.90),6)
```

```
    GPS=str(lat)+str(',')+str(long)
```

```
    myData={'Ultrasonic':Ultrasonic,'Weight':Weight,'GPS':GPS}
```

```
    def myOnpublishCallback():
```

```
        print("Published Ultrasonic=%sCm"%Ultrasonic,"Weight:%s  
kg"%Weight,"GPS:%s"%GPS)
```

```
success=deviceCli.publishEvent("IoTSensor","json",data=myData,qos=0,on_publish=myOnpublishCallback)
```

```
if not success:
```

```
print("Not connected to IoTF")
```

```
time.sleep(1)
```

```
deviceCli.commandCallback=myCommandCallback
```

```
deviceCli.disconnect()
```

```
import time
import sys
import ibmiotf.api
import ibmiotf.device
import random

organization="711"
devicetype="pre"
deviceid="1436"
authMethod="token"
authToken="0987654321"

def myCommandCallback(cmd):
    print("Command: ",cmd)
    status="cmd.d"
    if status == "d":
        print("1")
    else:
        print("2")
    try:
        deviceOptions={
            "deviceid":deviceid,
            "organization":organization,
            "devicetype":devicetype,
            "authMethod":authMethod,
            "authToken":authToken
        }
        deviceCli=ibmiotf.device.Client(deviceOptions)
        deviceCli.connect()
        while True:
            time.sleep(5)
            Ultrasonic=random.randint(1,100)
            Weight=random.randint(1,100)
            GPS=random.randint(1,100)
            myData={"Ultrasonic":Ultrasonic,"Weight":Weight,"GPS":GPS}
            def myOnPublish(msg):
                print("Publish: ",msg)
            success=deviceCli.publishEvent("IoTSensor","json",data=myData,qos=0,on_publish=myOnPublish)
            if not success:
                print("Not connected to IoTF")
            time.sleep(1)

deviceCli.disconnect()
```

```
Python 3.7.3 Shell
File Edit Shell Debug Options Window Help
Published Ultrasonic=64Cm Weight:67 kg GPS:11.063629,76.874106
Published Ultrasonic=44Cm Weight:97 kg GPS:11.291457,76.839464
Published Ultrasonic=71Cm Weight:70 kg GPS:11.130893,76.815074
Published Ultrasonic=29Cm Weight:84 kg GPS:11.230709,76.833985
Published Ultrasonic=11Cm Weight:42 kg GPS:11.347655,76.855519
Published Ultrasonic=6Cm Weight:21 kg GPS:11.228981,76.859308
Published Ultrasonic=65Cm Weight:37 kg GPS:11.35478,76.817705
Published Ultrasonic=74Cm Weight:91 kg GPS:11.248876,76.837356
Published Ultrasonic=16Cm Weight:25 kg GPS:11.497019,76.855007
Published Ultrasonic=10Cm Weight:65 kg GPS:11.036492,76.877643
Published Ultrasonic=17Cm Weight:27 kg GPS:11.247543,76.872592
Published Ultrasonic=25Cm Weight:81 kg GPS:11.146928,76.899698
Published Ultrasonic=14Cm Weight:50 kg GPS:11.477591,76.851345
Published Ultrasonic=47Cm Weight:41 kg GPS:11.184917,76.82774
Published Ultrasonic=50Cm Weight:64 kg GPS:11.059392,76.80855
Published Ultrasonic=5Cm Weight:11 kg GPS:11.119933,76.839167
Published Ultrasonic=15Cm Weight:9 kg GPS:11.3698,76.802874
Published Ultrasonic=47Cm Weight:42 kg GPS:11.097572,76.819656
Published Ultrasonic=36Cm Weight:84 kg GPS:11.06367,76.830596
Published Ultrasonic=38Cm Weight:25 kg GPS:11.376252,76.888445
Published Ultrasonic=40Cm Weight:69 kg GPS:11.483877,76.862177
Published Ultrasonic=79Cm Weight:47 kg GPS:11.066321,76.826801
Published Ultrasonic=80Cm Weight:11 kg GPS:11.311968,76.80176
Published Ultrasonic=64Cm Weight:31 kg GPS:11.23764,76.81102
Published Ultrasonic=35Cm Weight:69 kg GPS:11.423376,76.862026
Published Ultrasonic=11Cm Weight:66 kg GPS:11.350898,76.851643
Published Ultrasonic=40Cm Weight:69 kg GPS:11.40319,76.863314
Published Ultrasonic=74Cm Weight:85 kg GPS:11.097492,76.83352

===== RESTART: C:\Users\ELCOT\Desktop\ibmwat.py =====
2022-11-20 06:25:30,594 ibmiotf.device.Client INFO Connected successfully: d:71nn7p:preethi:1436
Published Ultrasonic=23Cm Weight:9 kg GPS:11.451811,76.853592
Published Ultrasonic=16Cm Weight:52 kg GPS:11.310311,76.818532

===== RESTART: C:\Users\ELCOT\Desktop\ibmwat.py =====
2022-11-20 06:25:51,864 ibmiotf.device.Client INFO Connected successfully: d:71nn7p:preethi:1436
Published Ultrasonic=32Cm Weight:7 kg GPS:11.450933,76.818019
```

