

Develop a python script to publish and subscribe to IBM IoT platform

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Project Name	SmartFarmer - IoT Enabled Smart Farming Application

- **Develop the python code:**

```
#IBM Watson IOT
```

```
Platform#pip install wiotp-
```

```
sdk import
```

```
wiotp.sdk.device import
```

```
time
```

```
import random
```

```
import requests
```

```
import json
```

```
myConfig = {
```

```
    "identity": {
```

```
        "orgId": "drhkpn",
```

```
        "typeId": "Smart-Farmer",
```

```
        "deviceId": "9192"
```

```
    },
```

```
    "auth": {
```

```
        "token": "SO_kL5!_*299@q6i4r"
```

```
    }
```

```
}
```

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

```
if(cmd.data['cm']=="flon"):
    print("-----Light 1 is ON -- ")
```

```
if(cmd.data['cm']=="floff"):
    print("-----Light 1 is OFF-- ")
```

```
if(cmd.data['cm']=="mton"):
    print("-----Motor is ON --- ")
```

```
if(cmd.data['cm']=="mtoff"):
    print("-----Motor is OFF --- ")
```

```
if(cmd.data['cm']=="slon"):
    print("-----Light 2 is ON -- ")
```

```
if(cmd.data['cm']=="sloff"):
    print("-----Light 2 is OFF-- ")
```

```
if(cmd.data['cm']=="fton"):
    print("-----Trap 1 is ON --- ")
```

```
if(cmd.data['cm']=="ftoff"):
    print("-----Trap 1 is OFF--- ")
```

```
if(cmd.data['cm']=="ston"):
    print("-----Trap 2 is ON---")
```

```
if(cmd.data['cm']=="stoff"):
    print("-----Trap 2 is OFF---")
```

```
if(cmd.data['cm']=="tton"):
    print("-----Trap 3 is ON---")
```

```
if(cmd.data['cm']=="ttoff"):
    print("-----Trap 3 is OFF---")
```

```
if(cmd.data['cm']=="futon"):
    print("-----Light 4 is ON-- ")
```

```
if(cmd.data['cm']=="futoff"):
    print("-----Trap 4 is OFF---")
```

```
if(cmd.data['cm']=="fvon"):
    print("-----Gate Valve 1 is ON---")
```

```
if(cmd.data['cm']=="fvoff"):
    print("-----Gate Valve 1 is OFF-- ")
```

```
if(cmd.data['cm']=="svon"):
```

```
print("-----Gate Valve 2 is ON ---")
```

```
if(cmd.data['cm']=="svoff"):
```

```
    print("-----Gate Valve 2 is OFF-- ")
```

```
if(cmd.data['cm']=="tvon"):
```

```
    print("-----Gate Valve 3 is ON ---")
```

```
if(cmd.data['cm']=="tvoff"):
```

```
    print("-----Gate Valve 3 is OFF-- ")
```

```
if(cmd.data['cm']=="fuvon"):
```

```
    print("-----Gate Valve 4 is ON ---")
```

```
if(cmd.data['cm']=="fuvoff"):
```

```
    print("-----Gate Valve 4 is OFF-- ")
```

```
if(cmd.data['cm']=="fivon"):
```

```
    print("-----Gate Valve 5 is ON ---")
```

```
if(cmd.data['cm']=="fivoff"):
```

```
    print("-----Gate Valve 5 is OFF-- ")
```

```
client = wiotp.sdk.device.DeviceClient(config=myConfig,
```

```
logHandlers=None)client.connect()
```

```
while(True):
```

```
weatherdata =
requests.get('https://api.openweathermap.org/data/2.5/weather?q=Chennai&appid=3942dd61b26410
206c466575e5addfbf')

a=weatherdata.text

b=json.loads(a)

c=(b["main"]["temp"]-
273.15)

d=(b["main"]["humidity"])

myData={'temp':c, 'humid':d}

client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)print("Published data Successfully: %s", myData)

client.commandCallback =

myCommandCallbacktime.sleep(2)

print()

client.disconnect()
```