Develop A Python Script To Publish And Subscribe To IBM IoT Platform

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Project Name	Project - SmartFarmer - IoT Enabled Smart Farming Application

Python Code:

```python
#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):
```

```python
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---- ")
```

```python
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---- ")
```

```python
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---- ")
```

```python
    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 = myCommandCallback time.sleep(2) print()

client.disconnect()
```