Develop The Python Code

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Project Name	SMART FARMER – IOT ENABLED SMART FARMING APPLICATION SYSTEM.

Develop The Python Code

Develop the python code to publish and subscribe to the commands from the IBM cloud.

CODE:

```python
import wiotp.sdk.device
import time
import os
import datetime
import random
myConfig = {
    "identity":{
        "orgId": "sw4p6z",
        "typeId": "FIRE",
        "deviceId": "WATER"
},
    "auth": {
        "token": "12345678"
}
 }
client = wiotp.sdk.device.DeviceClient (config=myConfig,
logHandlers=None)
client.connect()
```

```python
def myCommandCallback(cmd) :
    print("Message received from IBM IoT Platform:  %s" %
cmd.data['command'])
    m=cmd.data['command']
    if(m== "motoron"):
        print("Motor is switched on")
    elif (m== "motoroff"):
        print ("Motor is switched OFF")
    print(" ")

while True:
    soil=random.randint(0,100)
    temp=random.randint(-20,125)
    hum=random.randint(0,100)
    myData={'soil_moisture': soil, 'temperature':temp,
'humidity':hum}
    client.publishEvent(eventId="status",
msgFormat="json", data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    time.sleep(100)
    client.commandCallback = myCommandCallback
    client.disconnect ()
```

Add Device

	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
>	ABCD_1	Disconnected	AECD	Device	29 Oct 2022 16:14	
>	AJAY	Disconnected	AECD	Device	29 Oct 2022 12:49	
>	COLD	Disconnected	HOT	Device	2 Nov 2022 10:53	
v	WATER	Connected	FIRE	Device	29 Oct 2022 15:26	

Identity   Device Information   Recent Events   State   Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
status	{"soil_moisture":20,"temperature":92,"humidity"...	json	a few seconds ago
status	{"soil_moisture":11,"temperature":0,"humidity":3}	json	a few seconds ago

0 Simulations running

Python 3.7.4 Shell

File Edit Shell Debug Options Window Help

```
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul  8 2019, 20:34:20) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
 RESTART: C:/Users/roman/AppData/Local/Programs/Python/Python37/smartagri.py
2022-11-02 12:34:30,433  iotp.sdk.device.client.DeviceClient  INFO   Connected successfully: d:bjj5tn:FIRE:WATER
Published data Successfully: %s {'soil_moisture': 20, 'temperature': 92, 'humidity': 54}
```

Ln 7 Col 0