

Sprint 1 Python Code

Team ID	PNT2022TMID14367
Project Name	Smart Farmer - IoT enabled smart Farming Application

Program Coding:

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

```
#IBM
```

```
organization = "3nc6qc"
```

```
deviceType = "node"
```

```
deviceId = "008"
```

```
authMethod = "use-token-auth"
```

```
authToken = "6383637992"
```

```
#Gpio
```

```
def mycommandCallback(cmd):
```

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

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

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

```
        print("LED is ON")
```

```
    elif status=="lightoff":
```

```
        print("LED is OFF")
```

```
    else:
```

```
        print("please send proper command")
```

```
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()
```

```
#CONNECCT
```

```
deviceCli.connect()
```

```
while True:
```

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

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

```
data={'temp':temp,'hum':hum}
```

```
def myOnPublishCallback():
```

```
    print("Published Temperature = %s C"%temp,"Humidity = %s %" %hum, "to IBM Watson")
```

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

```
if not success:
```

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

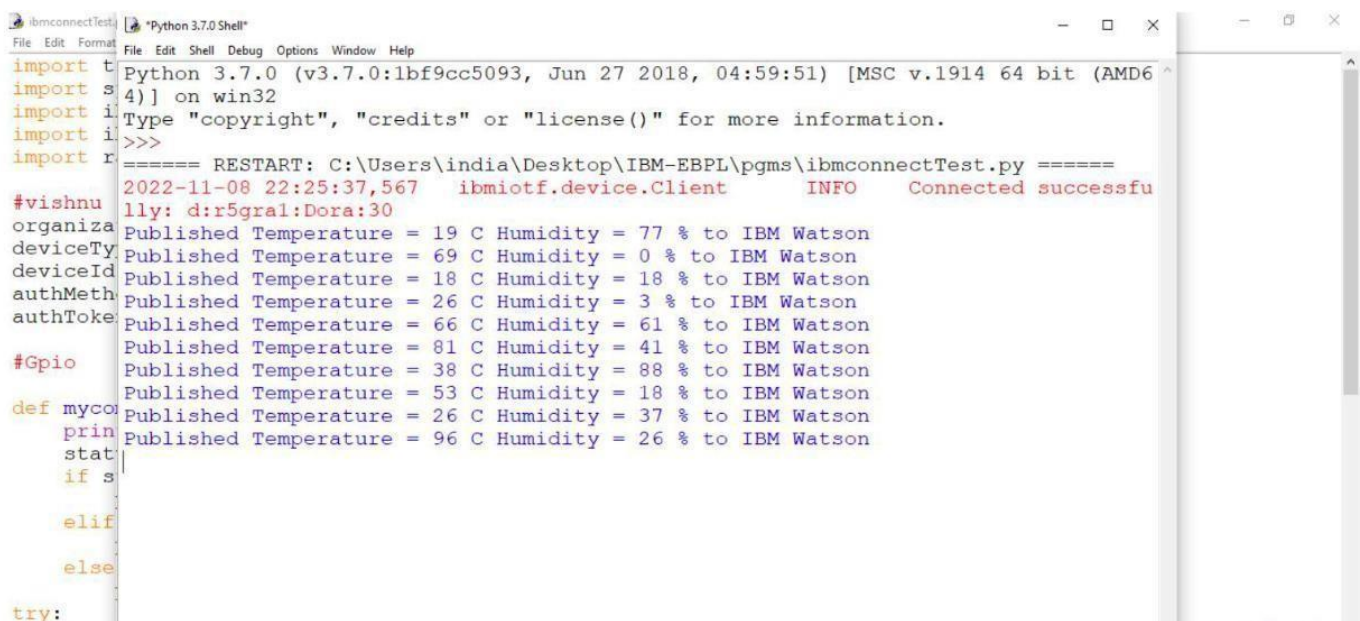
```
time.sleep(10)
```

```
deviceCli.commandCallback = mycommandCallback
```

```
#Disconnect
```

```
deviceCli.disconnect()
```

Screenshots:



```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\india\Desktop\IBM-EBPL\pgms\ibmconnectTest.py =====
2022-11-08 22:25:37,567 ibmiotf.device.Client INFO Connected successfully
lly: d:r5gral:Dora:30
Published Temperature = 19 C Humidity = 77 % to IBM Watson
Published Temperature = 69 C Humidity = 0 % to IBM Watson
Published Temperature = 18 C Humidity = 18 % to IBM Watson
Published Temperature = 26 C Humidity = 3 % to IBM Watson
Published Temperature = 66 C Humidity = 61 % to IBM Watson
Published Temperature = 81 C Humidity = 41 % to IBM Watson
Published Temperature = 38 C Humidity = 88 % to IBM Watson
Published Temperature = 53 C Humidity = 18 % to IBM Watson
Published Temperature = 26 C Humidity = 37 % to IBM Watson
Published Temperature = 96 C Humidity = 26 % to IBM Watson
```

Device ID

Status

Device Type

Class ID

Date Added

Descriptive Location

▼

008

Disconnected

node

Device

10 Nov 2022 10:04

→

...

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
event2	{"Alert!! Alert!! Distance":65.03}	json	a few seconds ago
event2	{"Alert!! Alert!! Distance":64.96}	json	a few seconds ago
event2	{"Alert!! Alert!! Distance":64.96}	json	a few seconds ago
event2	{"Alert!! Alert!! Distance":64.96}	json	a few seconds ago
event2	{"Alert!! Alert!! Distance":64.96}	json	a few seconds ago