

Sprint 1 Python Code

Team ID	PNT2022TMID49367
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 = "janesh"
deviceType = "raspberrypi"
deviceId = "12345"
authMethod = "use-token-auth"
authToken = "12345678"

#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 IoT")
```

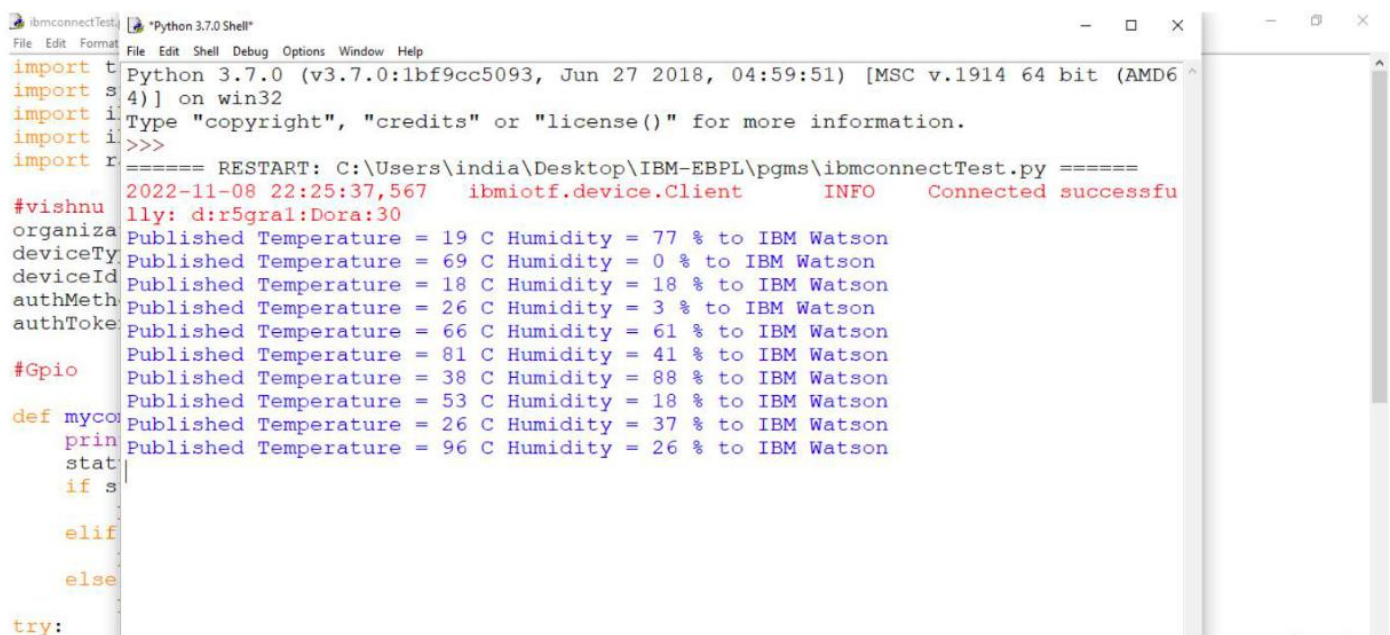
```
time.sleep(10)
```

```
deviceCli.commandCallback = mycommandCallback
```

```
#Disconnect
```

```
deviceCli.disconnect()
```

Screenshots:



```
ibmconnectTest.py Python 3.7.0 Shell
File Edit Format File Edit Shell Debug Options Window Help
import sys
import time
import json
import random

#vishnu
organiza
deviceTy
deviceId
authMeth
authToke

#Gpio

def myco
    prin
    stat
    if s
    elif
    else

try:
```

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: 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

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IBM Watson IoT Platform

Browse

Action

Device Types

Interfaces

Search by Device ID

Device S

<input type="checkbox"/>	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
▼	12345	Disconnected	raspberrypi	Device	11 Nov 2022 15:03	

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
event_1	{"randomNumber":55,"temp":65,"hum":98}	json	a few seconds ago
event_1	{"randomNumber":61,"temp":54,"hum":64}	json	a few seconds ago
event_1	{"randomNumber":6,"temp":55,"hum":68}	json	a few seconds ago
event_1	{"randomNumber":87,"temp":30,"hum":71}	json	a few seconds ago
event_1	{"randomNumber":90,"temp":5,"hum":90}	json	a few seconds ago

1 Simulation running

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