

## 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")
```

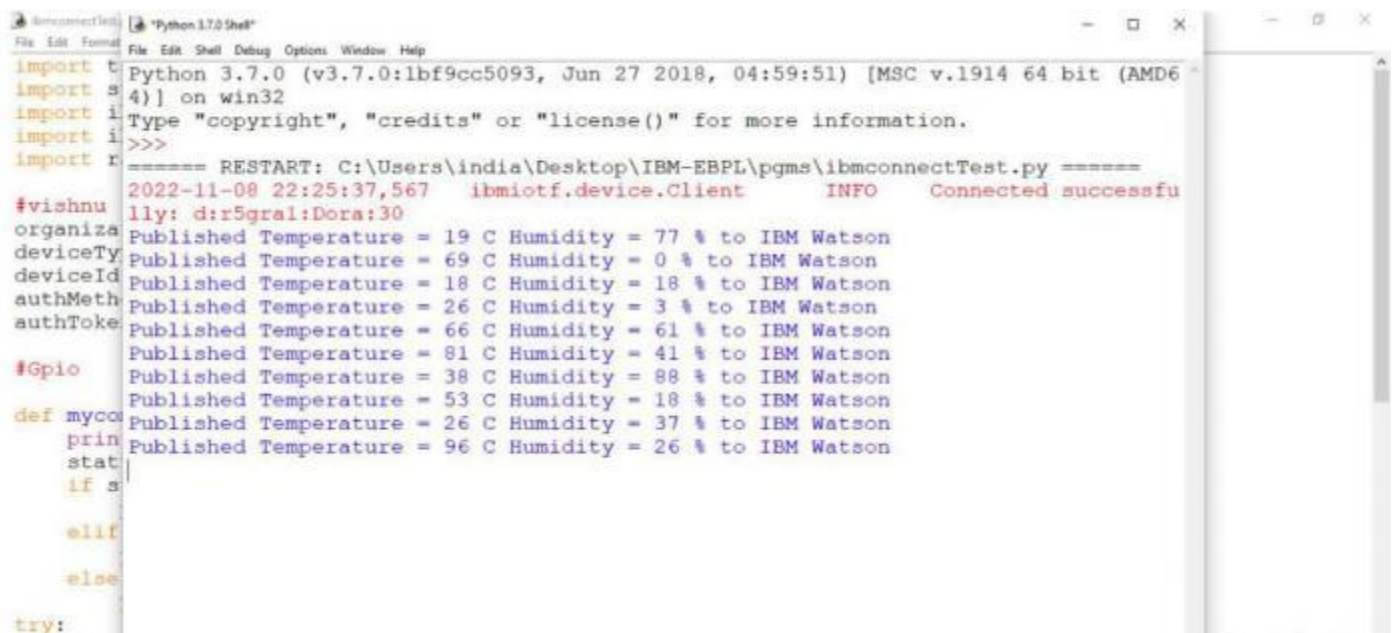
```
time.sleep(10)
```

```
deviceCli.commandCallback = mycommandCallback
```

```
#Disconnect
```

```
deviceCli.disconnect()
```

## Screenshots:



```
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
#vishnu
lly: d:r5gral:Dora:30
organiza Published Temperature = 19 C Humidity = 77 % to IBM Watson
deviceTy Published Temperature = 69 C Humidity = 0 % to IBM Watson
deviceId Published Temperature = 18 C Humidity = 18 % to IBM Watson
authMeth Published Temperature = 26 C Humidity = 3 % to IBM Watson
authToke Published Temperature = 66 C Humidity = 61 % to IBM Watson
Published Temperature = 81 C Humidity = 41 % to IBM Watson
#Gpio Published Temperature = 38 C Humidity = 88 % to IBM Watson
Published Temperature = 53 C Humidity = 18 % to IBM Watson
def myco Published Temperature = 26 C Humidity = 37 % to IBM Watson
    prin Published Temperature = 96 C Humidity = 26 % to IBM Watson
    stat
    if s
    elif
    else
try:
```

IBM Watson IoT Platform

Browse

Action

Device Types

Interfaces

Search by Device ID

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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ID: 5v1y0g

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