

SPRINT-1

Date	19 November 2022
Team ID	PNT2022TMID06181
Project Name	Project – Smart Farmer- IOT Enabled Smart Farming Application

PYTHON CODE:

```
import time

import sys

import ibmiotf.application
import ibmiotf.device

import random

#Provide your IBM Waston Device Credentials

organization="b76hg0"

deviceType="avpdk12"

deviceId="abcd"

authMethod="token"

authToken="123456789"

# Initialize GPIO

def myCommandCallback(cmd):

    print("message received from IBM Iot platform: %s" %

cmd.data['command'])

    status=cmd.data['command']

    if status=="motoron":

        print ("motor is on")

    elif status == "motoroff":

        print ("motor 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()
```

```
# Connect and send a datapoint "hello" with value "world" into the cloud as an  
event of type "greeting" 10 times deviceCli.connect()
```

```
deviceCli.connect()
```

while True:

```
#Get Sensor Data from DHT11
```

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

```
Humid=random.randint(40,100)
```

```
Mois=random.randint(10,110)
```

```
data = { 'temp' : temp, 'Humid': Humid , 'Mois': Mois }
```

```
#print data      def myOnPublishCallback():
```

```
def myOnPublishCallback():
```

```
    print("Published Temperature = %s C" % temp, "Humidity = %s %% " %  
Humid, "Moisture =%s deg c" % Mois, "to IBM Watson")
```

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

```
    if not success:
```

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

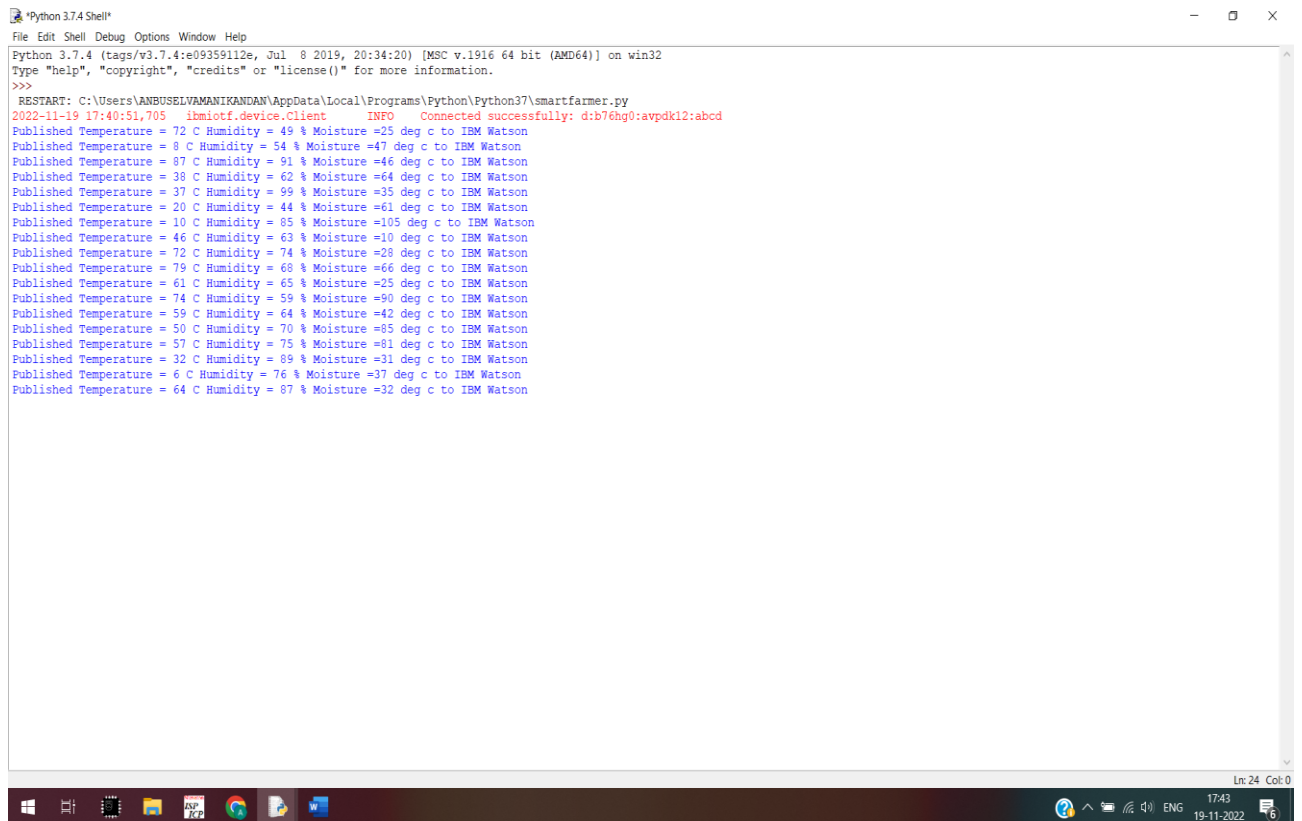
```
    time.sleep(10)
```

```
deviceCli.commandCallback = myCommandCallback
```

```
# Disconnect the device and application from the cloud deviceCli.disconnect()
```

```
deviceCli.disconnect()
```

OUTPUT:



```
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:09359112e, 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\ANBUSELVAMANIKANDAN\AppData\Local\Programs\Python\Python37\smartfarmer.py
2022-11-19 17:40:51,705 ibmiotf.device.Client INFO Connected successfully: d:b76hg0:avpdk12:abcd
Published Temperature = 72 C Humidity = 49 % Moisture =25 deg c to IBM Watson
Published Temperature = 8 C Humidity = 54 % Moisture =47 deg c to IBM Watson
Published Temperature = 87 C Humidity = 91 % Moisture =46 deg c to IBM Watson
Published Temperature = 38 C Humidity = 62 % Moisture =64 deg c to IBM Watson
Published Temperature = 37 C Humidity = 99 % Moisture =35 deg c to IBM Watson
Published Temperature = 20 C Humidity = 44 % Moisture =61 deg c to IBM Watson
Published Temperature = 10 C Humidity = 85 % Moisture =105 deg c to IBM Watson
Published Temperature = 46 C Humidity = 63 % Moisture =10 deg c to IBM Watson
Published Temperature = 72 C Humidity = 74 % Moisture =28 deg c to IBM Watson
Published Temperature = 79 C Humidity = 68 % Moisture =66 deg c to IBM Watson
Published Temperature = 61 C Humidity = 65 % Moisture =25 deg c to IBM Watson
Published Temperature = 74 C Humidity = 59 % Moisture =90 deg c to IBM Watson
Published Temperature = 59 C Humidity = 64 % Moisture =42 deg c to IBM Watson
Published Temperature = 50 C Humidity = 70 % Moisture =85 deg c to IBM Watson
Published Temperature = 57 C Humidity = 75 % Moisture =81 deg c to IBM Watson
Published Temperature = 32 C Humidity = 89 % Moisture =31 deg c to IBM Watson
Published Temperature = 6 C Humidity = 76 % Moisture =37 deg c to IBM Watson
Published Temperature = 64 C Humidity = 87 % Moisture =32 deg c to IBM Watson
```