DEVELOP THE PYTHON SCRIPT

PYTHON SCRIPT :

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


#Provide your IBM Watson Device
Credentialsorganization = "cbseji"
deviceType = "abcd"
deviceId = "1234"
authMethod = "token"
authToken =
"12345678"

# Initialize GPIO


def myCommandCallback(cmd):
    print("Command received: %s" %
    cmd.data['command'])status=cmd.data['command']
    if status=="lighton":
        print ("led is on")
    else :
        print ("led is off")
```

```
#print(cmd)
```

```
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()

while True:
     #Get Sensor Data from DHT11

     temp=random.randint(0,100
     )
     Humid=random.randint(0,10
     0)

     data = { 'temp' : temp, 'Humid':
     Humid }#print data
     def myOnPublishCallback():
        print ("Published Temperature = %s C" % temp, "Humidity = %s %%" % Humid, "to
IBMWatson")
```

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

    if not success:

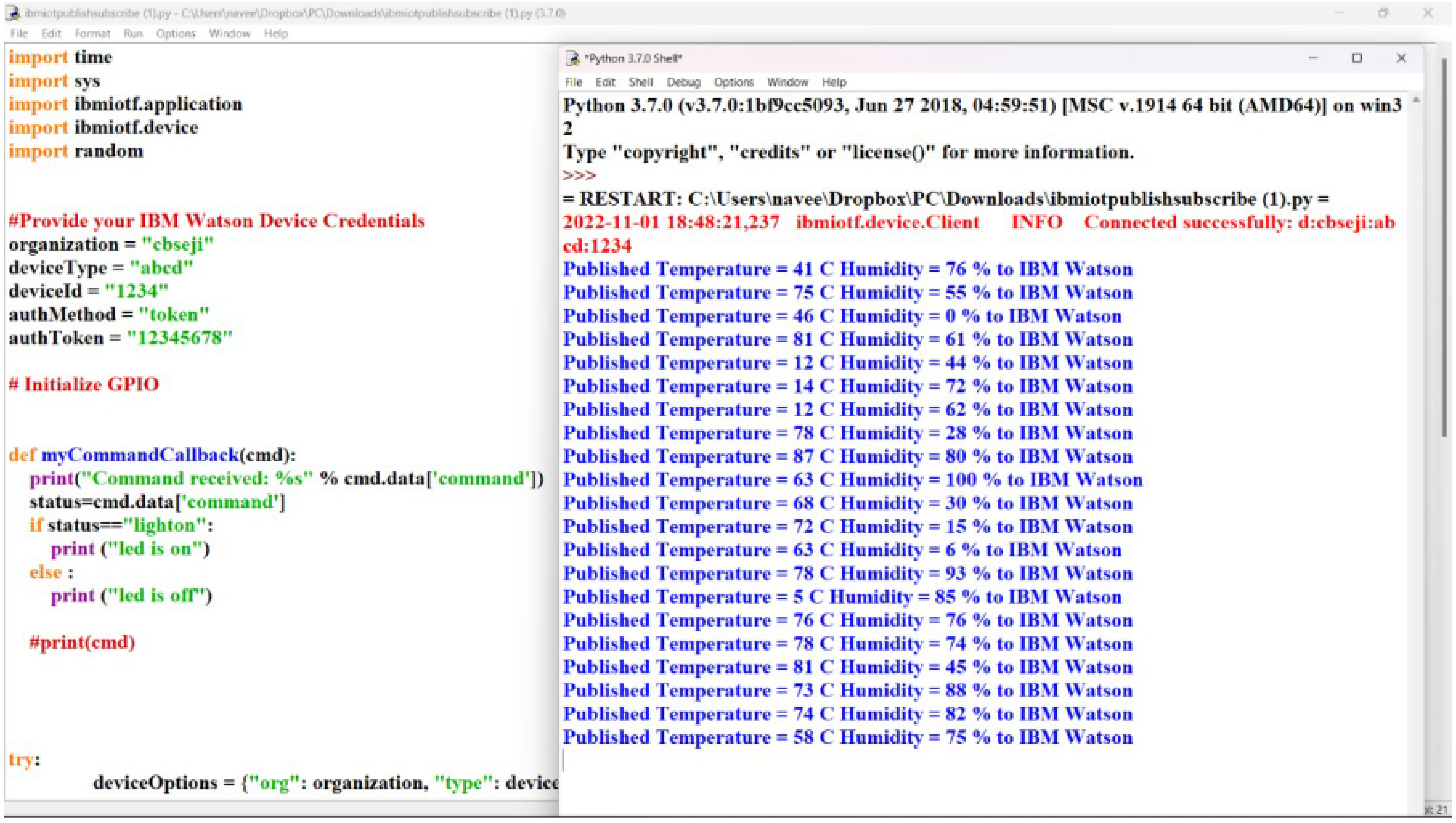
      print("Not connected to

    IoTF")time.sleep(1)
```

deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the

clouddeviceCli.disconnect()


ibmiotpublishsubscribe (1).py - C:\Users\navee\Dropbox\PC\Downloads\ibmiotpublishsubscribe (1).py (3.7.0)
File Edit Format Run Options Window Help
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help

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import sys
import ibmiotf.application
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   status=cmd.data['command']
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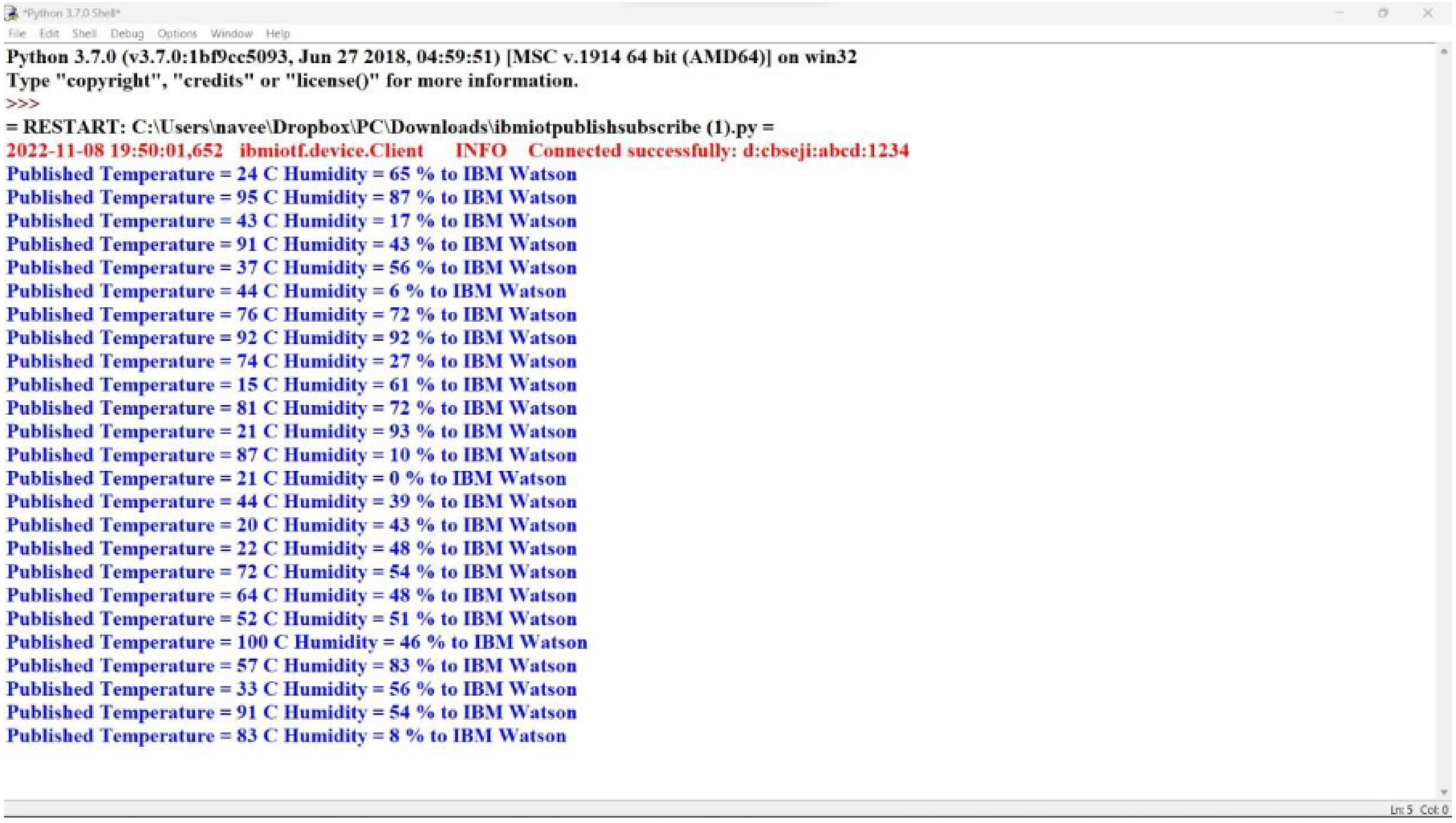
   #print(cmd)




try:
          deviceOptions = {"org": organization, "type": device
```

```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win3
2
Type "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\navee\Dropbox\PC\Downloads\ibmiotpublishsubscribe (1).py =
2022-11-01 18:48:21,237   ibmiotf.device.Client     INFO    Connected successfully: d:cbseji:ab
cd:1234
Published Temperature = 41 C Humidity = 76 % to IBM Watson
Published Temperature = 75 C Humidity = 55 % to IBM Watson
Published Temperature = 46 C Humidity = 0 % to IBM Watson
Published Temperature = 81 C Humidity = 61 % to IBM Watson
Published Temperature = 12 C Humidity = 44 % to IBM Watson
Published Temperature = 14 C Humidity = 72 % to IBM Watson
Published Temperature = 12 C Humidity = 62 % to IBM Watson
Published Temperature = 78 C Humidity = 28 % to IBM Watson
Published Temperature = 87 C Humidity = 80 % to IBM Watson
Published Temperature = 63 C Humidity = 100 % to IBM Watson
Published Temperature = 68 C Humidity = 30 % to IBM Watson
Published Temperature = 72 C Humidity = 15 % to IBM Watson
Published Temperature = 63 C Humidity = 6 % to IBM Watson
Published Temperature = 78 C Humidity = 93 % to IBM Watson
Published Temperature = 5 C Humidity = 85 % to IBM Watson
Published Temperature = 76 C Humidity = 76 % to IBM Watson
Published Temperature = 78 C Humidity = 74 % to IBM Watson
Published Temperature = 81 C Humidity = 45 % to IBM Watson
Published Temperature = 73 C Humidity = 88 % to IBM Watson
Published Temperature = 74 C Humidity = 82 % to IBM Watson
Published Temperature = 58 C Humidity = 75 % to IBM Watson
```



```
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\navee\Dropbox\PC\Downloads\ibmiotpublishsubscribe (1).py =
2022-11-08 19:50:01,652   ibmiotf.device.Client     INFO    Connected successfully: d:cbseji:abcd:1234
Published Temperature = 24 C Humidity = 65 % to IBM Watson
Published Temperature = 95 C Humidity = 87 % to IBM Watson
Published Temperature = 43 C Humidity = 17 % to IBM Watson
Published Temperature = 91 C Humidity = 43 % to IBM Watson
Published Temperature = 37 C Humidity = 56 % to IBM Watson
Published Temperature = 44 C Humidity = 6 % to IBM Watson
Published Temperature = 76 C Humidity = 72 % to IBM Watson
Published Temperature = 92 C Humidity = 92 % to IBM Watson
Published Temperature = 74 C Humidity = 27 % to IBM Watson
Published Temperature = 15 C Humidity = 61 % to IBM Watson
Published Temperature = 81 C Humidity = 72 % to IBM Watson
Published Temperature = 21 C Humidity = 93 % to IBM Watson
Published Temperature = 87 C Humidity = 10 % to IBM Watson
Published Temperature = 21 C Humidity = 0 % to IBM Watson
Published Temperature = 44 C Humidity = 39 % to IBM Watson
Published Temperature = 20 C Humidity = 43 % to IBM Watson
Published Temperature = 22 C Humidity = 48 % to IBM Watson
Published Temperature = 72 C Humidity = 54 % to IBM Watson
Published Temperature = 64 C Humidity = 48 % to IBM Watson
Published Temperature = 52 C Humidity = 51 % to IBM Watson
Published Temperature = 100 C Humidity = 46 % to IBM Watson
Published Temperature = 57 C Humidity = 83 % to IBM Watson
Published Temperature = 33 C Humidity = 56 % to IBM Watson
Published Temperature = 91 C Humidity = 54 % to IBM Watson
Published Temperature = 83 C Humidity = 8 % to IBM Watson
```