

TEAM ID	PNT2022TMID13026
PROJECT NAME	Smart Waste Management System for Metropolitan Cities

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 eventof
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:

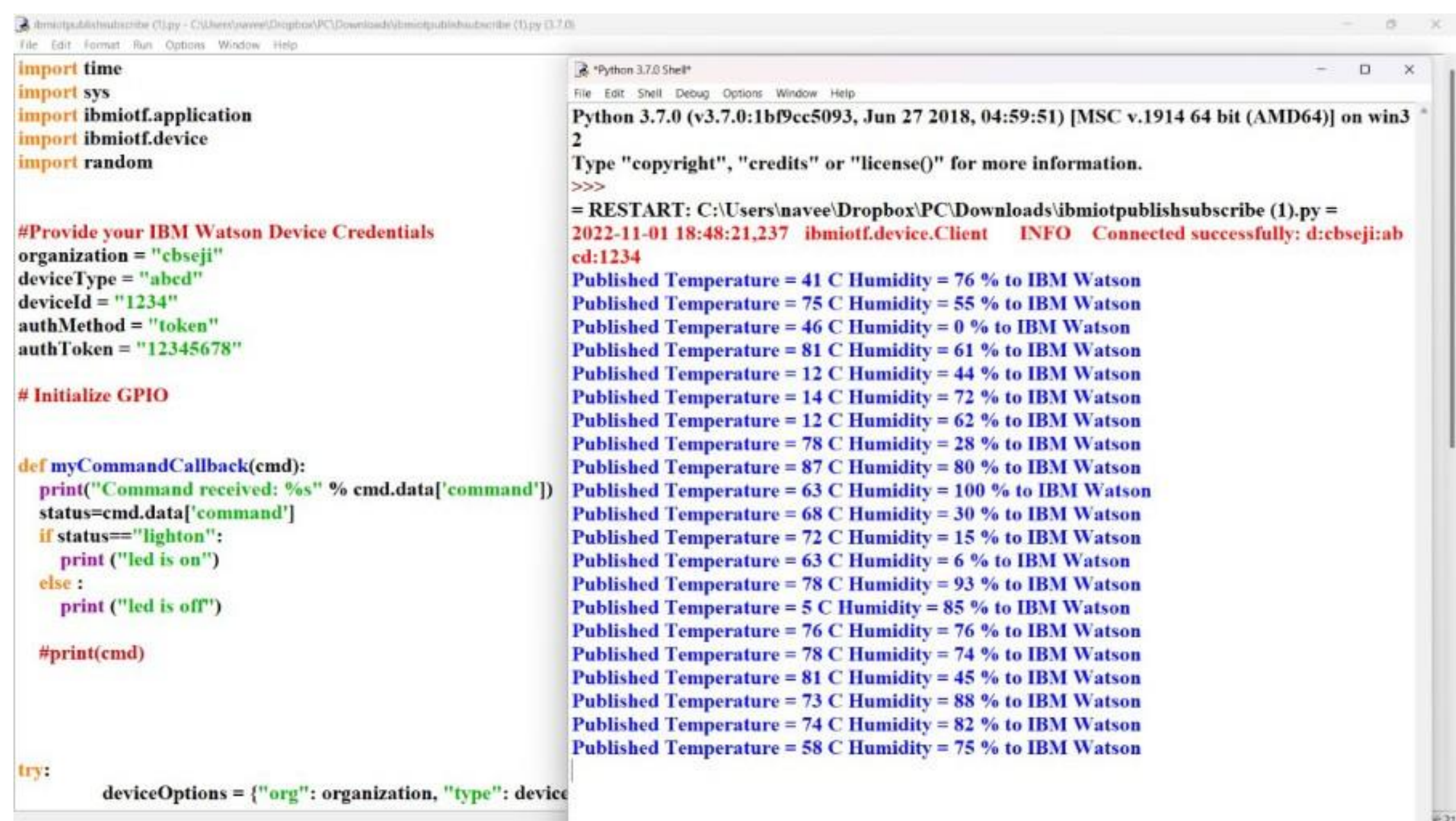
```
    print("Not connected to
```

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

```
deviceCli.commandCallback = myCommandCallback
```

Disconnect the device and application from the

```
clouddeviceCli.disconnect()
```



```
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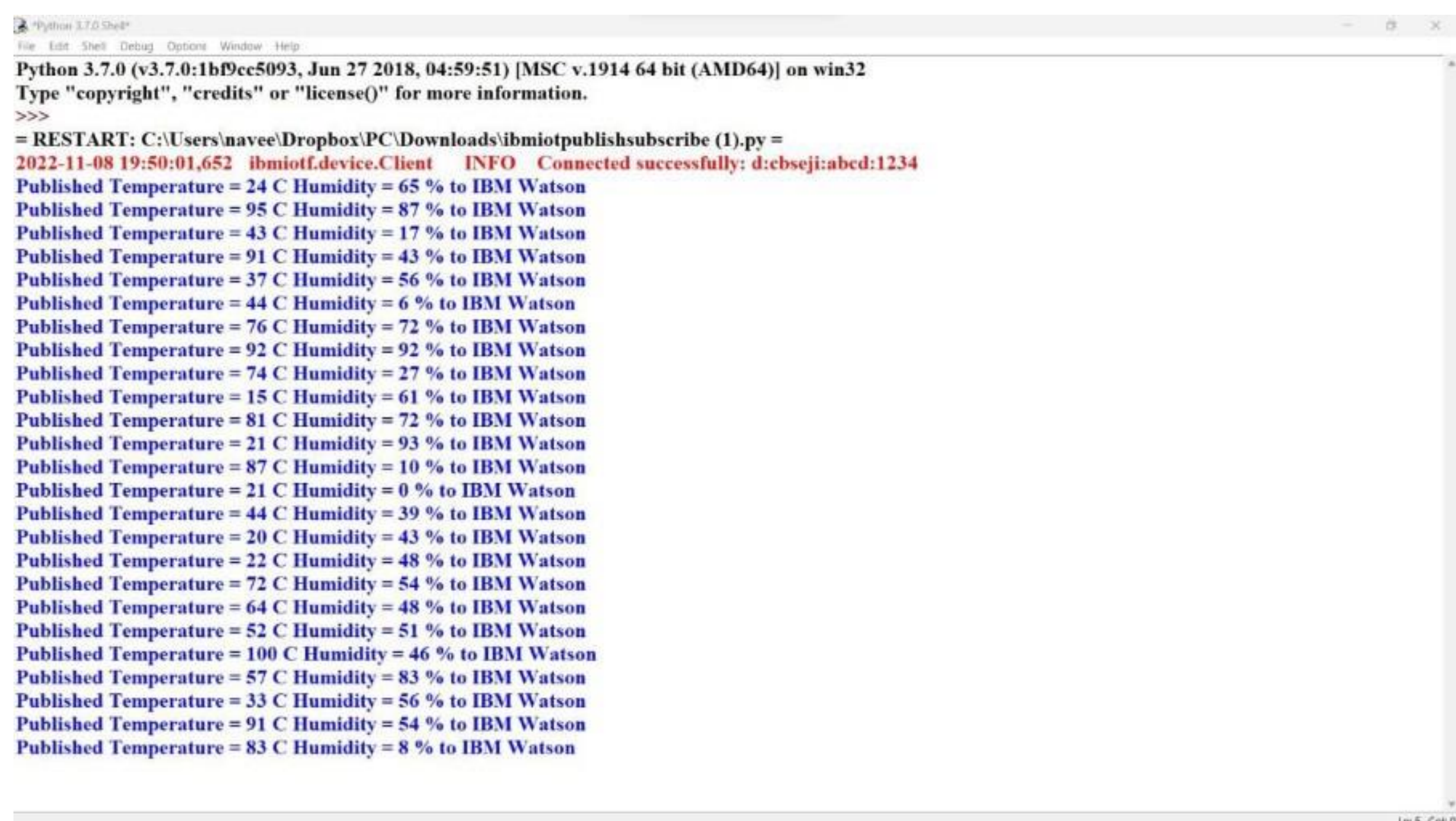
# Initialize GPIO

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    status=cmd.data['command']
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        print ("led is on")
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    #print(cmd)

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

```
Python 3.7.0 (v3.7.0:1b9cc5093, 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\navvee\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 (v3.7.0:1b9cc5093, 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\navvee\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
```