

SPRINT-3

Develop Python Script

Date	12 November 2022
Team ID	PNT2022TMID46185
Project Name	Sign with Smart Connectivity For Better Road Safety

PYTHON CODE:

```
import time
```

```
import sys
```

```
import ibmiotf.application
```

```
import ibmiotf.device
```

```
import random
```

```
#Provide your IBM Watson Device Credentials
```

```
organization = "yw26zg"
```

```
deviceType = "betterroad"
```

```
deviceId = "123456"
```

```
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(0,100)

```

```

data = { 'temp' : temp,'humid' : humid }

#print data

def myOnPublishCallback():

    print ("Published Temperature = %s C" % temp, "humidity = %s " % humid ,"to IBM Watson")

    success = deviceCli.publishEvent("event_1", "json", data, qos=0,
on_publish=myOnPublishCallback)

    if not success:

        print("Not connected to IoT")

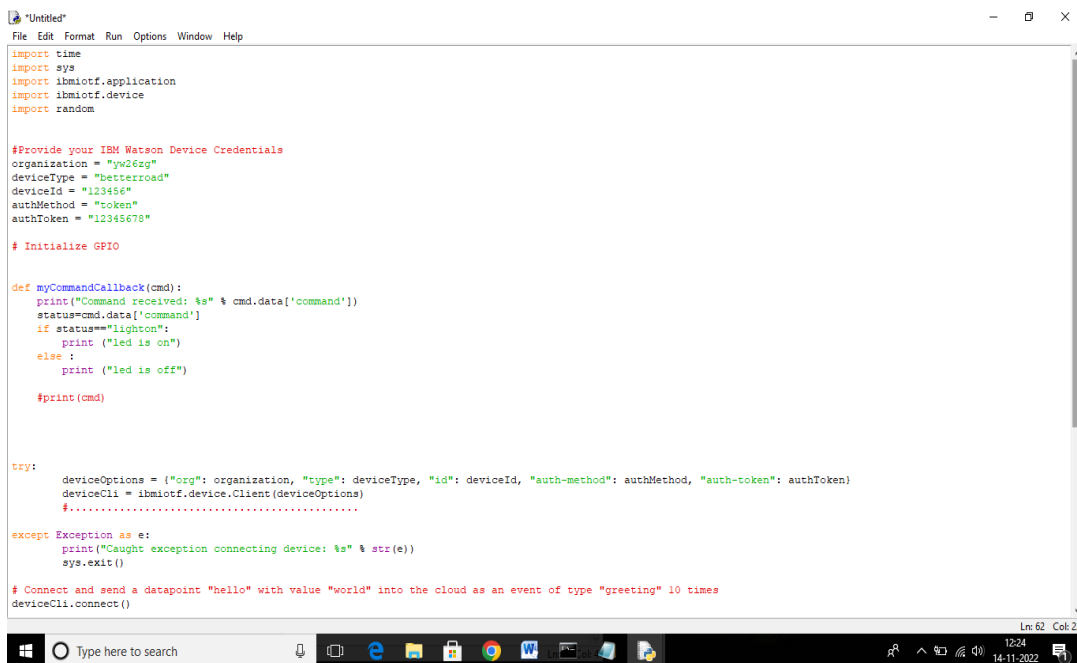
    time.sleep(1)

deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud

deviceCli.disconnect()

```



The screenshot shows a code editor window titled 'Untitled' with a menu bar (File, Edit, Format, Run, Options, Window, Help). The code is a Python script for connecting to IBM Watson IoT. It includes imports for time, sys, ibmiotf.application, ibmiotf.device, and random. It defines a myCommandCallback function that prints received commands and their status. The main logic is in a try block where it initializes deviceOptions, creates a deviceCli object, and connects to the cloud. An except block handles exceptions during connection. The script ends with a comment about sending a datapoint and a deviceCli.connect() call.

```

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

#Provide your IBM Watson Device Credentials
organization = "ps26eg"
deviceType = "betterroad"
deviceId = "123456"
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()

```



```
C:\Windows\py.exe
2022-11-14 12:23:10,958 ibmiotf.device.Client INFO Connected successfully: d:YW26zg:bettermoad:123456
Published Temperature = 34 C humidity = 24 to IBM Watson
Published Temperature = 66 C humidity = 96 to IBM Watson
Published Temperature = 87 C humidity = 29 to IBM Watson
Published Temperature = 98 C humidity = 67 to IBM Watson
Published Temperature = 95 C humidity = 76 to IBM Watson
Published Temperature = 45 C humidity = 38 to IBM Watson
Published Temperature = 23 C humidity = 27 to IBM Watson
Published Temperature = 28 C humidity = 57 to IBM Watson
Published Temperature = 17 C humidity = 51 to IBM Watson
Published Temperature = 9 C humidity = 26 to IBM Watson
Published Temperature = 67 C humidity = 29 to IBM Watson
Published Temperature = 93 C humidity = 50 to IBM Watson
Published Temperature = 87 C humidity = 0 to IBM Watson
Published Temperature = 27 C humidity = 59 to IBM Watson
Published Temperature = 95 C humidity = 52 to IBM Watson
Published Temperature = 19 C humidity = 92 to IBM Watson
Published Temperature = 27 C humidity = 74 to IBM Watson
Published Temperature = 40 C humidity = 74 to IBM Watson
Published Temperature = 93 C humidity = 98 to IBM Watson
Published Temperature = 89 C humidity = 30 to IBM Watson
Published Temperature = 44 C humidity = 55 to IBM Watson
Published Temperature = 88 C humidity = 73 to IBM Watson
Published Temperature = 61 C humidity = 81 to IBM Watson
Published Temperature = 0 C humidity = 43 to IBM Watson
Published Temperature = 4 C humidity = 99 to IBM Watson
Published Temperature = 93 C humidity = 84 to IBM Watson
Published Temperature = 14 C humidity = 71 to IBM Watson
Published Temperature = 57 C humidity = 49 to IBM Watson
Published Temperature = 84 C humidity = 65 to IBM Watson
Published Temperature = 74 C humidity = 11 to IBM Watson
Published Temperature = 79 C humidity = 0 to IBM Watson
Published Temperature = 2 C humidity = 44 to IBM Watson
Published Temperature = 18 C humidity = 27 to IBM Watson
Published Temperature = 34 C humidity = 92 to IBM Watson
```