

Sprint 3

Date	20 November 2022
Team ID	PNT2022TMID39433
Project Name	Signs 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 = "8ahq3z"

deviceType = "SENSORS"

deviceId = "2211"

authMethod = "token"

authToken = "22112001"

# 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(-30,100)
```

```
    Humid=random.randint(10,90)
```

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

```
    #print data
```

```
    def myOnPublishCallback():
```

```
        print ("Temperature = %s C" % temp, "Humidity = %s %" % Humid, "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()

```
*Python 3.7.0 Shell*
File Edit Shell Debug Options Window Help
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 infor
mation.
>>>
===== RESTART: K:/IBM Project/Python script.
py =====
2022-11-18 23:55:48,556 ibmiotf.device.Client INFO
    Connected successfully: d:8ahq3z:SENSORS:2211
Temperature = -5 C Humidity = 43 % to IBM Watson
Temperature = 34 C Humidity = 64 % to IBM Watson
Temperature = 7 C Humidity = 83 % to IBM Watson
Temperature = 4 C Humidity = 40 % to IBM Watson
Temperature = 47 C Humidity = 88 % to IBM Watson
Temperature = 45 C Humidity = 17 % to IBM Watson
Temperature = 49 C Humidity = 87 % to IBM Watson
Temperature = 49 C Humidity = 43 % to IBM Watson
Temperature = 66 C Humidity = 23 % to IBM Watson
Temperature = 16 C Humidity = 12 % to IBM Watson
Temperature = 55 C Humidity = 73 % to IBM Watson
Temperature = -2 C Humidity = 85 % to IBM Watson
Temperature = -22 C Humidity = 72 % to IBM Watson
Temperature = -12 C Humidity = 63 % to IBM Watson
Temperature = 31 C Humidity = 41 % to IBM Watson
Temperature = 67 C Humidity = 15 % to IBM Watson
Temperature = 12 C Humidity = 57 % to IBM Watson
Temperature = -22 C Humidity = 83 % to IBM Watson
Temperature = 24 C Humidity = 31 % to IBM Watson
Temperature = 44 C Humidity = 65 % to IBM Watson
Temperature = -11 C Humidity = 24 % to IBM Watson
Temperature = 48 C Humidity = 55 % to IBM Watson
Temperature = 80 C Humidity = 45 % to IBM Watson
Temperature = 92 C Humidity = 86 % to IBM Watson
Temperature = -14 C Humidity = 42 % to IBM Watson
```

IBM Watson IoT Platform

?

kavinmano2211@gmail.com

ID: 8ahq3z

Browse

Action

Device Types

Interfaces

Add Device

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
IoTSensor	{"temp":43,"Humid":46}	json	a few seconds ago
sensing	{"randomNumber":33,"Temperature":-24,"Humi...	json	a few seconds ago
IoTSensor	{"temp":22,"Humid":53}	json	a few seconds ago
IoTSensor	{"temp":-14,"Humid":42}	json	a few seconds ago
IoTSensor	{"temp":92,"Humid":86}	json	a few seconds ago

>

☐

SENSORS_1

☐

Disconnected

SENSORS

Device

Nov 18, 2022 10:29 PM

Items per page 50

1-4 of 4 items

1 Simulation running

Python 3.7.0 Shell

File Edit Shell Debug Options Window Help

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: K:/IBM Project/Python script.
py 2022-11-18 23:55:48,556 ibmiotf.device.Client INFO
Connected successfully: d:8ahq3z:SENSORS:2211
Temperature = -5 C Humidity = 43 % to IBM Watson
Temperature = 34 C Humidity = 64 % to IBM Watson
Temperature = 7 C Humidity = 83 % to IBM Watson
Temperature = 4 C Humidity = 40 % to IBM Watson
Temperature = 47 C Humidity = 88 % to IBM Watson
Temperature = 45 C Humidity = 17 % to IBM Watson
Temperature = 49 C Humidity = 87 % to IBM Watson
Temperature = 49 C Humidity = 43 % to IBM Watson
Temperature = 66 C Humidity = 23 % to IBM Watson
Temperature = 16 C Humidity = 12 % to IBM Watson
Temperature = 55 C Humidity = 73 % to IBM Watson
Temperature = -2 C Humidity = 95 % to IBM Watson
Temperature = -22 C Humidity = 72 % to IBM Watson
Temperature = -12 C Humidity = 63 % to IBM Watson
Temperature = 31 C Humidity = 41 % to IBM Watson
Temperature = 67 C Humidity = 15 % to IBM Watson
Temperature = 12 C Humidity = 57 % to IBM Watson
Temperature = -22 C Humidity = 83 % to IBM Watson
Temperature = 24 C Humidity = 31 % to IBM Watson
Temperature = 44 C Humidity = 65 % to IBM Watson
Temperature = -11 C Humidity = 24 % to IBM Watson
Temperature = 48 C Humidity = 55 % to IBM Watson

Ln: 14 Col: 0

https://8ahq3z.internetofthings.ibmcloud.co...

IBM Watson IoT Platform

?

kavinmano2211@gmail.com

ID: 8ahq3z

Browse

Action

Device Types

Interfaces

Add Device

The recent events listed show the live stream of data that is coming

Event	Value
IoTSensor	{"temp":48,"Humid":55}
IoTSensor	{"temp":-11,"Humid":24}
sensing	{"randomNumber":70,"Temperature":88,"H
IoTSensor	{"temp":44,"Humid":65}
IoTSensor	{"temp":24,"Humid":31}

>

☐

SENSORS_1

☐

Disconnected

SENSORS

1 Simulation running