

## Sprint 3

### 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 IoT")
```

```
    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

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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

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Disconnected

SENSORS

Device

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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

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

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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
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}

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SENSORS\_1

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Disconnected

SENSORS

1 Simulation running