

## Sprint 3

Date	20 November 2022
Team ID	PNT2022TMID39403
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()

The image shows a dual-screen setup. On the left is a terminal window titled "Python 3.7.0 Shell" with a menu bar (File, Edit, Shell, Debug, Options, Window, Help). It displays a continuous stream of log messages: "Published Temperature = 70 C Humidity = 92 % to IBM Watson", "Published Temperature = 68 C Humidity = 90 % to IBM Watson", and so on, with values fluctuating. On the right is a web browser window showing the "IBM Watson IoT Platform" dashboard. The browser's address bar shows "gdzrgd.internetofthings.ibmcloud.com/dashboard/device...". The dashboard has a top navigation bar with "Browse", "Action", "Device Types", and "Interfaces", along with an "Add Device" button. A sidebar on the left contains icons for various functions. The main content area displays a message: "The recent events listed show the live stream of data that is co". Below this is a table with two columns, "Event" and "Value".

Event	Value
IoT Sensor	["temp":89,"Humid":62]
IoT Sensor	["temp":52,"Humid":24]
IoT Sensor	["temp":11,"Humid":24]
IoT Sensor	["temp":49,"Humid":44]
IoT Sensor	["temp":82,"Humid":100]

