

SPRINT 2

Dump the server/software to cloud

Team ID	PNT2022TMID52810
Project Name	Project - Signs with smart connectivity for Better road safety

Dump the code from Sprint 1 to cloud so it can be accessed from anywhere

PYTHON SCRIPT:

```
import wiotp.sdk.device
import time
import random
import requests
import json
myConfig = {
    "identity": {
        "orgId": "tmwrsv",
        "typeId": "Sprint",
        "deviceId": "sprint12"
    },
    "auth": {
        "token": "KxMwjzjw)BijreluFk"
    }
}
def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
    random.random()
    client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
    client.connect()

while True:
    CITY = "Coimbatore"
    API_KEY = "9111b726e6aa664188c5a2924f15f78e"
    URL=
    "https://api.openweathermap.org/data/2.5/weather?q=Coimbatore,%20IN&appid=9111b726e6aa664188c5a2924f15f78e"
    response = requests.get(URL)
    if response.status_code == 200:
        data = response.json()
        main = data['main']
        temp = round(main['temp'] - 273,2)
        humy = main['humidity']
        pres = main['pressure']
        rept = data['weather']
        report = rept[0]['description']
        temp1=temp
```

```

if(temp1 < 5):
    alert = "Snow fall may occur"
hum=humy
if(hum>85):
    alert = "Probablity of raining is high. Take rain coat with you"
pre = pres
wea = report
if(wea == "clear sky"):
    wea_alt1 = "HAPPY JOURNEY"
    spd_alt1 = "GO @ < 80Kmph"
elif(wea == "few clouds"):
    wea_alt1 = "CLOUDY DAY"
    spd_alt1 = "GO @ < 60Kmph"
elif (wea == "overcast clouds"):
    wea_alt1 = "RAIN MAY COME"
    spd_alt1 = "GO @ < 30Kmph"
elif(wea == "shower rain"):
    wea_alt1 = "SLIPPERY ROAD"
    spd_alt1 = "GO @ < 20Kmph"
elif(wea == "rain" or "moderate rain"):
    wea_alt1 = "SLIPPERY ROAD"
    spd_alt1 = "GO @ < 20Kmph"
elif(wea == "thunderstorm"):
    wea_alt1 = "HEAVY RAIN"
    spd_alt1 = "GO @ < 10Kmph"
elif (wea == "snow"):
    wea_alt1 = "SNOW ON ROAD"
    spd_alt1 = "GO @ < 10Kmph"
elif(wea == "mist"):
    wea_alt1 = "TURN ON FOG LAMP"
    spd_alt1 = "GO @ < 20Kmph"
else:
    wea_alt1 = "HAPPY JOURNEY"
    spd_alt1 = "GO @ < 80Kmph"
xyz = time.ctime()
ctime = int(xyz[11:13])
if (ctime > 8 and ctime < 10) or (ctime > 15 and ctime < 18):
    me = 'SCHOOL TIMING GO SLOW SPEED LIMIT: 15Kmph'
    spd_alt1 = "GO @ < 15Kmph!!!"
else:
    me = xyz[11:19]
myData={'location':CITY,'temperature':temp, 'humidity':hum, 'pressure':pre,
'weather_report':wea,'wea_alt':wea_alt1,'spd_alt':spd_alt1,'schl_tmng':me}
client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
print("Published data Successfully: %s", myData)
client.commandCallback = myCommandCallback
time.sleep(1)
client.disconnect()

```

PYTHON IDE:

```

File Edit Format Run Options Window Help
import wiotp.sdk.device
import time
import random
import requests
import json
myConfig = {
    "identity": {
        "orgId": "tmwrsrv",
        "typeId": "Sprint",
        "deviceId": "sprint12"
    },
    "auth": {
        "token": "KxMwjzjwBijreIuFk"
    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
    random.random()
    client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
    client.connect()

while True:
    CITY = "Coimbatore"
    API_KEY = "9111b726e6aa664188c5a2924f15f78e"
    URL = "https://api.openweathermap.org/data/2.5/weather?q=Coimbatore,&201N&appid=9111b726e6aa664188c5a2924f15f78e"
    response = requests.get(URL)
    if response.status_code == 200:
        data = response.json()
        main = data['main']
        temp = round(main['temp'] - 273.2)
        humy = main['humidity']
        pres = main['pressure']
        rept = data['weather']
        report = rept[0]['description']
        templ=temp
        if(templ < 5):
            alert = "Snow fall may occur"
        hum=humy
        if(hum>85):
            alert = "Probability of raining is high. Take rain coat with you"
        pre = pres
        wea = report
        if(wea == "clear sky"):
            wea_alt1 = "HAPPY JOURNEY"
            spd_alt1 = "GO 8 < 80Kmph"
        elif(wea == "few clouds"):
            wea_alt1 = "SCARCY DAYS"

```

PYTHON IDE OUTPUT:

[illegible]

IBM WATSON IOT PLATFORM OUTPUT:

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains various icons for navigation. The main content area has a 'Browse' tab selected, with sub-tabs 'All Devices' and 'Diagnose'. A blue 'Add Device' button is in the top right. Below the tabs, a text block explains that the table shows a summary of all devices that have been added and can be filtered, organized, and searched. A search bar labeled 'Search by Device ID' is present. To the right of the search bar, there is a 'Device Simulator' toggle switch and icons for list, filter, and refresh. The table below lists three devices:

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
1110	Disconnected	iot_new	Device	Nov 12, 2022 4:15 PM	
sprint12	Connected	Sprint	Device	Nov 14, 2022 11:06 PM	
weather_tdy	Disconnected	weather	Device	Nov 13, 2022 7:09 PM	

At the bottom of the table, it says 'Items per page 50 | 1-3 of 3 items'. On the right side of the table, it says '1 of 1 page' with navigation arrows. Below the table, there is a status indicator that says '1 Simulation running'.

The screenshot shows the IBM Watson IoT Platform dashboard with the details of a specific device selected. The top navigation bar and sidebar are the same as in the previous screenshot. The main content area has a 'Browse' tab selected, with sub-tabs 'All Devices' and 'Diagnose'. A blue 'Add Device' button is in the top right. Below the tabs, a search bar labeled 'Search by Device ID' is present. To the right of the search bar, there is a 'Device Simulator' toggle switch and icons for list, filter, and refresh. The table below lists three devices, with 'sprint12' selected. The details for 'sprint12' are shown in a modal window. The modal has tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs'. The 'Recent Events' tab is selected, showing a list of events:

Event	Value	Format	Last Received
status	{"location":"Coimbatore","temperature":24.03,"h..."	json	a few seconds ago
status	{"location":"Coimbatore","temperature":24.03,"h..."	json	a few seconds ago
status	{"location":"Coimbatore","temperature":24.03,"h..."	json	a few seconds ago
status	{"location":"Coimbatore","temperature":24.03,"h..."	json	a few seconds ago
status	{"location":"Coimbatore","temperature":24.03,"h..."	json	a few seconds ago

At the bottom of the modal, there is a status indicator that says '1 Simulation running'.

IBM Watson IoT Platform

2004201ec@cit.edu.in
ID: tmwrsv

Event Payload

Event Name: status
Time Received: Nov 19, 2022 7:10 PM

```
1 {  
2   "location": "Coimbatore",  
3   "temperature": 25.03,  
4   "humidity": 61,  
5   "pressure": 1012,  
6   "weather_report": "haze",  
7   "wea_alt": "SLIPPERY ROAD",  
8   "spd_alt": "GO @ < 20Kmph",  
9   "schl_tmg": "19:10:18"  
10 }
```

1 Simulation running

20:40
19-11-2022