

Date	11 November 2022
Team ID	PNT2022TMID27367
Project Name	Smart waste management system for metropolitan cities
Story Points	15

Sprint 2

Develop the python code to find the GPS location using Latitude and Longitude (random values) and send it to Node red using IBM Watson platform and view location of bins on map

PYTHON CODE:

```
import wiotp.sdk.device
import time
import random

myConfig = {
    "identity": {
        "orgId": "fzv53v",
        "typeId": "Bin",
        "deviceId": "Bin_1"
    },
    "auth": {
        "token": "1234567890"
    }
}

def myCommandCallback(cmd):
    print ("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']
```

```

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)

client.connect()

def pub (data):

    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)

    print ("Published data Successfully: %s", myData)

while True:

    myData={'name': 'Bin1', 'lat': 13.092677, 'lon': 80.188314}

    pub (myData)

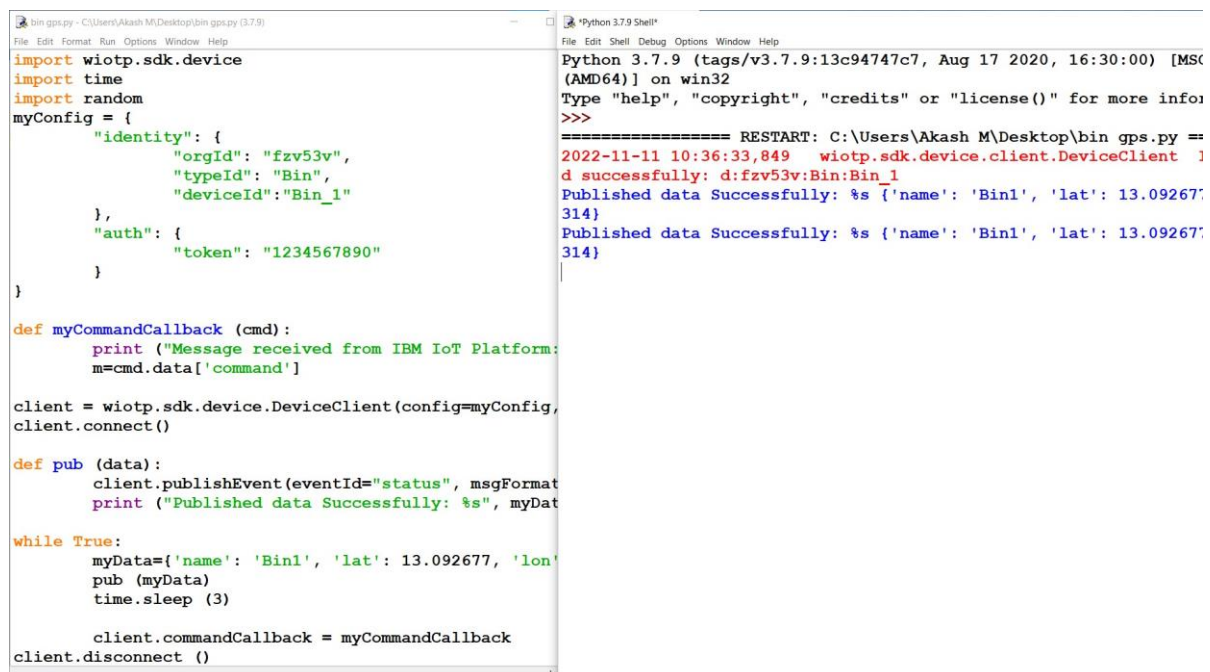
    time.sleep (3)

    client.commandCallback = myCommandCallback

client.disconnect ()

```

Output in python IDLE :



```

bin gps.py - C:\Users\Akash M\Desktop\bin gps.py (3.7.9)
File Edit Format Run Options Window Help
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "fzv53v",
        "typeId": "Bin",
        "deviceId": "Bin_1"
    },
    "auth": {
        "token": "1234567890"
    }
}

def myCommandCallback (cmd):
    print ("Message received from IBM IoT Platform: ", cmd)
    m=cmd.data['command']

client = wiotp.sdk.device.DeviceClient(config=myConfig,
client.connect()

def pub (data):
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)
    print ("Published data Successfully: %s", myData)

while True:
    myData={'name': 'Bin1', 'lat': 13.092677, 'lon': 80.188314}
    pub (myData)
    time.sleep (3)

    client.commandCallback = myCommandCallback
client.disconnect ()

```

```

Python 3.7.9 (tags/v3.7.9:13c94747c7, Aug 17 2020, 16:30:00) [MSO
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more info
>>>
===== RESTART: C:\Users\Akash M\Desktop\bin gps.py ==
2022-11-11 10:36:33,849 wiotp.sdk.device.client.DeviceClient ]
d successfully: d:fzv53v:Bin:Bin_1
Published data Successfully: %s {'name': 'Bin1', 'lat': 13.092677, 'lon': 80.188314}
Published data Successfully: %s {'name': 'Bin1', 'lat': 13.092677, 'lon': 80.188314}

```

IBM Watson IOT platform :

The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present with the text 'Search by Device ID'. A table lists devices with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. Two devices are listed: 12345 (NodeMCU, Disconnected, Oct 20, 2022 2:24 PM) and 12345 (Rasp, Disconnected, Nov 12, 2022 9:02 PM). The second device is selected, and its details are shown in a sidebar. The details include: Device ID (12345), Device Type (Rasp), Date Added (Nov 12, 2022 9:02 PM), Added By (pawanipadpro@gmail.com), and Connection Status (Disconnected). The bottom of the interface shows 'Items per page 50' and '1 of 1 page'.

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
12345	Disconnected	NodeMCU	Device	Oct 20, 2022 2:24 PM	
12345	Disconnected	Rasp	Device	Nov 12, 2022 9:02 PM	

Identity	Device Information	Recent Events	State	Logs
Device ID	12345			
Device Type	Rasp			
Date Added	Nov 12, 2022 9:02 PM			
Added By	pawanipadpro@gmail.com			
Connection Status	Disconnected			

Node Red Platform:

