SPRINT – 2

Date	17 November 2022
Team ID	PNT2022TMID51107
Project Name	Smart Waste Management System for Metropolitan Cities
Story points	15

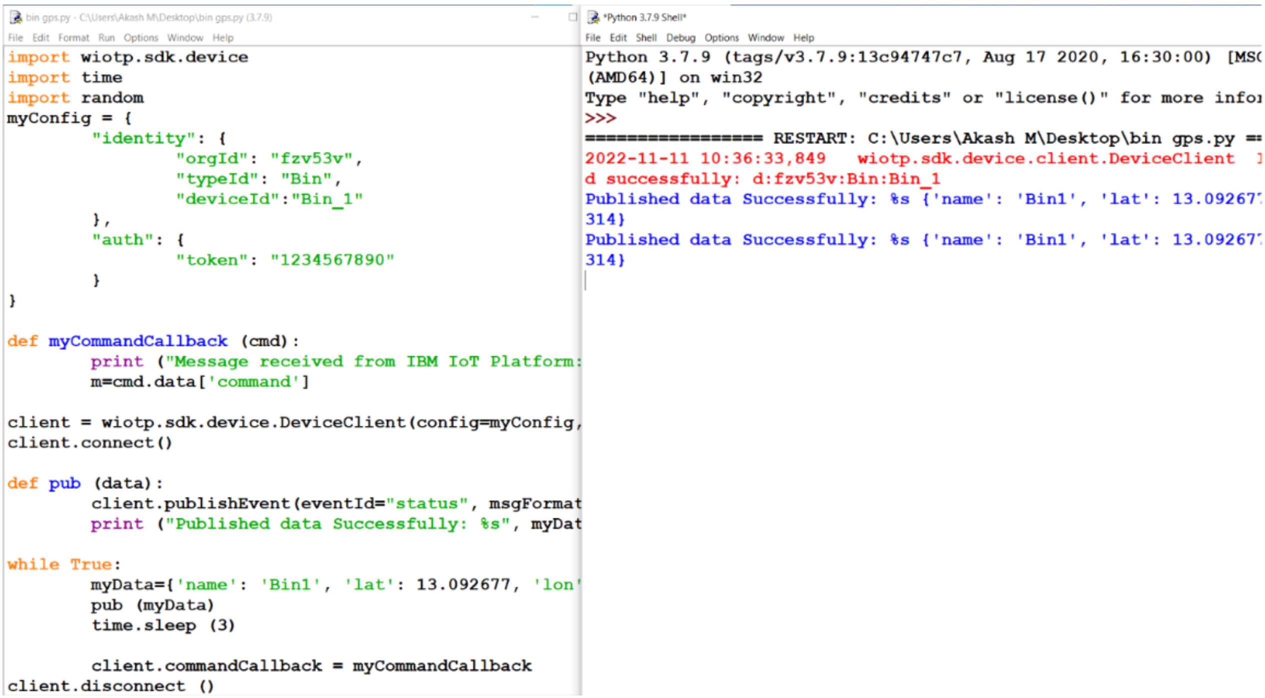
Develop the Python Code to Find the GPS Location Using Latitude and Longitude (random values) and send it to Node Red Using IBM Watson Platform and View Location of Bins on Map

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:

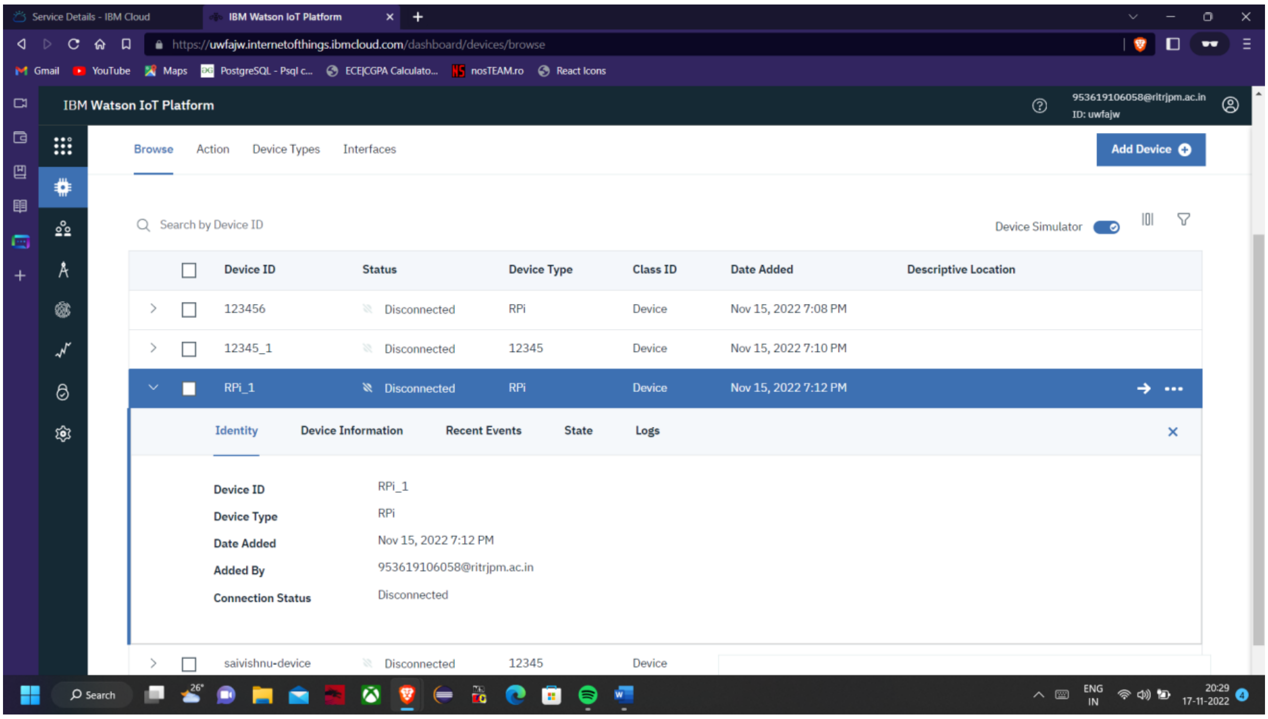


bin gps.py - C:\Users\Akash M\Desktop\bin gps.py (3.7.9)
File Edit Format Run Options Window Help
Python 3.7.9 Shell
File Edit Shell Debug Options Window Help

```
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:
        m=cmd.data['command']

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

def pub (data):
        client.publishEvent(eventId="status", msgFormat
        print ("Published data Successfully: %s", myDat

while True:
        myData={'name': 'Bin1', 'lat': 13.092677, 'lon'
        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) [MSC
(AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more infor
>>>
================== RESTART: C:\Users\Akash M\Desktop\bin gps.py ==
2022-11-11 10:36:33,849   wiotp.sdk.device.client.DeviceClient  I
d successfully: d:fzv53v:Bin:Bin_1
Published data Successfully: %s {'name': 'Bin1', 'lat': 13.09267
314}
Published data Successfully: %s {'name': 'Bin1', 'lat': 13.09267
314}
```

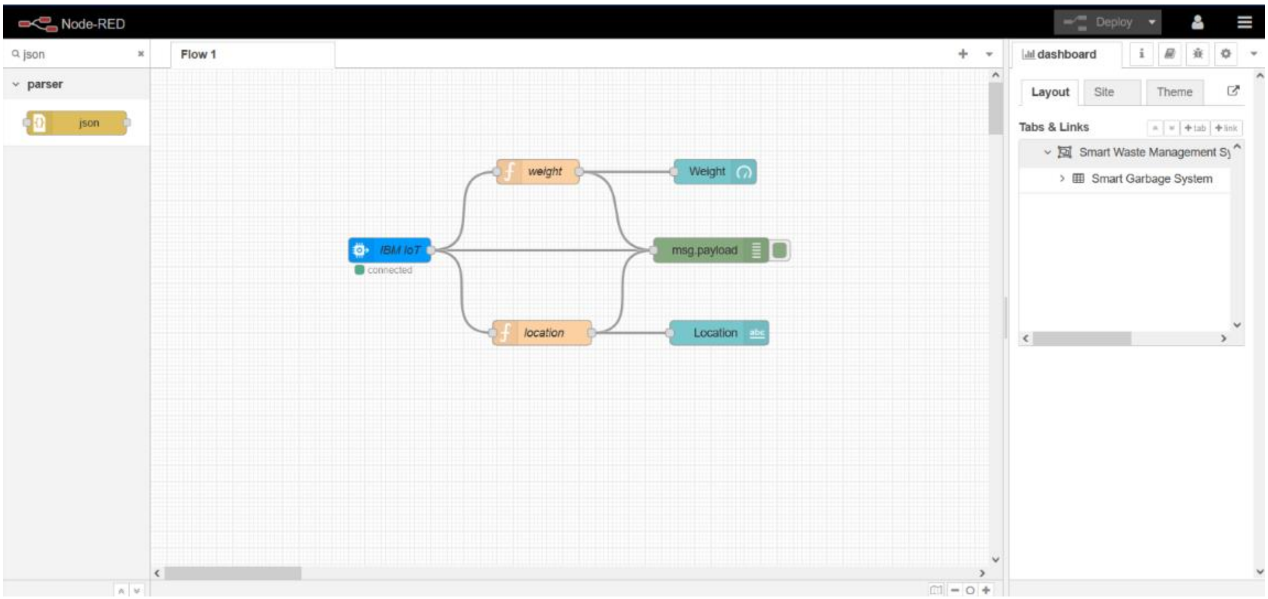
IBM Watson IOT Platform:



Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
123456	Disconnected	RPi	Device	Nov 15, 2022 7:08 PM	
12345_1	Disconnected	12345	Device	Nov 15, 2022 7:10 PM	
RPi_1	Disconnected	RPi	Device	Nov 15, 2022 7:12 PM	
saivishnu-device	Disconnected	12345	Device		

Device ID	RPi_1
Device Type	RPi
Date Added	Nov 15, 2022 7:12 PM
Added By	953619106058@ritrjpm.ac.in
Connection Status	Disconnected

Node Red Platform:


Node-RED
Deploy
json
parser
json
Flow 1
weight
Weight
IBM IoT
connected
msg.payload
location
Location
dashboard
Layout
Site
Theme
Tabs & Links
Smart Waste Management Sy
Smart Garbage System