Date	5 November 2022
Team ID	PNT2022TMID42565
Project Name	Smart waste management system for metropolitan cities
Story Points	15

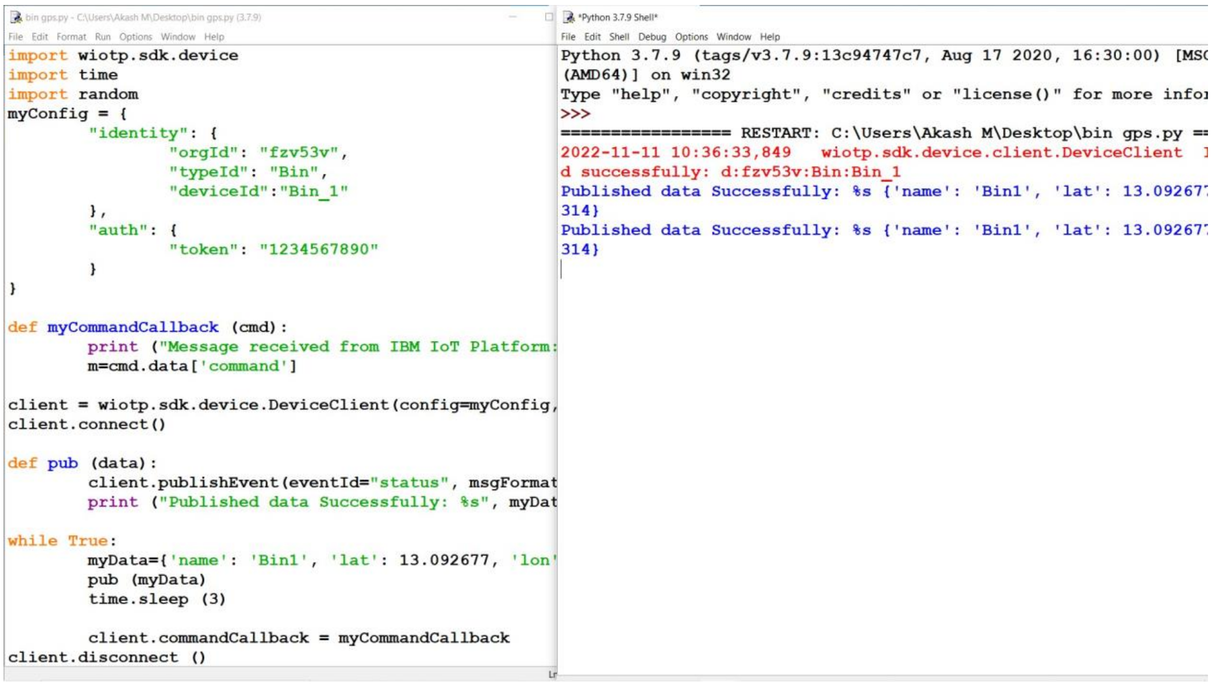
Sprint 2

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 :

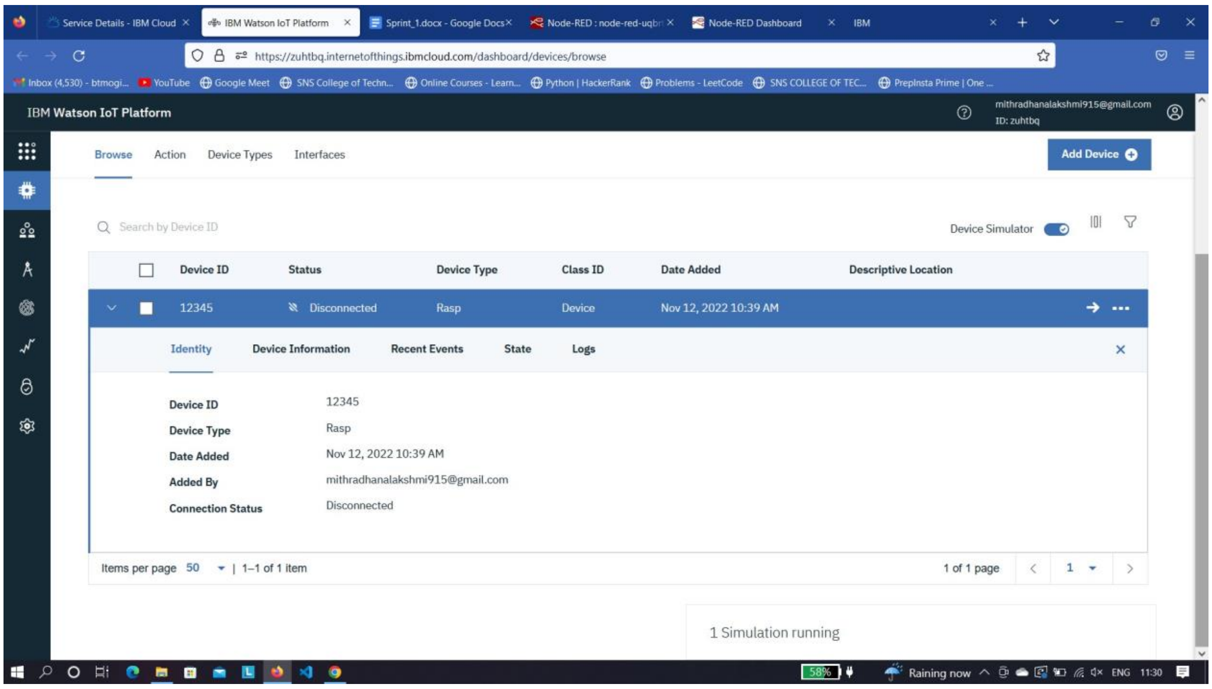


bin gps.py - C:\Users\Akash M\Desktop\bin gps.py (3.7.9)
File Edit Format Run Options Window Help
Python 3.7.9 Shell
File Edit Shell Debug Options Window Help

```
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) [MS
(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  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 :



IBM Watson IoT Platform

Browse | Action | Device Types | Interfaces

Add Device

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
12345	Disconnected	Rasp	Device	Nov 12, 2022 10:39 AM	

Identity | Device Information | Recent Events | State | Logs

Device ID	12345
Device Type	Rasp
Date Added	Nov 12, 2022 10:39 AM
Added By	mithradhanalakshmi915@gmail.com
Connection Status	Disconnected

Items per page 50 | 1–1 of 1 item

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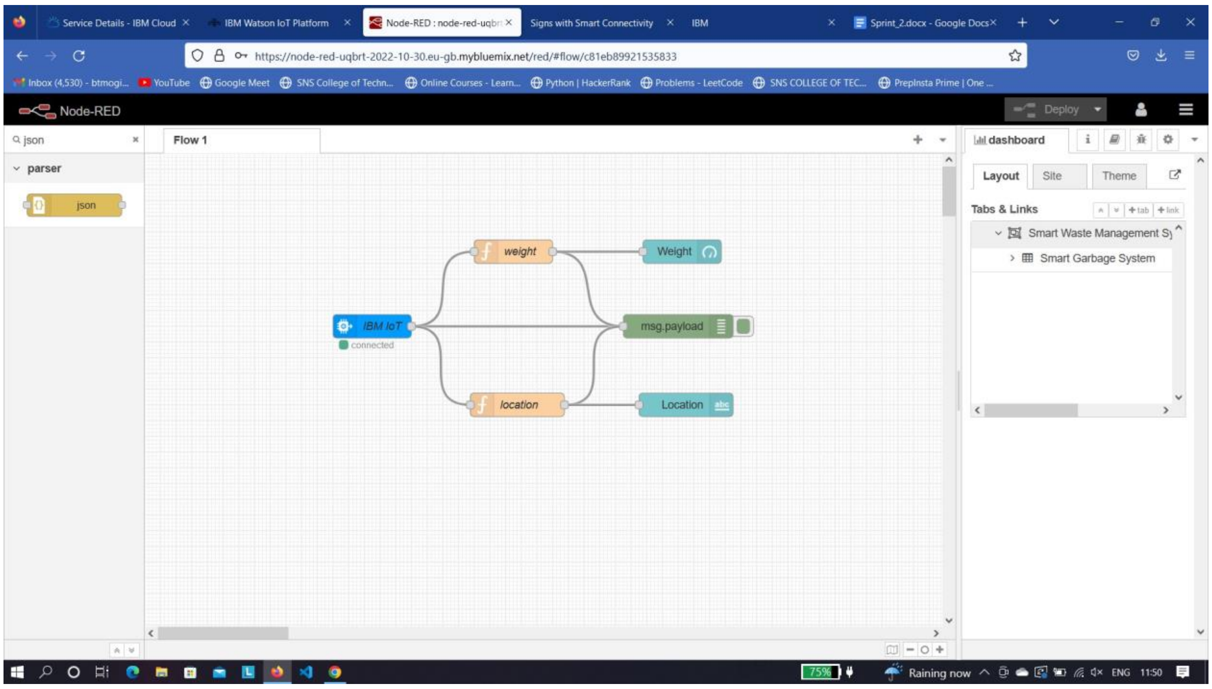
1 Simulation running

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