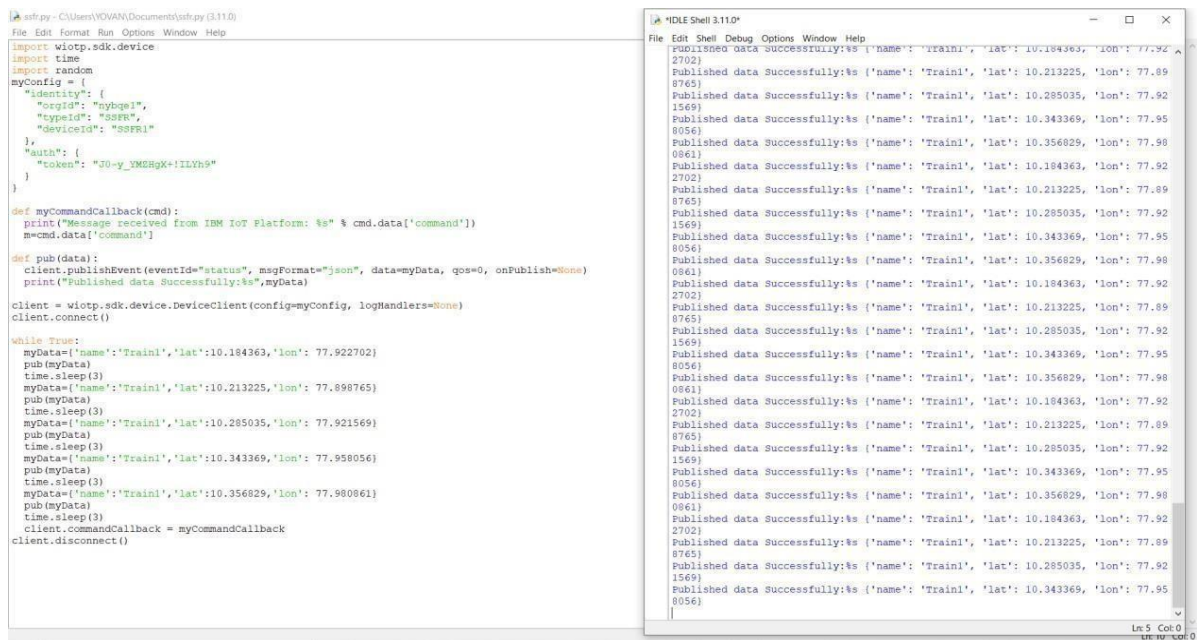


TESTING OF WEB UI

Date	15 November 2022
Team ID	PNT2022TMID03698
Project Name	Smart Solutions For Railways

Location Tracking

- The python code for detecting the location of the train is made to Run
- The live status of the train is updated in the IBM Watson IoT Platform and it is further used by the node red application
- The location is shown in the map via the Node red UI



The image shows a screenshot of a Python script in an IDE (left) and its output in a terminal window (right).

Python Script (Left):

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

myConfig = {
    "identity": {
        "orgid": "mybqsl",
        "typeid": "SSFR1",
        "deviceid": "SSFR1"
    },
    "auth": {
        "token": "J0-y_YMSRgX+ILYh5"
    }
}

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

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

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

while True:
    myData={'name':'Train1','lat':10.184363,'lon': 77.922702}
    pub(myData)
    time.sleep(3)
    myData={'name':'Train1','lat':10.213225,'lon': 77.898765}
    pub(myData)
    time.sleep(3)
    myData={'name':'Train1','lat':10.285035,'lon': 77.921569}
    pub(myData)
    time.sleep(3)
    myData={'name':'Train1','lat':10.343369,'lon': 77.958056}
    pub(myData)
    time.sleep(3)
    myData={'name':'Train1','lat':10.356829,'lon': 77.980861}
    pub(myData)
    time.sleep(3)
    client.commandCallback = myCommandCallback
    client.disconnect()
```

Terminal Output (Right):

```
Published data Successfully:%s {'name': 'Train1', 'lat': 10.184363, 'lon': 77.922702}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.213225, 'lon': 77.898765}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.285035, 'lon': 77.921569}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.343369, 'lon': 77.958056}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.356829, 'lon': 77.980861}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.184363, 'lon': 77.922702}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.213225, 'lon': 77.898765}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.285035, 'lon': 77.921569}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.343369, 'lon': 77.958056}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.356829, 'lon': 77.980861}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.184363, 'lon': 77.922702}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.213225, 'lon': 77.898765}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.285035, 'lon': 77.921569}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.343369, 'lon': 77.958056}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.356829, 'lon': 77.980861}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.184363, 'lon': 77.922702}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.213225, 'lon': 77.898765}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.285035, 'lon': 77.921569}
Published data Successfully:%s {'name': 'Train1', 'lat': 10.343369, 'lon': 77.958056}
```

Browse **Action** **Device Types** **Interfaces**

Search by Device ID

Device Simulator ON

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
> Jeeva_Yovan	Disconnected	Watson	Device	28 Oct 2022 19:58	
SSFR1	Connected	SSFR	Device	16 Nov 2022 10:32	

Identity **Device Information** **Recent Events** **State** **Logs**

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
status	{"name": "Train1", "lat": 10.285035, "lon": 77.9215...	json	a few seconds ago
status	{"name": "Train1", "lat": 10.213225, "lon": 77.8987...	json	a few seconds ago
status	{"name": "Train1", "lat": 10.184363, "lon": 77.9227...	json	a few seconds ago
status	{"name": "Train1", "lat": 10.356829, "lon": 77.9808...	json	a few seconds ago
status	{"name": "Train1", "lat": 10.343369, "lon": 77.9580...	json	a few seconds ago

0 Simulations running

Node-RED interface showing a flow with an IBM IoT node connected to a debug node and a worldmap node. The debug console displays messages from the worldmap node, including location data for "Train1".

```
iot-2/type/SSFR10/SSFR1/ev/status/fmt/json :  
msg payload : Object  
  { name: "Train1", lat: 10.184363,  
    lon: 77.922702 }  
16/11/2022, 11:06:53 am node: debug 1  
iot-2/type/SSFR10/SSFR1/ev/status/fmt/json :  
msg payload : Object  
  { name: "Train1", lat: 10.213225,  
    lon: 77.898765 }  
16/11/2022, 11:06:55 am node: debug 1  
iot-2/type/SSFR10/SSFR1/ev/status/fmt/json :  
msg payload : Object  
  { name: "Train1", lat: 10.285035,  
    lon: 77.921569 }  
16/11/2022, 11:06:57 am node: debug 1  
iot-2/type/SSFR10/SSFR1/ev/status/fmt/json :  
msg payload : Object  
  { name: "Train1", lat: 10.343369,  
    lon: 77.950896 }  
16/11/2022, 11:07:00 am node: debug 1  
iot-2/type/SSFR10/SSFR1/ev/status/fmt/json :  
msg payload : Object  
  { name: "Train1", lat: 10.356829,  
    lon: 77.980861 }  
16/11/2022, 11:07:03 am node: debug 1  
iot-2/type/SSFR10/SSFR1/ev/status/fmt/json :  
msg payload : Object  
  { name: "Train1", lat: 10.184363,  
    lon: 77.922702 }
```

Live Status section showing a map titled "Tracking". The map displays a location in the vicinity of Bangalore, India, with a red dot indicating the current position. The map is powered by Leaflet and OpenStreetMap data.