

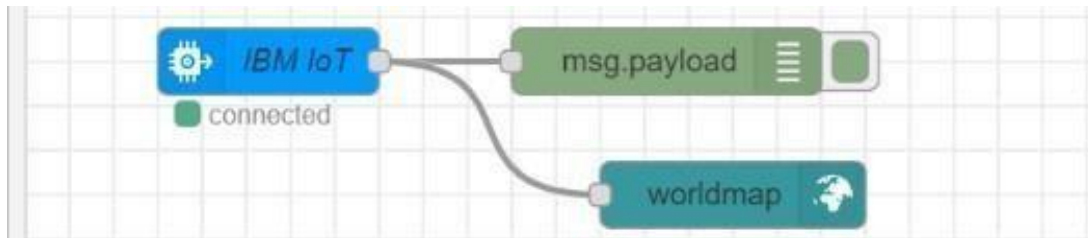
SPRINT-4

Team ID	PNT2022TMID46884
Project Name	SMART SOLUTIONS FOR RAILWAYS

PROCEDURE:

- Step1: Develop a node red application for GPS
- Step2: Develop a python code for GPS
- Step3: Run the program
- Step4: Train location will be displayed
- Step5: Create a node red for wakeup call and E-catering service

NODE RED FLOW:



PYTHON CODE FOR GPS:

```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "u3neop",
        "typeId": "GPS",
        "deviceId": "12345"
    },
    "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': 'Train1', 'lat': 17.6387448, 'lon': 78.4754336}
    pub (myData)
```

```

time.sleep (3)
#myData={'name': 'Train2', 'lat': 17.6387448, 'lon': 78.4754336}
#pub (myData)
#time.sleep (3)
myData={'name': 'Train1', 'lat': 17.6341908, 'lon': 78.4744722}
pub (myData)
time.sleep(3)
myData={'name': 'Train1', 'lat': 17.6340889, 'lon': 78.4745052}
pub (myData)
time.sleep (3)
myData={'name': 'Train1', 'lat': 17.6248626, 'lon': 78.4720259}
pub (myData)
time.sleep (3)
myData={'name': 'Train1', 'lat': 17.6188577, 'lon': 78.4698726}
pub (myData)
time.sleep (3)
myData={'name': 'Train1', 'lat': 17.6132382, 'lon': 78.4707318}
pub (myData)
time.sleep (3)
client.commandCallback = myCommandCallback
client.disconnect ()

```

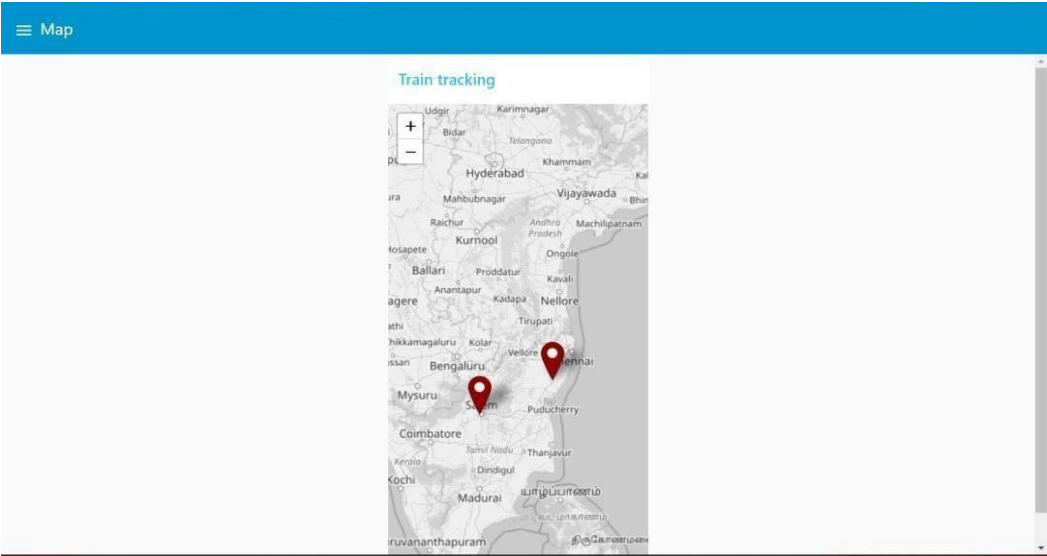
PYTHON CODE OUTPUT:

```

Python 3.8.2 (tags/v3.8.2:7b3ab59, Feb 25 2020, 23:03:10) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: D:\ibm projr\Develop a python code for publishing the location.py ==
2022-11-18 21:24:25,730   wiotp.sdk.device.client.DeviceClient INFO   Connected successfully: d:u3neop:GPS:12345
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6387448, 'lon': 78.4754336}
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6341908, 'lon': 78.4744722}
Published data Successfully: %s {'name': 'Train1', 'lat': 17.6340889, 'lon': 78.4745052}

```

TRAIN TRACKING :



NODE RED CONNECTION FOR WAKEUP CALL AND E-CATERING SERVICE:

