

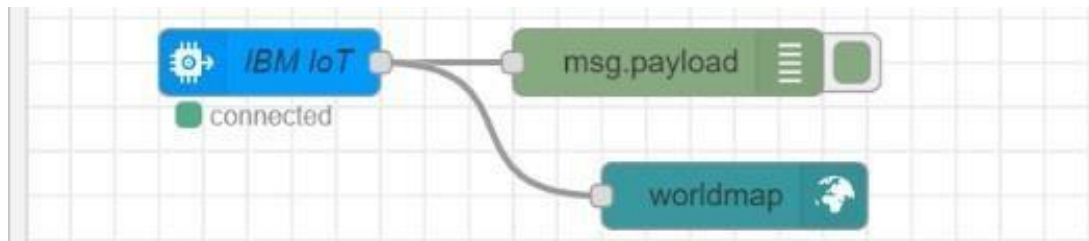
## SPRINT-4

Date	19 NOVEMBER 2022
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": "dks66l",
        "typeId": "Sudha",
        "deviceId": "45"
    },
    "auth": {
        "token": "sudha2002@"
    }
}
```

```

}

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':13.08363 , 'lon': 80.27080}

    pub (myData)

    time.sleep (2)

    myData={'name': 'Train2', 'lat': 12.40797, 'lon': 79.81410}

    pub (myData)

    time.sleep (2)

    myData={'name': 'Train1', 'lat': 11.83331, 'lon': 79.37465}

    pub(myData)

    time.sleep(6)

    myData={'name': 'Train1', 'lat': 11.59664, 'lon': 78.69899}

    pub (myData)

    time.sleep (6)

    myData={'name': 'Train1', 'lat': 11.63431, 'lon': 78.11122}

    pub (myData)

    time.sleep (6)

```

```
myData={'name': 'Train1', 'lat': 11.32207, 'lon': 77.61684}
```

```
pub (myData)
```

```
time.sleep (6)
```

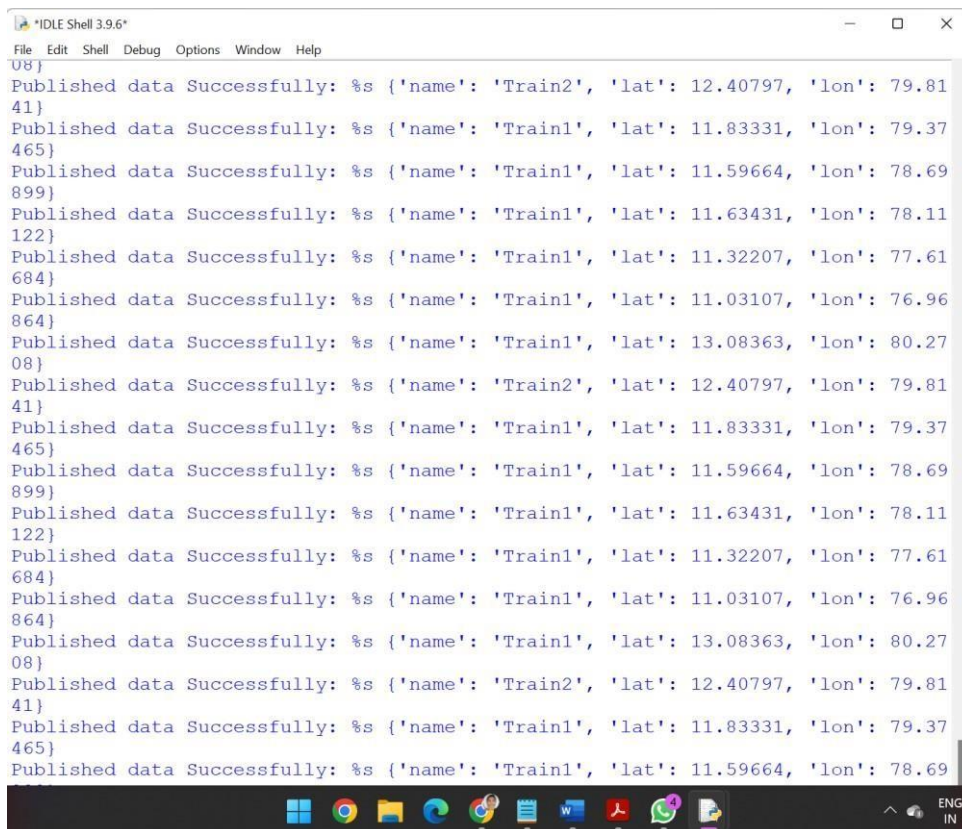
```
myData={'name': 'Train1', 'lat': 11.03107, 'lon': 76.96864}
```

```
pub (myData) time.sleep (6)
```

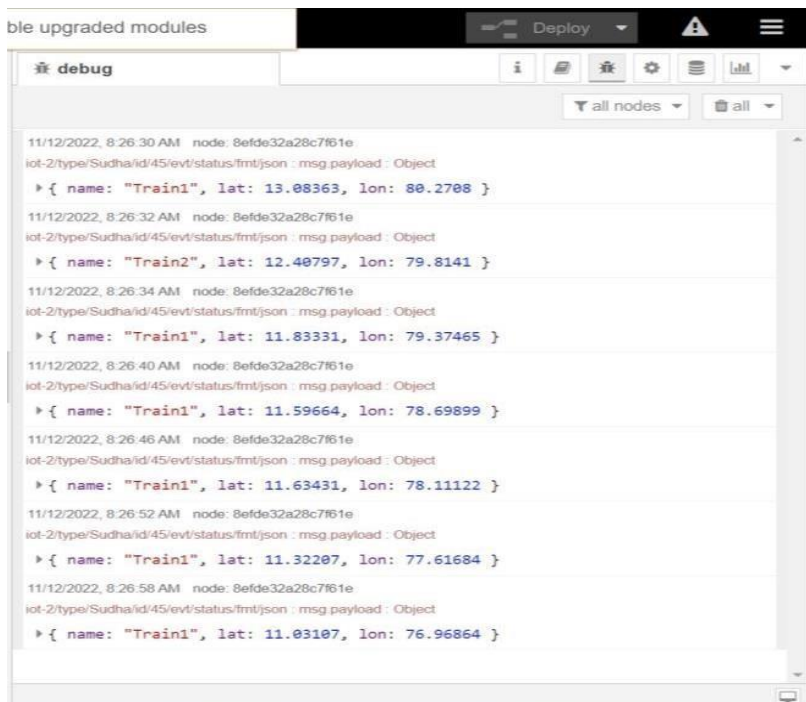
```
client.commandCallback = myCommandCallback
```

```
client.disconnect ()
```

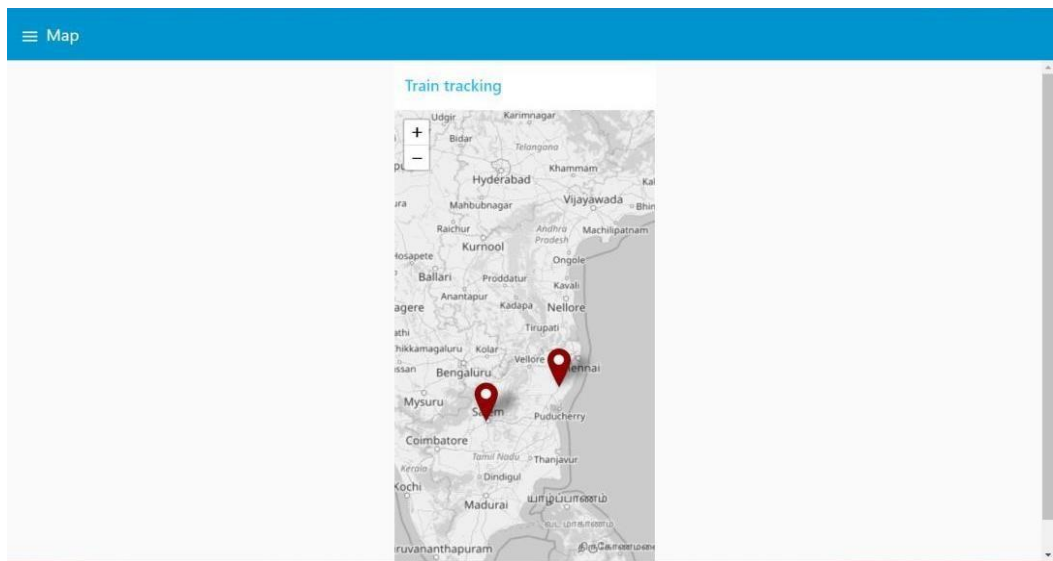
## PYTHON CODE OUTPUT:

A screenshot of the IDLE Shell 3.9.6 window. The window has a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The main text area displays the output of a Python script. The output consists of multiple lines, each starting with 'Published data Successfully: %s' followed by a JSON object. The JSON objects contain 'name', 'lat', and 'lon' values. The values for 'name' are 'Train2' and 'Train1'. The values for 'lat' and 'lon' are various floating-point numbers. The output is repeated several times, indicating a loop or multiple publications. The window title bar shows 'IDLE Shell 3.9.6' and standard window controls. The taskbar at the bottom shows various application icons and the system clock.

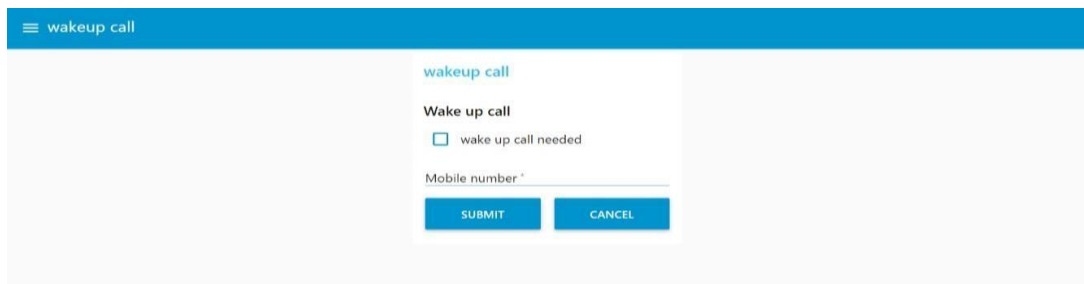
## NODE RED OUTPUT:



## TRAIN TRACKING :



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



FOOD

Food

☐ VEG

☐ NON-VEG

SUBMIT

CANCEL