

SPRINT-4

Date	12 NOVEMBER 2022
Team ID	PNT2022TMID42281
Project Name	Project – SMART SOLUTIONS FOR RAILWAYS

PROCEDURE:

Step1: Develop a node red application for GPS

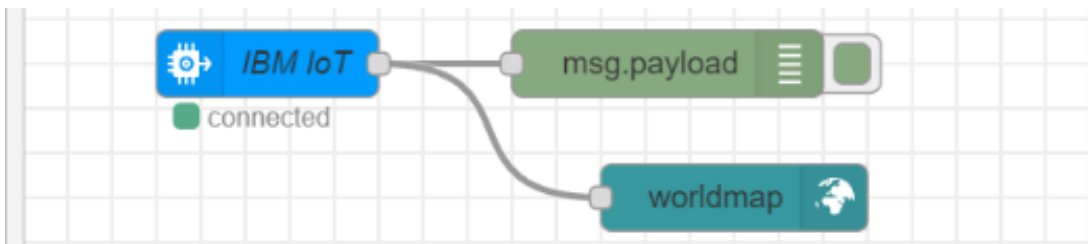
Step2: Develop a python code for GPS

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}
```

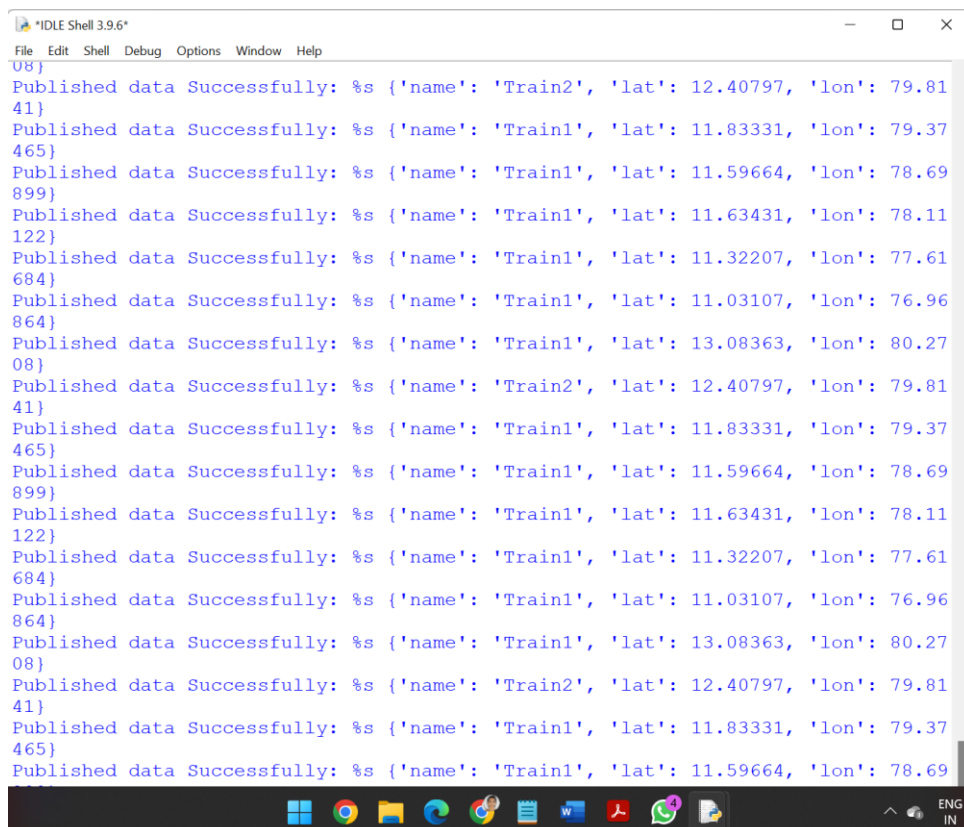
```
pub (myData)
```

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

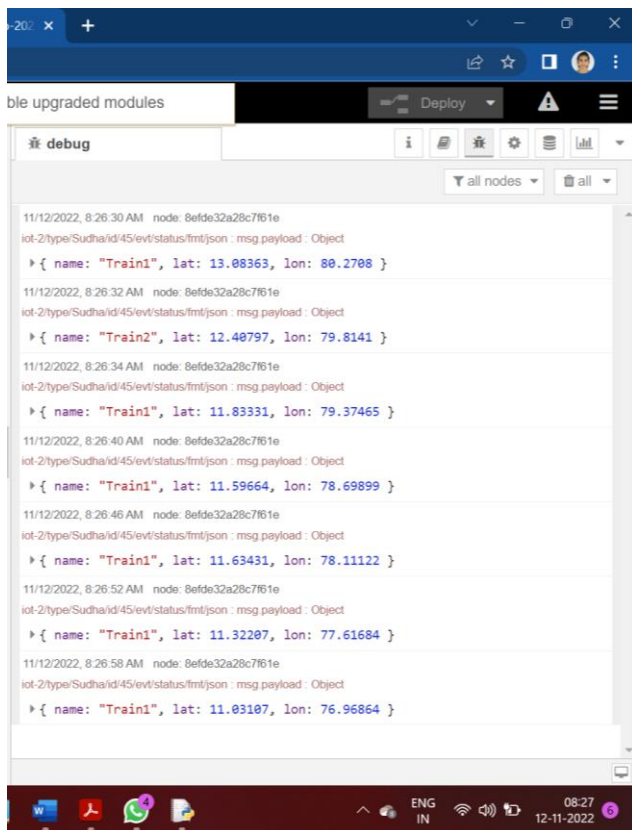
```
client.commandCallback = myCommandCallback
```

```
client.disconnect ()
```

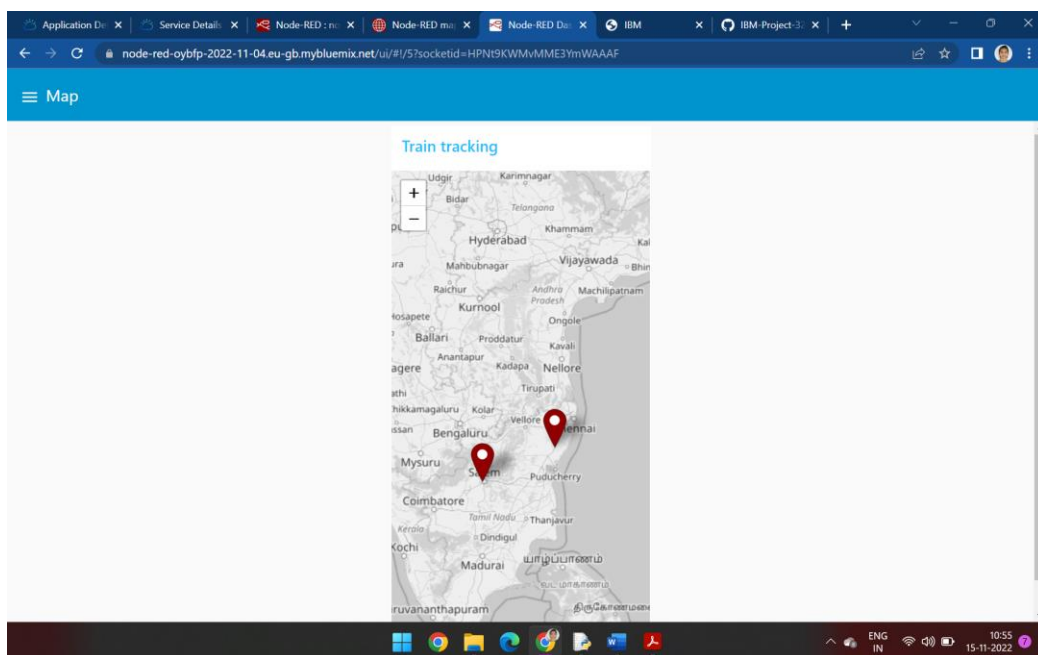
PYTHON CODE OUTPUT:

A screenshot of the IDLE Shell 3.9.6 window. The window title is "IDLE Shell 3.9.6". The menu bar includes File, Edit, Shell, Debug, Options, Window, and Help. The shell area displays a series of output messages: "U8}", "Published data Successfully: %s {'name': 'Train2', 'lat': 12.40797, 'lon': 79.8141}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.83331, 'lon': 79.37465}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.59664, 'lon': 78.69899}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.63431, 'lon': 78.11122}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.32207, 'lon': 77.61684}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.03107, 'lon': 76.96864}", "Published data Successfully: %s {'name': 'Train1', 'lat': 13.08363, 'lon': 80.2708}", "Published data Successfully: %s {'name': 'Train2', 'lat': 12.40797, 'lon': 79.8141}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.83331, 'lon': 79.37465}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.59664, 'lon': 78.69899}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.63431, 'lon': 78.11122}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.32207, 'lon': 77.61684}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.03107, 'lon': 76.96864}", "Published data Successfully: %s {'name': 'Train1', 'lat': 13.08363, 'lon': 80.2708}", "Published data Successfully: %s {'name': 'Train2', 'lat': 12.40797, 'lon': 79.8141}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.83331, 'lon': 79.37465}", "Published data Successfully: %s {'name': 'Train1', 'lat': 11.59664, 'lon': 78.69899}". The taskbar at the bottom shows various application icons and the system clock displaying "ENG IN".

NODE RED OUTPUT:



TRAIN TRACKING :



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

Application DetailsService DetailsNode-RED : nNode-RED mNode-RED DIBMIBM-Project-3

node-red-oybfp-2022-11-04.eu-gb.mybluemix.net/ui/#/4?socketid=HPNt9KWMvMME3YmWAAAF

wakeup call

wakeup call

Wake up call

☐ wakeup call needed

Mobile number *

SUBMITCANCEL

Application DetailsService DetailsNode-RED : nNode-RED mNode-RED DIBMIBM-Project-3

node-red-oybfp-2022-11-04.eu-gb.mybluemix.net/ui/#/3?socketid=HPNt9KWMvMME3YmWAAAF

E-CATERING

FOOD

Food

☐ VEG

☐ NON-VEG

SUBMITCANCEL