

SPRINT-4

Date	15 NOVEMBER 2022
Team ID	PNT2022TMID37898
Project Name	Project – SMART SOLUTIONS FOR RAILWAYS

PROCEDURE:

Step1: Develop a node red application for GPS

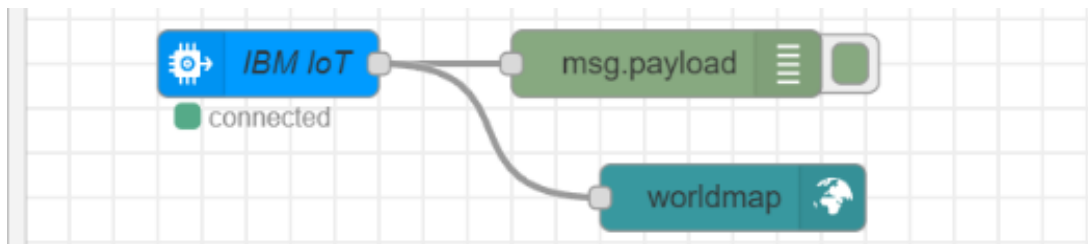
Step2: Develop a python code for GPS

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": "6iujkz",
        "typeId": "roncloud",
        "deviceId": "1603"
    },
    "auth": {
        "token": "ron@1603"
    }
}
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)
```

```
myData={'name':'Train 1','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':'Train 1','lat':17.6341908,'lon':78.4744722}
pub(myData)
time.sleep(3)
myData={'name':'Train 1','lat':17.6340889,'lon':78.4745052}
pub(myData)
time.sleep(3)
myData={'name':'Train 1','lat':17.6348626,'lon':78.4720259}
pub(myData)
time.sleep(3)
myData={'name':'Train 1','lat':17.6188577,'lon':78.4698726}
pub(myData)
time.sleep(3)
myData={'name':'Train 1','lat':17.6132382,'lon':78.4707318}
pub(myData)
time.sleep(3)
client.commandCallback=myCommandCallback
ent.disconnect()
```

 IDLE Shell 3.9.10

File Edit Shell Debug Options Window Help

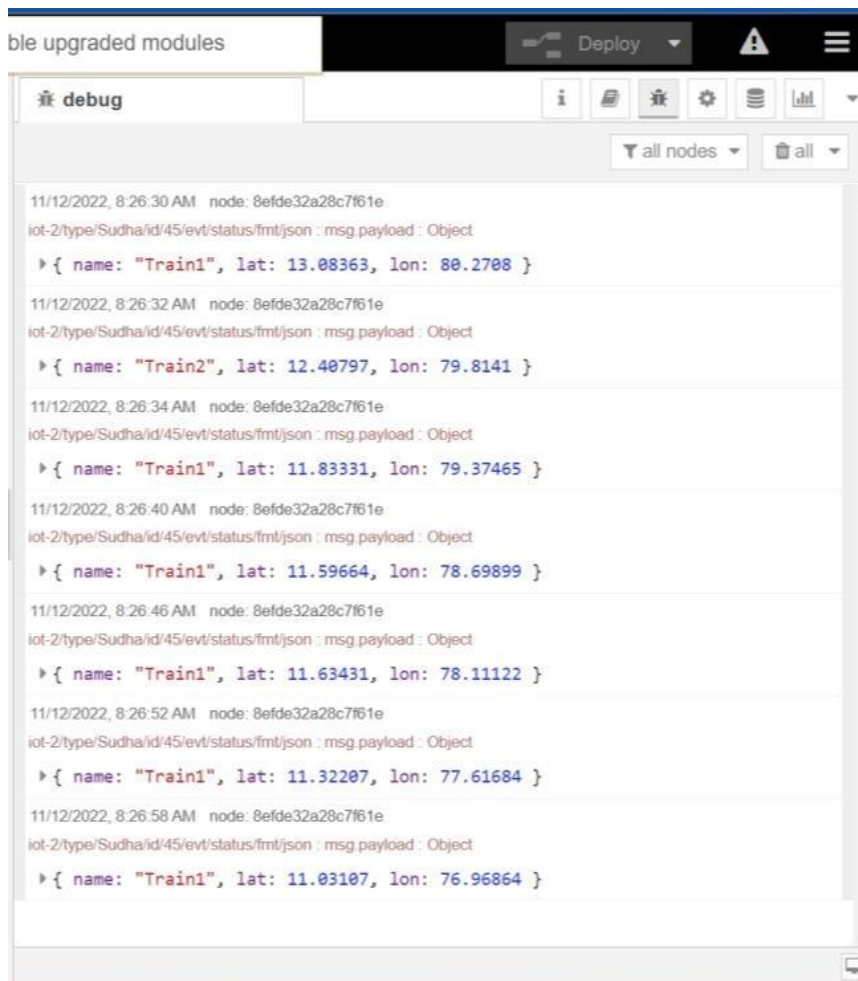
```
Python 3.9.10 (tags/v3.9.10:f2f3f53, Jan 17 2022, 15:14:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
```

```

===== RESTART: C:\Users\Suriya\Downloads\location tracking test.py =====
2022-11-18 15:32:38.967 wiotp.sdk.device.Client.DeviceClient INFO Connected successfully: d:6iujkz:roncloud:1603
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6387448, 'lon': 78.4754336)
Published data Successfully: %s ('name': 'Train2', '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': 17.6340899, 'lon': 78.4745052)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6348626, 'lon': 78.4720259)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6189577, 'lon': 78.4698726)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6132382, 'lon': 78.4707318)
Published data Successfully: %s ('name': 'Train1', 'lat': 17.6387448, 'lon': 78.4754336)
Published data Successfully: %s ('name': 'Train2', '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': 17.6340899, 'lon': 78.4745052)
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```

NODE RED OUTPUT:



TRAIN TRACKING :

