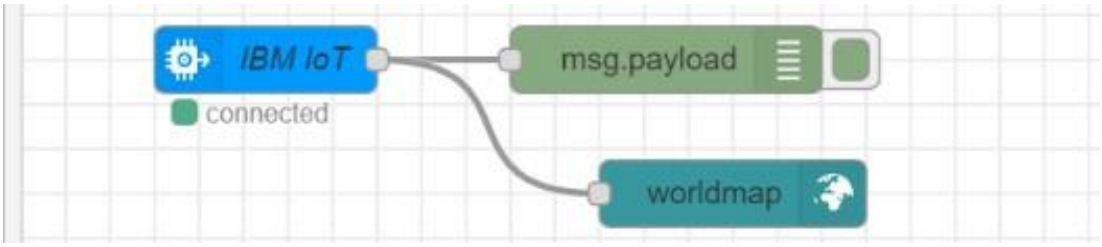
SPRINT-4

Date	19 NOVEMBER 2022
Team ID	PNT2022YMID38248
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 serice

NODE RED FLOW:



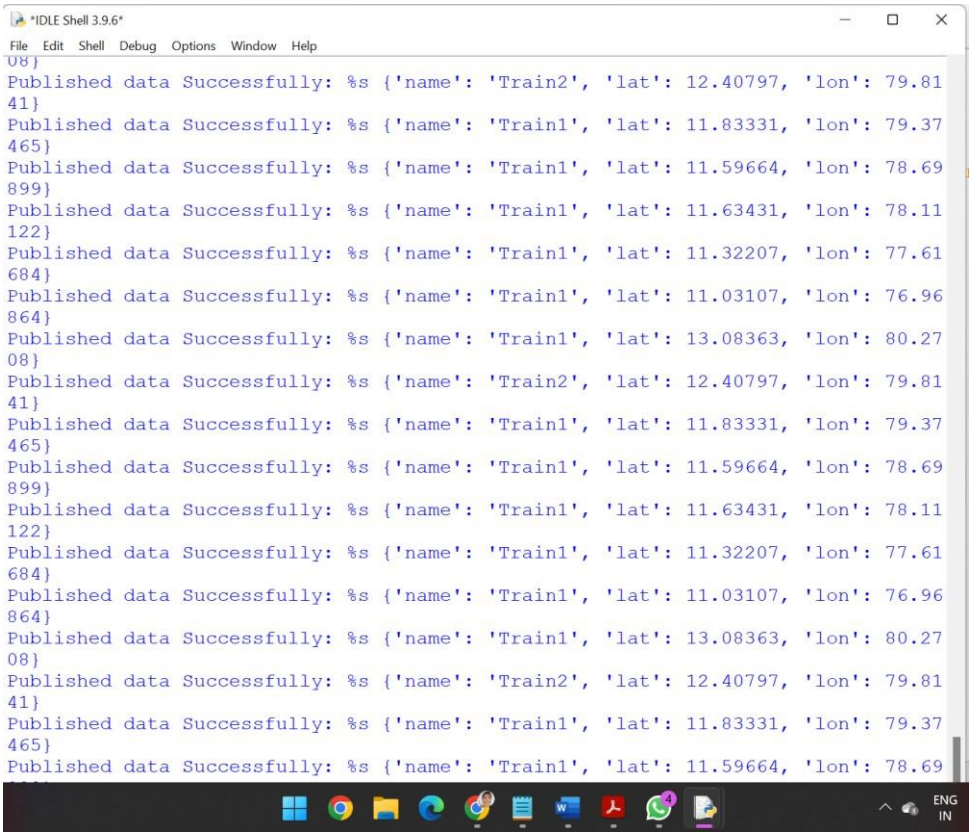
PYTHON CODE FOR GPS:

```
import wiotp.sdk.device

import time import

random myConfig = {

        "identity": {

                "orgId": "dks66l",

                "typeId": "Sudha",

                "deviceId":"45"

        },

        "auth": {

                "token": "sudha2002@"

        }
```

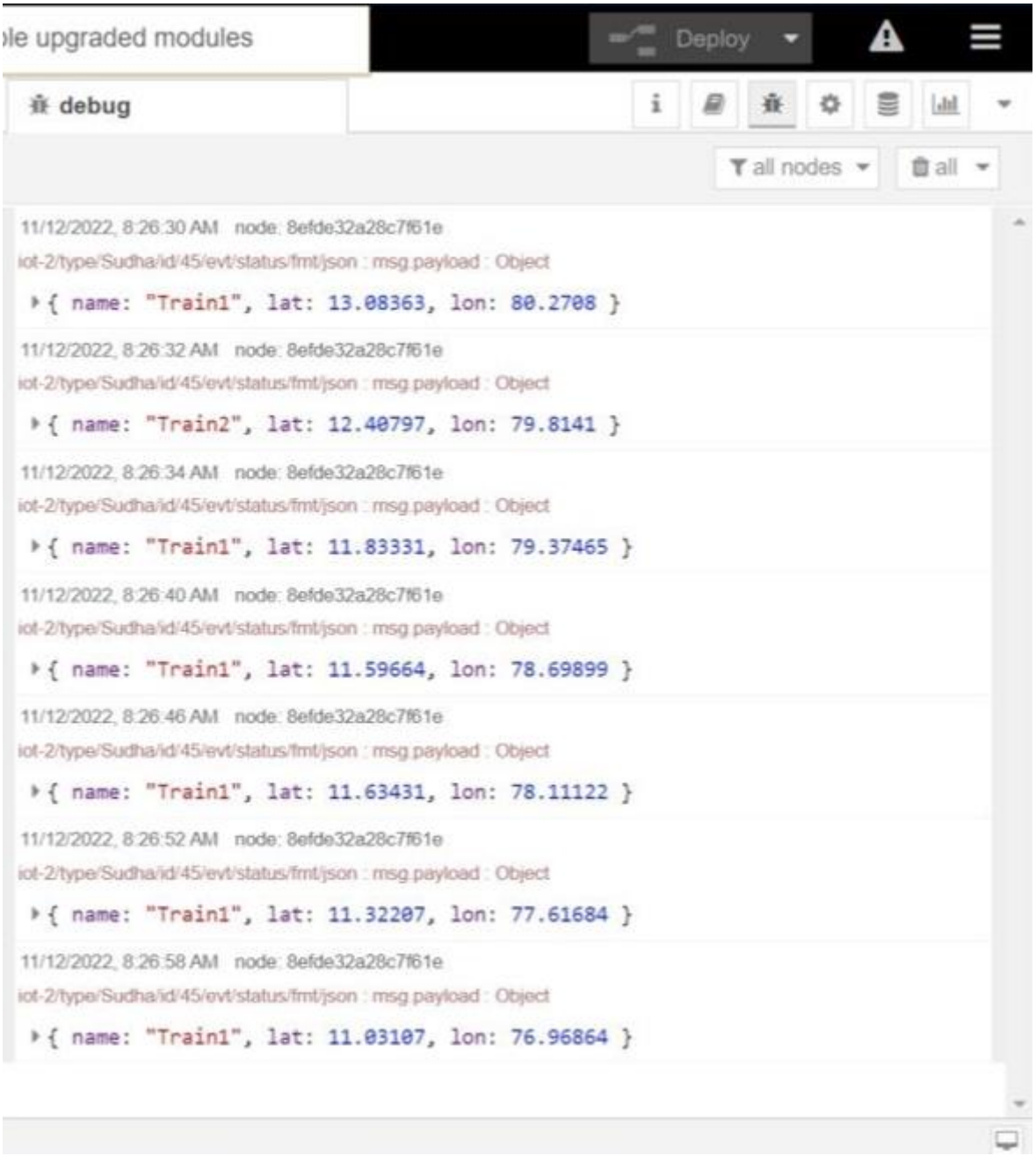
```
}
def myCommandCallback (cmd):        print ("Message received from IBM IoT Platform:
%s" % cmd.data['command'])
            m=cmd.data['command']

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 ()
```

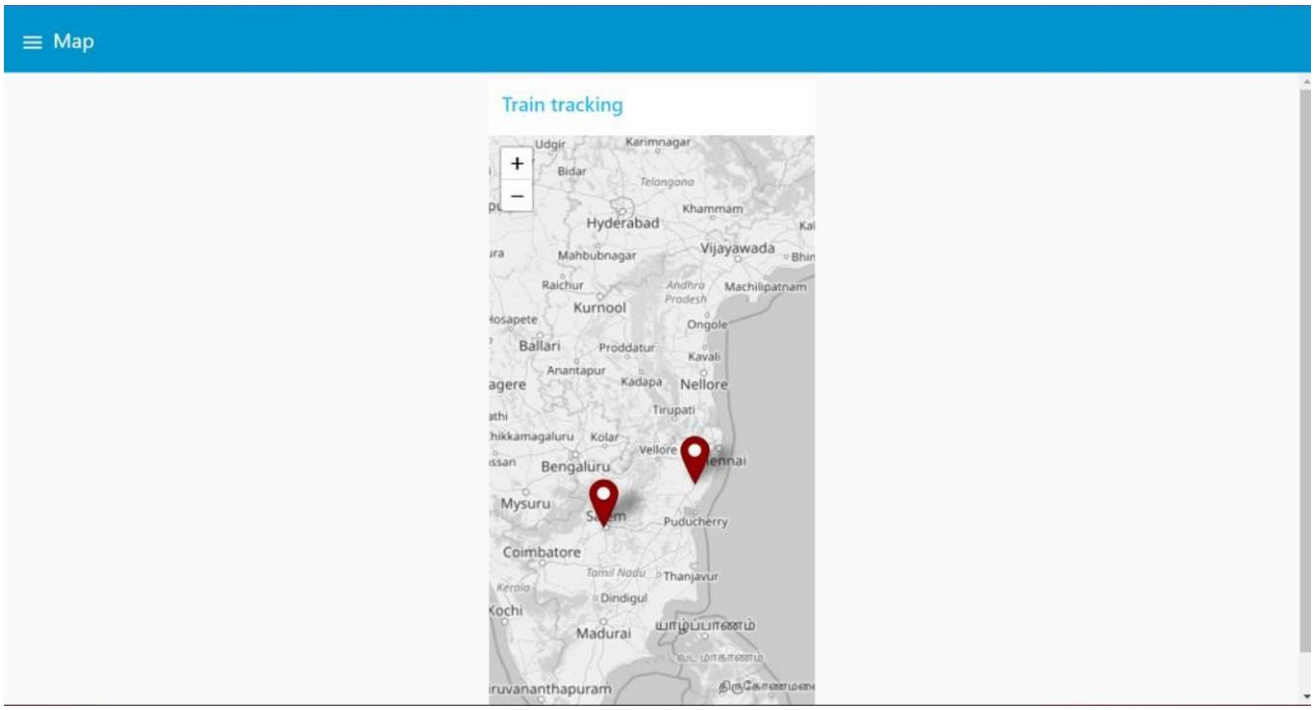
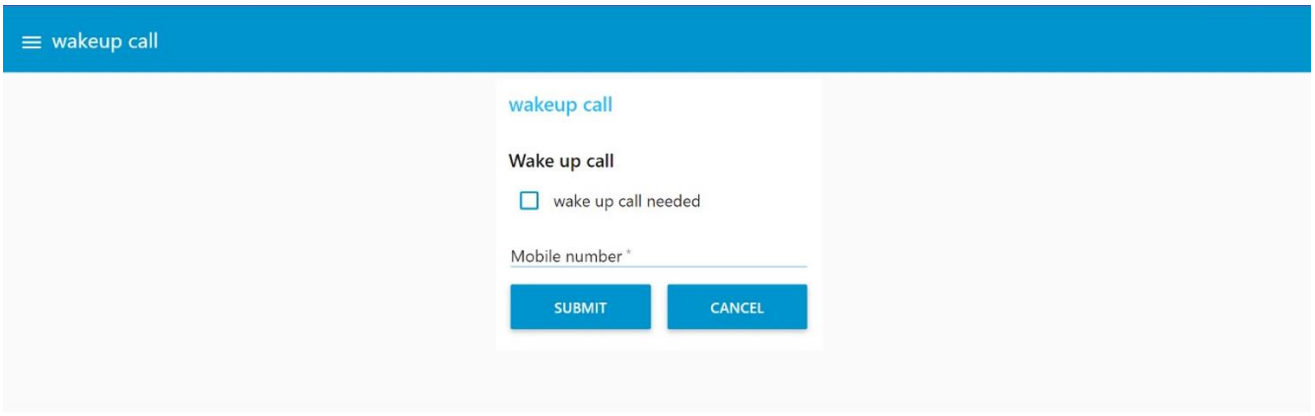
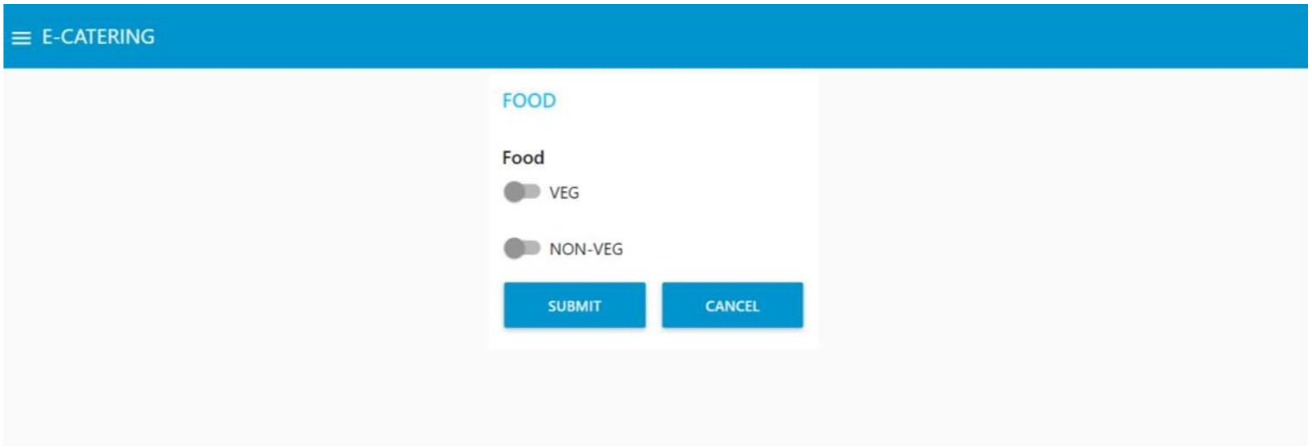
PYTHON CODE OUTPUT:



NODE RED OUTPUT:



TRAIN TRACKING :



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