

SPRINT 4

DATE	-	19 NOVEMBER 2022
TEAM ID	-	PNT2022TMID16776
PROJECT NAME	-	SMART SOLUTION FOR RAILWAYS

PROCEDURE:

Step1: Develop a node red application for GPS.

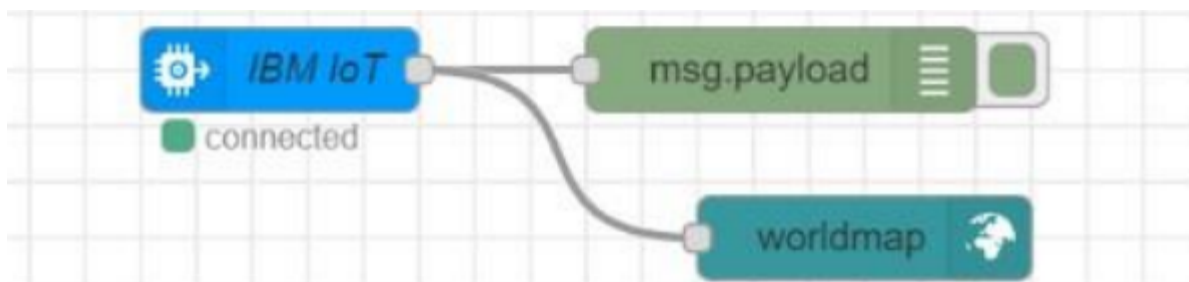
Step2 : Develop a python code for GPS.

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": "12345",
        "typeId": "123",
        "deviceId": "123"
    },
    "auth": {
        "token": "12345678"
    }
}

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}
```

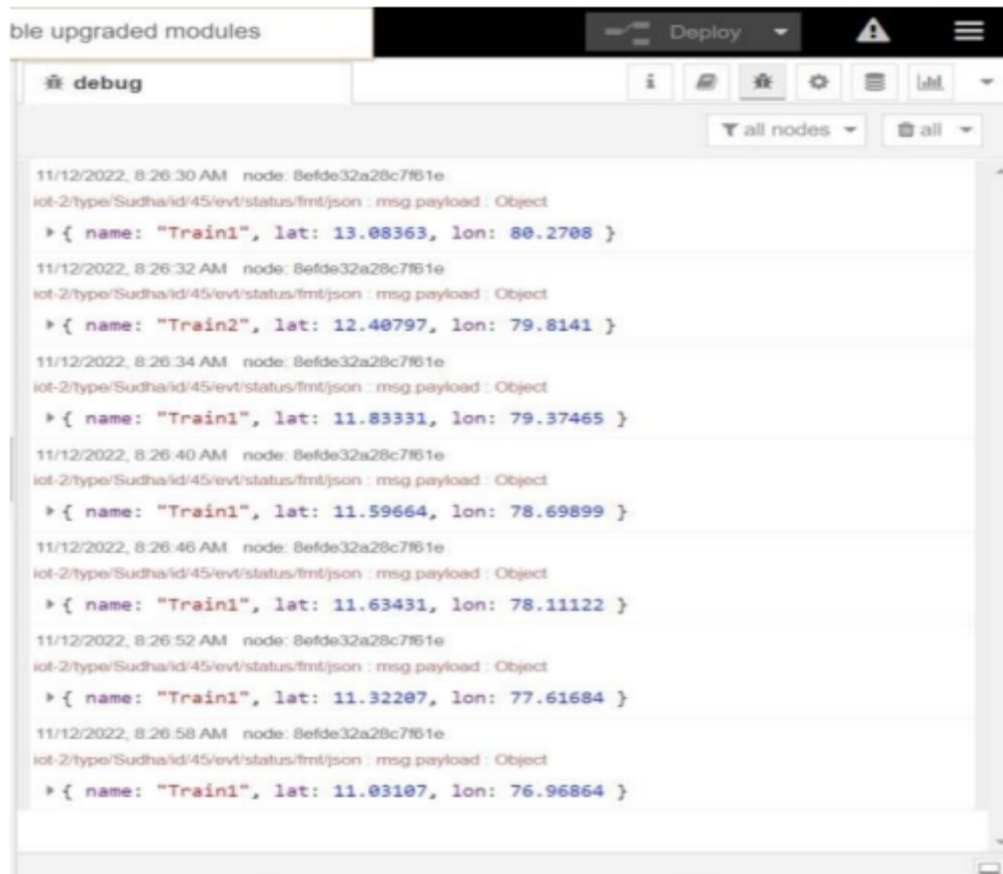
```
pub (myData)
time.sleep (2)
myData={'name': 'Train2', 'lat': 12.40797, 'lon': 79.81410}
pub (myData)
time.sleep (2)
myData={'name': 'Train1', 'lat': 11.83331, 'lon': 79.37465}
pub(myData)
time.sleep(6)
myData={'name': 'Train1', 'lat': 11.59664, 'lon': 78.69899}
pub (myData)
time.sleep (6)
myData={'name': '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:

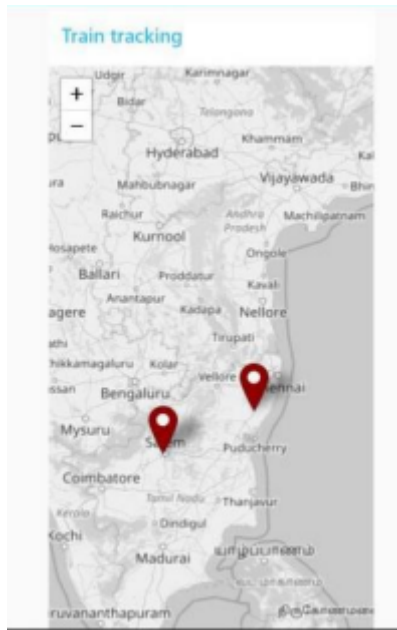
```

IDLE Shell 3.9.6
File Edit Shell Debug Options Window Help
U8}
Published data Successfully: %s {'name': 'Train2', 'lat': 12.40797, 'lon': 79.81
41}
Published data Successfully: %s {'name': 'Train1', 'lat': 11.83331, 'lon': 79.37
465}
Published data Successfully: %s {'name': 'Train1', 'lat': 11.59664, 'lon': 78.69
899}
Published data Successfully: %s {'name': 'Train1', 'lat': 11.63431, 'lon': 78.11
122}
Published data Successfully: %s {'name': 'Train1', 'lat': 11.32207, 'lon': 77.61
684}
Published data Successfully: %s {'name': 'Train1', 'lat': 11.03107, 'lon': 76.96
864}
Published data Successfully: %s {'name': 'Train1', 'lat': 13.08363, 'lon': 80.27
08}
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Published data Successfully: %s {'name': 'Train1', 'lat': 11.83331, 'lon': 79.37
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465}
Published data Successfully: %s {'name': 'Train1', 'lat': 11.59664, 'lon': 78.69
```

NODE RED OUTPUT:



TRAIN TRACKING :



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

wakeup call

wakeup call

Wake up call

☐ wake up call needed

Mobile number *

SUBMIT

CANCEL

FOOD

Food

☒ VEG

☐ NON-VEG

SUBMIT

CANCEL