

SPRINT-4

Date	19 NOVEMBER 2022
Team ID	PNT2022TMID46747
Project Name	SMART SOLUTIONS FOR RAILWAYS

PROCEDURE:

Step1: Develop a node red application for GPS

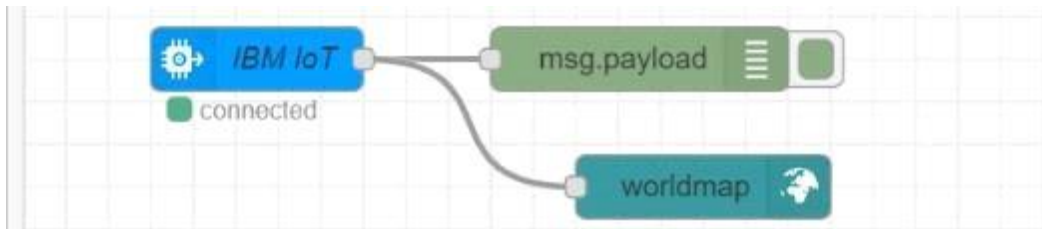
Step2: Develop a python code for GPS

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":"gagtey",
        "typeId":"GPS",
        "deviceId":"12345"
    },
}
```

```

    "auth":{
        "token":"12345678"
    }
}

defmyCommandcallback(cmd):
    print("messagereceivedfromIBMIOTPlatform:%s"%cmd.data['command'])
    m=cmd.data['command']

client=wiotp.sdk.device.deviceclient(config=myConfig,logHandlers=None)
client.connect()
defpub(data):
    client.publishEvent(eventide="status",msgFormat="json",data=mydata,qos=0,
    print("publisheddatasuccesfully:%s",my data)

While True:
    Mydata={'name':'Train1','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','lat':17.6341908,'lon':7847444722)
Pub(myData)
Time.sleep(3)
Mydata={'name':'Train1','lat':17.6340889,'lon':78.4745052)
Pub(myData)
Time.sleep(3)
Mydata={'name':'Train1','lat':17.6248626,'lon':78.4720259)
Pub(myData)
Time.sleep(3)
Mydata={' name':'Train1','lat':17.6188577,'lon':78.4698726)

```

Pub(myData)

Time.sleep(3)

client.commandCallback=mycommanCallback

client.disconnect()

PYTHON CODE OUTPUT:

```
IDLE Shell 3.9.6*
File Edit Shell Debug Options Window Help
08}
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}
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Published data Successfully: %s {'name': 'Train1', 'lat': 11.83331, 'lon': 79.37465}
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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': 78.69
```

TRAIN TRACKING :

