# **SPRINT 4**

DATE - 19 NOVEMBER 2022

TEAM ID - PNT2022TMID16776

PROJECT NAME - SMART SOLUTION FOR RAILWAYS

## **PROCEDURE:**

Step1: Develop a node red application for GPS.

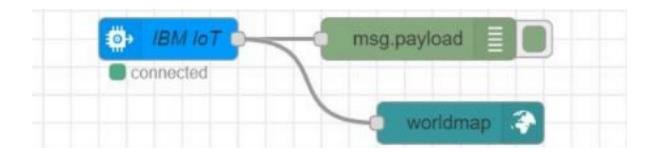
Step2: Develop a python code for GPS.

Step3: Run the program.

Step4: Train location will be displayed.

**Step5**: Create a node red for wakeup call and E-catering serice.

## **NODE RED FLOW:**



#### **PYTHON CODE FOR GPS:**

```
import wiotp.sdk.device
import time import
random myConfig = {
"identity": {
"orgId": "dks661",
"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 ()
```

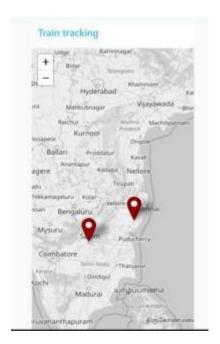
#### **PYTHON CODE OUTPUT:**

```
*IDLE Shell 3.9.6*
File Edit Shell Debug Options Window Help
Published data Successfully: %s ('name': 'Train2', 'lat': 12.40797, 'lon': 79.81
Published data Successfully: %s ('name': 'Train1', 'lat': 11.83331, 'lon': 79.37
Published data Successfully: %s ('name': 'Train1', 'lat': 11.59664, 'lon': 78.69
Published data Successfully: %s ('name': 'Train1', 'lat': 11.63431, 'lon': 78.11
Published data Successfully: %s ('name': 'Train1', 'lat': 11.32207, 'lon': 77.61
Published data Successfully: %s ('name': 'Train1', 'lat': 11.03107, 'lon': 76.96
Published data Successfully: %s ('name': 'Train1', 'lat': 13.08363, 'lon': 80.27
Published data Successfully: %s ('name': 'Train2', 'lat': 12.40797, 'lon': 79.81
Published data Successfully: %s ('name': 'Train1', 'lat': 11.83331, 'lon': 79.37
4651
Published data Successfully: %s ('name': 'Train1', 'lat': 11.59664, 'lon': 78.69
Published data Successfully: %s ('name': 'Trainl', 'lat': 11.63431, 'lon': 78.11
Published data Successfully: %s ('name': 'Train1', 'lat': 11.32207, 'lon': 77.61
Published data Successfully: %s ('name': 'Train1', 'lat': 11.03107, 'lon': 76.96
Published data Successfully: %s ('name': 'Train1', 'lat': 13.08363, 'lon': 80.27
Published data Successfully: %s ('name': 'Train2', 'lat': 12.40797, 'lon': 79.81
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
```

#### **NODE RED OUTPUT:**

```
ble upgraded modules
                                                               i # # 0 = M
   m debug
                                                                       11/12/2022, 8:26:30 AM node: Sefde32a25c7f61e
  iot-2/type/Sudha/id/45/evt/status/Intl/son : msg.payload : Object
   > { name: "Train1", lat: 13.08363, lon: 80.2708 }
  11/12/2022, 8:26:32 AM node: 8efde32x28c7f61e
  iot-2/type/Sudha/id/45/ev//status/fmt/json | msg.payload | Object
   * { name: "Train2", lat: 12.40797, lon: 79.8141 }
  11/12/2022, 8:26:34 AM node: 8efde32a28c7f61e
  iot-2/type/Sudharid/45/evt/status/fint/json / msg payload : Object
   > { name: "Train1", lat: 11.83331, lon: 79.37465 }
  11/12/2022, 8:26:40 AM node: 8efde32a28c7f61e
  iot-2/type/Sudha/id/45/evt/status/fmt/json : msg.payload : Object
   > { name: "Train1", lat: 11.59664, lon: 78.69899 }
  11/12/2022, 8:26:46 AM node: 8efde32a28c7f61e
  tot-2/type/Sudha/id/45/evt/status/fmt/son imag payload. Object
   * { name: "Train1", lat: 11.63431, lon: 78.11122 }
  11/12/2022, 8:26:52 AM node: 8efde32a28c7f61e
  iot-2/type/Sudha/id/45/evt/status/fint/json : msg.payload : Object
  > { name: "Train1", lat: 11.32207, lon: 77.61684 }
  11/12/2022, 8:26:58 AM node: 8efde32a28c7f61e
  iot-2/type/Sudha/id/45/evt/status/fmt/json : msg.payload : Object
   > { name: "Train1", lat: 11.03107, lon: 76.96864 }
```

#### **TRAIN TRACKING:**



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

