Topic:

Smart Solution for Railways

Team ID:

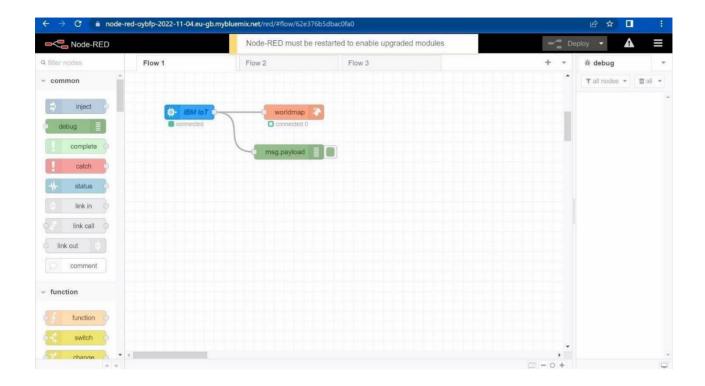
PNT2022TMID51678

SPRINT - 3

PROCEDURE:

- **Step 1:** Develop node red web application to track the train location.
- **Step 2:** Install the required node node-red-contribwebworldmap.
- **Step 3:** Connect the node flow.
- **Step 4:** Run the python code.
- **Step 5:** Click the shortcut CTRL+SHIFT+M to jump to the default map (worldmap).
- **Step 4:** View the map.

NODE RED FLOW:



PYTHON CODE FOR GPS:

```
import
wiotp.sdk.device
import time import
random
myconfig = {
      "identity": {
            "orgID": "dks661"
            "typeID": "Sundar"
            "deviceID": "45"
      },
      "auth": {
            "token": "sundar@2001"
      }
}
def
myCommandCallback(cmd):
      print ("Message has been received from IoT platform: %s
      %cmd.data['command'])
      m = cmd.data['command']
client = wiotp.sdk.DeviceClient(config = myConfig, logHandlers = None)
client.connect()
def pub
(data):
      client.publishEvent (eventId = "status", msgFormat = "json", data = myData,
      qos = 0, onPublish = None)
```

| while True: | client.connect() |
|----------------|---|
| | myData = {'name': 'Train1', 'lat': 13.08363, 'lon': 80.27080} |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

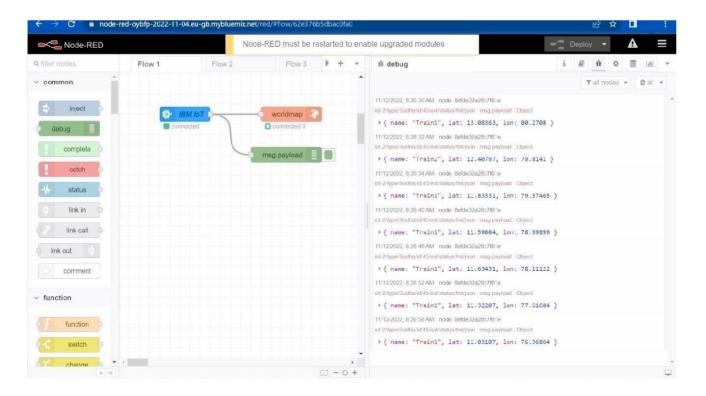
```
time.sleep(2)
      myData = {'name': 'Train2', 'lat': 12.40797, 'lon': 79.81410}
      pub(myData)
time.sleep(2)
      myData = {'name': 'Train1', 'lat': 11.83331, 'lon': 79.37465}
      pub(myData)
      time.sleep(6)
      myData = {'name': 'Train1', 'lat': 11.59664, 'lon': 78.69899}
      pub(myData)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

NODE RED FLOW:

```
*IDLE Shell 3.9.6*
                                                                             ×
File Edit Shell Debug Options Window Help
Published data Successfully: %s ('name': 'Train2', 'lat': 12.40797, 'lon': 79.81
411
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': '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
8641
Published data Successfully: %s {'name': 'Train1', 'lat': 13.08363, 'lon': 80.27
083
Published data Successfully: %s {'name': 'Train2', 'lat': 12.40797, 'lon': 79.81
411
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
6841
Published data Successfully: %s {'name': 'Train1', 'lat': 11.03107, 'lon': 76.96
8641
Published data Successfully: %s {'name': 'Train1', 'lat': 13.08363, 'lon': 80.27
081
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
```

NODE RED OUTPUT:



TRAIN TRACKING:

