

SPRINT 2 TEST CASE:

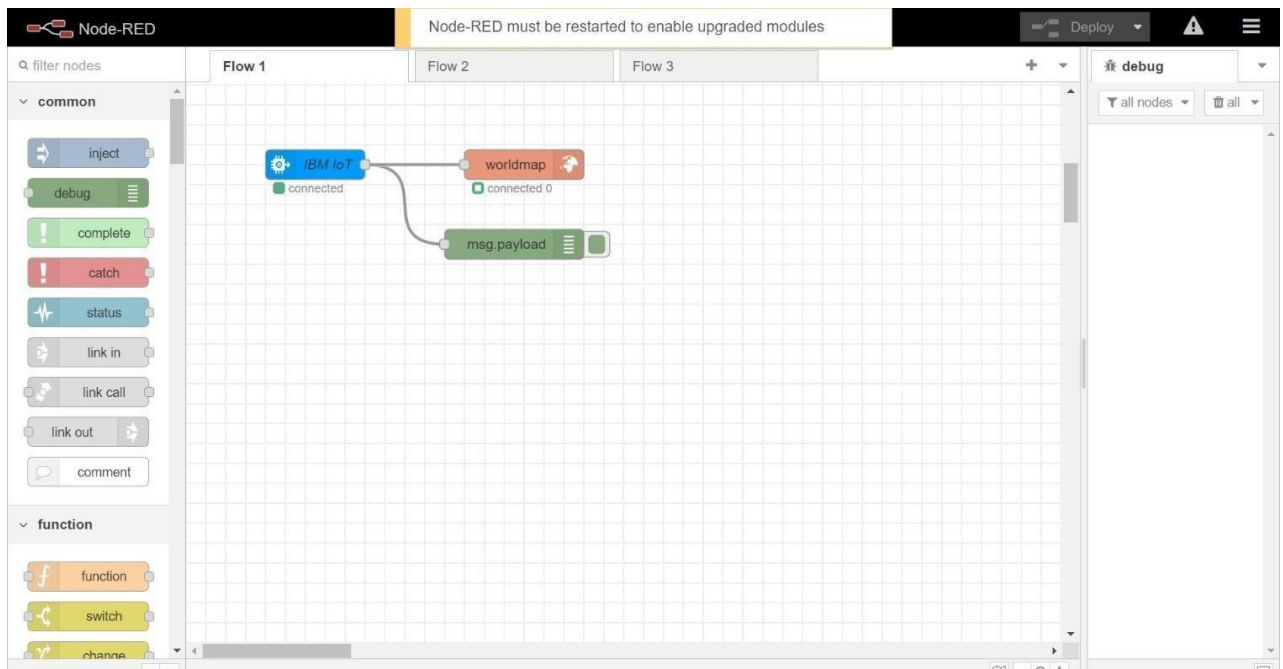
Python Output:

```

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}
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
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Published data Successfully: %s {'name': 'Train1', 'lat': 11.03107, 'lon': 76.96
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08}
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}

```

Node Red Flow:



NODE RED OUTPUT:

The screenshot shows the Node-RED web interface. On the left, the 'common' and 'function' node palettes are visible. The main workspace displays a flow in 'Flow 1' with three nodes: 'IBM IoT' (blue), 'worldmap' (orange), and 'msg payload' (green). The 'IBM IoT' node is connected to 'worldmap', which is connected to 'msg payload'. The 'debug' tab on the right shows a log of messages. The messages are JSON objects containing train data:

```
11/12/2022, 8:26:30 AM node: 8efde32a28:7f6'e  
iot-2/type/Sudha/id/45/evl/status/fmt/json : msg payload : Object  
> { name: "Train1", lat: 13.08363, lon: 80.2708 }  
11/12/2022, 8:26:32 AM node: 8efde32a28:7f6'e  
iot-2/type/Sudha/id/45/evl/status/fmt/json : msg payload : Object  
> { name: "Train2", lat: 12.40797, lon: 79.8141 }  
11/12/2022, 8:26:34 AM node: 8efde32a28:7f6'e  
iot-2/type/Sudha/id/45/evl/status/fmt/json : msg payload : Object  
> { name: "Train1", lat: 11.83331, lon: 79.37465 }  
11/12/2022, 8:26:40 AM node: 8efde32a28:7f6'e  
iot-2/type/Sudha/id/45/evl/status/fmt/json : msg payload : Object  
> { name: "Train1", lat: 11.59664, lon: 78.59899 }  
11/12/2022, 8:26:46 AM node: 8efde32a28:7f6'e  
iot-2/type/Sudha/id/45/evl/status/fmt/json : msg payload : Object  
> { name: "Train1", lat: 11.63431, lon: 78.11122 }  
11/12/2022, 8:26:52 AM node: 8efde32a28:7f6'e  
iot-2/type/Sudha/id/45/evl/status/fmt/json : msg payload : Object  
> { name: "Train1", lat: 11.32207, lon: 77.51684 }  
11/12/2022, 8:26:58 AM node: 8efde32a28:7f6'e  
iot-2/type/Sudha/id/45/evl/status/fmt/json : msg payload : Object  
> { name: "Train1", lat: 11.03107, lon: 76.96864 }
```

TRAIN TRACKING :

The screenshot shows a map application titled 'Node-RED - map all the things'. The map displays the state of Karnataka, India, with various cities and towns labeled. Two red location pins are placed on the map: one near Chennai and another near Coimbatore. The bottom left corner of the map shows the coordinates: 'Lat, Lon 9.31894, 80.46764'. The bottom right corner has a small text: 'Leaflet | Map data © OpenStreetMap contributors'.