Smart Waste Management System for Metropolitan Cities

Project Objectives - Develop A Web Application Using Node-RED Service:

Problem:

A Web UI should be created in Node-RED using dashboard nodes available in it.

Features:

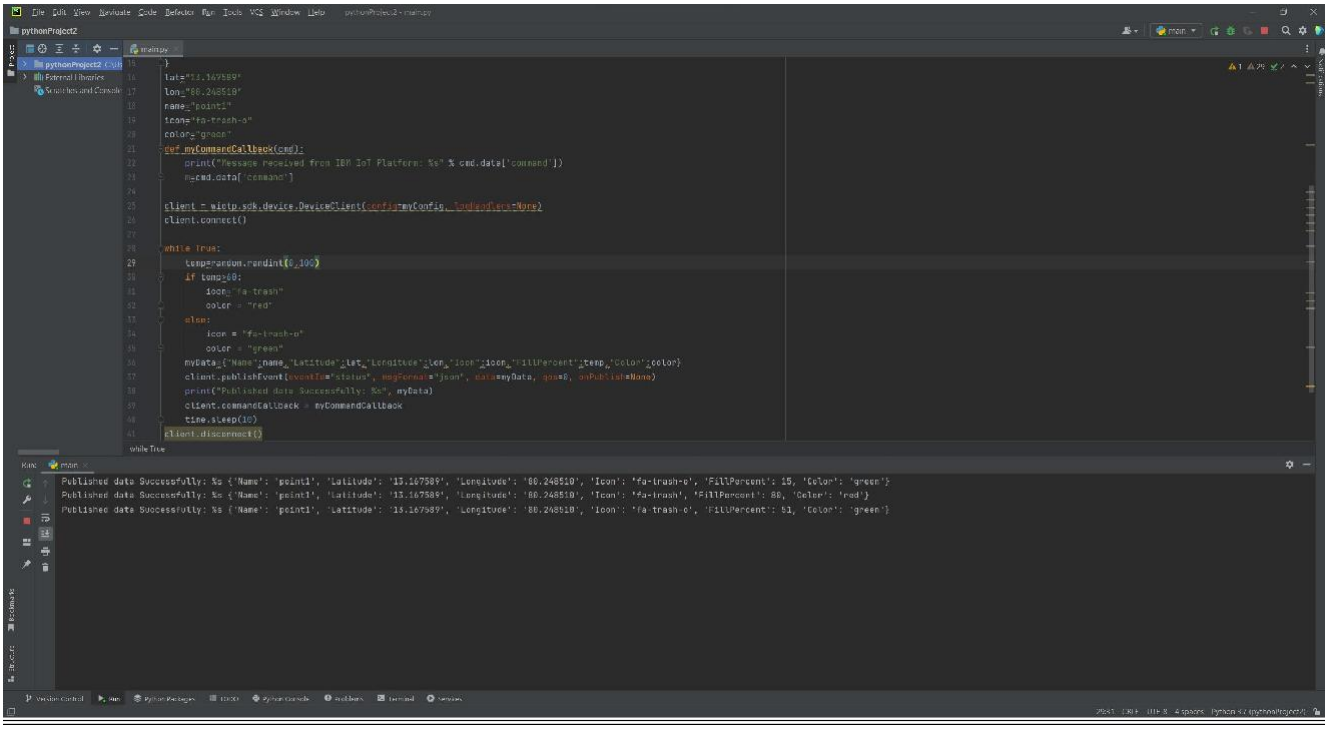
The web application should have the following features:

- Connect to IBM IoT platform and get the location data
- Display the location on the Map in Node-RED Web UI
- Send the notification if the bin value crosses the threshold value

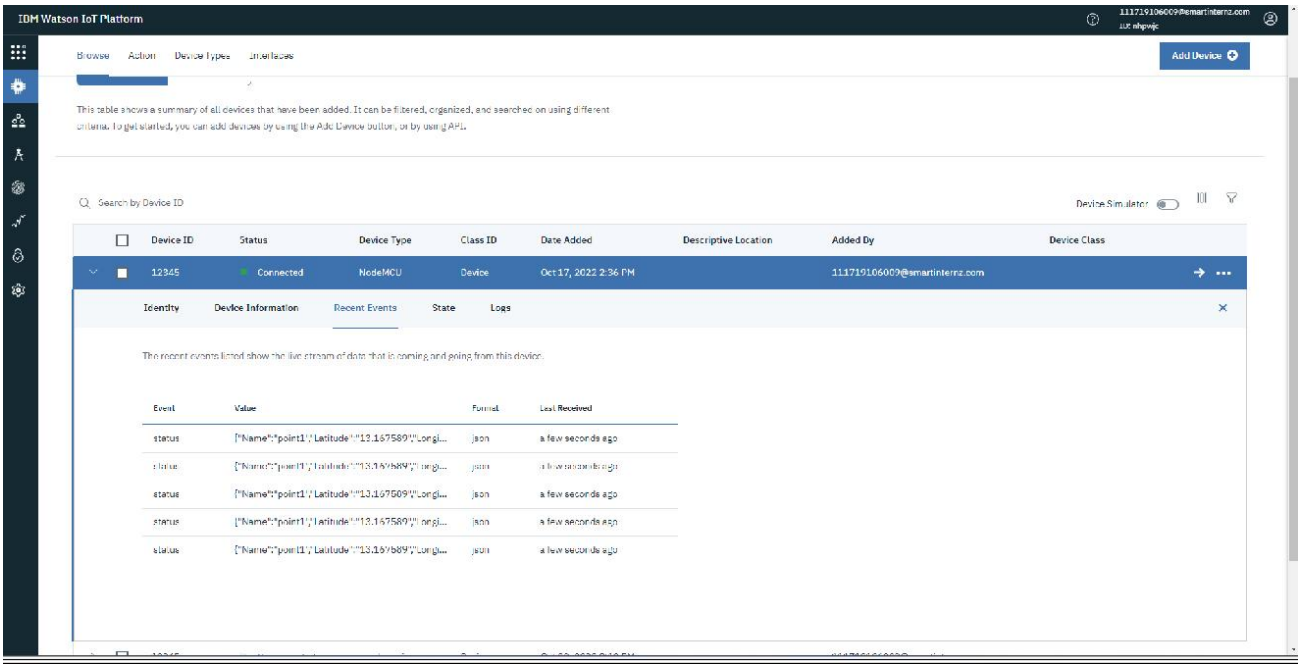
You should need dashboard nodes to be installed to build a dashboard.

Screenshot:

Output from Pycharm (Simulation of the hardware used to pass values and connect to IBM Iot) :

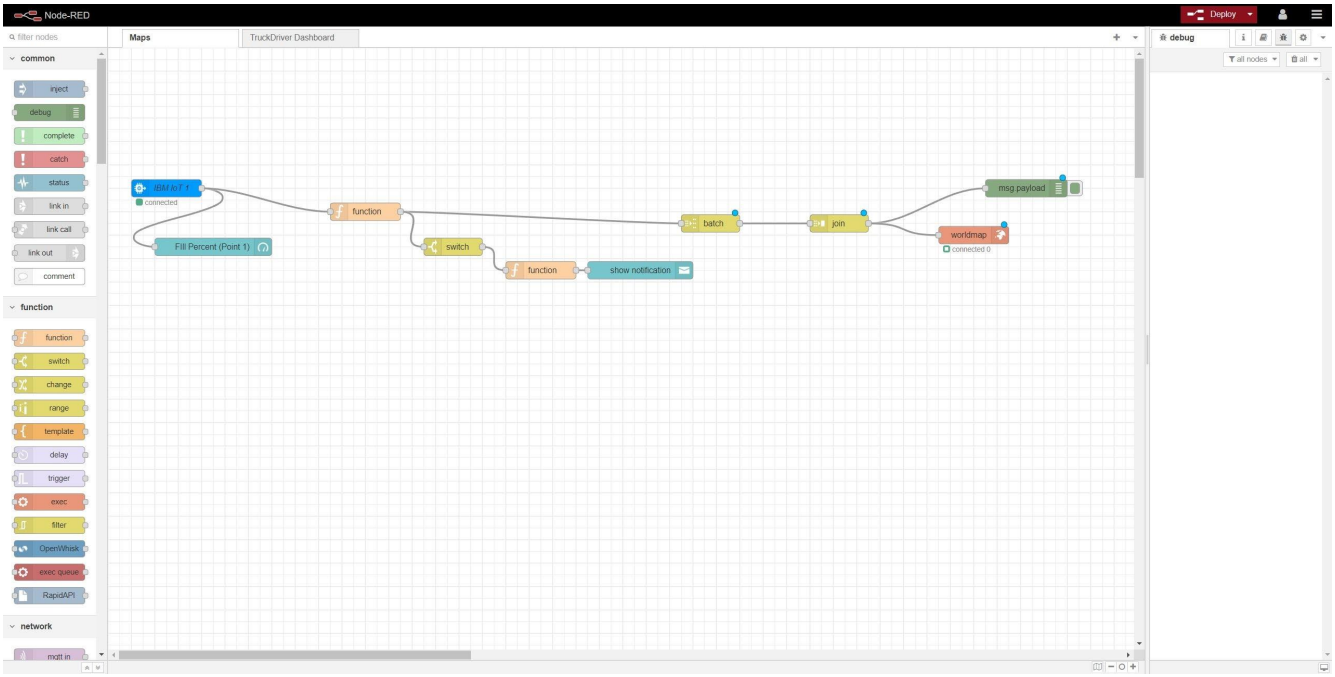


Output from IBM Waston IOT Platform:

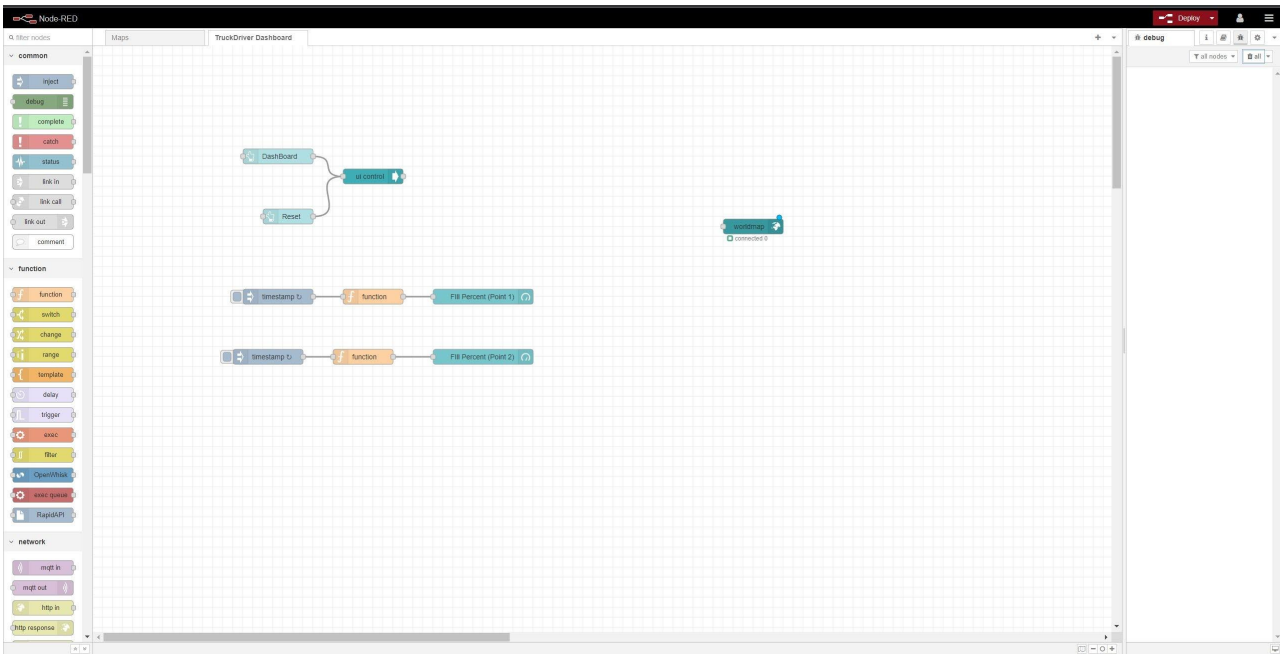


Node RED Flow for this task:

In this flow we use the IBM IoT node for getting data from IBM Watson Iot platform and changing them into the required format with the help of the function node and passing the values to the Gauge node (UI node) and to the World Map node.

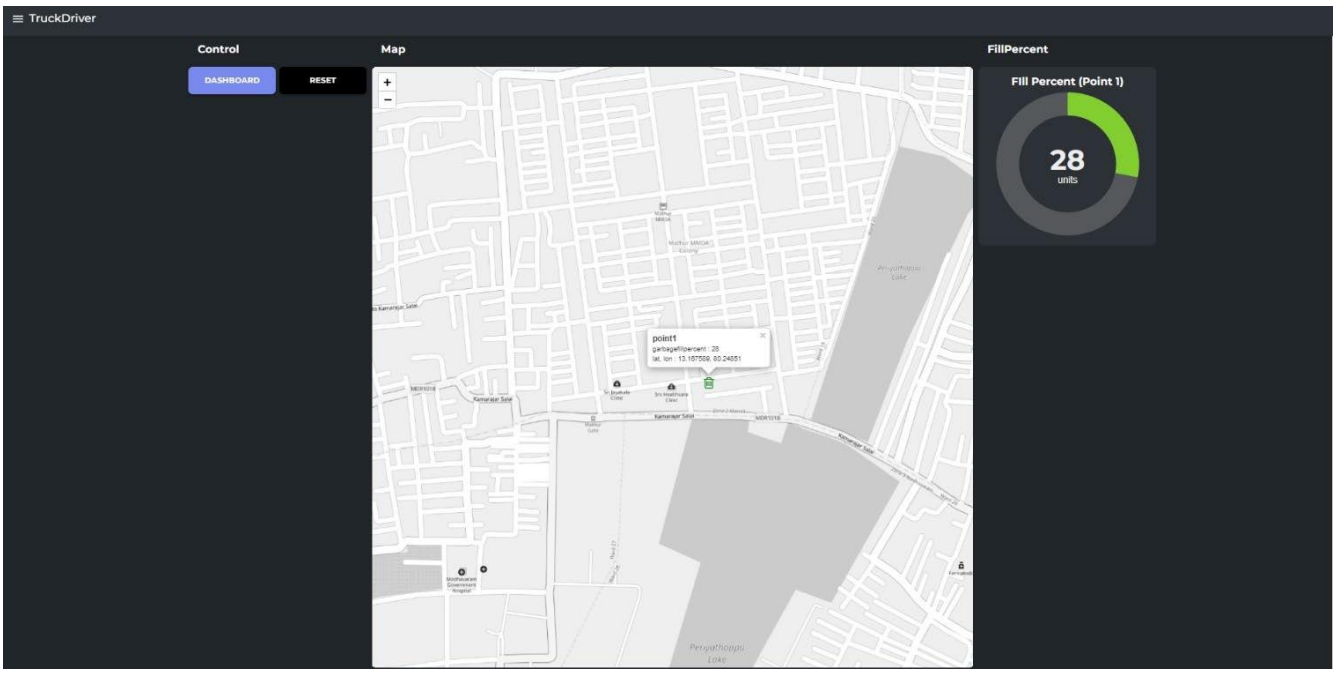


In this flow I've created a dashboard to show the world map and the gauge and controlled them with the UI control node and added few buttons to configure what to show. (i.e., dashboard button to show dashboard and reset button to reset all the nodes)



Website Output:

This output shows the location of the bin and the value in the gauge. When the BIN value is below the threshold level (i.e., 60 in my case) the icon appears as green.



This output shows the location in Red Icon when the BIN value is greater than 60 and we can also see the notification in the bottom right corner.