

PROJECT DEVELOPMENT – DELIVERY OF SPRINT – 2

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Project Title	Signs With Smart Connectivity for Better RoadSafety

SPRINT-2 (USN - 4)

Develop a web using Node Red service for display weather data, by accessing the data from IBM Watson.

STEP 1: Creating a IoT device in the IBM IoT Watson Platform for updating the weather conditions of a particular city.

The screenshot displays the IBM Watson IoT Platform interface. The top navigation bar includes tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains various icons for navigation. The main content area shows a device named 'Openweather_deviceid' with a status of 'Disconnected'. Below this, a table titled 'Recent Events' displays a stream of data. The table has four columns: 'Event', 'Value', 'Format', and 'Last Received'. The data shows five events, each with a JSON value containing temperature, windspeed, and latitude information. A status box at the bottom right indicates '1 Simulation running'.

Event	Value	Format	Last Received
event_1	{"Temperature":52,"Windspeed":25,"Latitude":5...	json	a few seconds ago
event_1	{"Temperature":97,"Windspeed":44,"Latitude":6...	json	a few seconds ago
event_1	{"Temperature":71,"Windspeed":72,"Latitude":6...	json	a few seconds ago
event_1	{"Temperature":42,"Windspeed":40,"Latitude":3...	json	a few seconds ago
event_1	{"Temperature":63,"Windspeed":83,"Latitude":6...	json	a few seconds ago

1 Simulation running

STEP 2: Using Node – RED Flow Editor, Design a flow to display the weather details in web.

The screenshot shows the Node-RED Flow Editor interface. The left sidebar contains a search bar and two categories of nodes: 'IBM Watson' (speech to text, text to speech) and 'dashboard' (text input, text). The main workspace displays a flow with the following nodes and connections:

- timestamp** node connected to the **openweathermap** node.
- openweathermap** node connected to five parallel output nodes: **msg.payload**, **Status**, **Location**, **Temperature**, and **Humidity**.
- Wind Speed** node connected to the **openweathermap** node.
- Description** node connected to the **openweathermap** node.

The right sidebar shows the **debug** console with a log of messages. The messages are JSON objects containing weather data, including coordinates, weather conditions, base, main, and visibility. The messages are timestamped and include a node ID.

```
11/18/2022, 10:02:15 AM node: c8634af8bdc78d6a
msg.payload: Object
{ coord: object, weather: array[1],
base: "stations", main: object,
visibility: 10000 ... }
```

The bottom of the image shows the Windows taskbar with the search bar and various application icons.

STEP 3: Displaying the output as weather details of a particular city via the Node – RED service.

