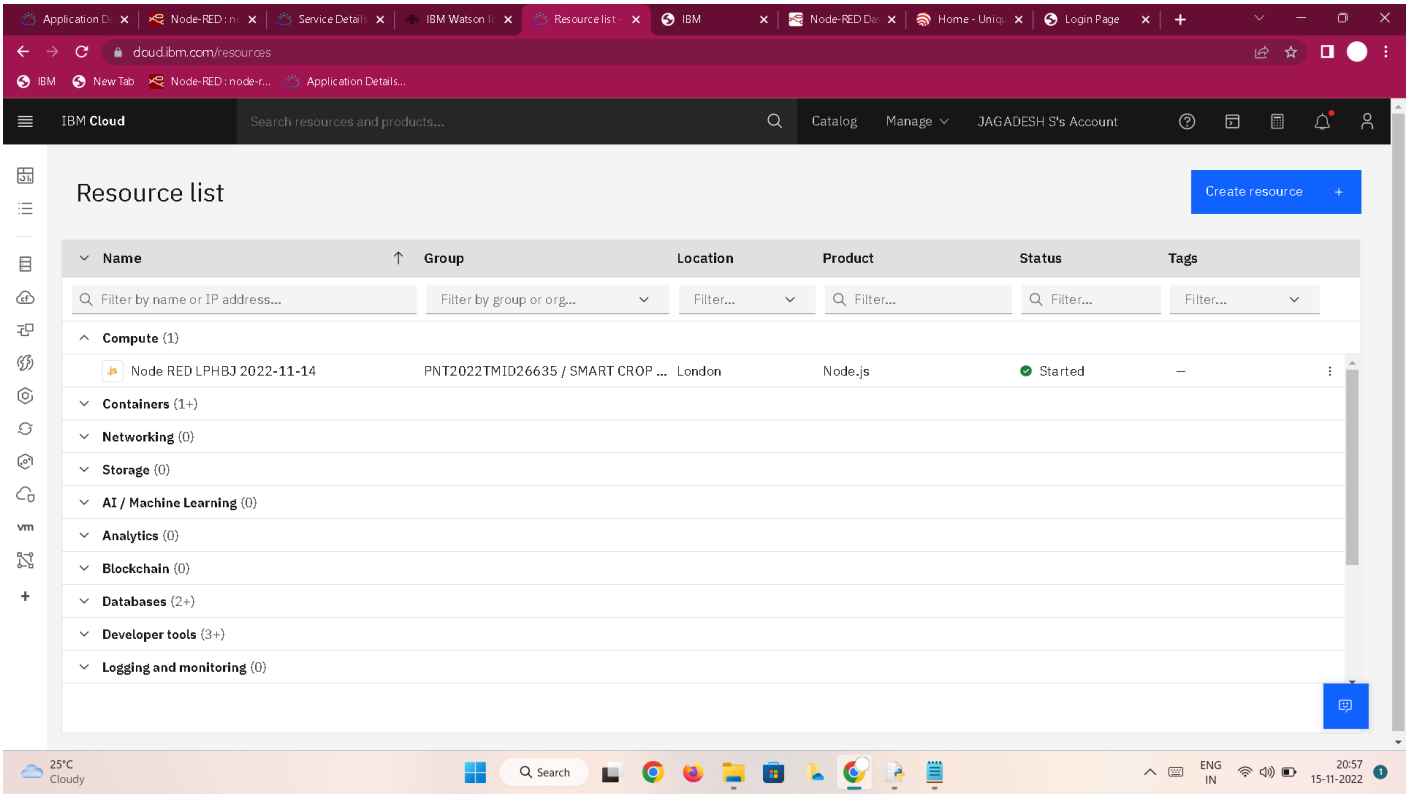
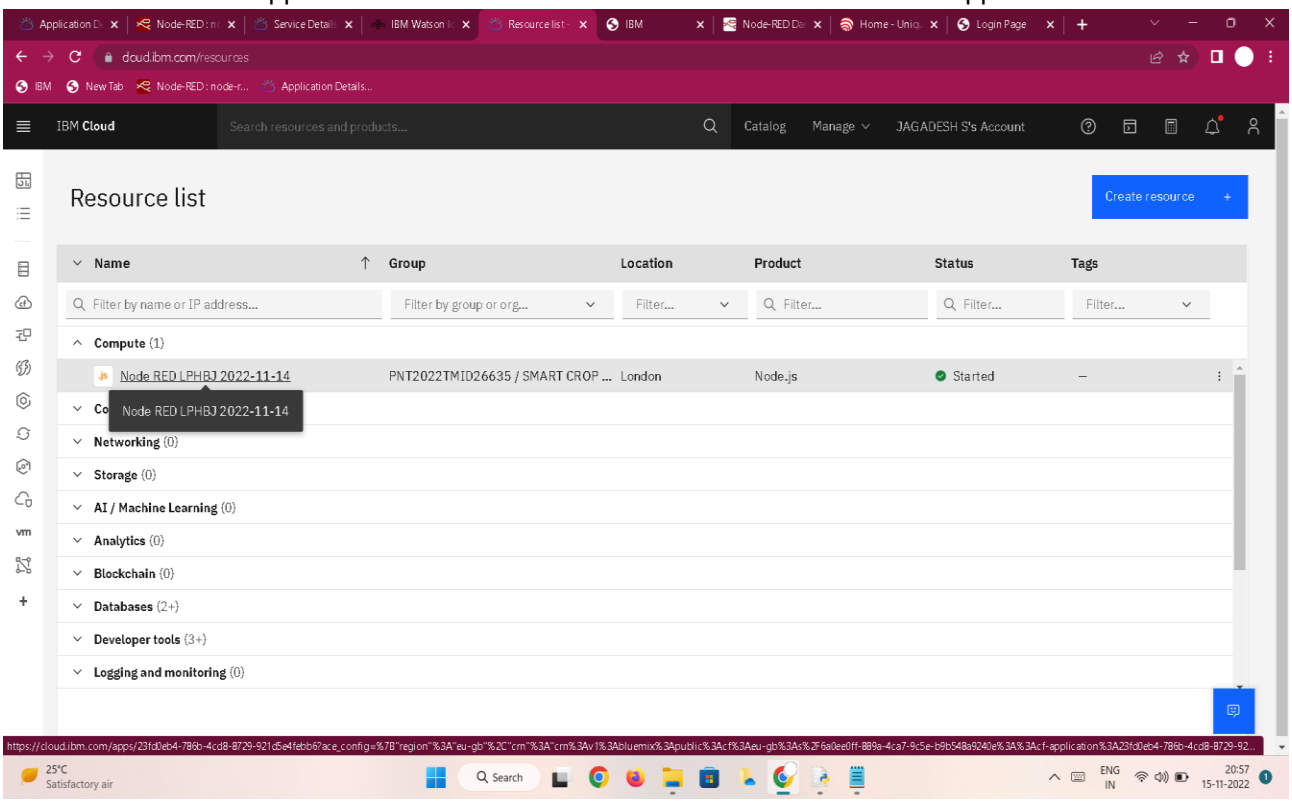
Creating a Node-Red Web Application to view data in Separate Numerical form

Date	07 November 2022
Team ID	PNT2022TMID26635
Project Name	Project – IoT based Smart Crop Protection for Agriculture

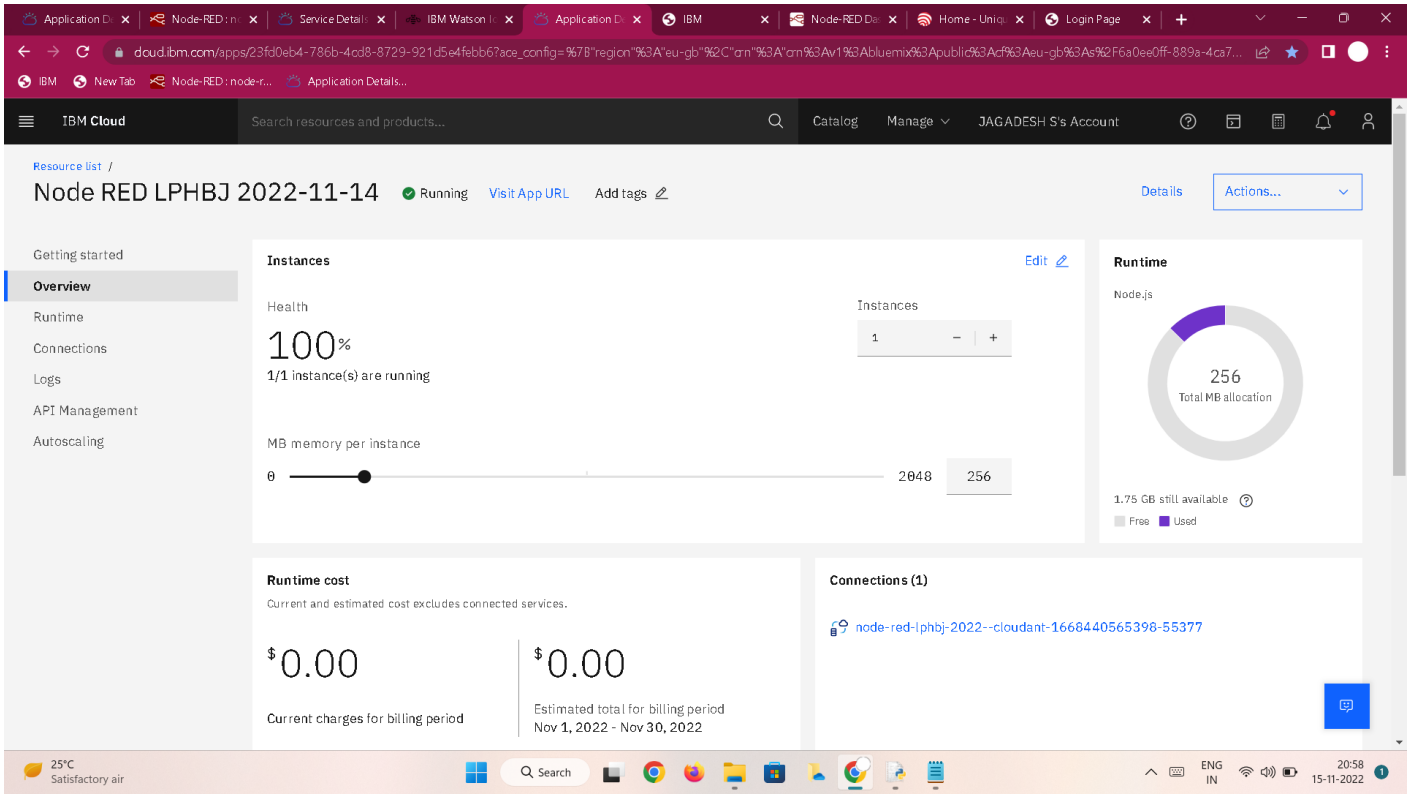
➢ In IBM cloud dashboard, click on Cloud Foundry apps



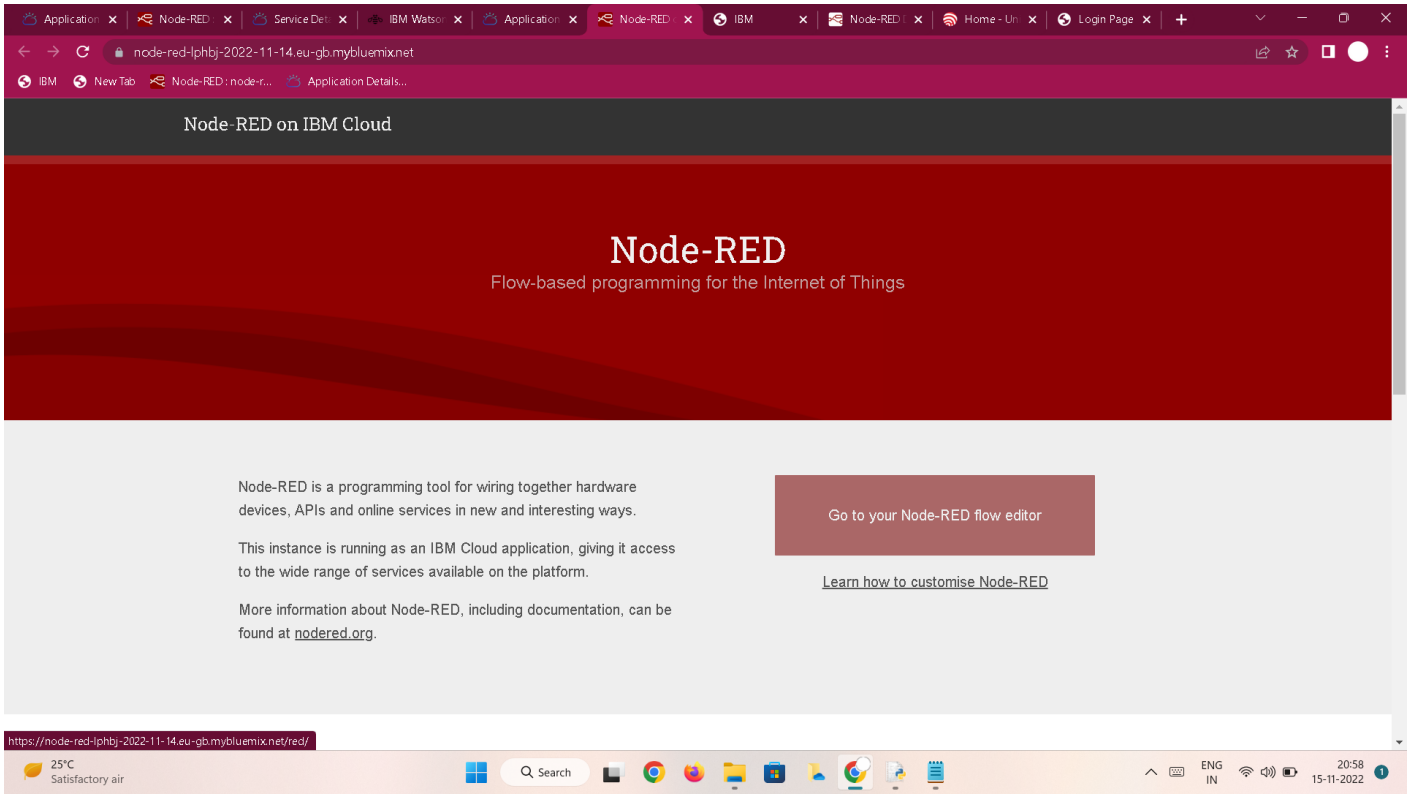
➢ A new window appears where we need to NODE-RED SELDZ app created before



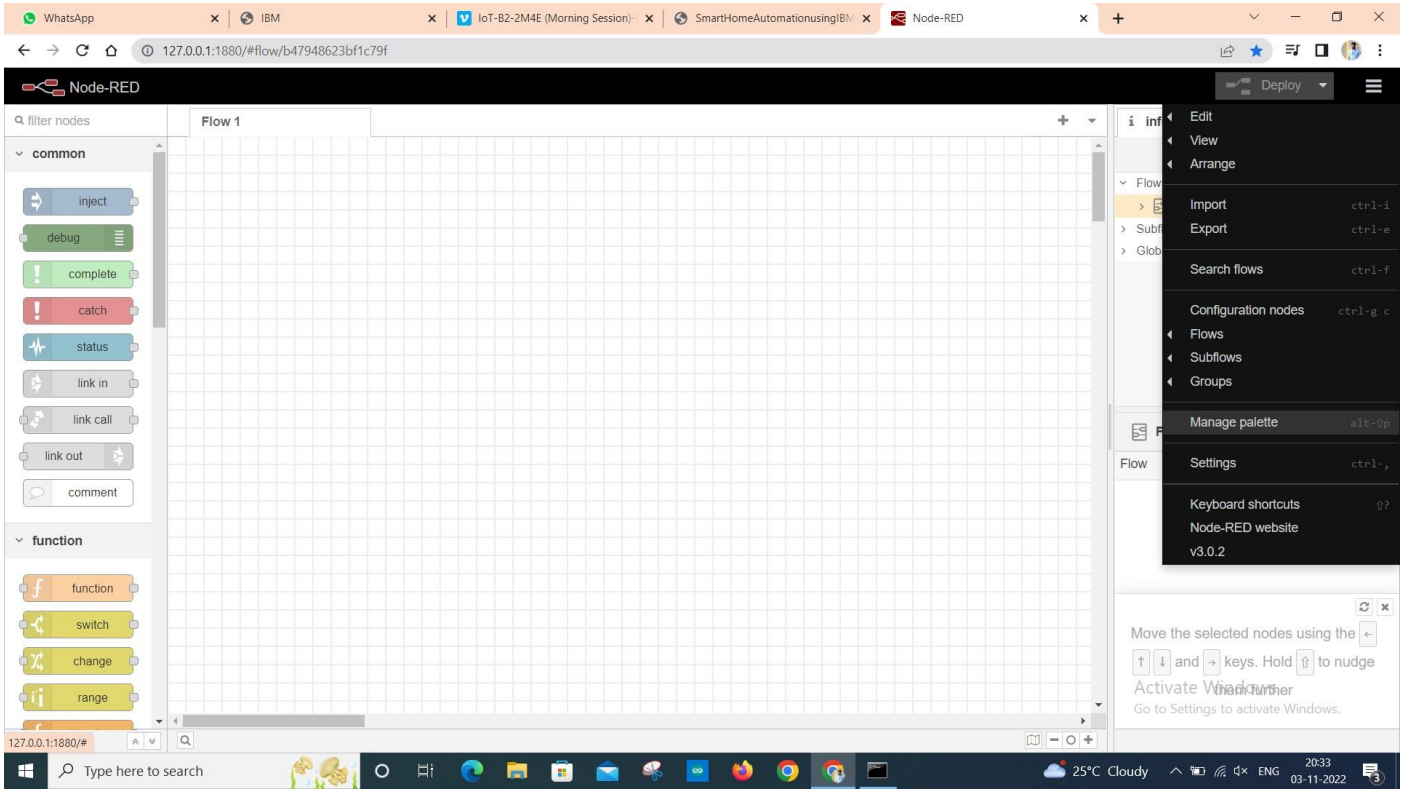
➢ Click on Visit App URL in Node RED SELDZ service dashboard.



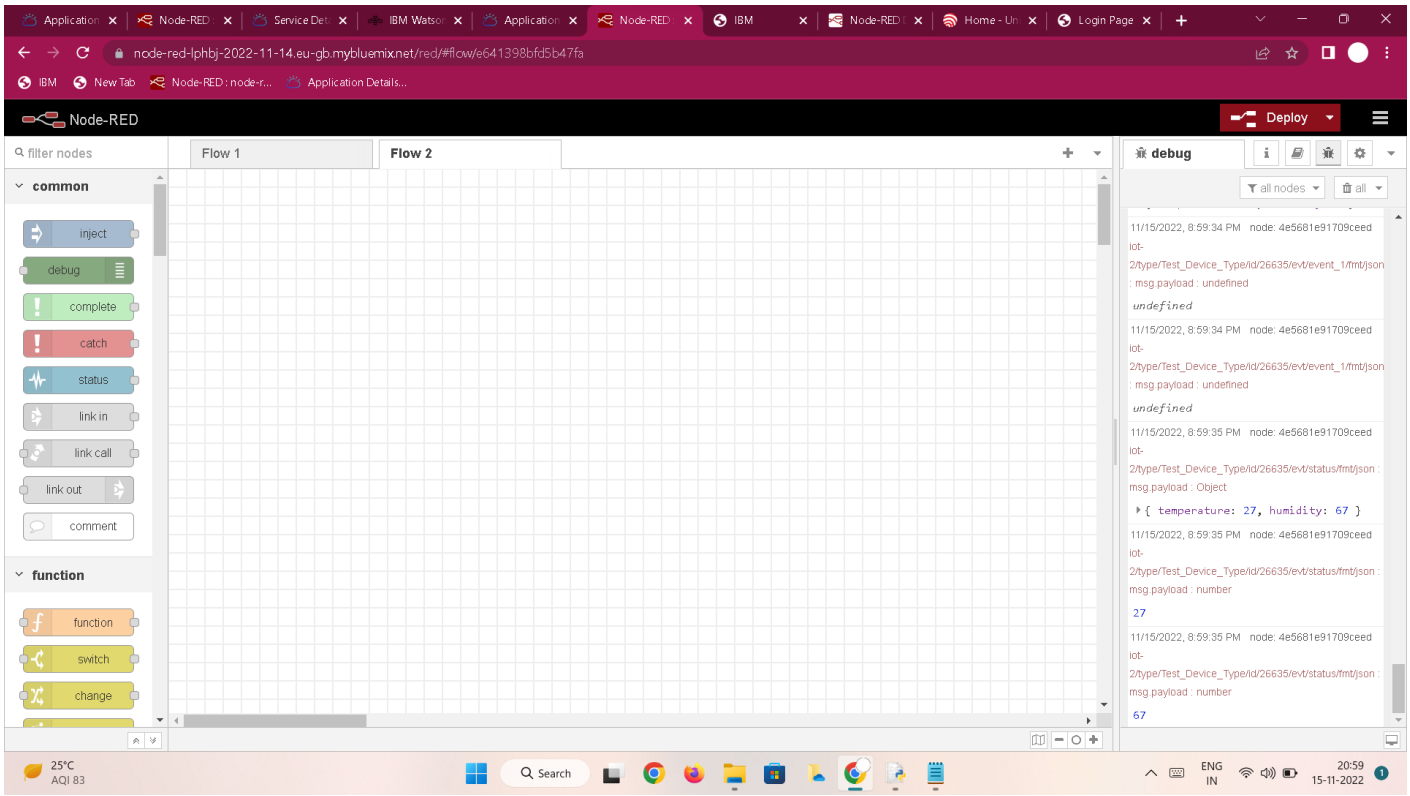
- Click on your Node-RED flow editor where you will be redirected to the Node-RED flow editor.



➢ To install IBM nodes in Node-red flow editor click on manage palette in the menu option which is on the top-right of the screen.

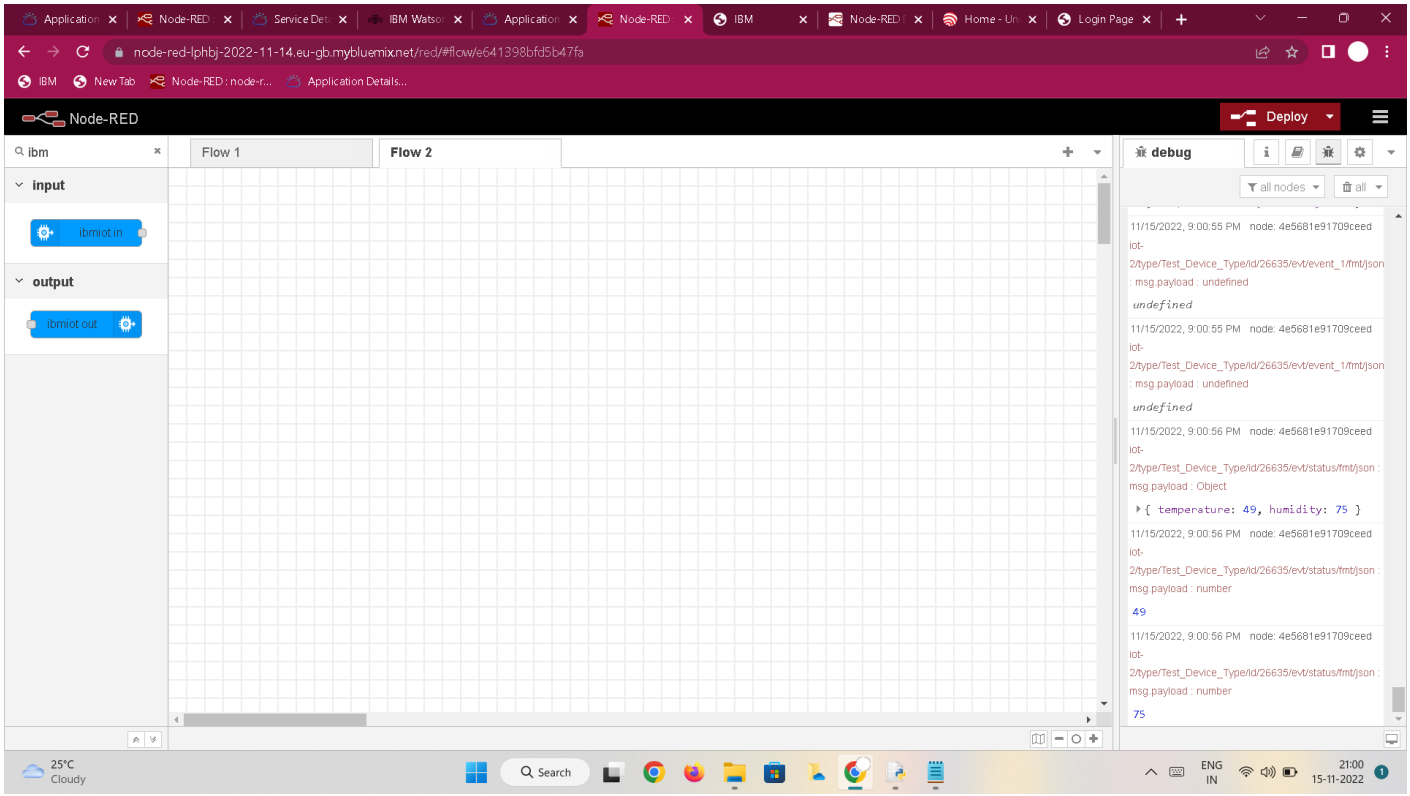


➢ In install section search for ibmiot and install the ibm nodes to flow editor.

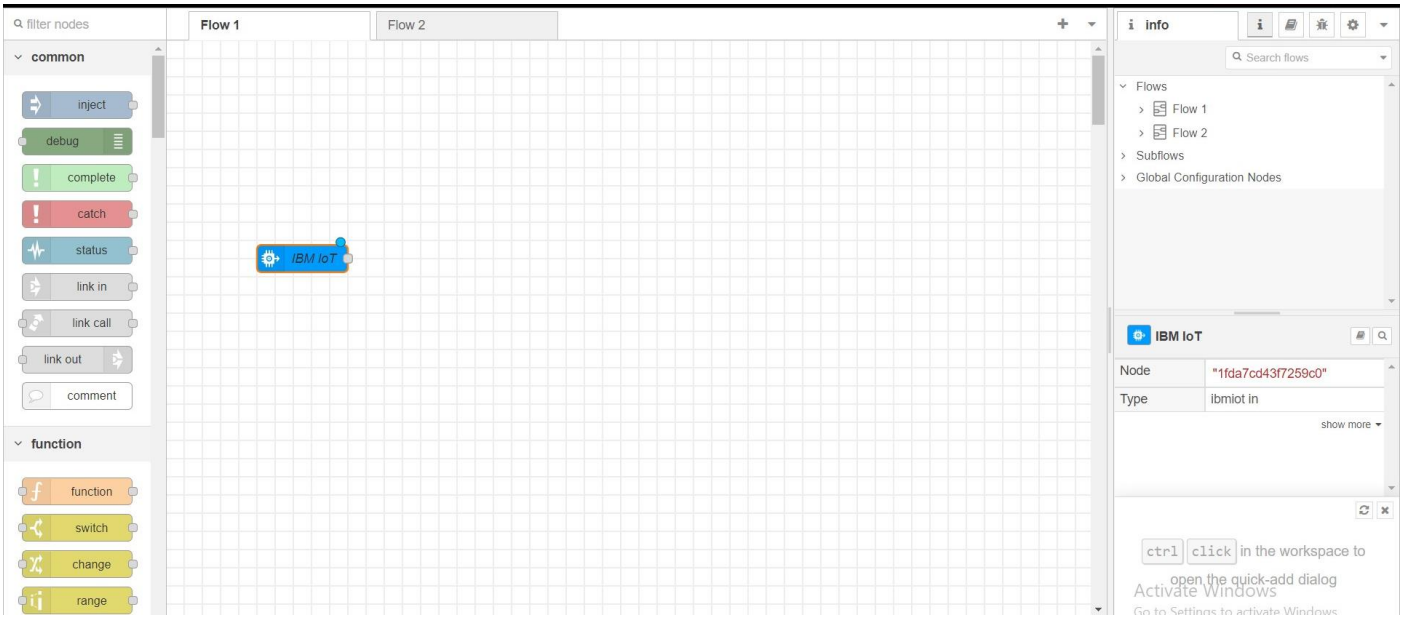


➢

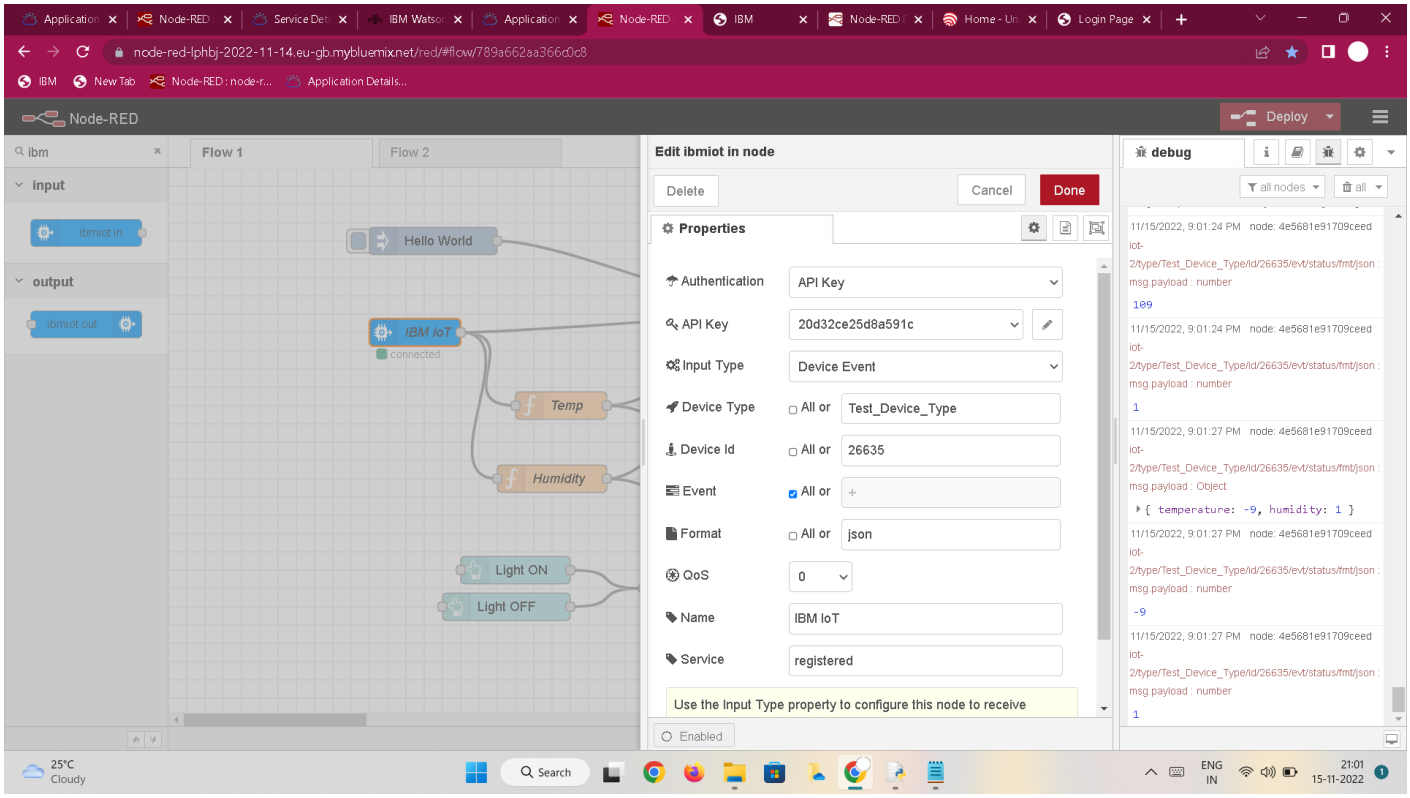
➢ Search for IBM nodes in the filter nodes section



➢ To Retrieve the data from the IBM IoT platform by using Node-RED IBM IoT Input node and double click on the IBM IoT input node



- Select API Key from Authentication in properties.
  - In API Key paste API Key, API Token and server name and update it



- Also update your input type as event, Device type, Device ID, command and format in the propertiees section and click on Done

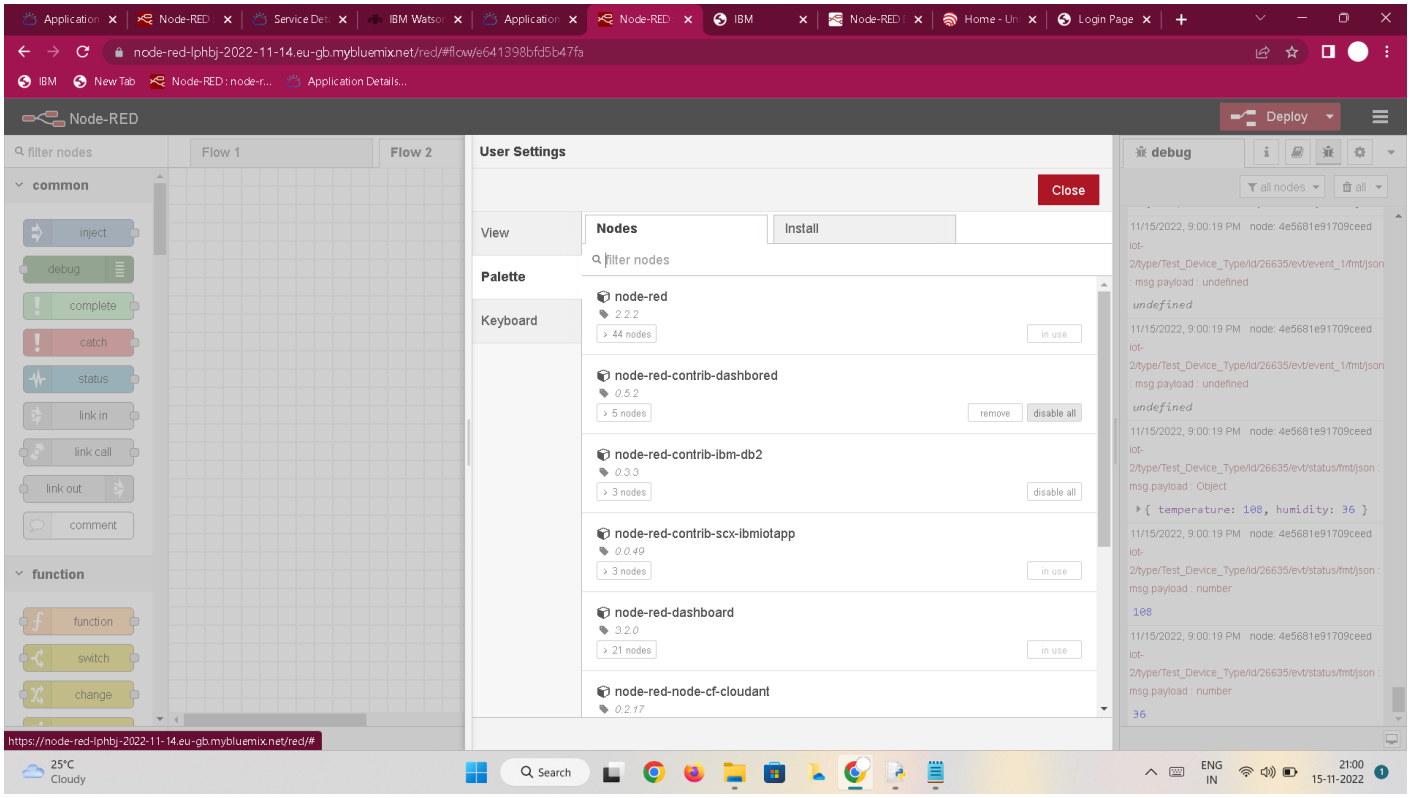
To generate API Key go to IBM IoT platform

- In Apps Section -> Click onGenerate API Key

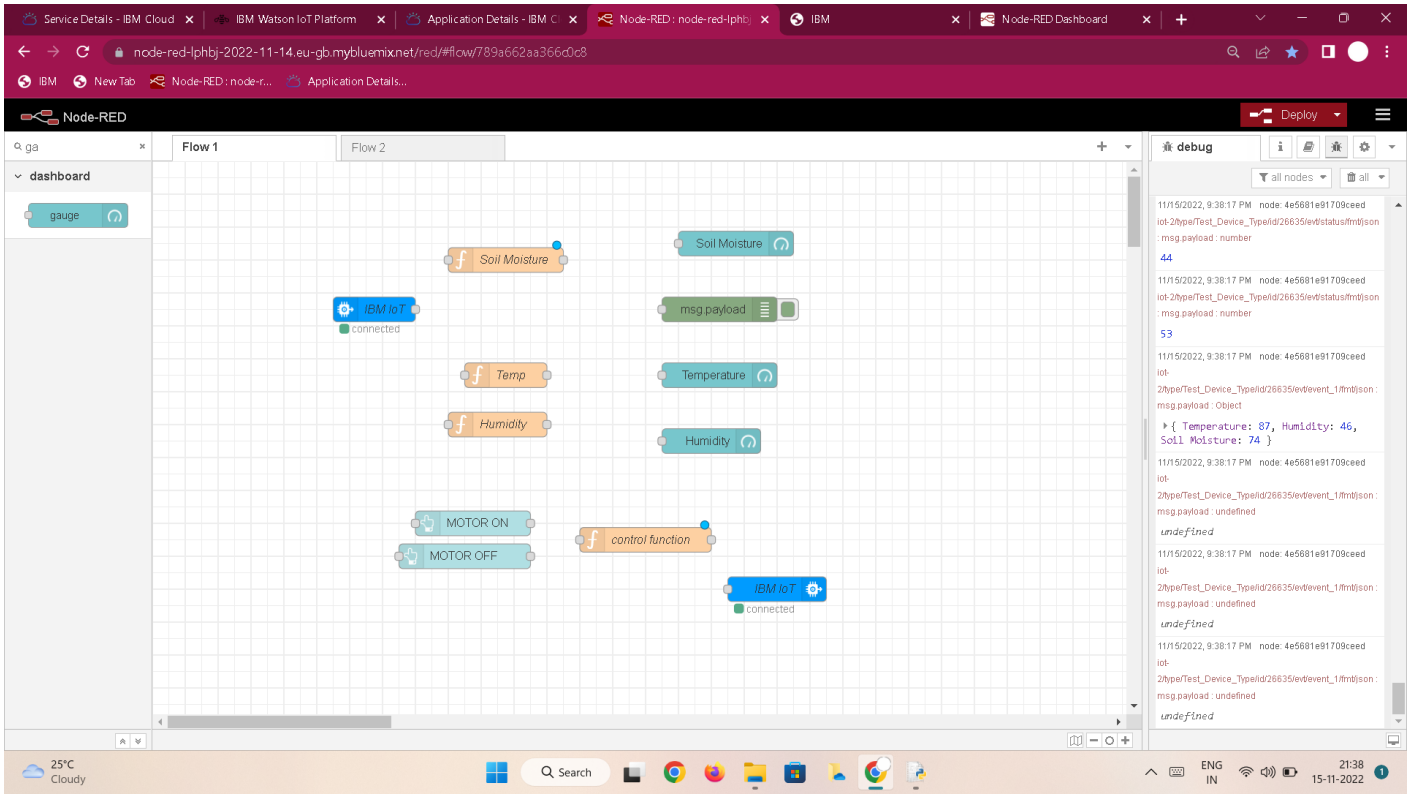
- Click on Deploy option to check the connection status. If the status is disconnected check for IBM IoT properties and try again.

  Place the debug node in the flow editor and click on deploy to see the temperature and humidity value in the debug tab

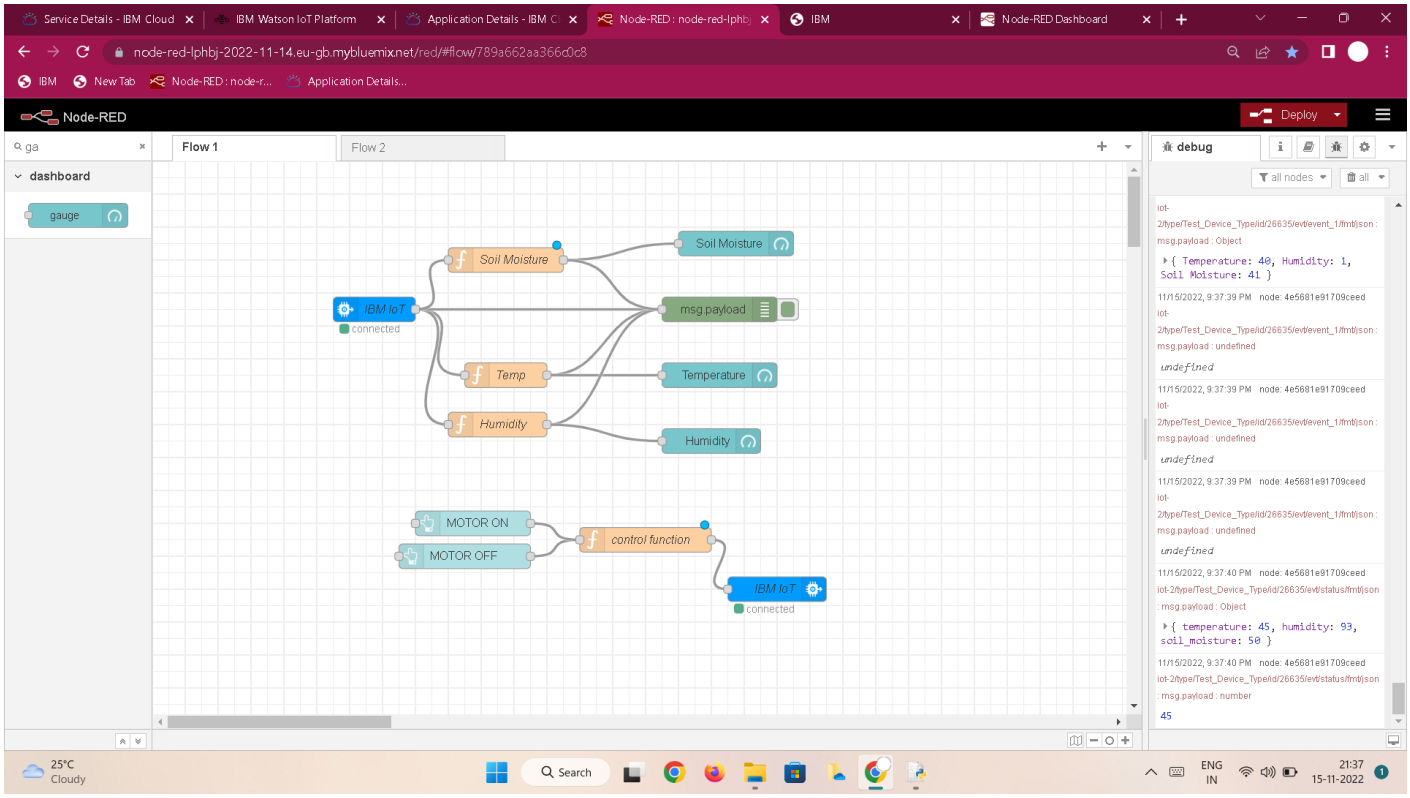
- Install the dashboard node from the manage pallet to create a UI to display temperature and humidity values in the Dashboard



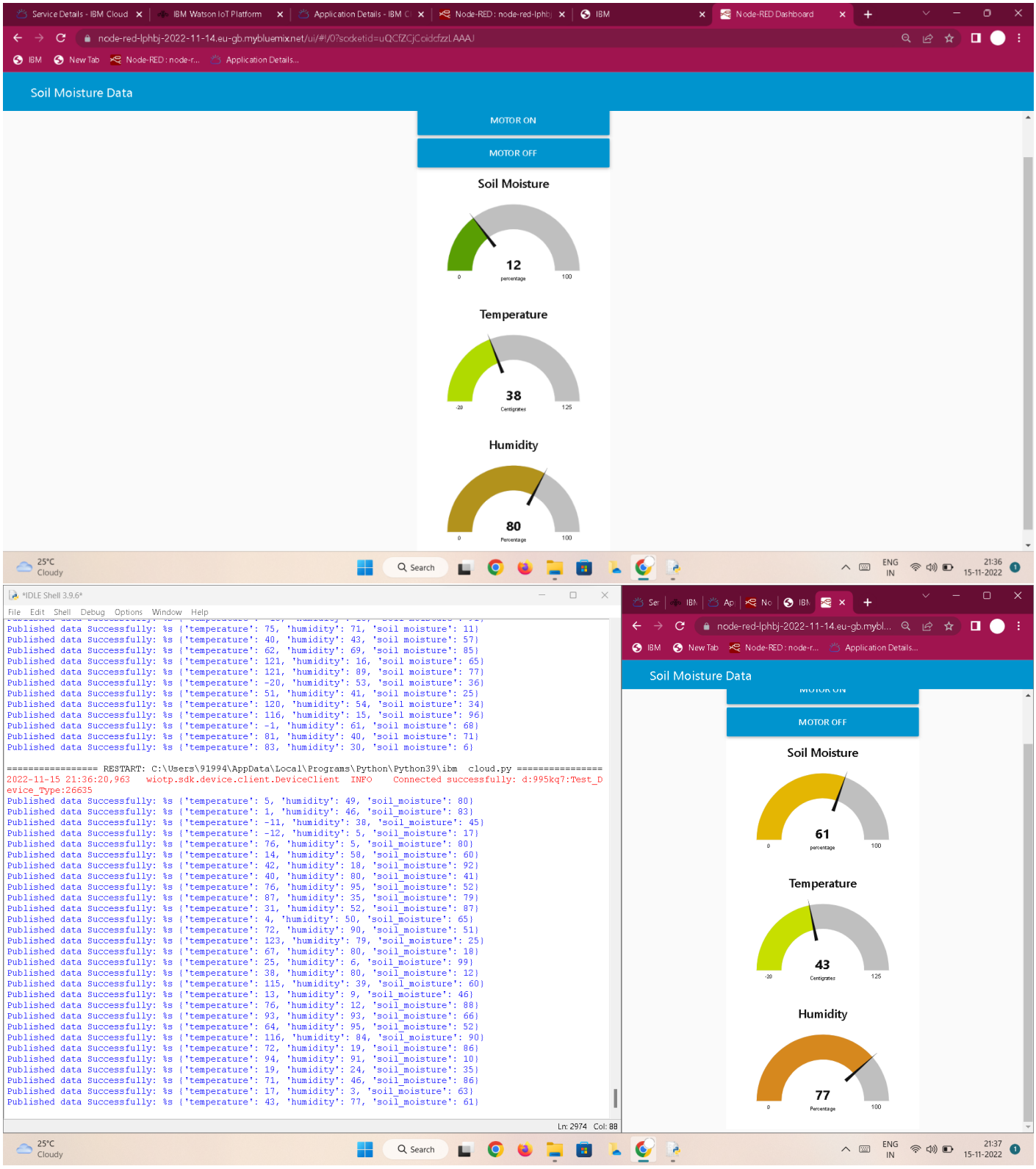
- Drag and place the function node ang gauge node in the flow editor to separate the temperature, humidity and soil mositure value and also for motor on and off.



- ➢ Double click on function and update the details as follow, ➢ Type msg.payload=msg.payload.Temperature in one function.
- ➢ Type msg.payload=msg.payload.Humidity in another function
- ➢ Type msg.payload=msg.payload.soil_moisture
- ➢ Type msg.payload=msg.payload.Pressure
- ➢ To separate the humidity and temperature values from payload and click deploy



- ➢ Select gauge function and these nodes to temperature, pressure, soil mositure gas and humidity
- ➢ Edit temperature, soil moisture and humidity nodes and deploy it.
- ➢ After editing the nodes, deploy it



RESULT:

Thus, the Node-Red Web Application is created successfully.