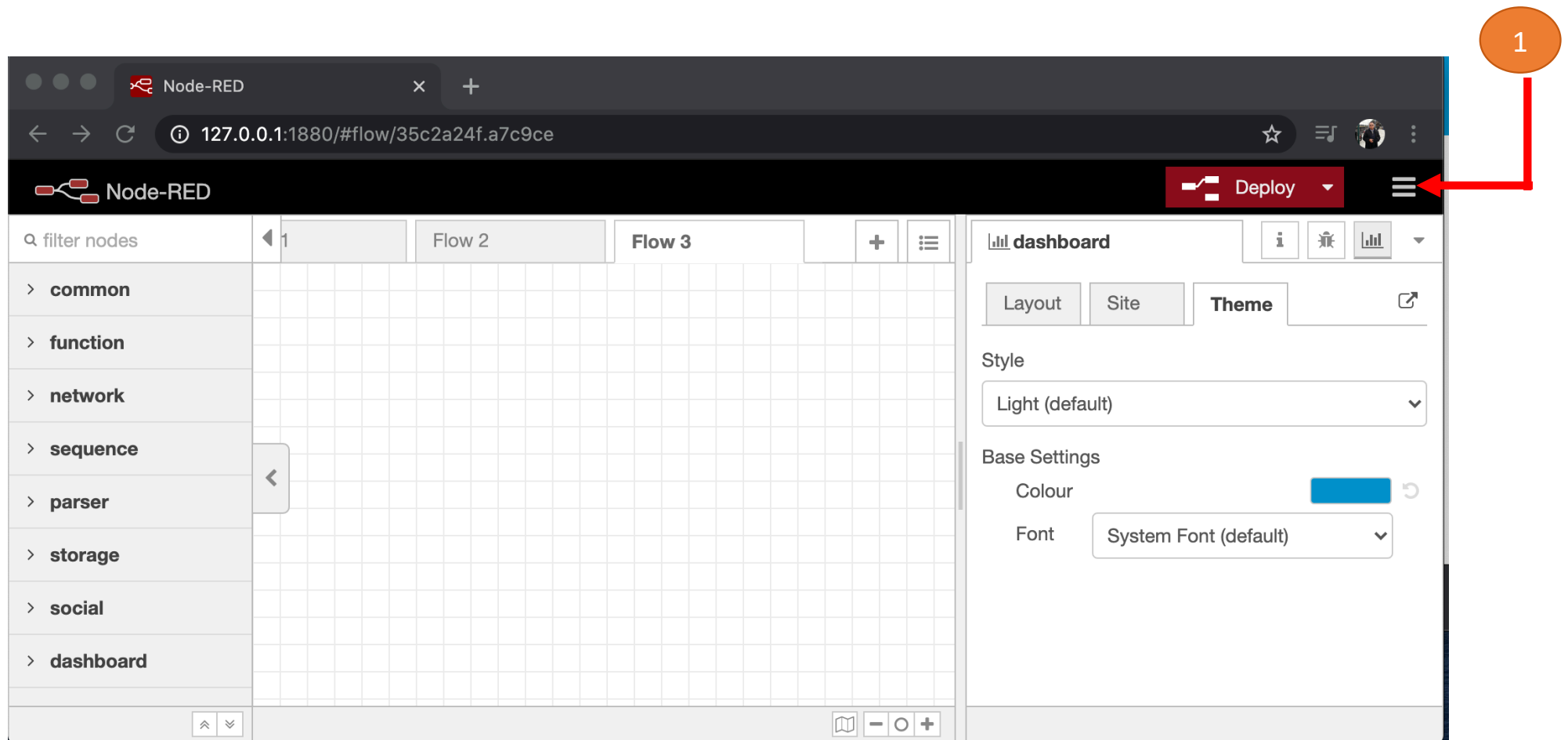


How to Build Node-RED –Dashboard

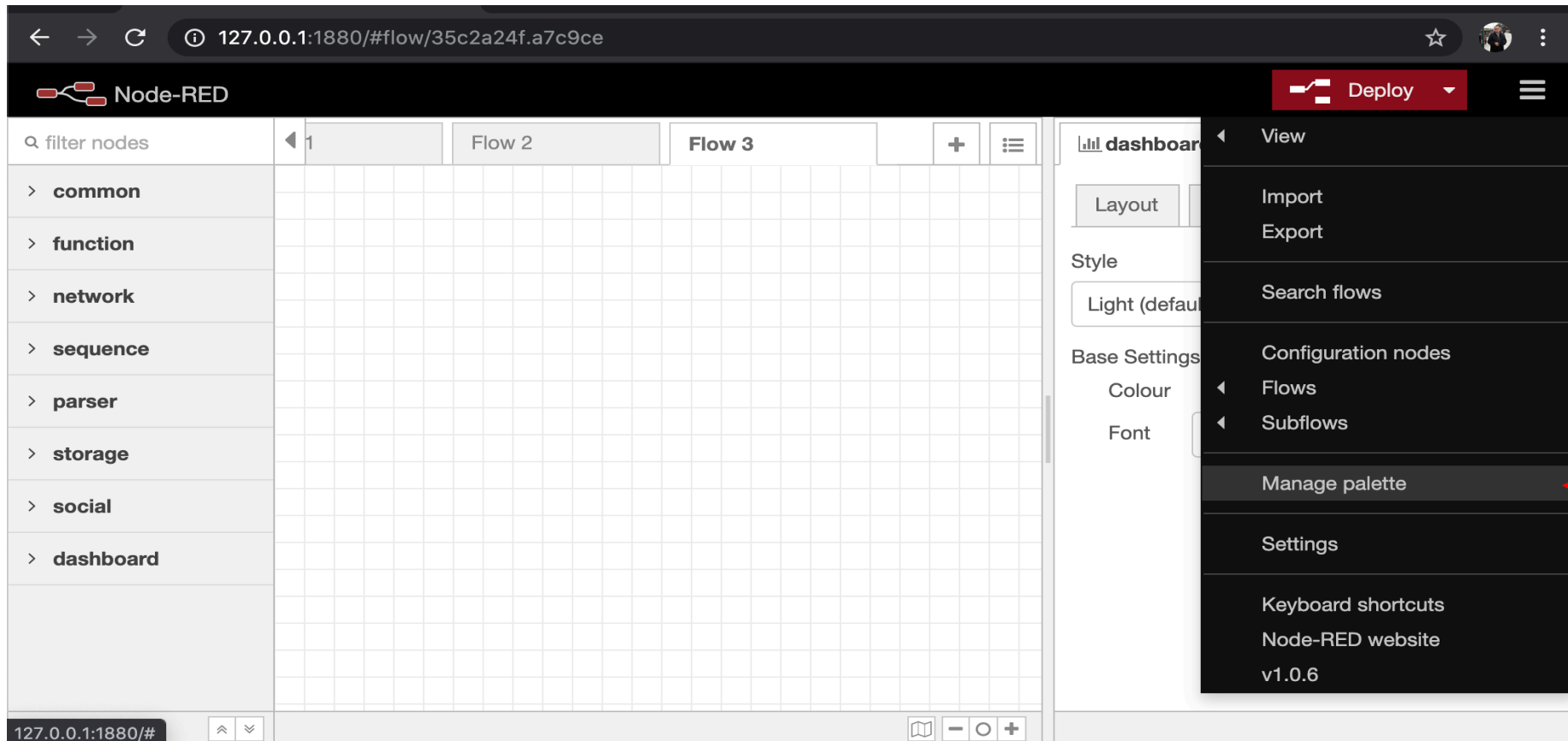


v1 jan 2020 : v2 feb 2021
Safyzan Salim

1. Go to **Menu** to install Dashboard palette.

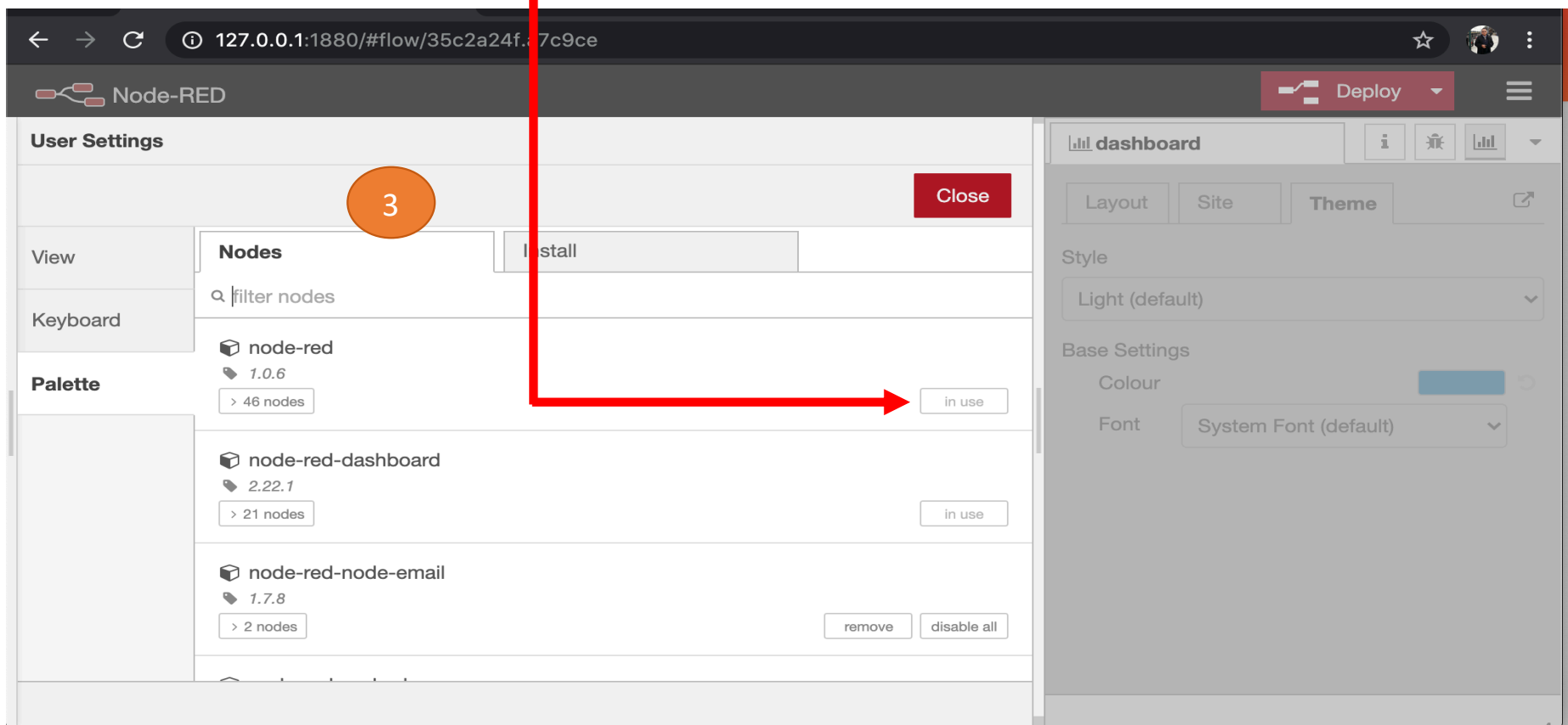


2. Select **Manage palette**.

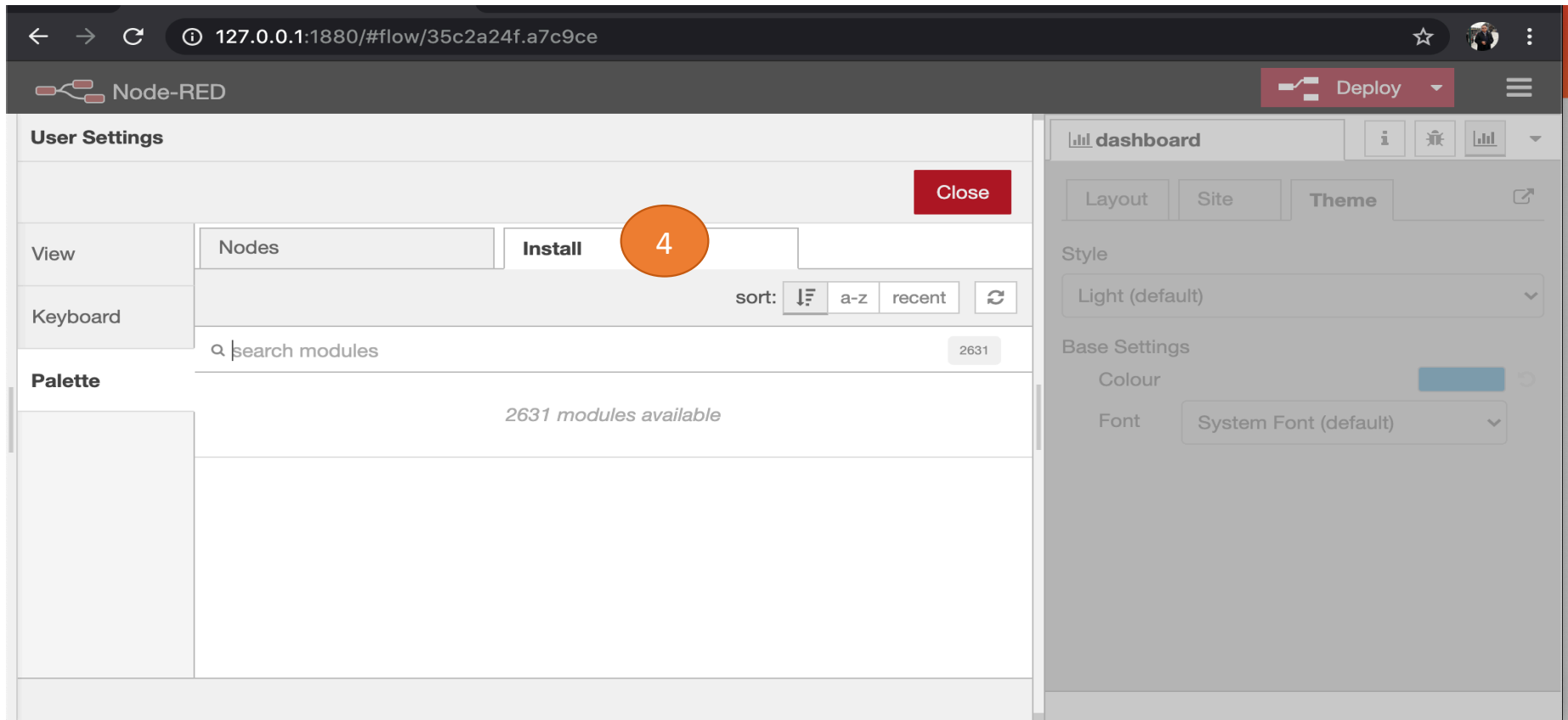


3. Nodes tab shows **Installed** and **in use** palette. User can also **remove** the unwanted palette from this tab.

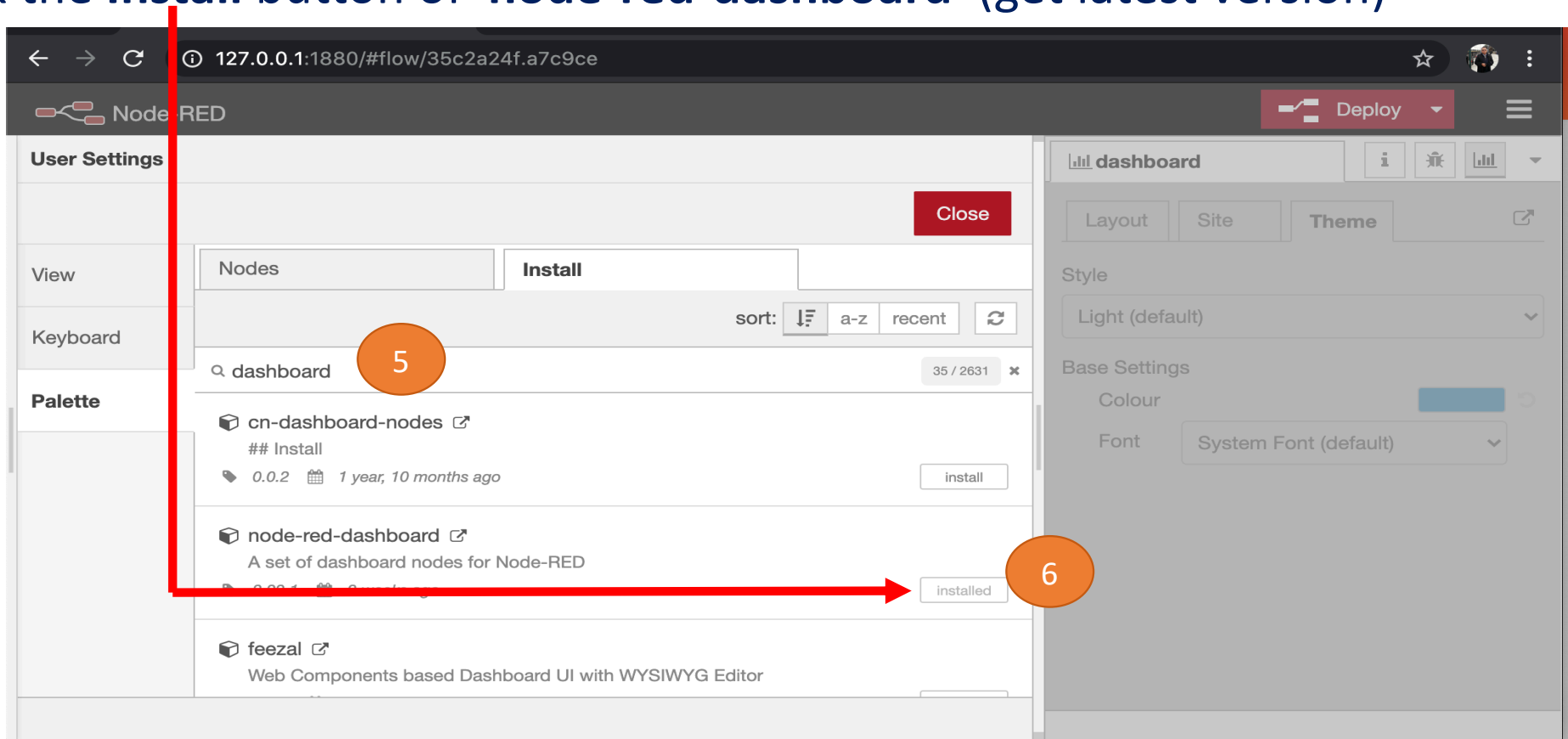
Note: **In use** node cannot be removed.



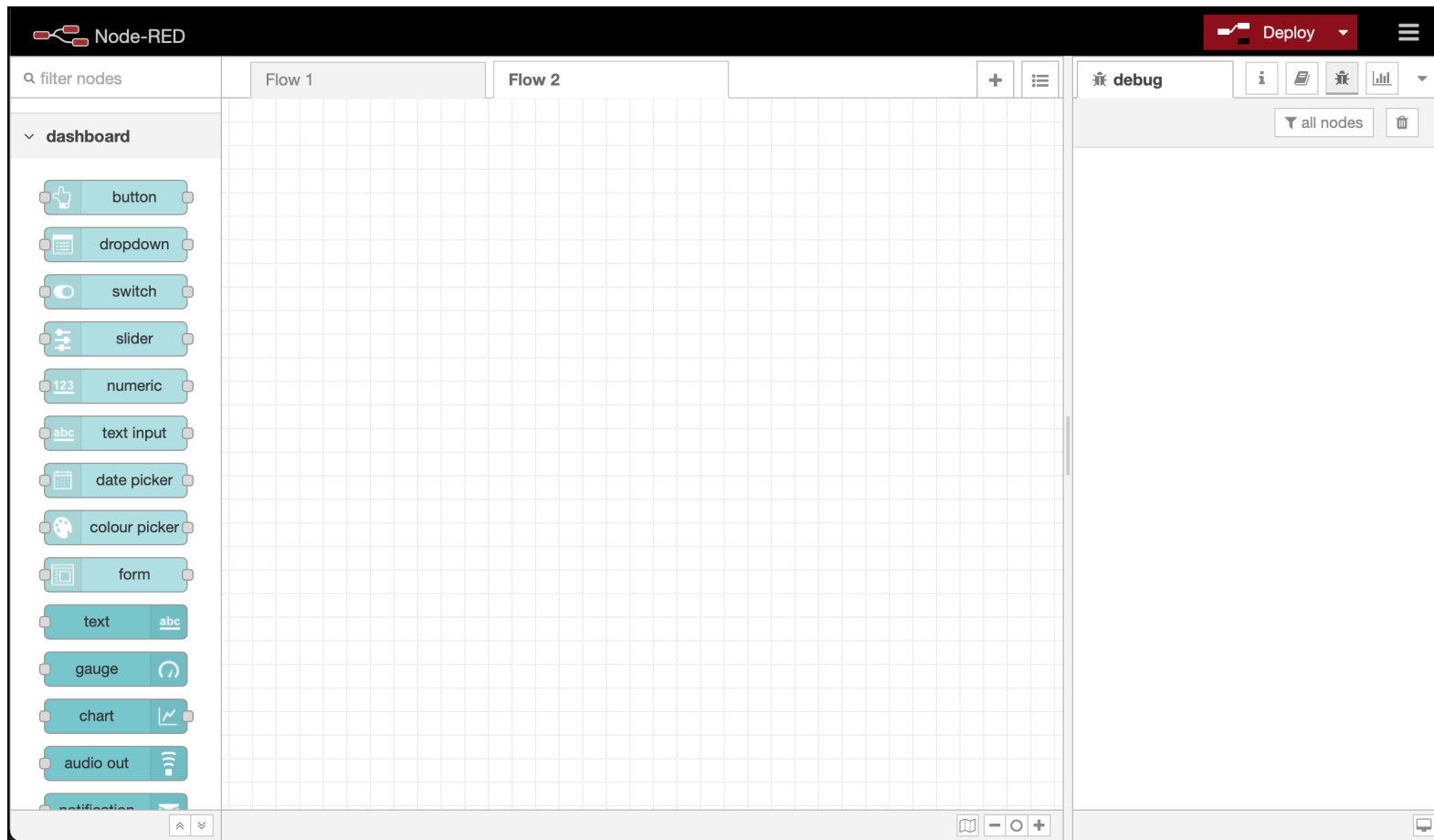
4. **Install** tab is used to search and install new palette.



5. Go to **search module** text box and type **dashboard**.
6. Click the **Install** button of **node-red-dashboard** (get latest version)



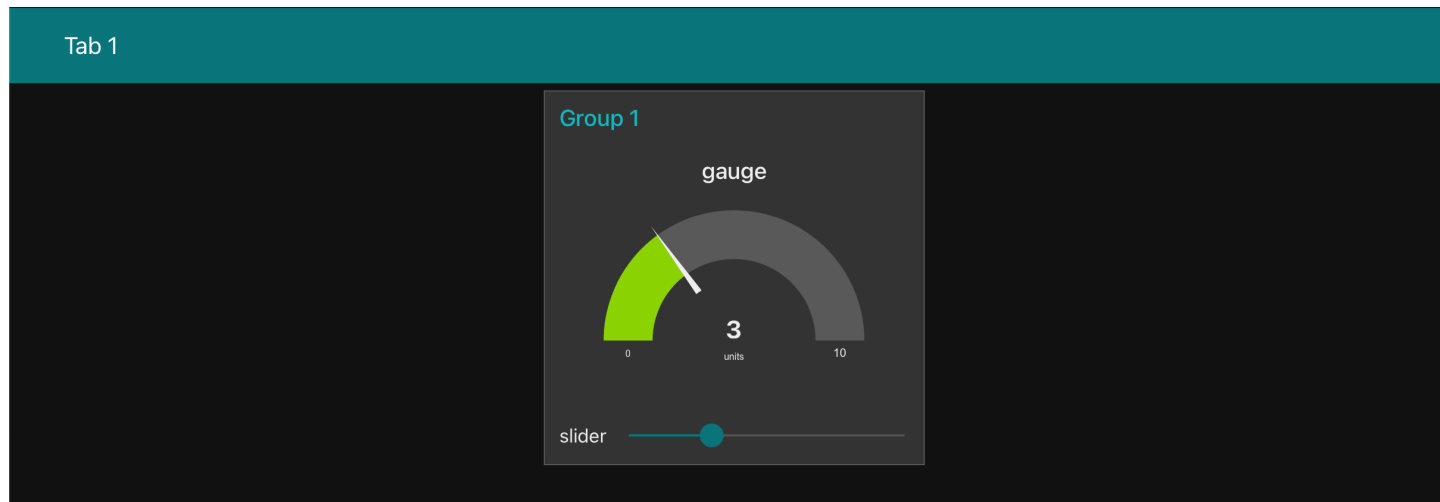
7. Dashboard palette installed. **ode-red-dashboard** (get latest version)



EXERCISE 1: My First Dashboard

Scenario: Gauge will respond based on slider movement. The value is corresponding to the slider's value.

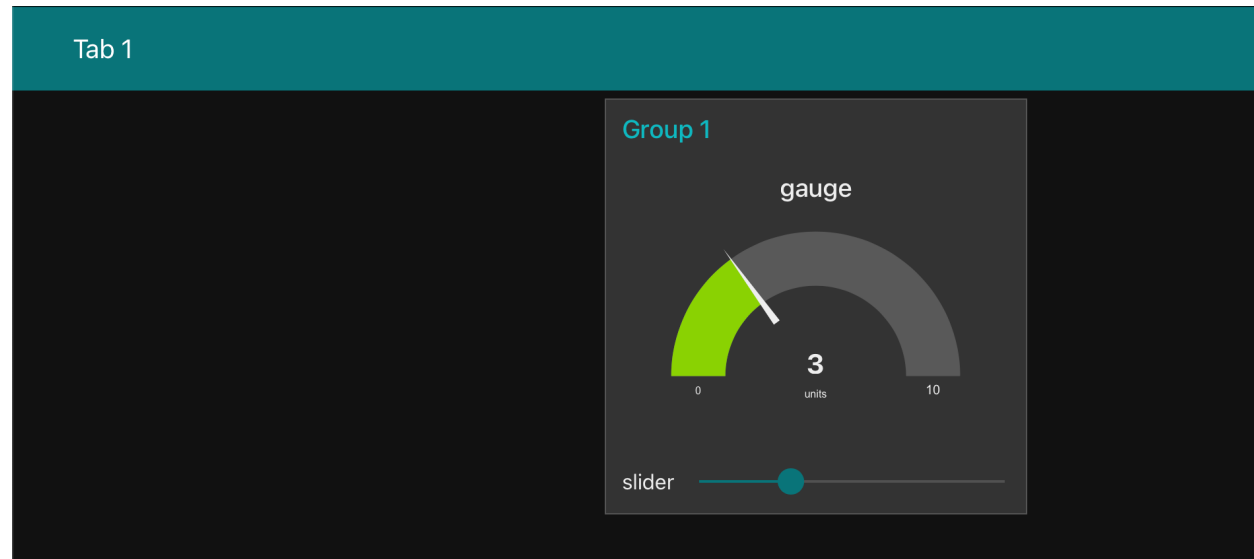
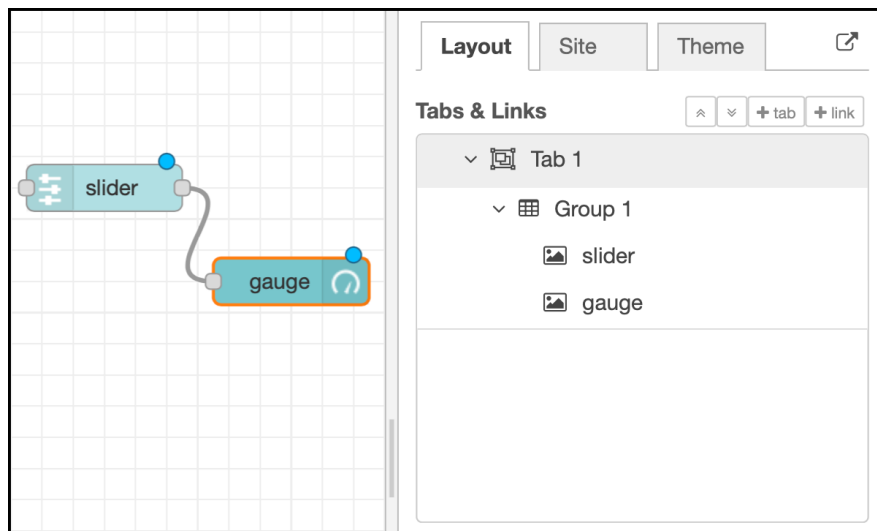
Task: Setup the dashboard as in the figure.



Step 1:

The hierarchy in designing the Dashboard.

- i. **Tab 1** (same with project name: only 1)
- ii. **Group1** (minimum is 1, but can have more than 1, depend on project)
- iii. **The node(s)** (reflects the activities)



Note: for the purpose of study, leave the suggested names such as Tab 1, Group 1 as it is. Ones may change the names later to suit the project needs.

ECERCISE 1: My First Dashboard

Step 2:

Drag **Slider** node & **Gauge** node from **Dashboard palette** onto **workspace**.

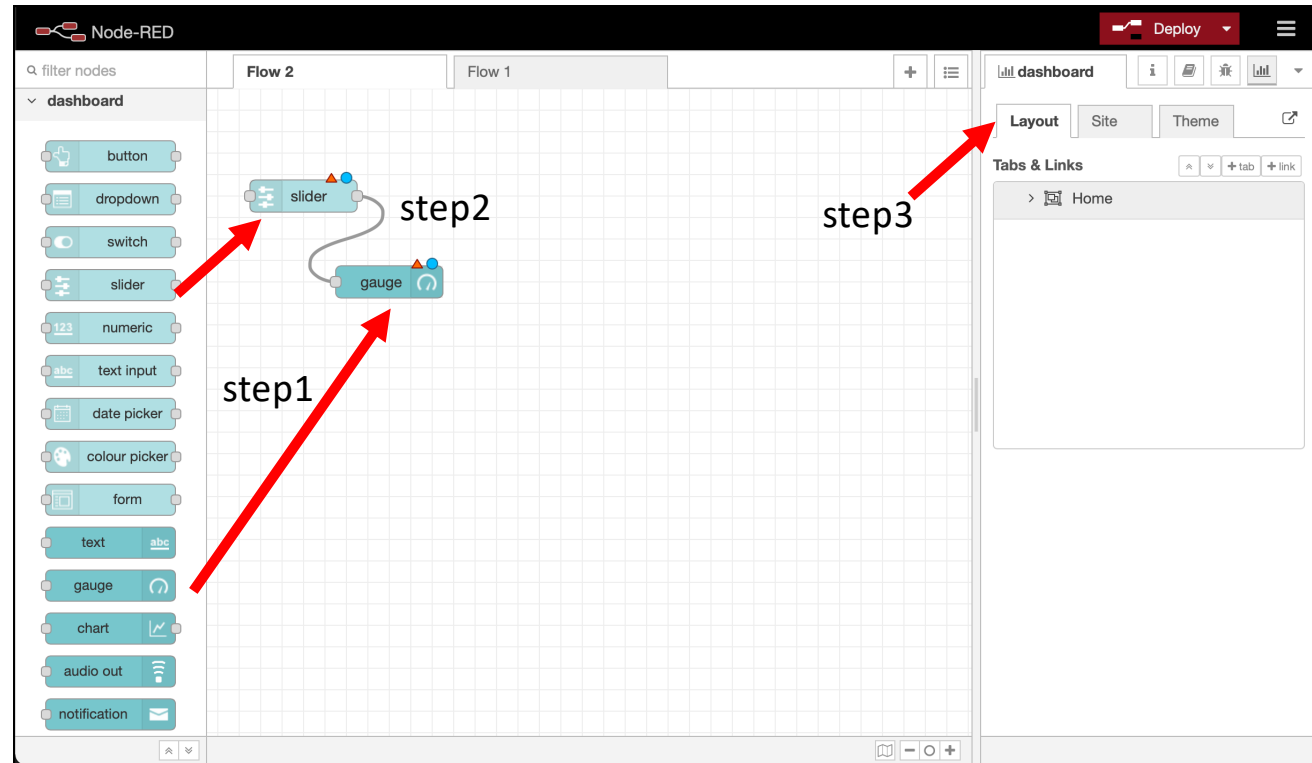
Step 3:

Connect the **Slider** & **Gauge** nodes.

Note:  indicate that the nodes are not properly setup.

Step 4:

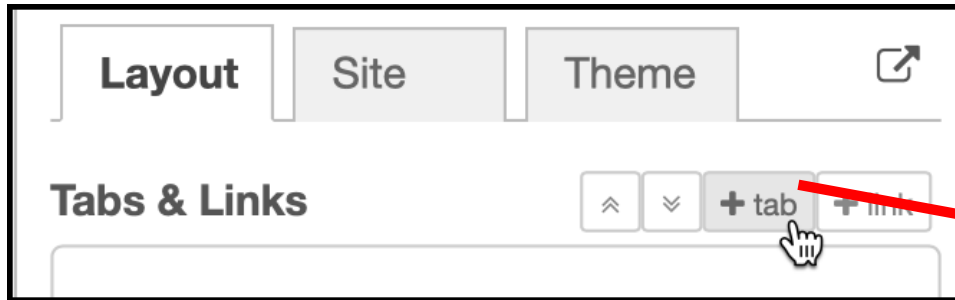
Click **Layout** tab. This is where you are going to configure the Dashboard properties.



ECERCISE 1: My First Dashboard

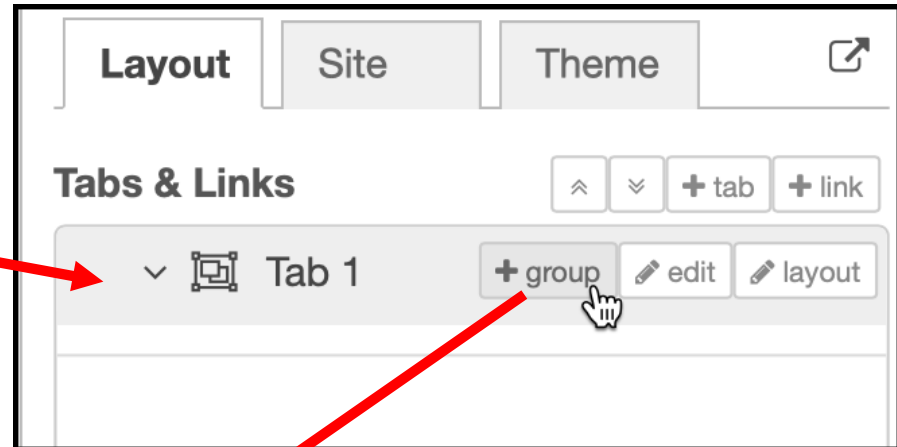
Step 5:

At Layout tab, click **+ tab** to start a project.



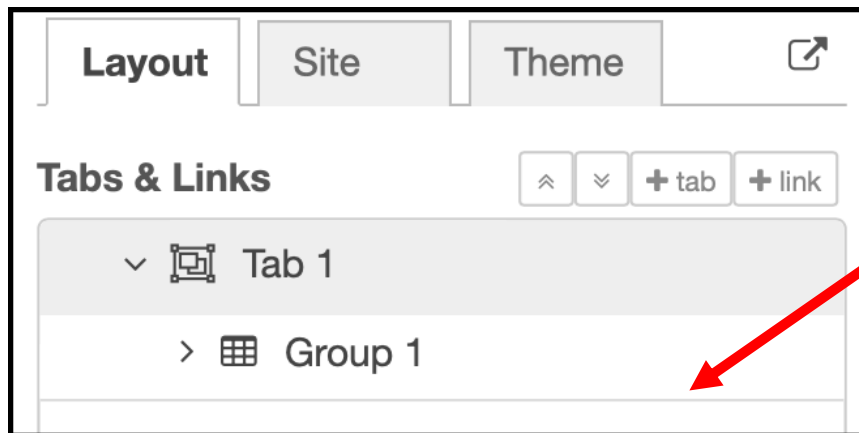
Step 6:

Click **+ tab** to create the group or entity.



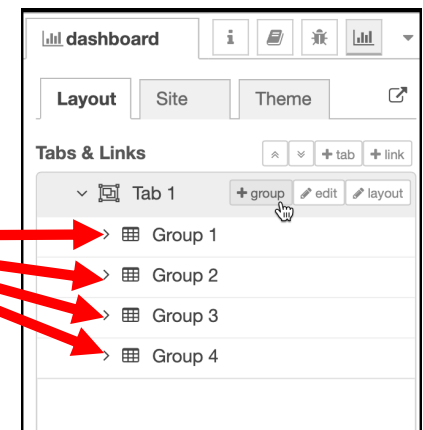
Step 7:

If you plan to have more Groups, repeat step 6.



Step 8:

One project with 4 groups.



Step 9:

Double click at **Slider**, change the **Group** properties to **[Tab 1] Group1** & click **DONE**.

Note: Delete will delete **Slider**

Done: Save the node

The image shows a software interface for editing a slider node. On the left, the 'Edit slider node' dialog is open, featuring a 'Delete' button, 'Cancel', and a red 'Done' button. Below these are icons for settings, a document, and a node. The 'Properties' section includes:

- Group:** A dropdown menu showing '[Tab 1] Group 1' with a blue selection border and an edit icon.
- Size:** A text field with 'auto'.
- Label:** A text field with 'slider'.
- Tooltip:** A text field with 'optional tooltip'.
- Range:** Three input fields: 'min' with '0', 'max' with '10', and 'step' with '1'.
- Output:** A dropdown menu with 'continuously while sliding'.
- Logic:** A checkbox labeled 'If msg arrives on input, set slider to new payload value:' which is checked.

On the right, a dashboard preview is visible. It has a top bar with 'dashboard', an info icon, a document icon, a node icon, and a dropdown arrow. Below are tabs for 'Layout', 'Site', and 'Theme'. A 'Tabs & Links' section contains a tree view with 'Tab 1' expanded, showing 'Group 1' underneath.

Step 10:

Double click at **Gauge**, change the **Group** properties to **[Tab 1] Group1** & click **DONE**.

Note: Delete will delete **Gauge**

Done: Save the node

The image shows a software interface for editing a dashboard node. On the left, the 'Edit gauge node' dialog is open. It has a title bar with 'Edit gauge node' and three buttons: 'Delete', 'Cancel', and 'Done'. Below the title bar is a 'Properties' section with a settings icon, a document icon, and a refresh icon. The properties are as follows:

- Group:** A dropdown menu showing '[Tab 1] Group 1' with a pencil icon to its right.
- Size:** A text input field containing 'auto'.
- Type:** A dropdown menu showing 'Gauge'.
- Label:** A text input field containing 'gauge'.
- Value format:** A text input field containing '{{value}}'.
- Units:** A text input field containing 'units'.
- Range:** Two text input fields, 'min' with '0' and 'max' with '10'.
- Colour gradient:** Three colored squares: green, yellow, and red.

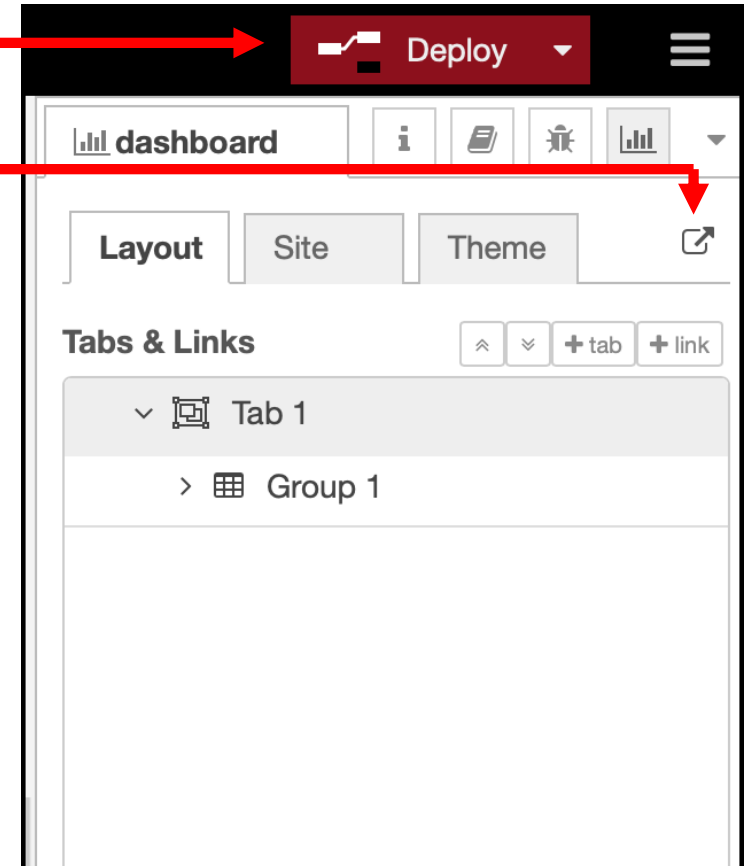
On the right, a preview of the dashboard is shown. It has a top bar with 'dashboard' and several icons. Below the top bar are tabs for 'Layout', 'Site', and 'Theme'. Under 'Layout', there is a 'Tabs & Links' section with a '+ tab' and '+ link' button. The preview shows a tree structure with 'Tab 1' expanded, showing 'Group 1'.

Step 11:

Click **Deploy** to compile, execute & save the project.

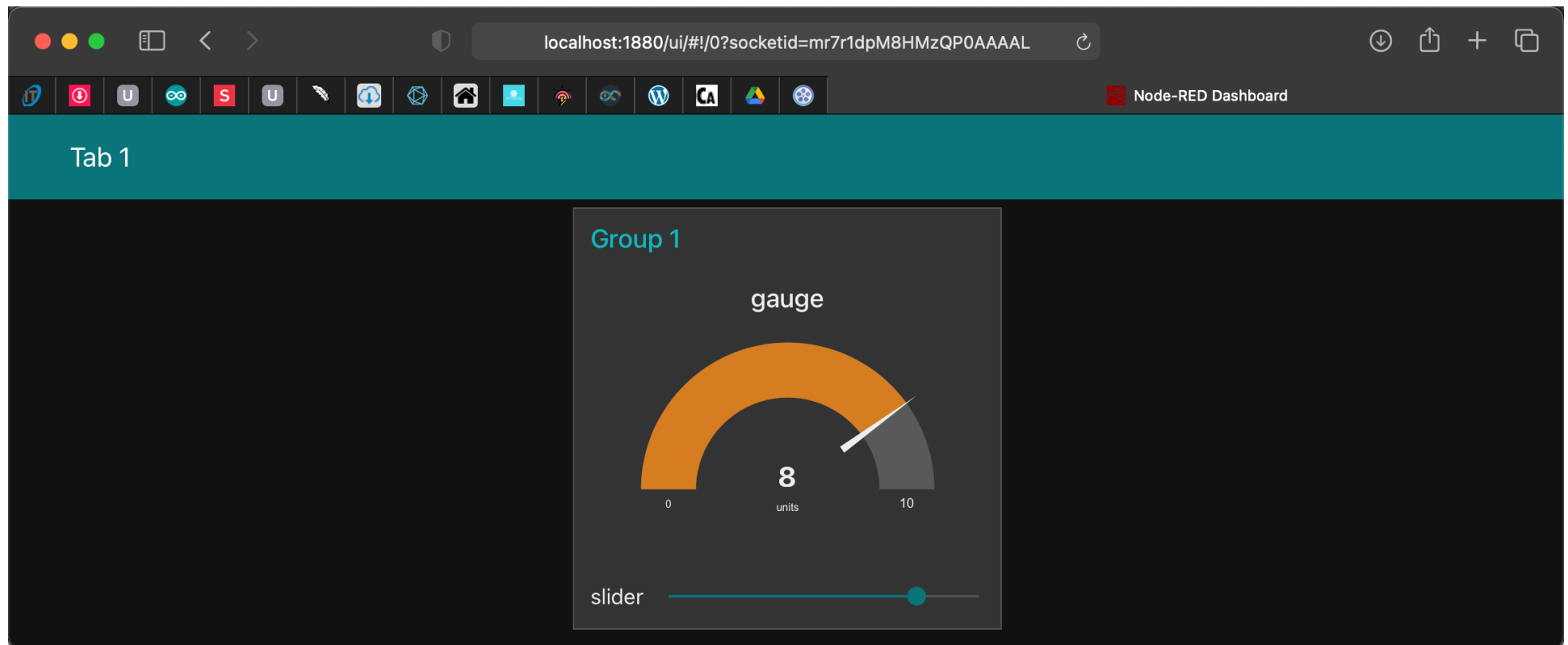
Step 12:

Browse localhost:1880/ui/ by clicking at Dashboard icon 



ECERCISE 1: My First Dashboard

The final output:

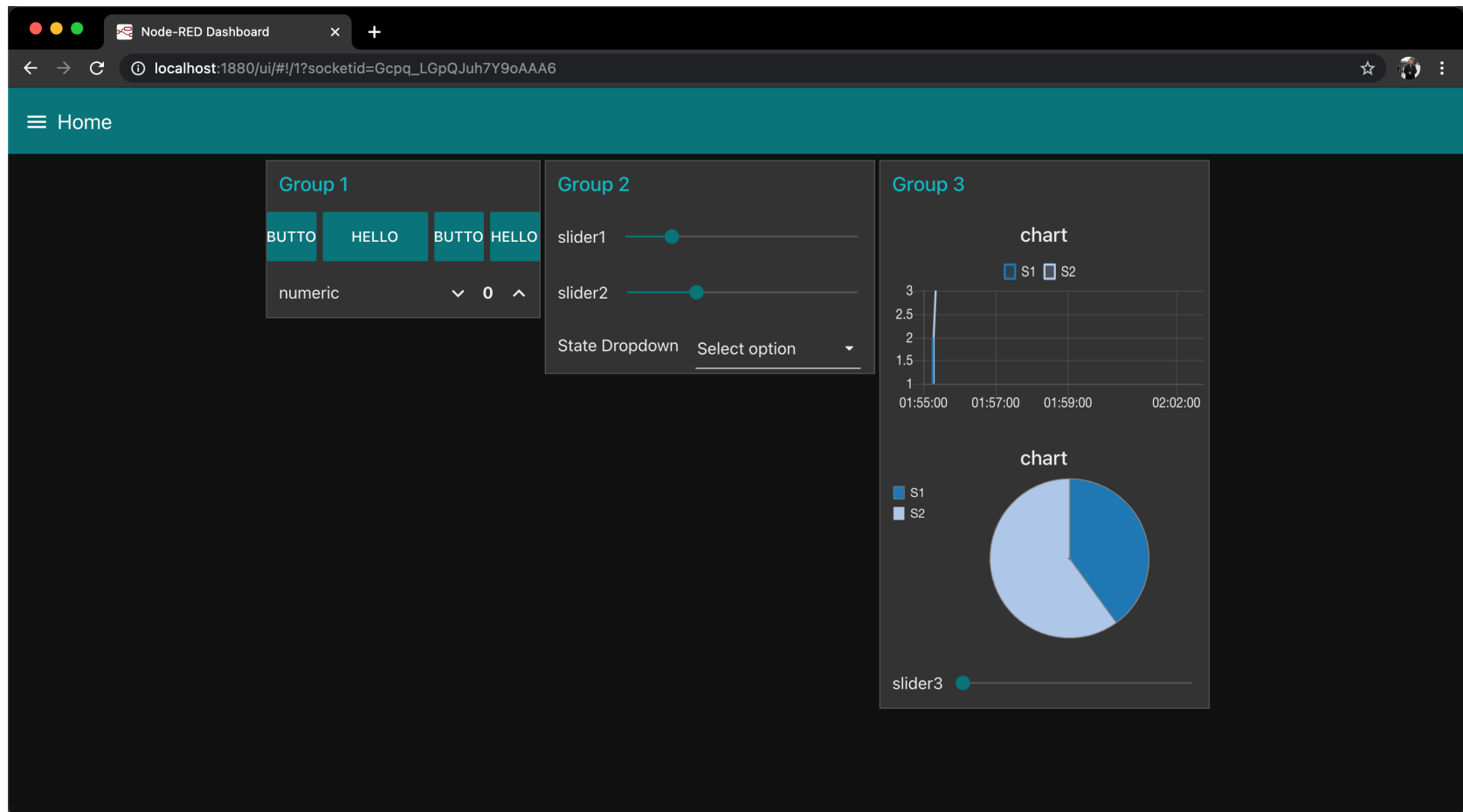


ECERCISE 2: Complex Dashboard

Requirements:

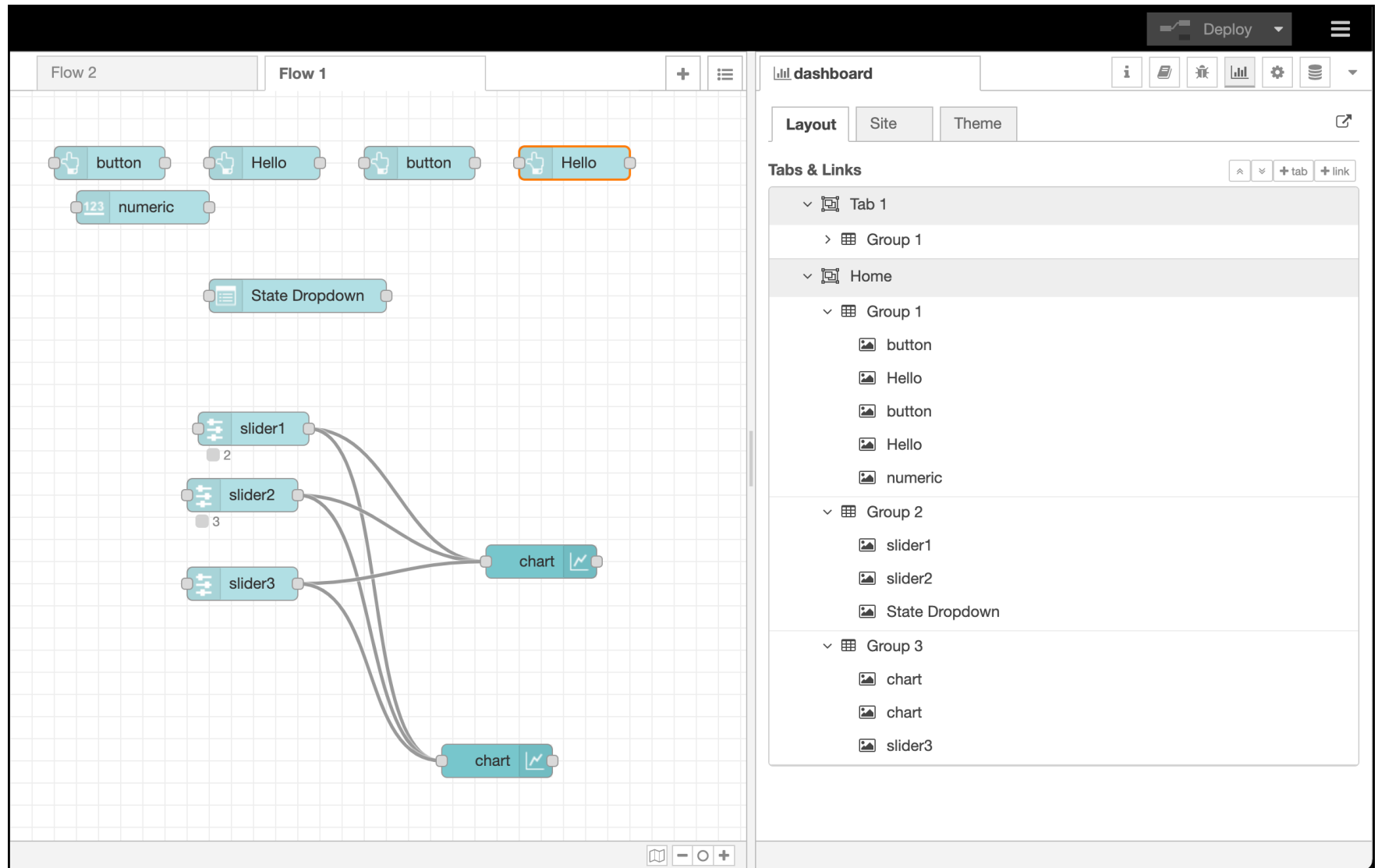
Slider 1 & Slider 2 output are at Group 3.

State Dropdown: Show list of states in Malaysia.



ECERCISE 2: Complex Dashboard

Solution:



ECERCISE 2: Complex Dashboard

Solution: - json

```
{
  "id": "da66bc6d.4587a",
  "type": "tab",
  "label": "Flow",
  "disabled": false,
  "info": "",
  "id": "a71d87cf.9ea298",
  "type": "ui_button",
  "z": "da66bc6d.4587a",
  "name": "",
  "group": "b63d4964.d56738",
  "order": 3,
  "width": 1,
  "height": 1,
  "passthru": false,
  "label": "button",
  "tooltip": "",
  "color": "",
  "bgcolor": "",
  "icon": "",
  "payload": "",
  "payloadType": "str",
  "topic": "",
  "x": 90,
  "y": 80,
  "wires": [
    [
      {
        "id": "ef7fb6e6.ac7f08",
        "type": "ui_button",
        "z": "da66bc6d.4587a",
        "name": "",
        "group": "b63d4964.d56738",
        "order": 2,
        "width": 2,
        "height": 1,
        "passthru": false,
        "label": "Hello",
        "tooltip": "",
        "color": "",
        "bgcolor": "",
        "icon": "",
        "payload": "",
        "payloadType": "str",
        "topic": "",
        "x": 230,
        "y": 80,
        "wires": [
          [
            {
              "id": "174343bc.1b09cc",
              "type": "ui_button",
              "z": "da66bc6d.4587a",
              "name": "",
              "group": "b63d4964.d56738",
              "order": 1,
              "width": 1,
              "height": 1,
              "passthru": false,
              "label": "button",
              "tooltip": "",
              "color": "",
              "bgcolor": "",
              "icon": "",
              "payload": "",
              "payloadType": "str",
              "topic": "",
              "x": 510,
              "y": 80,
              "wires": [
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                    "id": "b0f2545f.d548",
                    "type": "ui_slider",
                    "z": "da66bc6d.4587a",
                    "name": "",
                    "label": "slider1",
                    "tooltip": "",
                    "group": "a5b63e7f.4bc0f8",
                    "order": 1,
                    "width": 0,
                    "height": 0,
                    "passthru": true,
                    "outs": "all",
                    "topic": "S1",
                    "min": 0,
                    "max": 10,
                    "step": 1,
                    "x": 220,
                    "y": 320,
                    "wires": [
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                          "id": "6b387fff.199f8",
                          "type": "ui_chart",
                          "z": "da66bc6d.4587a",
                          "name": "",
                          "group": "60fa8661.35b8d8",
                          "order": 1,
                          "width": 0,
                          "height": 0,
                          "label": "chart",
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                          "legend": true,
                          "xformat": "HH:mm:ss",
                          "interpolate": "linear",
                          "nodata": "",
                          "dot": false,
                          "ymin": "",
                          "ymax": "",
                          "removeOlder": 1,
                          "removeOlderPoints": "",
                          "removeOlderUnit": "3600",
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                          "useOneColor": false,
                          "useUTC": false,
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                            "#aec7e8",
                            "#ff7f0e",
                            "#2ca02c",
                            "#98df8a",
                            "#d62728",
                            "#ff9896",
                            "#9467bd",
                            "#c5b0d5"
                          ],
                          "useOldStyle": false,
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                                "id": "e37d6333.2e1a28",
                                "type": "ui_slider",
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                                "name": "",
                                "label": "slider2",
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                                "group": "a5b63e7f.4bc0f8",
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                                "width": 0,
                                "height": 0,
                                "passthru": true,
                                "outs": "all",
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                                "min": 0,
                                "max": 10,
                                "step": 1,
                                "x": 210,
                                "y": 380,
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                                    {
                                      "id": "6b387fff.199f8",
                                      "type": "ui_slider",
                                      "z": "da66bc6d.4587a",
                                      "name": "",
                                      "label": "slider3",
                                      "tooltip": "",
                                      "group": "60fa8661.35b8d8",
                                      "order": 3,
                                      "width": 0,
                                      "height": 0,
                                      "passthru": true,
                                      "outs": "all",
                                      "topic": "S3",
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                                      "max": 10,
                                      "step": 1,
                                      "x": 210,
                                      "y": 460,
                                      "wires": [
                                        [
                                          {
                                            "id": "269e058f.ad5312",
                                            "type": "ui_chart",
                                            "z": "da66bc6d.4587a",
                                            "name": "",
                                            "group": "60fa8661.35b8d8",
                                            "order": 2,
                                            "width": 0,
                                            "height": 0,
                                            "label": "chart",
                                            "chartType": "pie",
                                            "legend": true,
                                            "xformat": "HH:mm:ss",
                                            "interpolate": "linear",
                                            "nodata": "",
                                            "dot": false,
                                            "ymin": "",
                                            "ymax": "",
                                            "removeOlder": 1,
                                            "removeOlderPoints": "",
                                            "removeOlderUnit": "3600",
                                            "cutout": 0,
                                            "useOneColor": false,
                                            "useUTC": false,
                                            "colors": [
                                              "#1f77b4",
                                              "#aec7e8",
                                              "#ff7f0e",
                                              "#2ca02c",
                                              "#98df8a",
                                              "#d62728",
                                              "#ff9896",
                                              "#9467bd",
                                              "#c5b0d5"
                                            ],
                                            "useOldStyle": false,
                                            "outputs": 1,
                                            "x": 440,
                                            "y": 620,
                                            "wires": [
                                              [
                                                {
                                                  "id": "881e9e35.64da9",
                                                  "type": "ui_numeric",
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                                                  "label": "numeric",
                                                  "tooltip": "",
                                                  "group": "b63d4964.d56738",
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                                                  "width": 0,
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                                                  "wrap": false,
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                                                  "max": 10,
                                                  "step": 1,
                                                  "x": 120,
                                                  "y": 120,
                                                  "wires": [
                                                    [
                                                      {
                                                        "id": "2b7826d6.efb79a",
                                                        "type": "ui_dropdown",
                                                        "z": "da66bc6d.4587a",
                                                        "name": "",
                                                        "label": "State Dropdown",
                                                        "tooltip": "",
                                                        "place": "Select option",
                                                        "group": "a5b63e7f.4bc0f8",
                                                        "order": 3,
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                                                        "height": 0,
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                                                            "label": "Johor",
                                                            "value": "",
                                                            "type": "str"
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                                                          {
                                                            "label": "Negeri Sembilan",
                                                            "value": "",
                                                            "type": "str"
                                                          }
                                                        ],
                                                        "payload": "",
                                                        "topic": "",
                                                        "x": 260,
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                                                        "wires": [
                                                          [
                                                            {
                                                              "id": "b63d4964.d56738",
                                                              "type": "ui_group",
                                                              "name": "Group 1",
                                                              "tab": "472ac123.7ec428",
                                                              "order": 1,
                                                              "disp": true,
                                                              "width": 5,
                                                              "id": "a5b63e7f.4bc0f8",
                                                              "type": "ui_group",
                                                              "name": "Group 2",
                                                              "tab": "472ac123.7ec428",
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                                                              "disp": true,
                                                              "width": 6,
                                                              "id": "472ac123.7ec428",
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                                                              "name": "Home",
                                                              "icon": "dashboard",
                                                              "order": 1,
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                                                          ]
                                                        ]
                                                      }
                                                    ]
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  ]
}
```

QnA

END