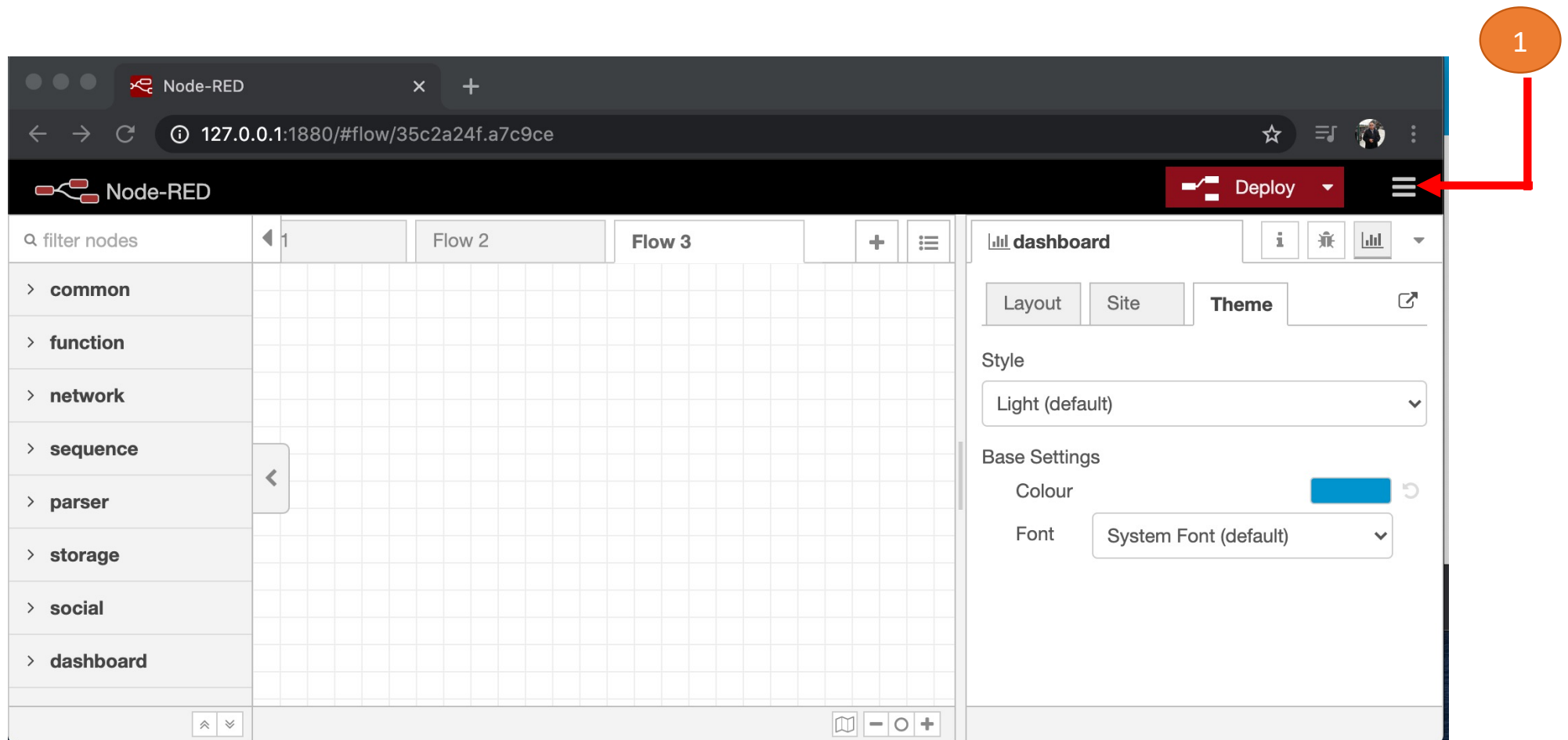


# How to Build Node-RED –Dashboard

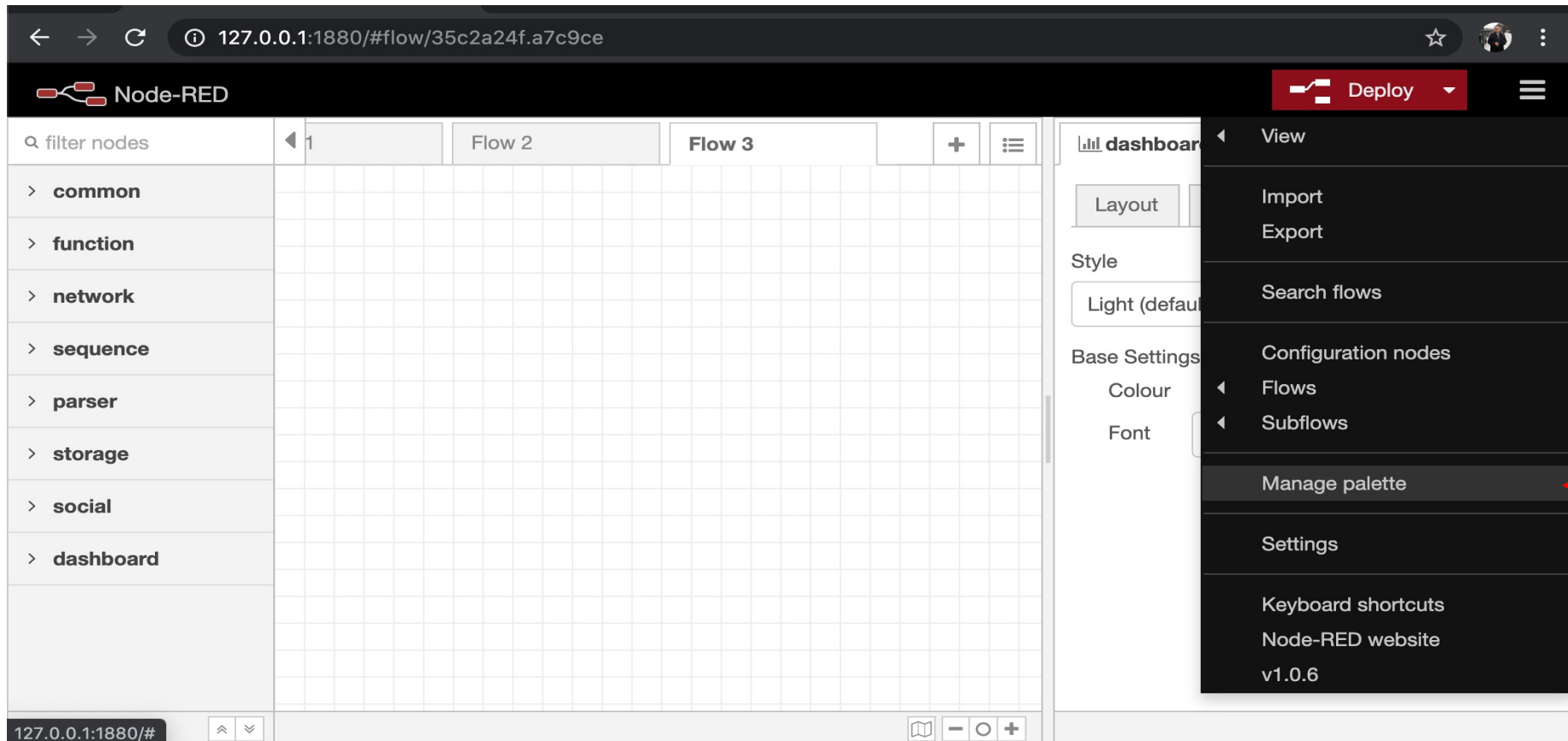


v1 jan 2020 : v2 feb 2021  
Safyzan Salim

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

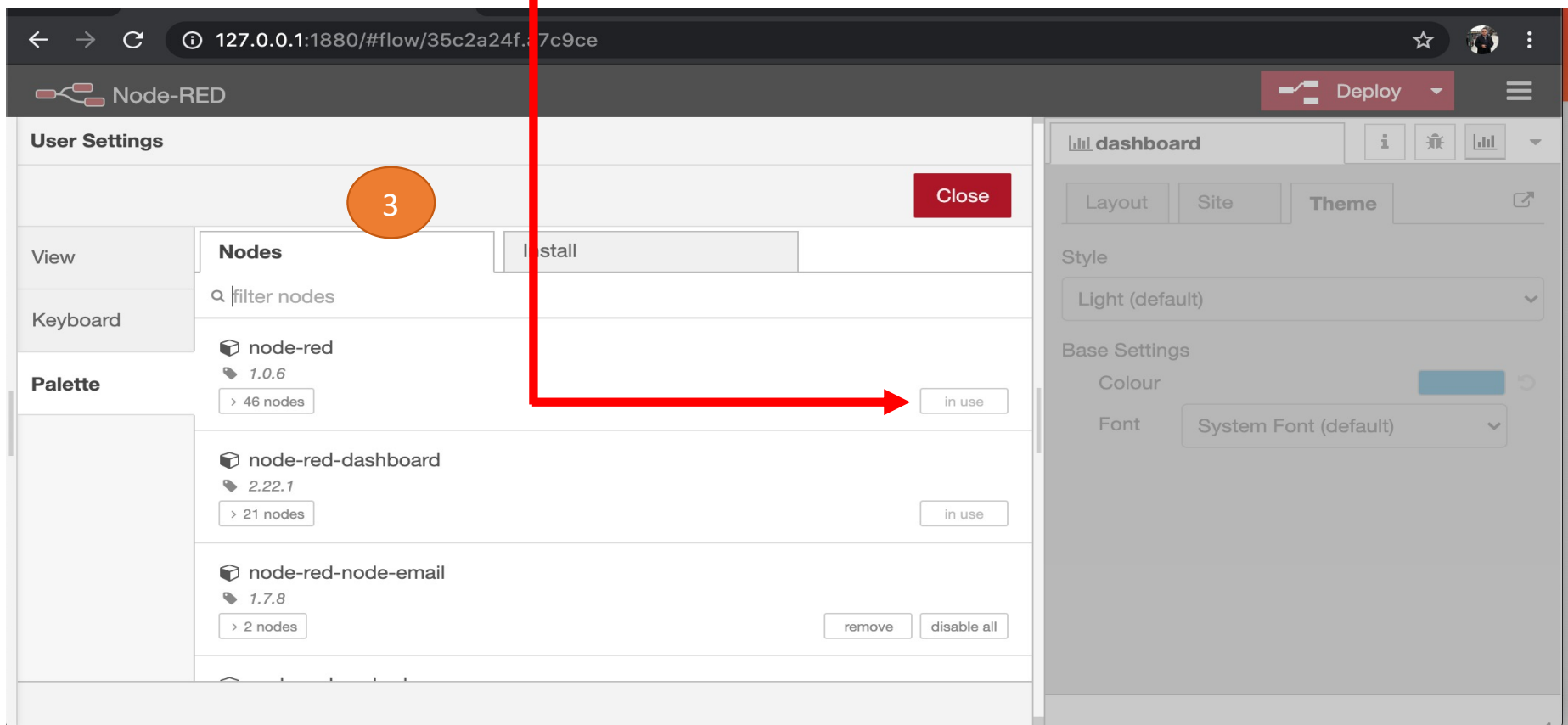


## 2. Select **Manage palette**.

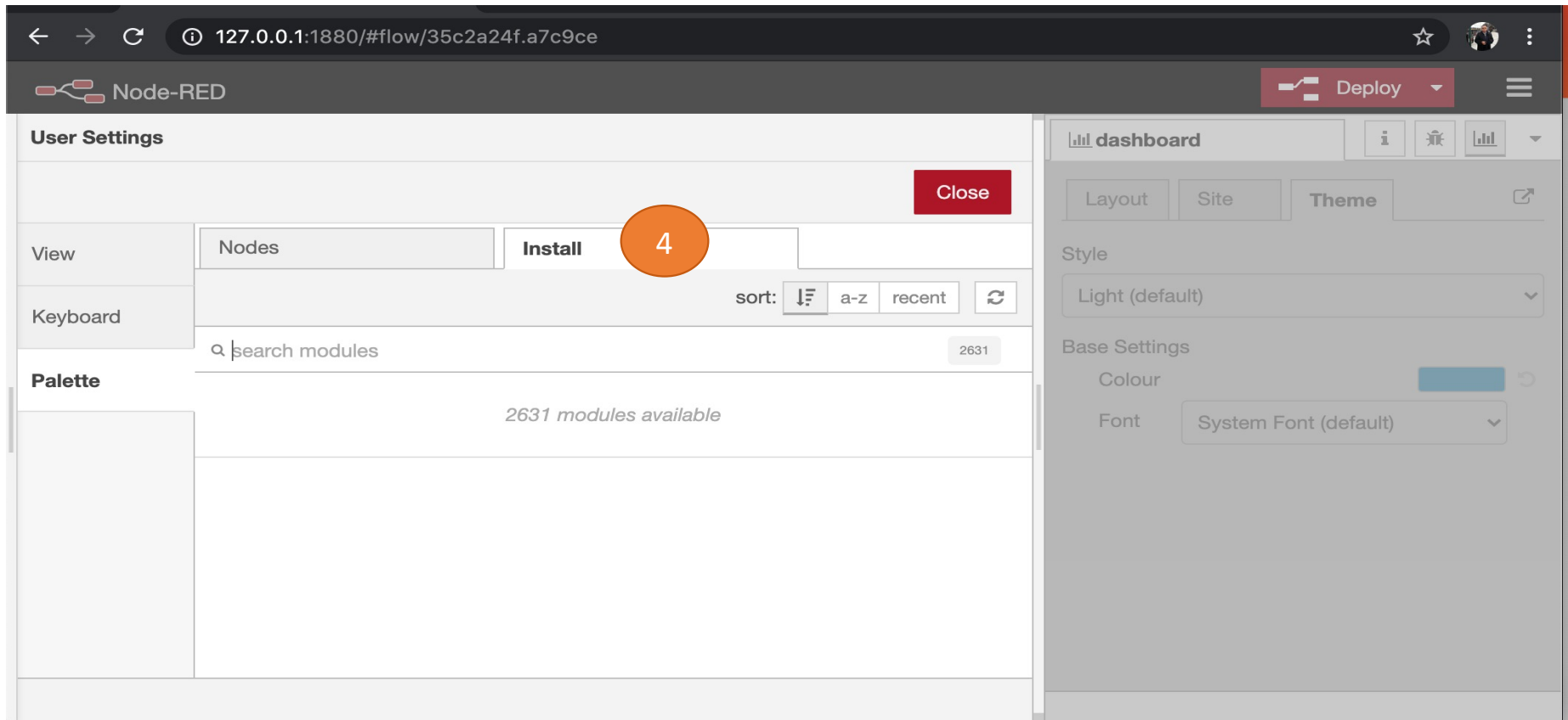


3. Nodes tab shows **Installed** and **in use** palette. User can also **remove** the unwanted palette from this tab.

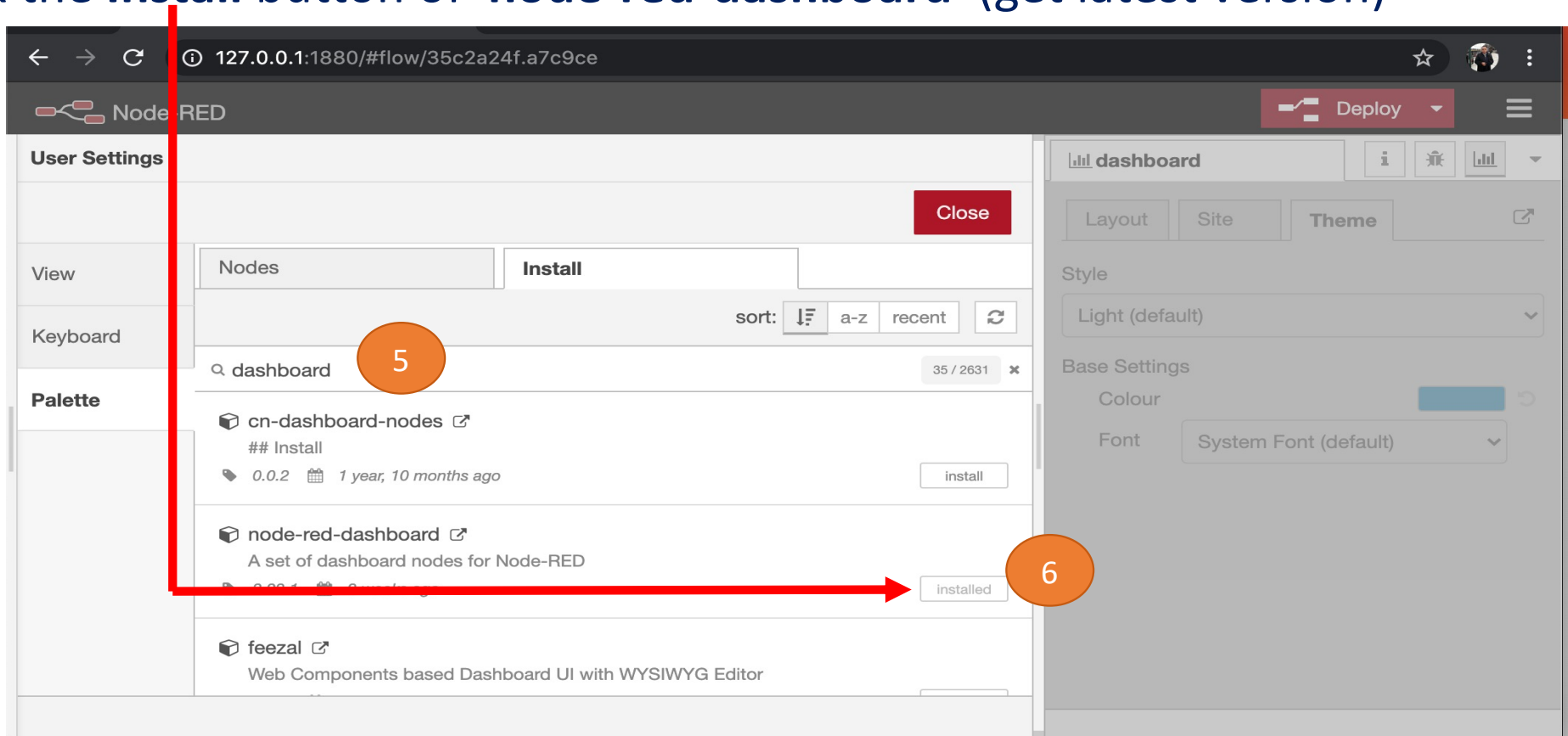
Note: **In use** node cannot be removed.



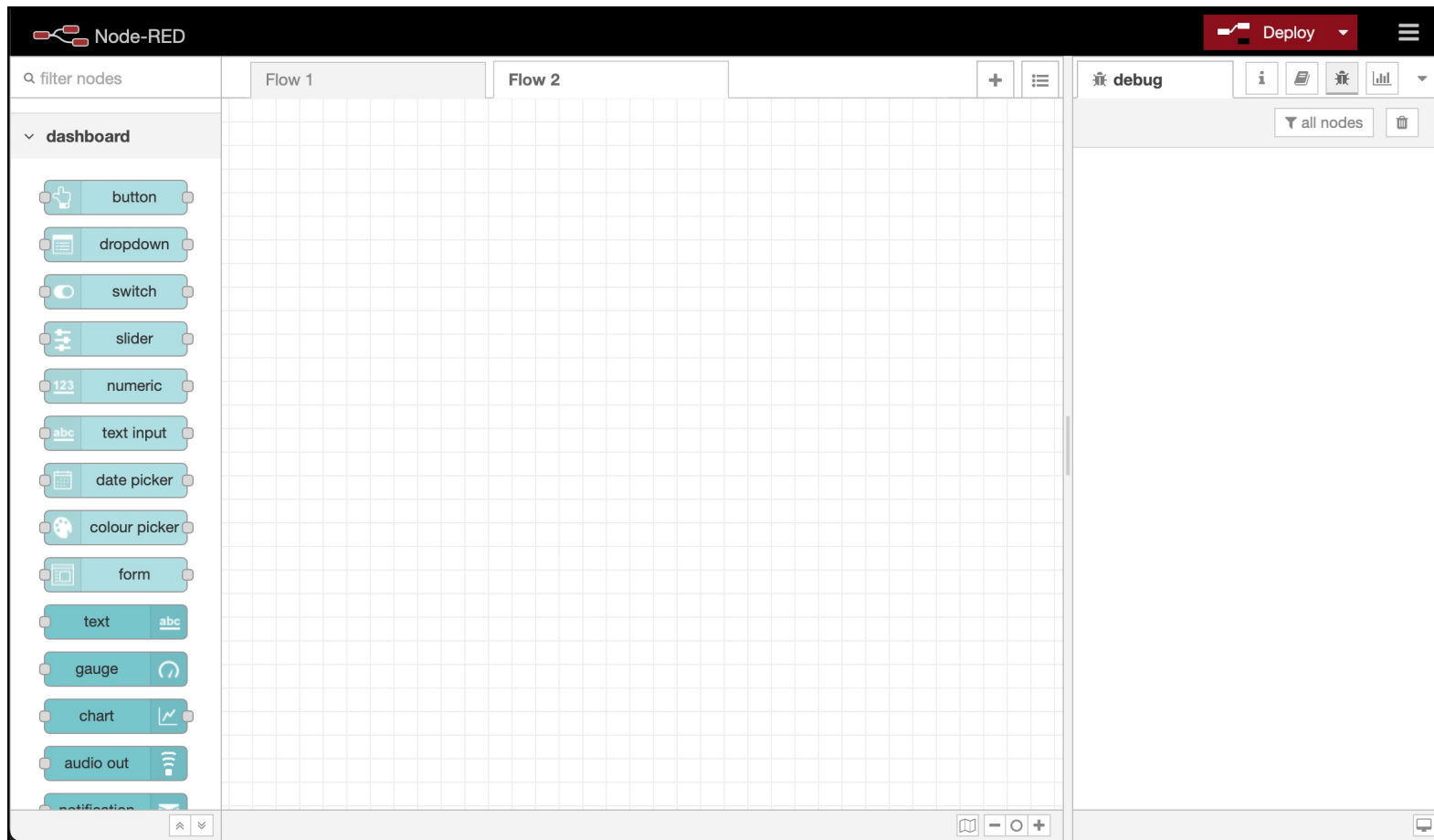
## 4. **Install** tab is used to search and install new palette.



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



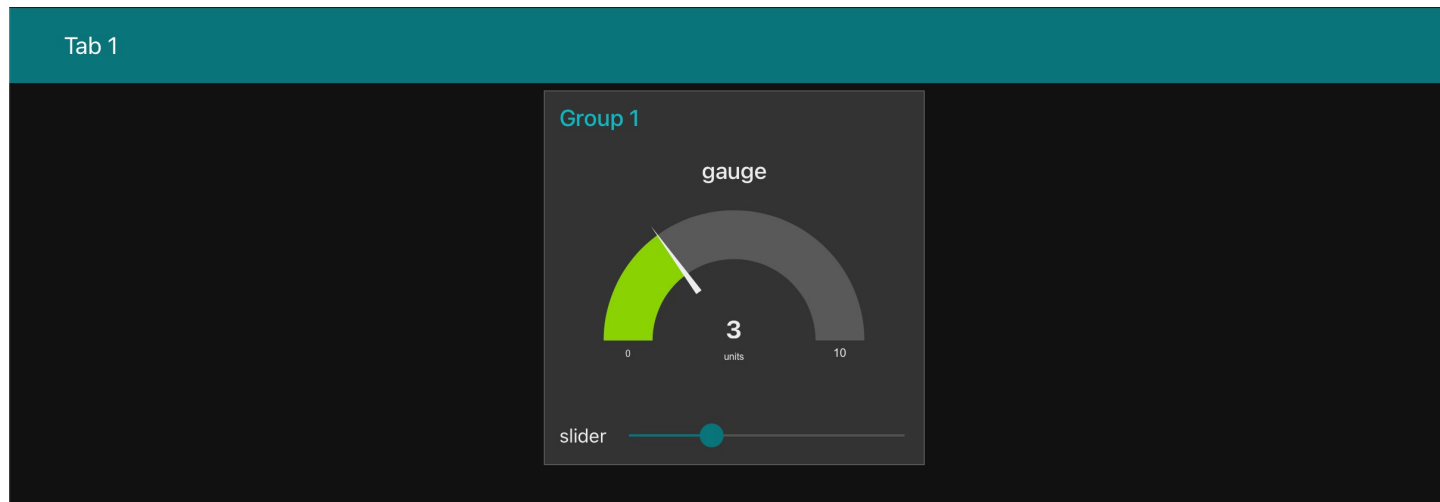
## 7. Dashboard palette installed. **ode-red-dashboard** (get latest version)



## 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.

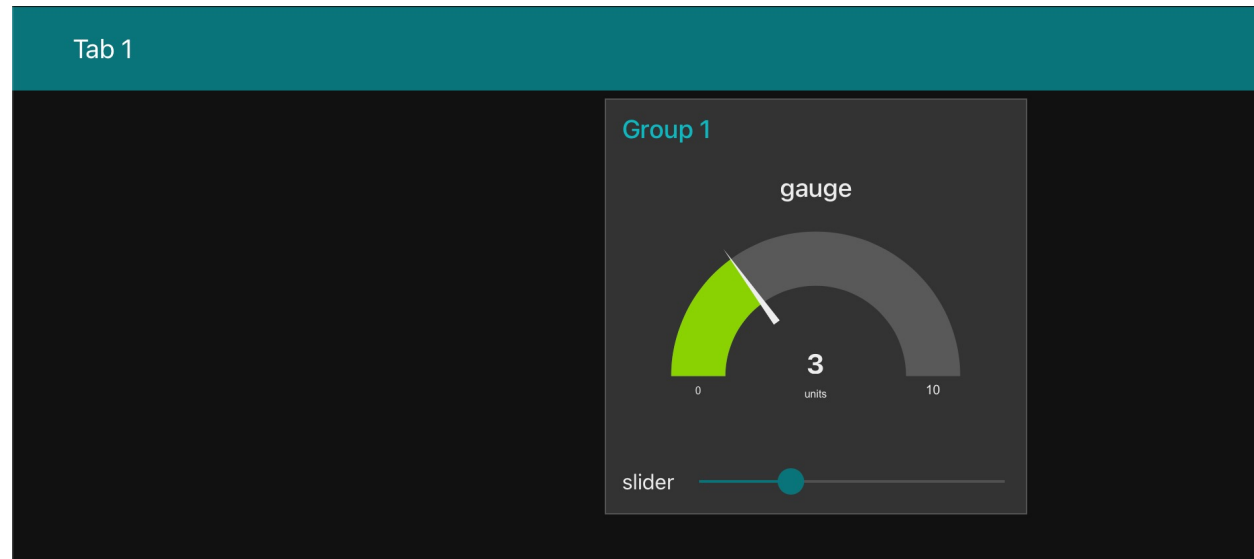
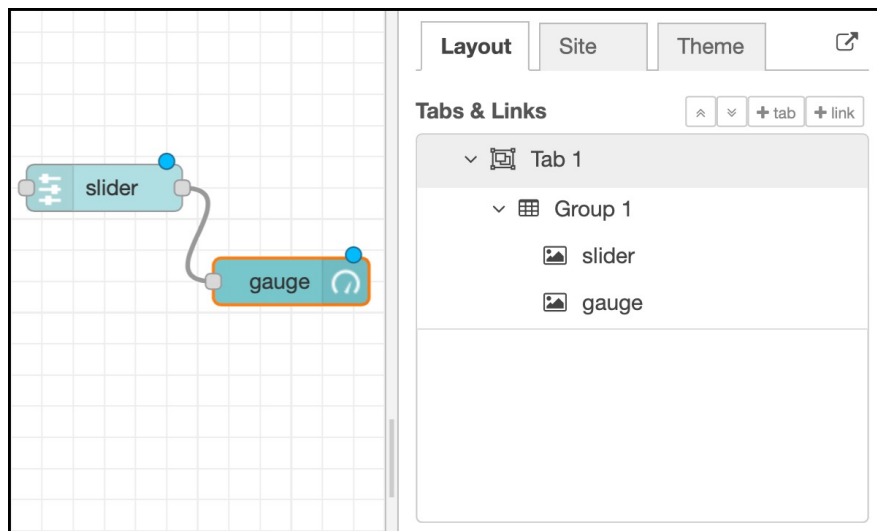




### Step 1:

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**.

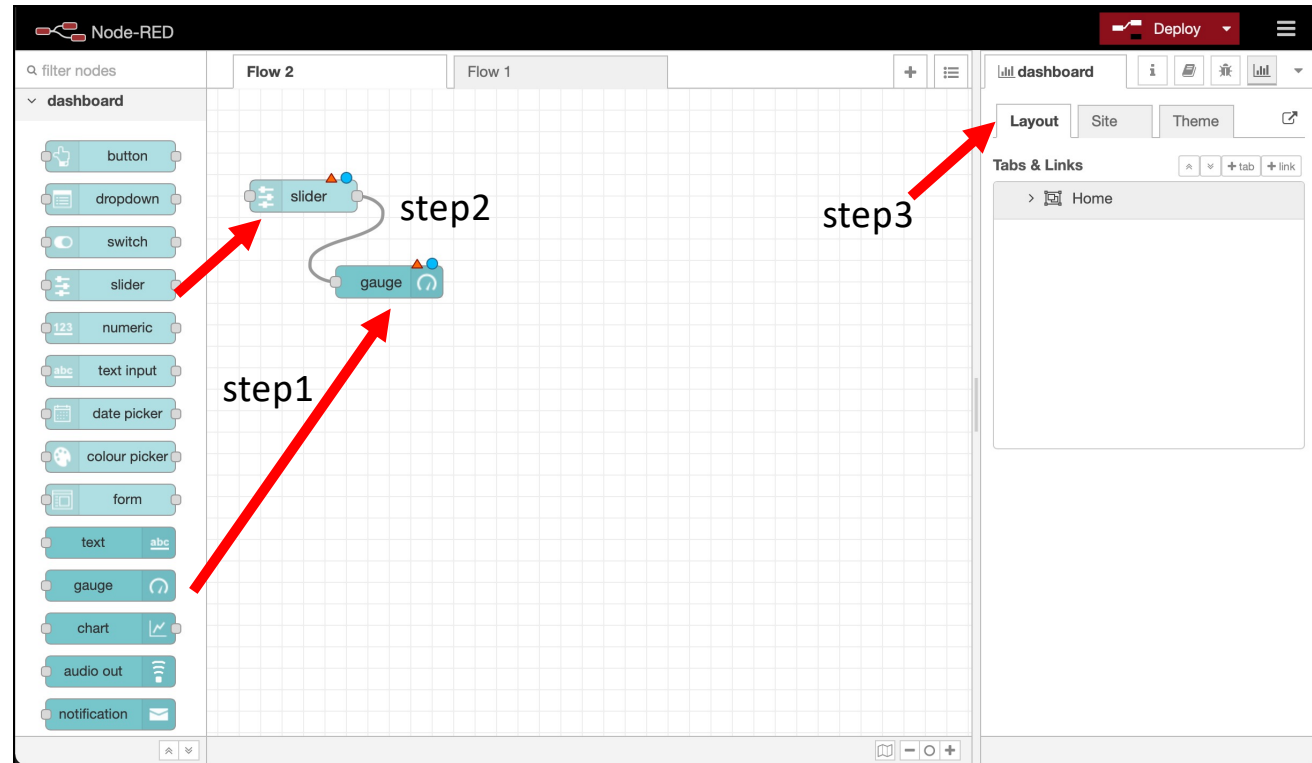
### Step 3:

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

**Note:**  indicate that the nodes are not properly setup.

### Step 4:

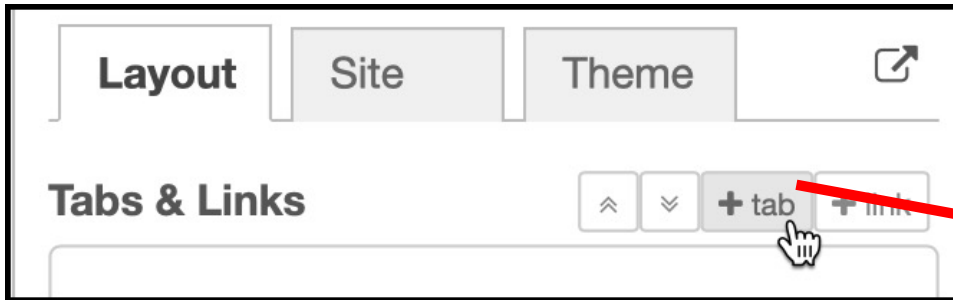
Click **Layout** tab. This is where you are going to configure the Dashboard properties.



## ECERCISE 1: My First Dashboard

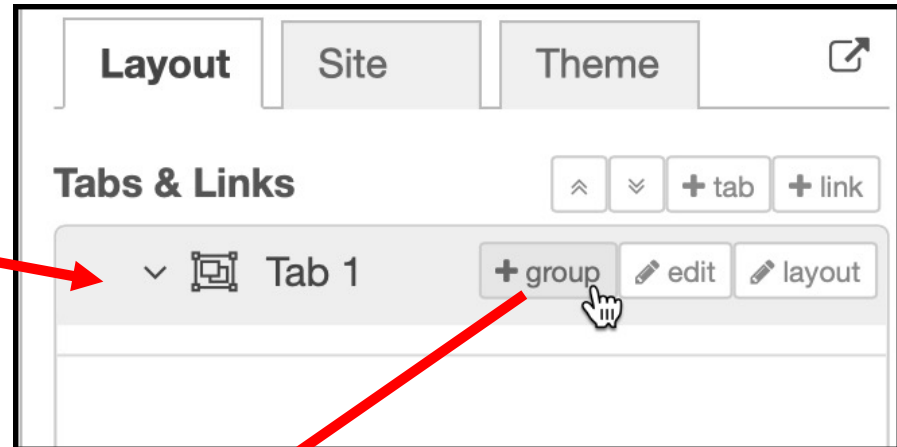
### Step 5:

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



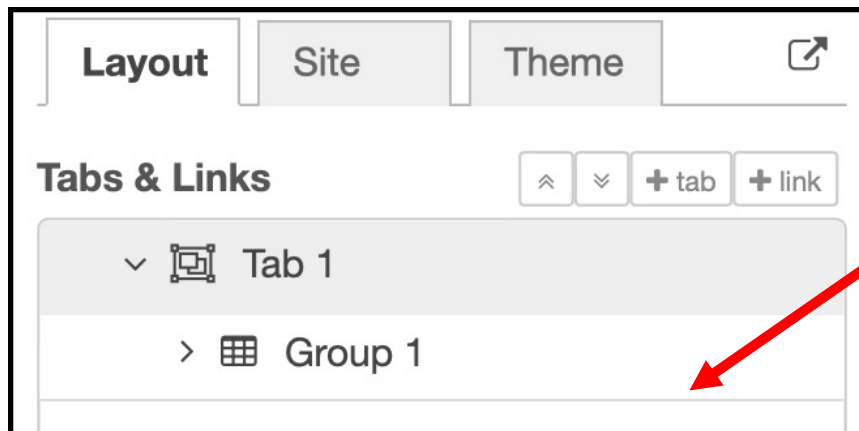
### Step 6:

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



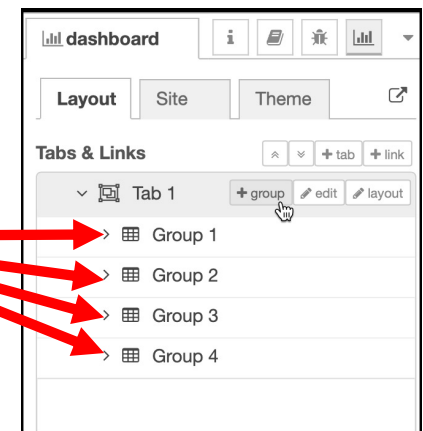
### Step 7:

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 input field containing 'auto'.
- Label:** A text input field containing 'slider'.
- Tooltip:** A text input field containing 'optional tooltip'.
- Range:** Three input fields for 'min' (0), 'max' (10), and 'step' (1).
- Output:** A dropdown menu showing 'continuously while sliding'.

At the bottom of the dialog, a checkbox is checked with the text: '→ If msg arrives on input, set slider to new payload value:'. On the right, a dashboard preview is visible with tabs for 'Layout', 'Site', and 'Theme'. The 'Layout' tab is active, showing a 'Tabs & Links' section with a tree structure: 'Tab 1' (expanded) containing 'Group 1'.

## 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

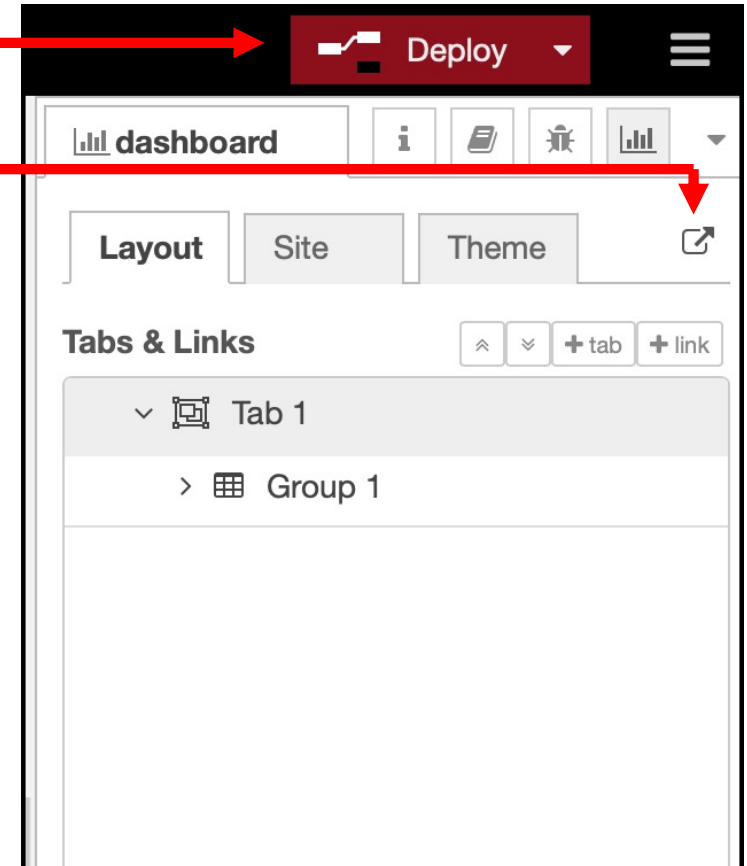
The screenshot shows the 'Edit gauge node' dialog box on the left and a dashboard preview on the right. The dialog has a title bar 'Edit gauge node' and three buttons: 'Delete', 'Cancel', and 'Done'. Below the buttons is a 'Properties' section with a gear icon and three sub-panels: 'Group', 'Size', and 'Type'. The 'Group' property is set to '[Tab 1] Group 1'. The 'Size' property is set to 'auto'. The 'Type' property is set to 'Gauge'. Below these are text input fields for 'Label' (gauge), 'Value format' ({{value}}), and 'Units' (units). The 'Range' section has 'min' set to 0 and 'max' set to 10. The 'Colour gradient' section shows three colored boxes: green, yellow, and red. The dashboard preview on the right shows a 'dashboard' title bar with icons for info, settings, and a gauge. Below the title bar are tabs for 'Layout', 'Site', and 'Theme'. The 'Layout' tab is active, showing a 'Tabs & Links' section with a tree view containing 'Tab 1' and 'Group 1'.

### Step 11:

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

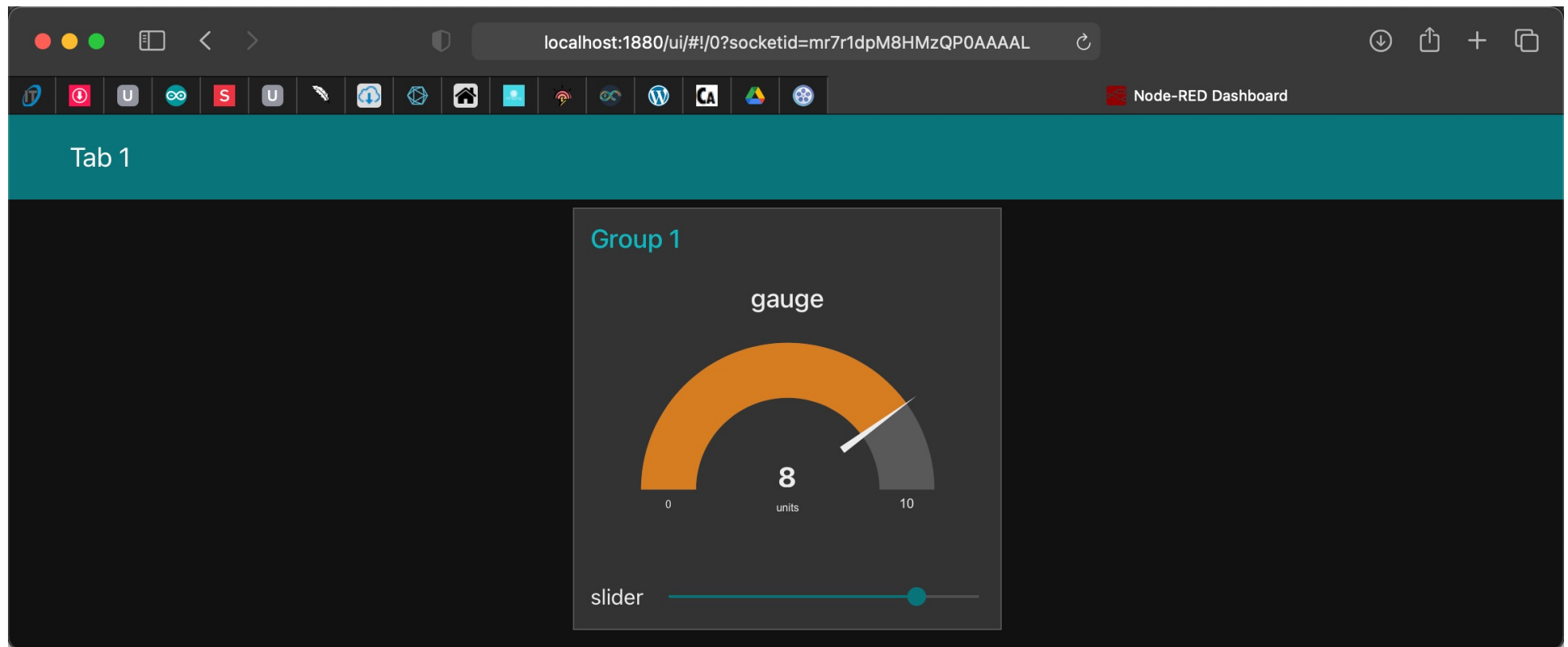
### Step 12:

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



## ECERCISE 1: My First Dashboard

### The final output:

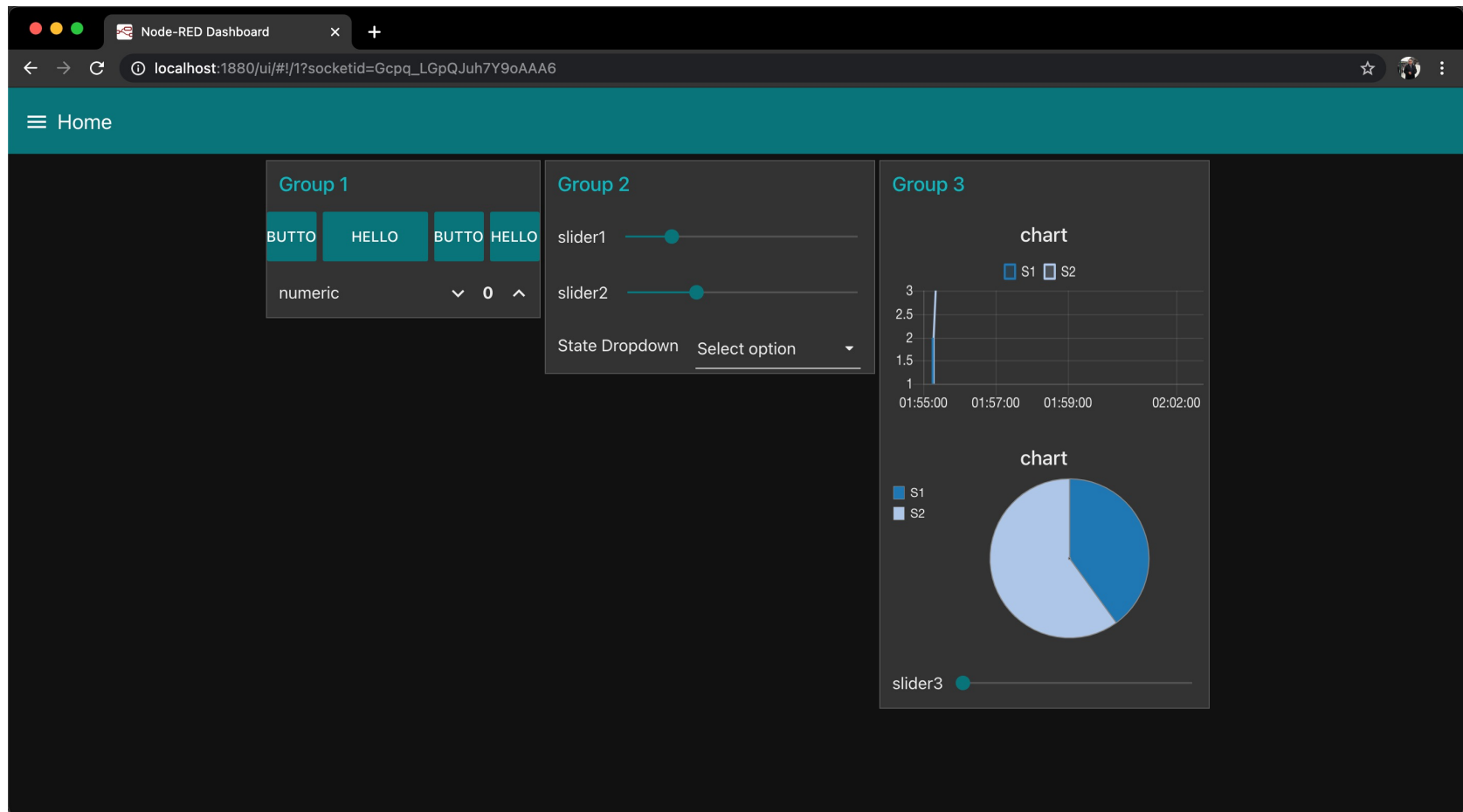


## ECERCISE 2: Complex Dashboard

### Requirements:

Slider 1 & Slider 2 output are at Group 3.

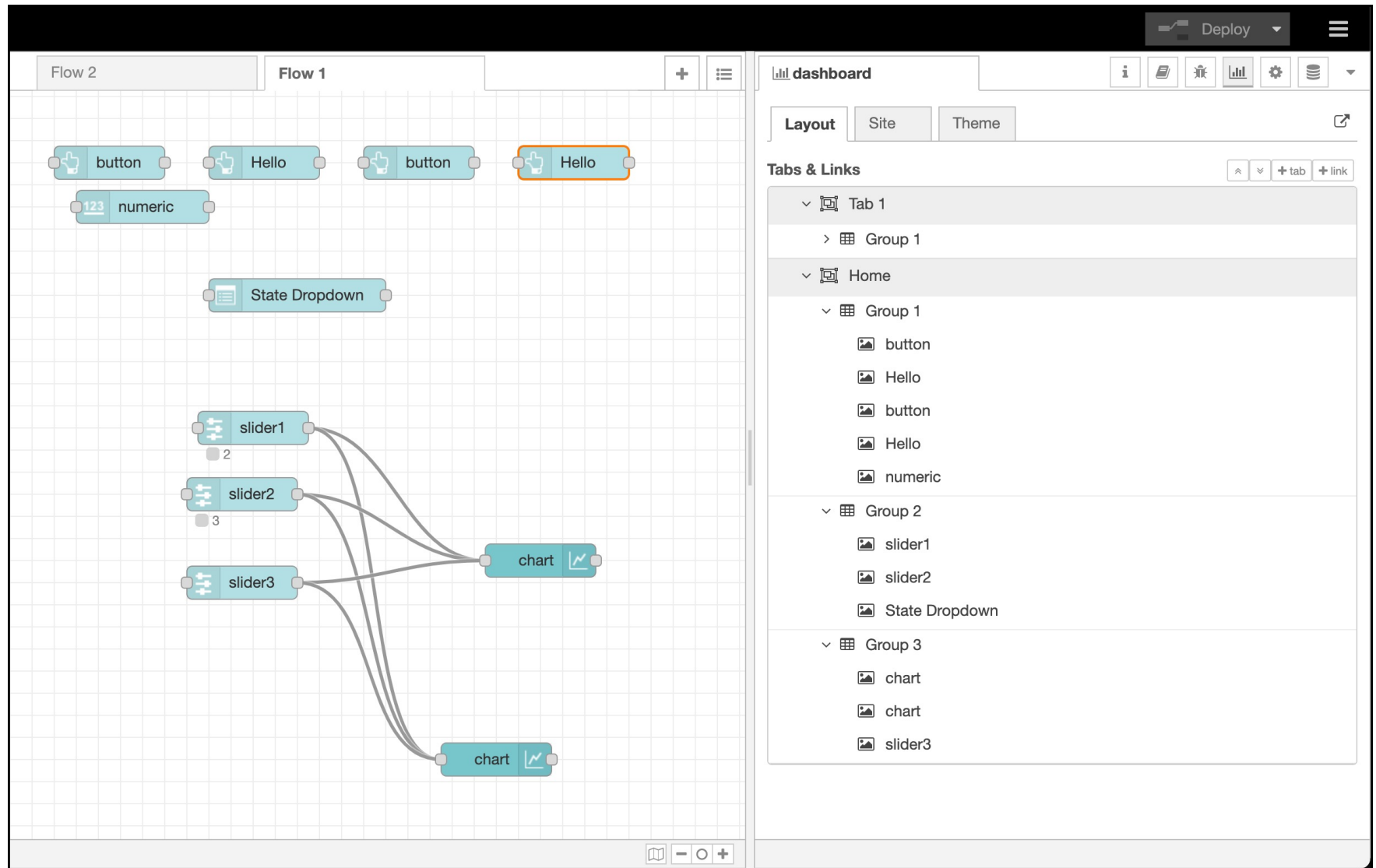
State Dropdown: Show list of states in Malaysia.





## 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": "",
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              "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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                          "type": "ui_chart",
                          "z": "da66bc6d.4587a",
                          "name": "",
                          "group": "60fa8661.35b8d8",
                          "order": 1,
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                          "xformat": "HH:mm:ss",
                          "interpolate": "linear",
                          "nodata": "",
                          "dot": false,
                          "ymin": "",
                          "ymax": "",
                          "removeOlder": 1,
                          "removeOlderPoints": "",
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                          "useUTC": false,
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                            "#aec7e8",
                            "#ff7f0e",
                            "#2ca02c",
                            "#98df8a",
                            "#d62728",
                            "#ff9896",
                            "#9467bd",
                            "#c5b0d5"
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                                "type": "ui_slider",
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                                "label": "slider2",
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                                "step": 1,
                                "x": 210,
                                "y": 380,
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                                      "type": "ui_slider",
                                      "z": "da66bc6d.4587a",
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                                      "tooltip": "",
                                      "group": "60fa8661.35b8d8",
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                                      "height": 0,
                                      "passthru": true,
                                      "outs": "all",
                                      "topic": "S3",
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                                      "max": 10,
                                      "step": 1,
                                      "x": 210,
                                      "y": 460,
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                                        [
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                                            "id": "269e058f.ad5312",
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                                            "z": "da66bc6d.4587a",
                                            "name": "",
                                            "group": "60fa8661.35b8d8",
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                                            "height": 0,
                                            "label": "chart",
                                            "chartType": "pie",
                                            "legend": true,
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                                            "interpolate": "linear",
                                            "nodata": "",
                                            "dot": false,
                                            "ymin": "",
                                            "ymax": "",
                                            "removeOlder": 1,
                                            "removeOlderPoints": "",
                                            "removeOlderUnit": "3600",
                                            "cutout": 0,
                                            "useOneColor": false,
                                            "useUTC": false,
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                                              "#aec7e8",
                                              "#ff7f0e",
                                              "#2ca02c",
                                              "#98df8a",
                                              "#d62728",
                                              "#ff9896",
                                              "#9467bd",
                                              "#c5b0d5"
                                            ],
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                                            "outputs": 1,
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                                            "y": 620,
                                            "wires": [
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                                                {
                                                  "id": "881e9e35.64da9",
                                                  "type": "ui_numeric",
                                                  "z": "da66bc6d.4587a",
                                                  "name": "",
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                                                  "width": 0,
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                                                  "passthru": true,
                                                  "topic": "",
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                                                  "max": 10,
                                                  "step": 1,
                                                  "x": 120,
                                                  "y": 120,
                                                  "wires": [
                                                    [
                                                      {
                                                        "id": "2b7826d6.efb79a",
                                                        "type": "ui_dropdown",
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                                                        "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"
                                                          },
                                                          {
                                                            "label": "Negeri Sembilan",
                                                            "value": "",
                                                            "type": "str"
                                                          }
                                                        ],
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                                                        "topic": "",
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                                                        "y": 200,
                                                        "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",
                                                              "order": 2,
                                                              "disp": true,
                                                              "width": 6,
                                                              "id": "60fa8661.35b8d8",
                                                              "type": "ui_group",
                                                              "name": "Group 3",
                                                              "tab": "472ac123.7ec428",
                                                              "order": 3,
                                                              "disp": true,
                                                              "width": 6,
                                                              "id": "472ac123.7ec428",
                                                              "type": "ui_tab",
                                                              "z": "",
                                                              "name": "Home",
                                                              "icon": "dashboard",
                                                              "order": 1,
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                                                              "hidden": false
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                                                          ]
                                                        ]
                                                      }
                                                    ]
                                                  ]
                                                }
                                              ]
                                            ]
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                ]
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          ]
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      ]
    ]
  ]
}
```

QnA

**END**