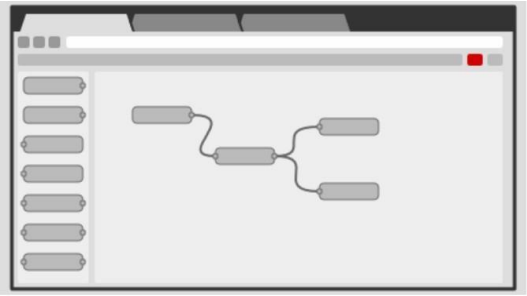
Sprint- 3

Team ID	**PNT2022TMID17768**
Project Title	**Gas Leakage Monitoring And Alerting System**
Date	**15.11.2022**

Node-RED

Low-code programming for event-driven applications

Latest version: v3.0.2 (npm)



Browser-based flow editing

Node-RED provides a browser-based flow editor that makes it easy to wire together flows using the wide range of nodes in the palette. Flows can be then deployed to the runtime in a single-click.

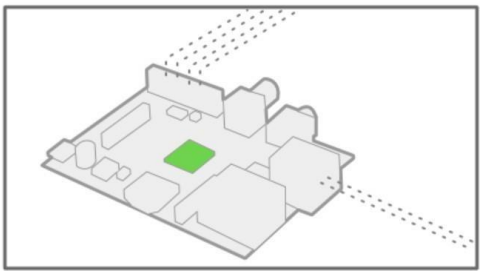
JavaScript functions can be created within the editor using a rich text editor.

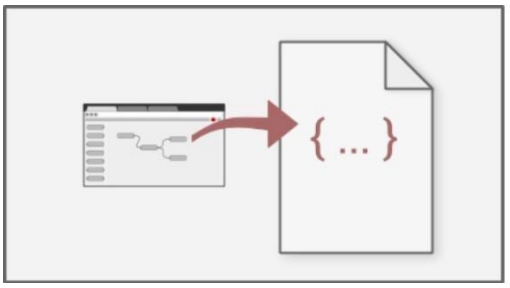
A built-in library allows you to save useful functions, templates or flows for re-use.

Built on Node.js

The light-weight runtime is built on Node.js, taking full advantage of its event-driven, non-blocking model. This makes it ideal to run at the edge of the network on low-cost hardware such as the Raspberry Pi as well as in the cloud.

With over 225,000 modules in Node's package repository, it is easy to extend the range of palette nodes to add new capabilities.



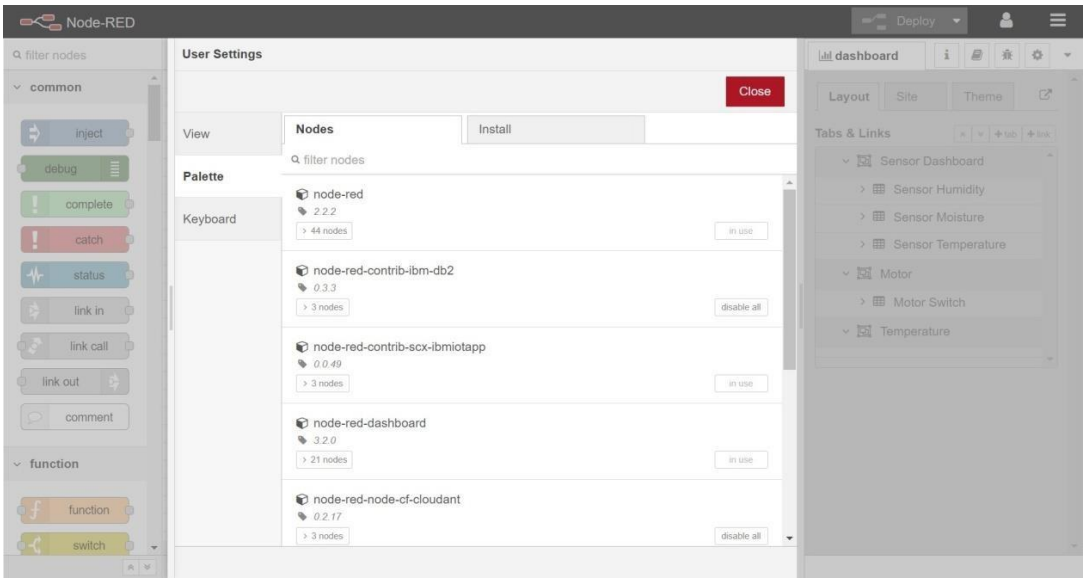


Social Development

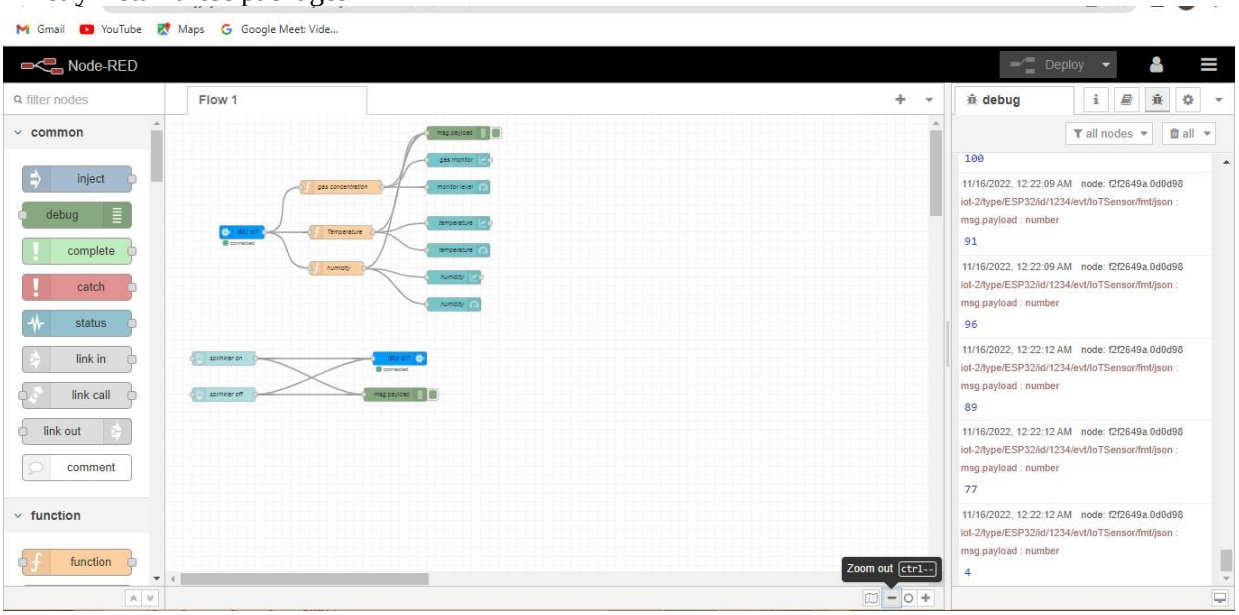
The flows created in Node-RED are stored using JSON which can be easily imported and exported for sharing with others.

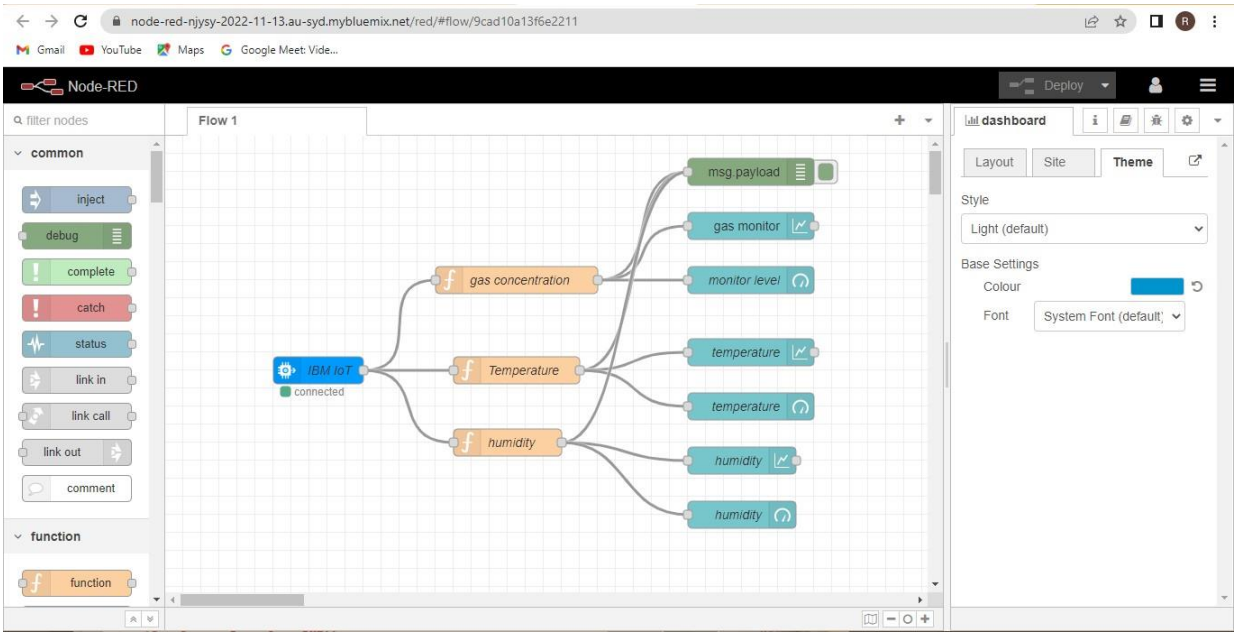
An online flow library allows you to share your best flows with the world.

Node flow:



Firstly install these packages




node-red-njysy-2022-11-13.au-syd.mybluemix.net/red/#flow/9cad10a13f6e2211
Gmail
YouTube
Maps
Google Meet: Vide...
Node-RED
Deploy
filter nodes
Flow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
IBM IoT
connected
gas concentration
Temperature
humidity
msg.payload
gas monitor
monitor level
temperature
temperature
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Layout
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Base Settings
Colour
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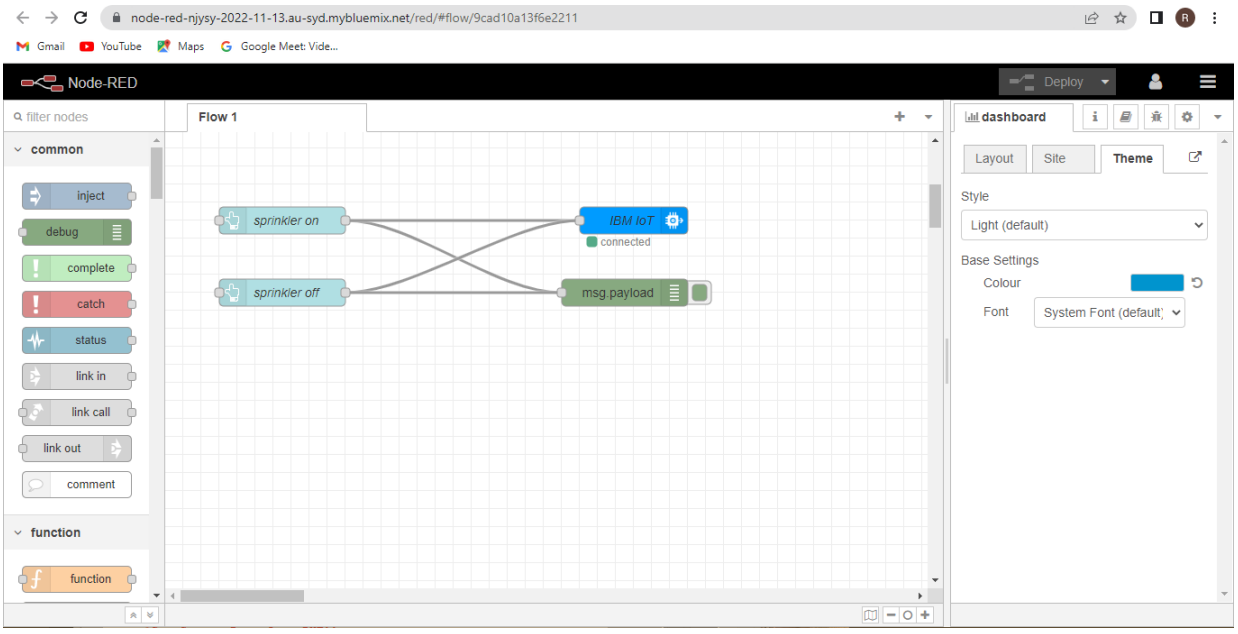
System Font (default)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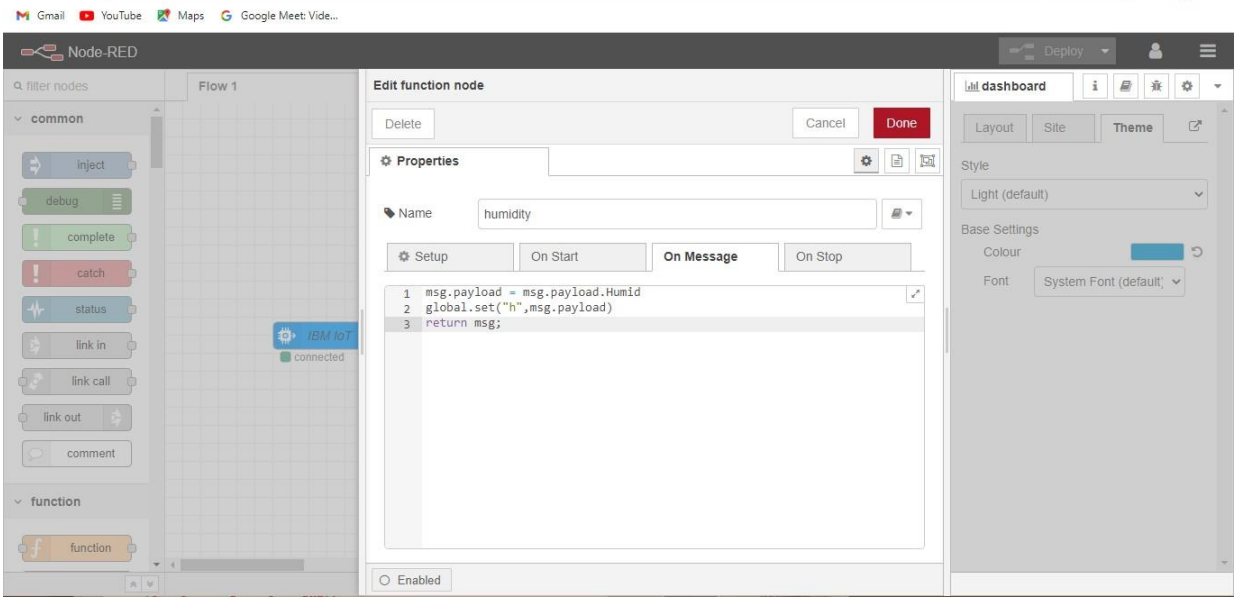
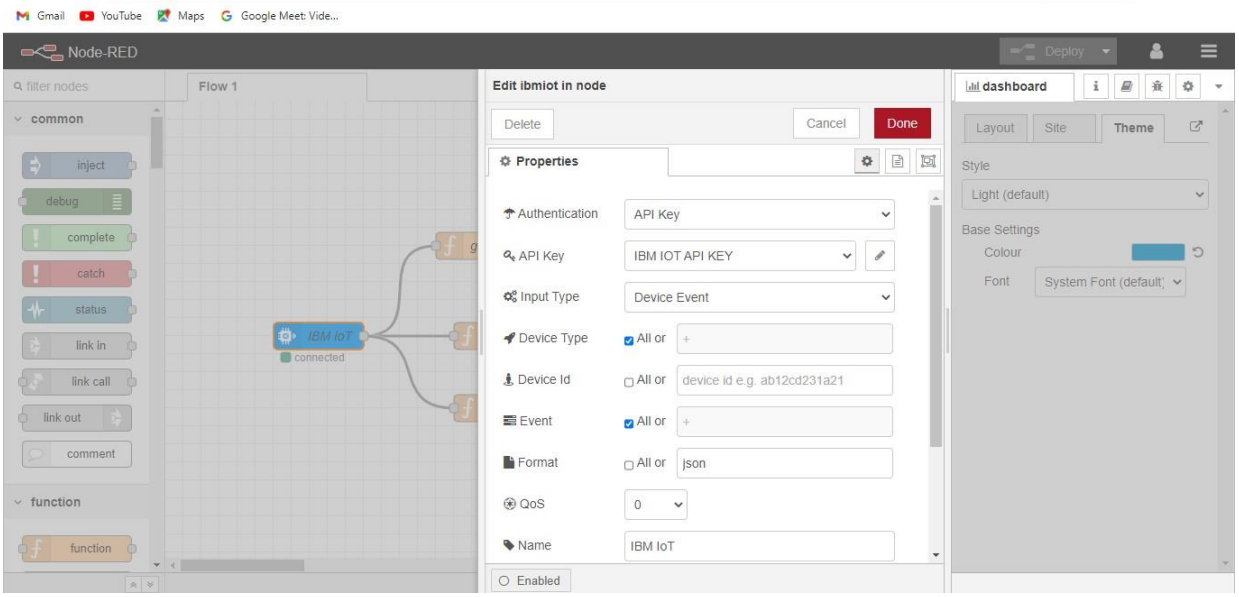
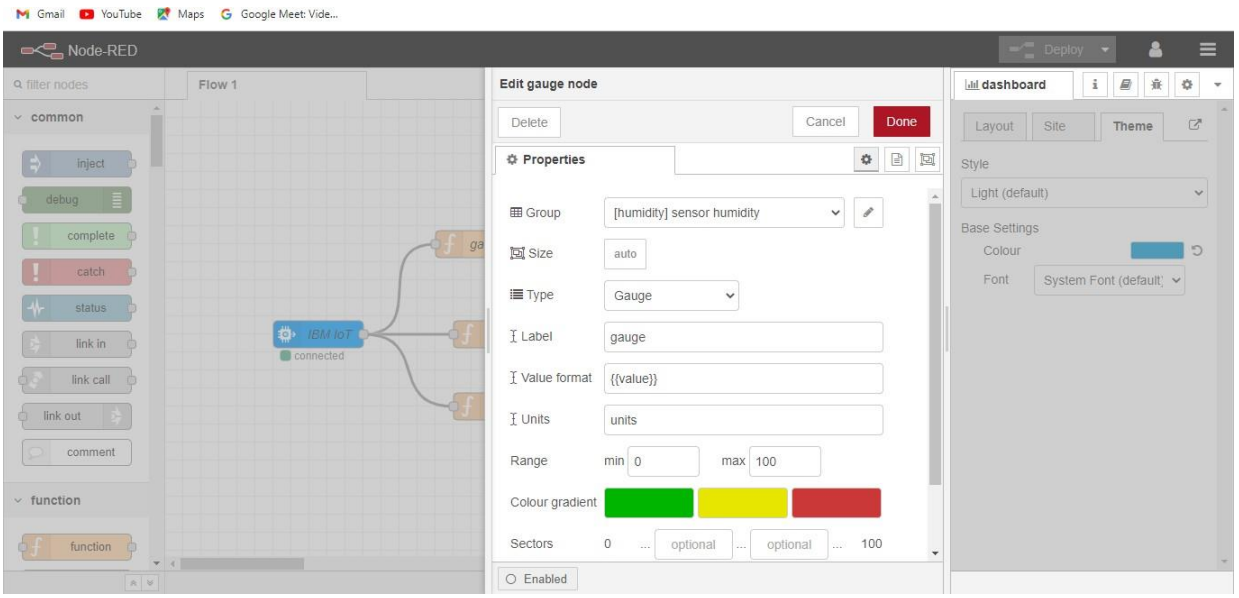
The Interior parts/values/codes of the nodes:



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Cancel
Done
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[humidity] sensor humidity
Size
auto
Type
Gauge
Label
gauge
Value format
{{value}}
Units
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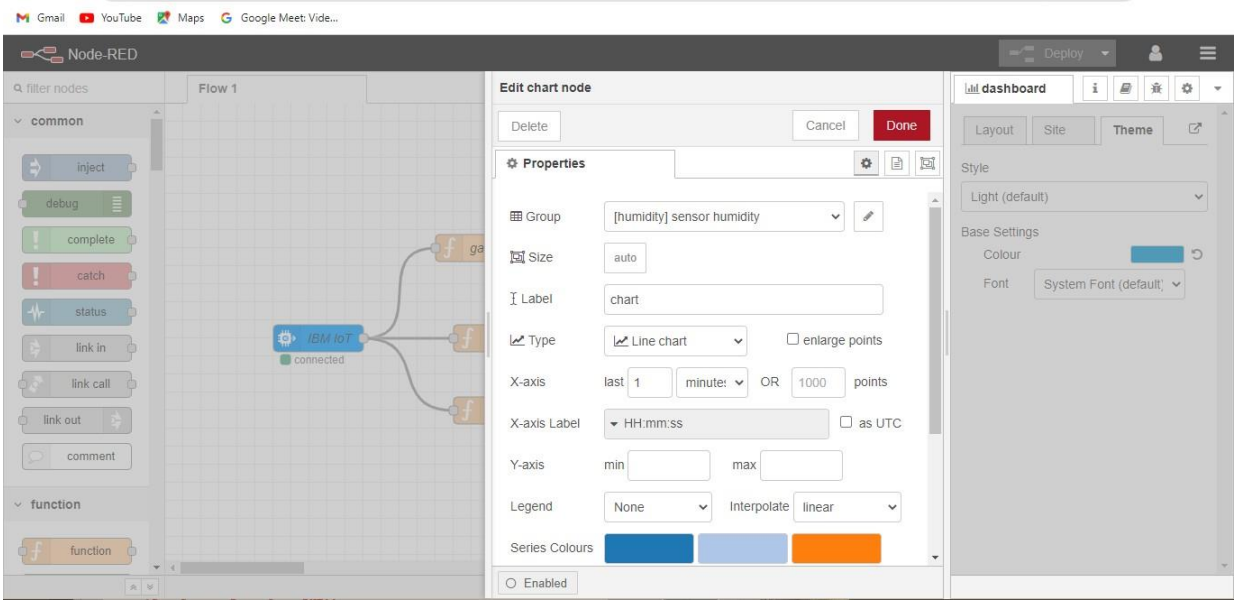
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Done
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Group
[humidity] sensor humidity
Size
auto
Label
chart
Type
Line chart
enlarge points
X-axis
last 1
minutes
OR 1000
points
X-axis Label
HH:mm:ss
as UTC
Y-axis
min
max
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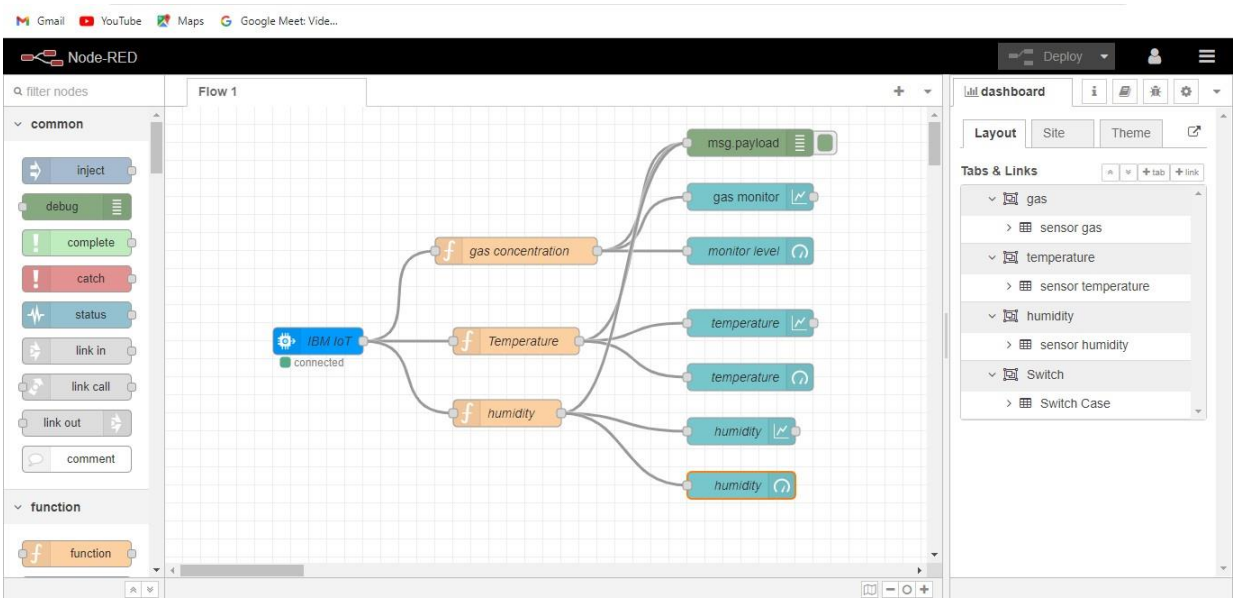
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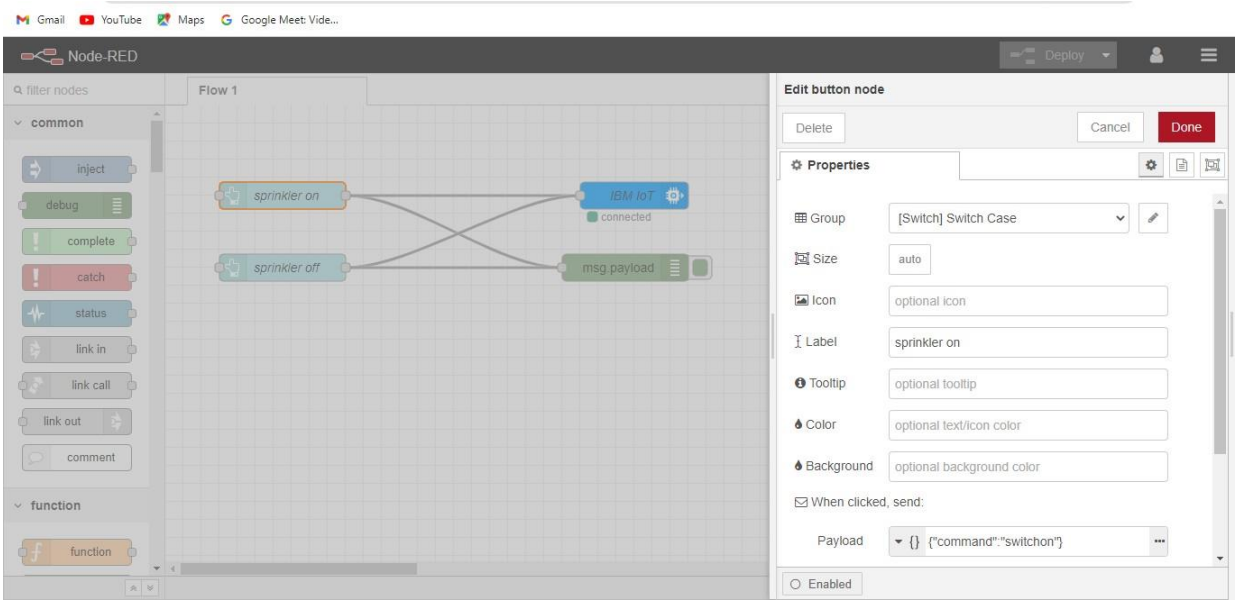
Switch Case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IBM IoT
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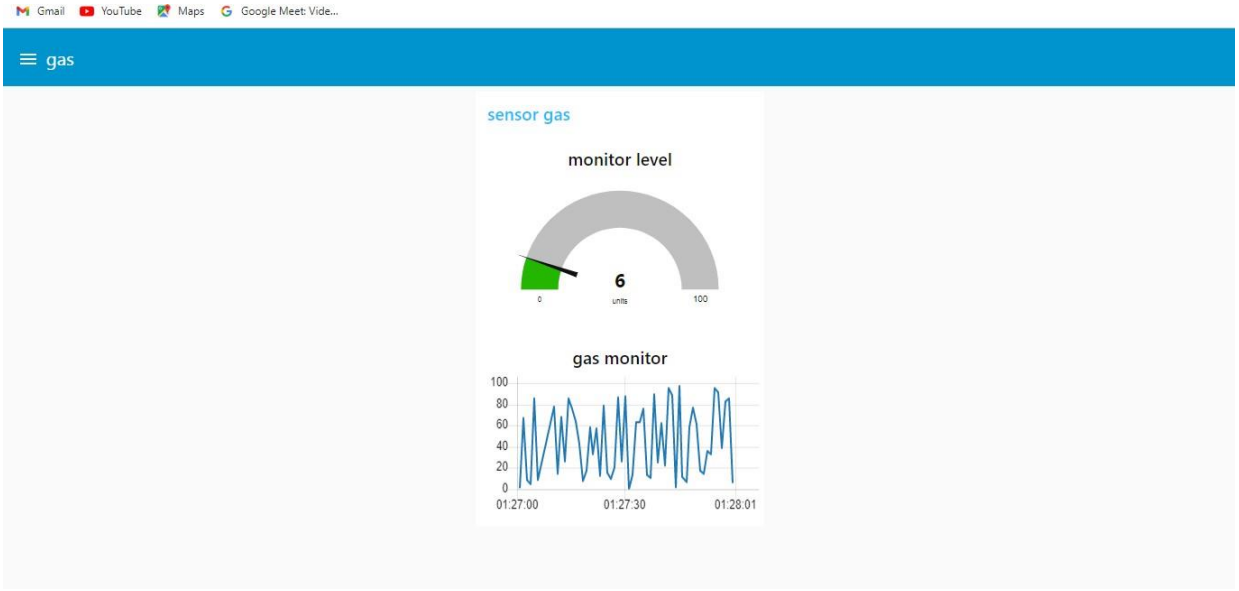
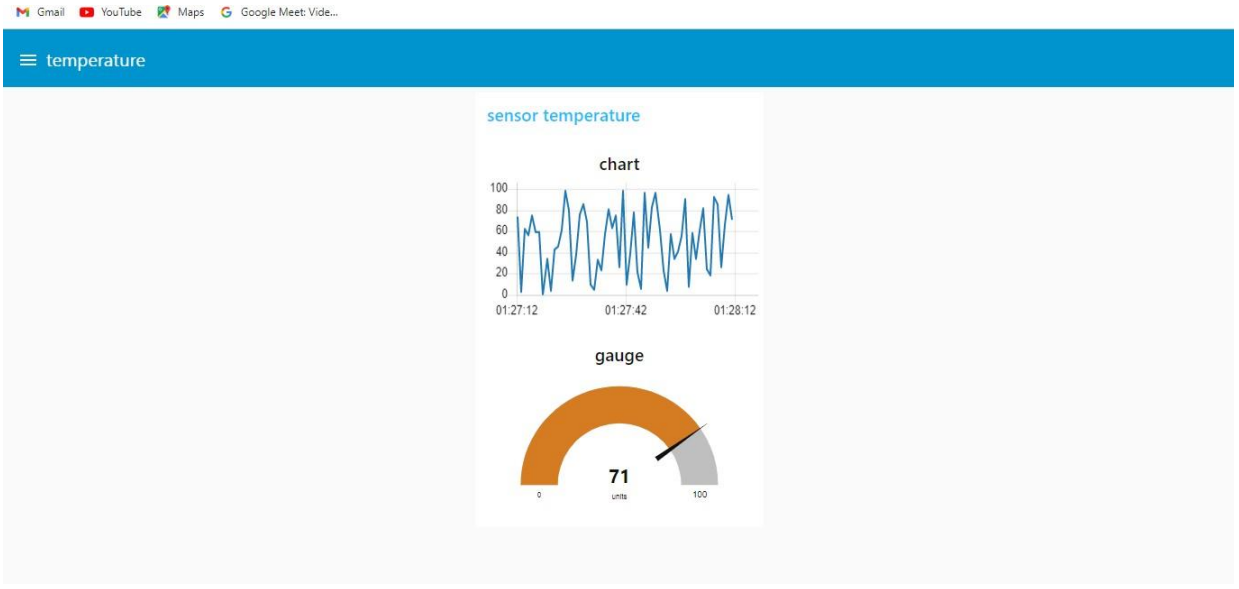
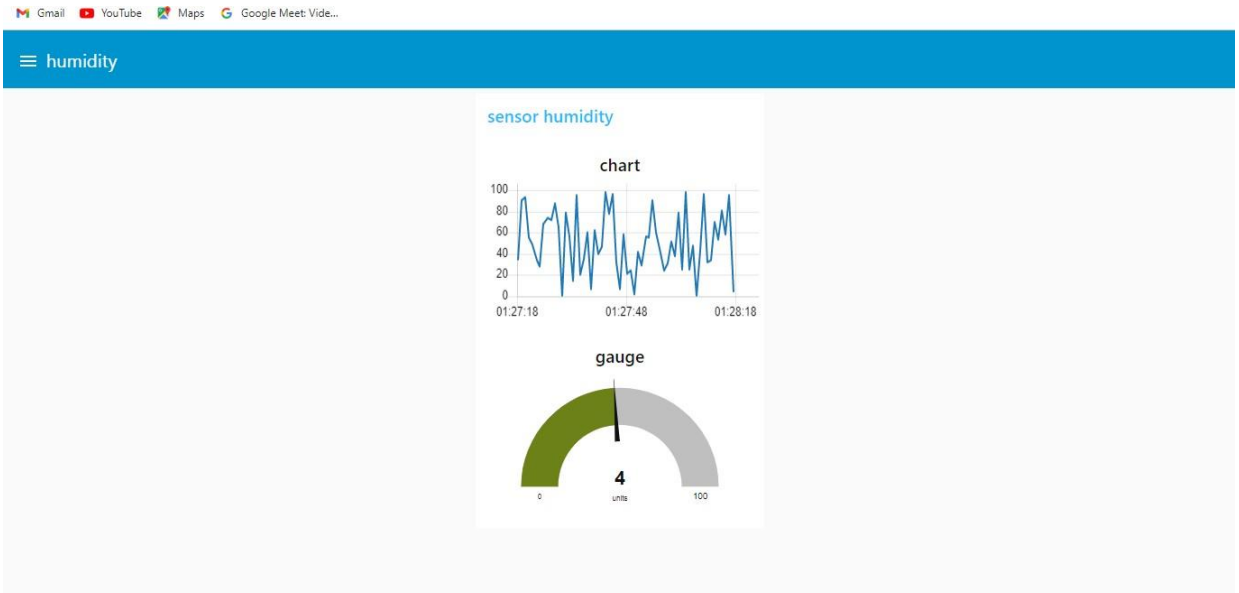
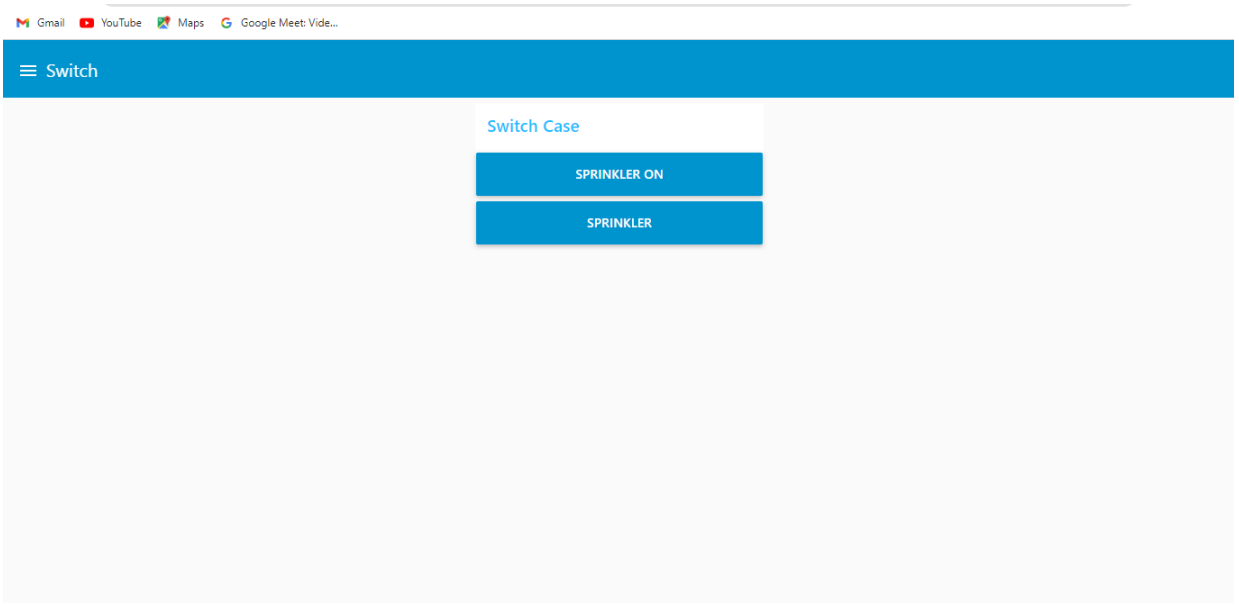
msg payload
Edit button node
Delete
Cancel
Done
Properties
Group
[Switch] Switch Case
Size
auto
Icon
optional icon
Label
sprinkler on
Tooltip
optional tooltip
Color
optional text/icon color
Background
optional background color
When clicked, send:
Payload
{"command":"switchon"}
Enabled

Dashboard created using Node:





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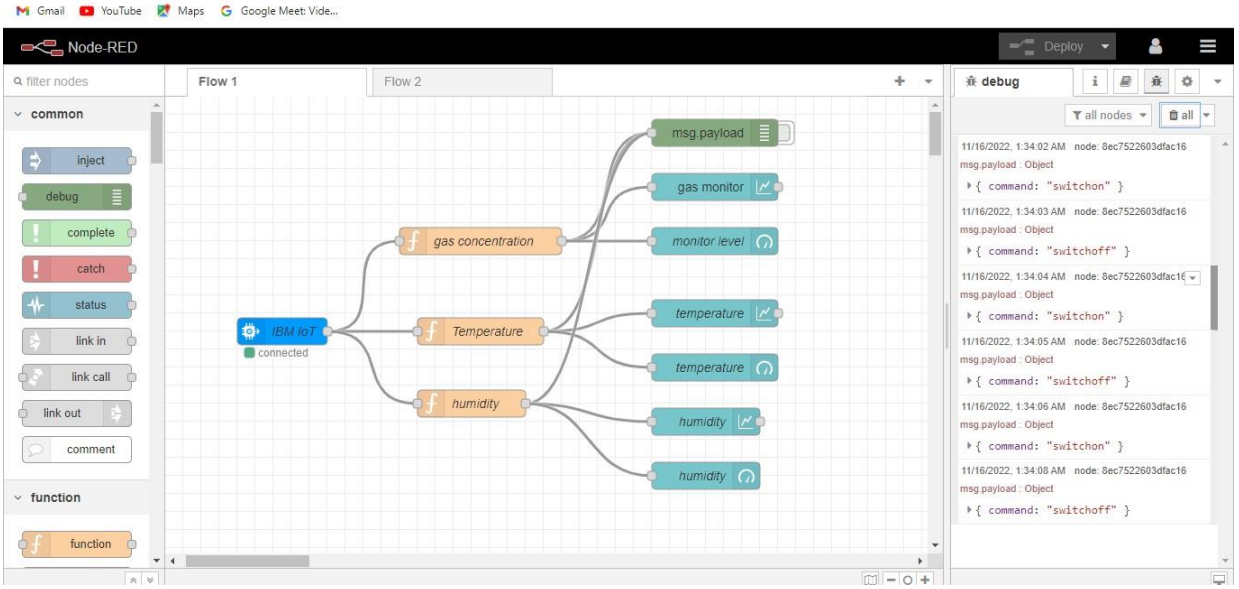
Maps
Google Meet: Vide...
Switch
Switch Case
SPRINKLER ON
SPRINKLER

Testing: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Temperature
humidity
msg.payload
gas monitor
monitor level
temperature
temperature
humidity
humidity
debug
all nodes
all
11/16/2022, 1:34:02 AM node: 8ec7522603dfac16
msg.payload : Object
{ command: "switchon" }
11/16/2022, 1:34:03 AM node: 8ec7522603dfac16
msg.payload : Object
{ command: "switchoff" }
11/16/2022, 1:34:04 AM node: 8ec7522603dfac16
msg.payload : Object
{ command: "switchon" }
11/16/2022, 1:34:05 AM node: 8ec7522603dfac16
msg.payload : Object
{ command: "switchoff" }
11/16/2022, 1:34:06 AM node: 8ec7522603dfac16
msg.payload : Object
{ command: "switchon" }
11/16/2022, 1:34:08 AM node: 8ec7522603dfac16
msg.payload : Object
{ command: "switchoff" }