

# BUILD A WEB APPLICATION USING NODE RED

Team Id	PNT2022TMID53951
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Topic	Building web application using Node red

## **Goal:**

To build a web application using node red.

## **Steps:**

- Open the Node-Red website which you have created in the previous step. Insert the corresponding IBM IoT nodes and other kind of sensors and motor switches.
- Finally, click on the deploy option in the right-side panel.
- Visualize the results in the Node- Red where the URL is followed by /data.
- Visualize the comments in Node- Red review URL followed by /comment.
- On clicking on the IBM IoT, note you have to enter the device credentials of the device you have created in the Watson IBM platform.
- On taking the functions of soil moisture humidity and temperature enter the functionality they must perform in the property setup formatting ah one center the function is soil moisture value less than 20 then generate a message and then in the corresponding HTTP request enter the URL of bulk SMS to send the message to the given contact number.
- On clicking on the motor on function, give the payload value as json command.
- Repeat the same for the motor off.

## **Output:**

IBM IOT INPUT NODE:

**Edit ibmiot in node**

Delete Cancel Done

**Properties**

Authentication API Key

API Key 7dd0c222.d9446c

Input Type Device Event

Device Type ☒ All or +

Device Id ☐ All or 67891

Event ☒ All or +

Format ☐ All or json

QoS 0

Name IBM IoT

☐ Enabled

### SOIL MOISTURE FUNCTION:

**Edit function node**

Delete Cancel Done

**Properties**

Name Soil Moisture

Setup On Start On Message On Stop

```

1 global.set('moist',msg.payload.soil_moisture)
2 msg.payload=msg.payload.soil_moisture
3 return msg;

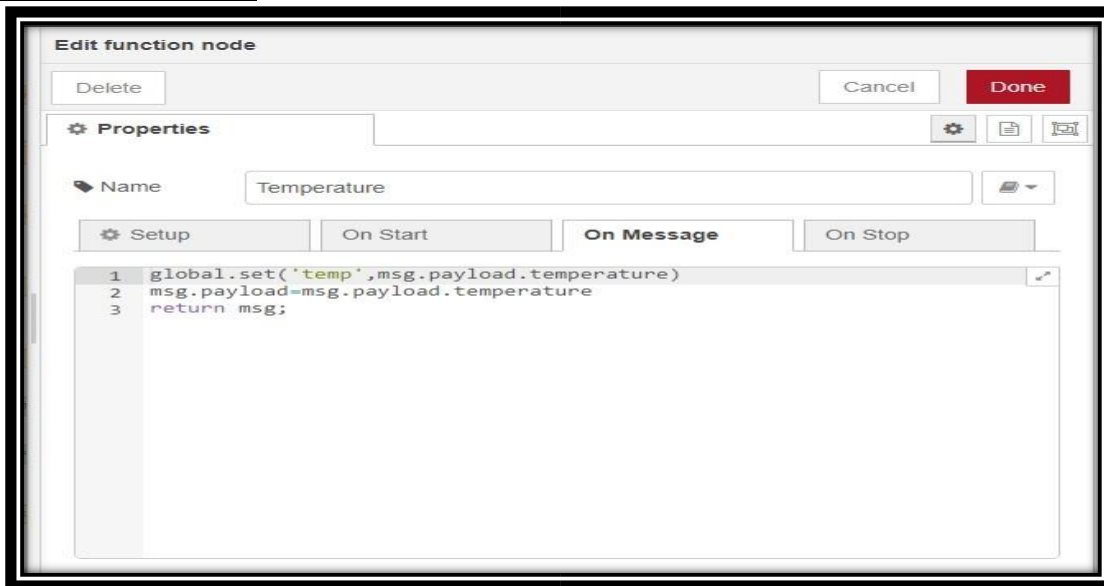
```

☐ Enabled

### HUMIDITY FUNCTION:



**TEMPERATURE FUNCTION:**



### SOIL MOISTURE GAUGE:

DeleteCancelDone

⚙ Properties

Group

[IBM Watson Sensor Data] IBM Watsi

Size

auto

Type

Gauge

Label

Soil Moisture

Value format

{{value}}

Units

units

Range

min

0

max

100

Colour gradient

Sectors

0

...

optional

...

optional

...

100

Enabled

### HUMIDITY CHART:

DeleteCancelDone

Properties

Group

[IBM Watson Sensor Data] IBM Watsi

Size

auto

Label

Humidity

Type

Line chart

☐ enlarge points

X-axis

last

1

hours

OR

1000

points

X-axis Label

HH:mm:ss

☐ as UTC

Y-axis

min

max

Legend

None

Interpolate

linear

Series Colours

☐ Enabled

## TEMPERATURE CHART:

DeleteCancelDone

Properties

Group

[IBM Watson Sensor Data] IBM Watsi

Size

auto

Label

Temperature

Type

Line chart

☐ enlarge points

X-axis

last

1

hours

OR

1000

points

X-axis Label

HH:mm:ss

☐ as UTC

Y-axis

min

max

Legend

None

Interpolate

linear

Series Colours

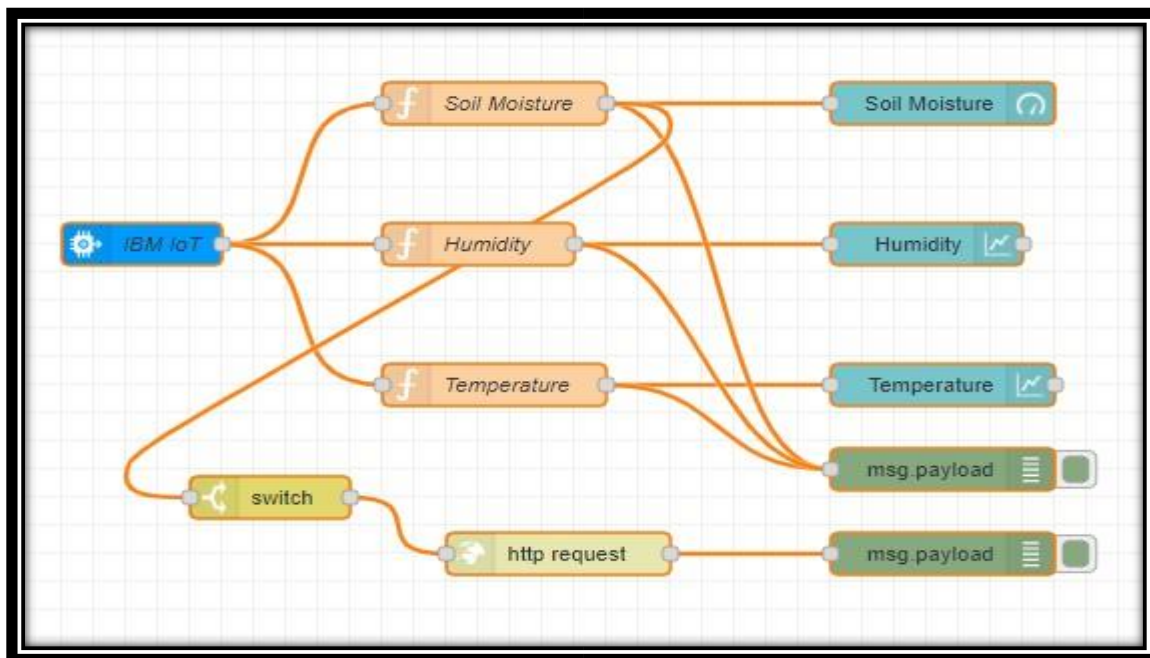
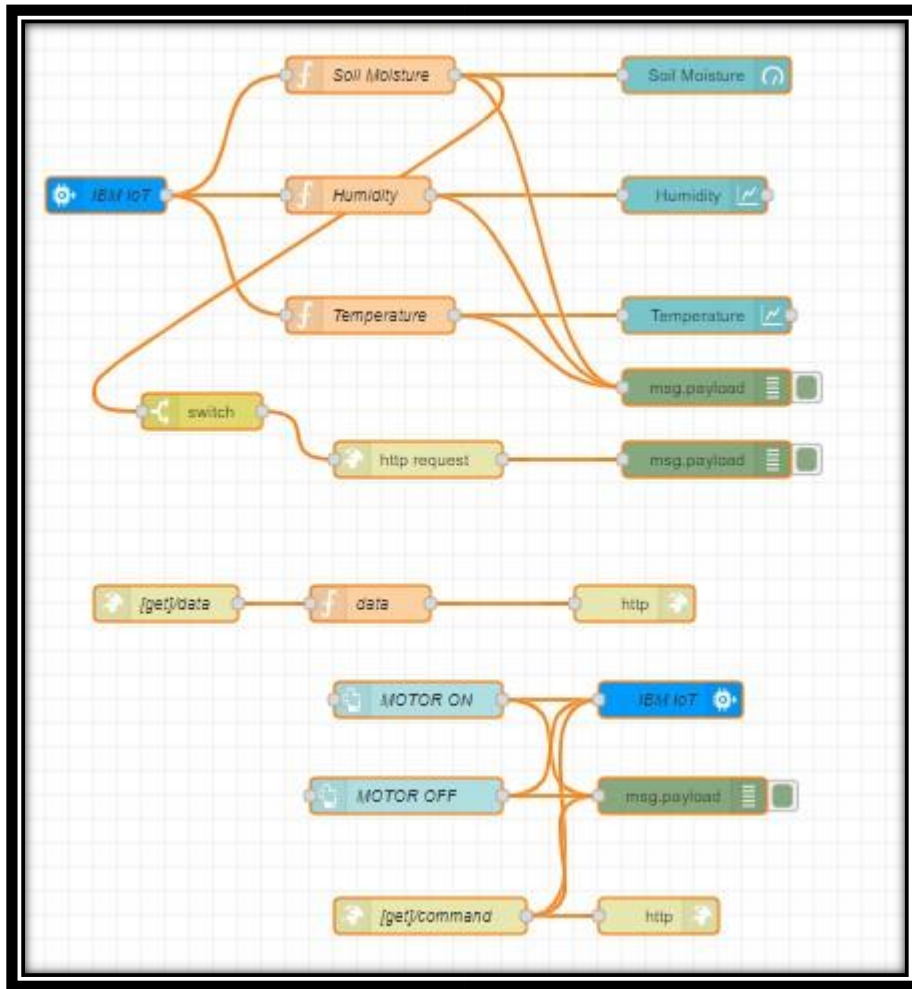
☐ Enabled

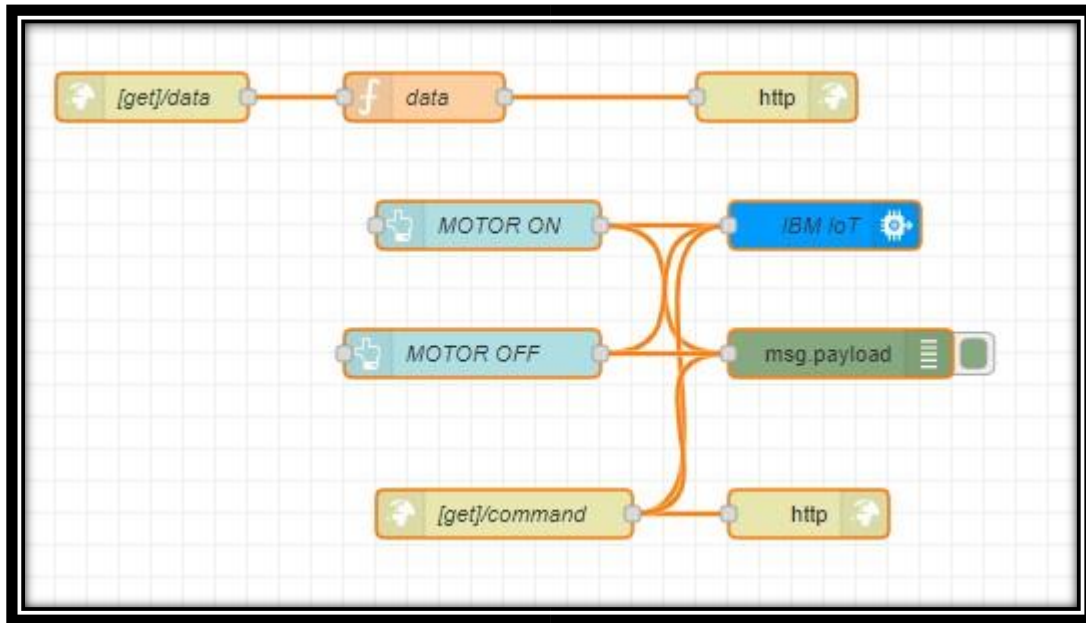
## **MOTOR ON:**

The screenshot shows the 'Edit button node' dialog box. At the top, there are three buttons: 'Delete', 'Cancel', and 'Done'. Below these is a 'Properties' section with a gear icon and three sub-headers: 'Group', 'Size', and 'Icon'. The 'Group' property is set to '[Controls] Motor Control'. The 'Size' property is set to '4 x 2'. The 'Icon' property is set to 'optional icon'. Below these are fields for 'Label' (set to 'MOTOR ON'), 'Tooltip' (set to 'optional tooltip'), 'Color' (set to 'optional text/icon color'), and 'Background' (set to '#008000'). At the bottom, there is a checkbox 'When clicked, send:' which is checked. Below this checkbox is a 'Payload' field with a dropdown arrow, a curly brace icon, and the text '{"command":"motoron"}'. There is also a three-dot menu icon to the right of the payload field.

## **MOTOR OFF:**

The screenshot shows the 'Edit button node' dialog box. At the top, there are three buttons: 'Delete', 'Cancel', and 'Done'. Below these is a 'Properties' section with a gear icon and three sub-headers: 'Group', 'Size', and 'Icon'. The 'Group' property is set to '[Controls] Motor Control'. The 'Size' property is set to '4 x 2'. The 'Icon' property is set to 'optional icon'. Below these are fields for 'Label' (set to 'MOTOR OFF'), 'Tooltip' (set to 'optional tooltip'), 'Color' (set to 'optional text/icon color'), and 'Background' (set to '#FF0000'). At the bottom, there is a checkbox 'When clicked, send:' which is checked. Below this checkbox is a 'Payload' field with a dropdown arrow, a curly brace icon, and the text '{"Command":"motoroff"}'. There is also a three-dot menu icon to the right of the payload field.





## OUTPUT:

