

BUILD A WEB APPLICATION USING NODE RED

Team Id	PNT2022TMID14876
Date	19/10/2022
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:

Delete
Cancel
Done

Edit ibmiot in node

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:

Delete
Cancel
Done

Edit function node

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:

Delete
Cancel
Done

Edit function node

Properties

Name
Humidity

Setup
On Start
On Message
On Stop

```

1 global.set('hum',msg.payload.humidity)
2 msg.payload=msg.payload.humidity
3 return msg;

```

TEMPERATURE FUNCTION:

Edit function node

Delete Cancel Done

Properties

Name Temperature

Setup On Start **On Message** On Stop

```
1 global.set('temp',msg.payload.temperature)
2 msg.payload=msg.payload.temperature
3 return msg;
```

SOIL MOISTURE GAUGE:

Edit gauge node

Delete Cancel Done

Properties

Group [IBM Watson Sensor Data] IBM Wats

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:

Delete

Cancel

Done

⚙ Properties

⚙

📄

🖼

📊 Group

[IBM Watson Sensor Data] IBM Wats

✎

📏 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:

Delete

Cancel

Done

⚙ Properties

⚙

📄

🖼

📊 Group

[IBM Watson Sensor Data] IBM Wats

✎

📏 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:

Edit button node

Delete Cancel Done

Properties

Group [Controls] Motor Control

Size 4 x 2

Icon optional icon

Label MOTOR ON

Tooltip optional tooltip

Color optional text/icon color

Background #008000

☒ When clicked, send:

Payload `{ "command": "motoron" }`

MOTOR OFF:

Edit button node

Delete Cancel Done

Properties

Group [Controls] Motor Control

Size 4 x 2

Icon optional icon

Label MOTOR OFF

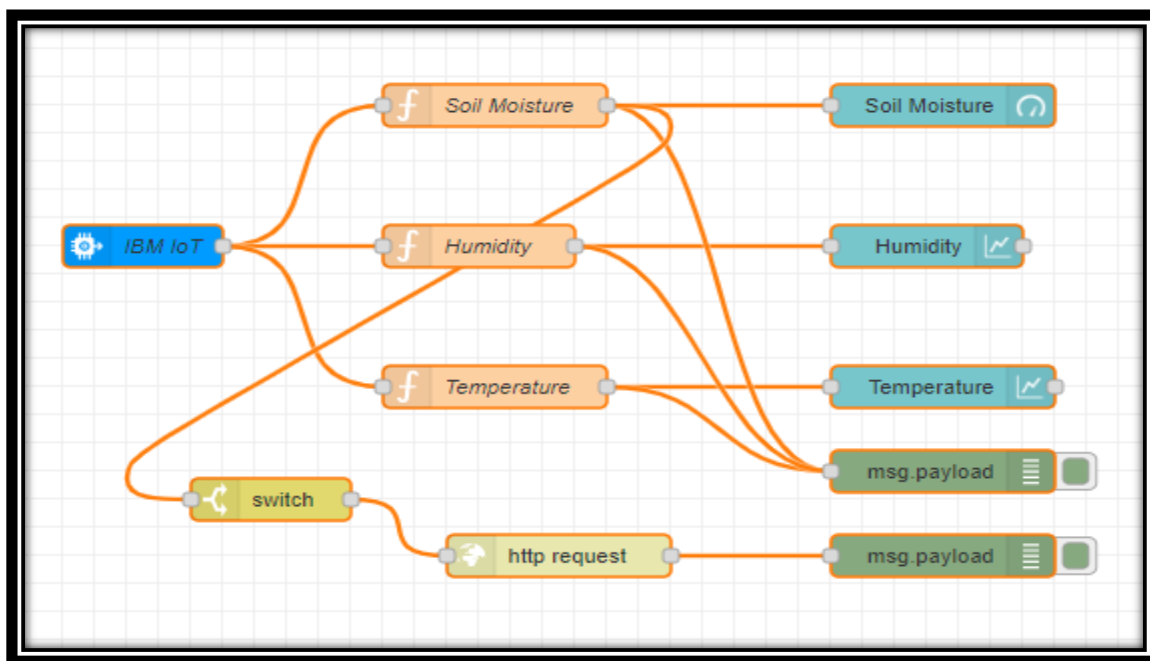
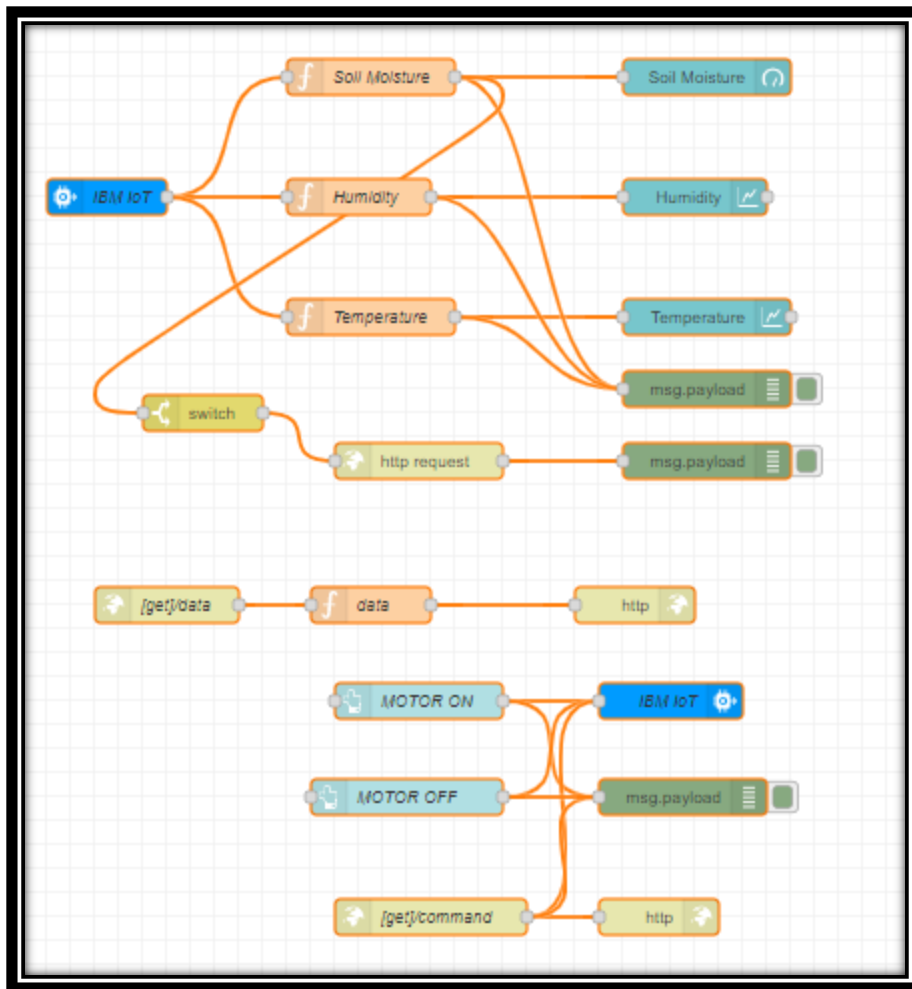
Tooltip optional tooltip

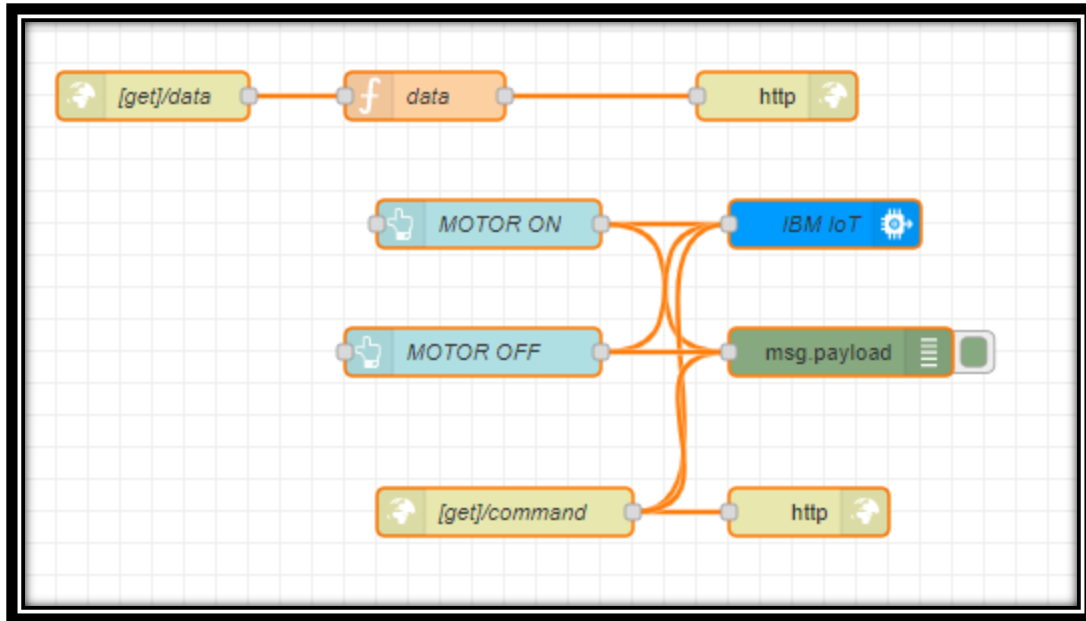
Color optional text/icon color

Background #FF0000

☒ When clicked, send:

Payload `{ "Command": "motoroff" }`





OUTPUT:

