

SPRINT 4

The image displays two screenshots of the Node-RED web interface, likely from a browser window. The top screenshot shows a flow diagram for controlling lights. The bottom screenshot shows the configuration for a custom function node.

Top Screenshot: Node-RED Flow Diagram

The flow diagram (Flow 1) includes the following nodes and connections:

- Light on** (button node) connects to **msg.payload** (msg payload node).
- Lightoff** (button node) connects to **msg.payload** (msg payload node).
- msg.payload** (msg payload node) connects to **IBM IoT** (IoT node).
- IBM IoT** (IoT node) connects to **http** (http node).
- [get]/control** (http node) connects to **commandfunctionnode** (function node).
- commandfunctionnode** (function node) connects to **http** (http node).

Bottom Screenshot: Edit function node configuration

The **Edit function node** configuration window is shown, with the following details:

- Name:** Humidity
- Setup:** On Start
- Code:**

```
1 msg.payload=msg.payload; On Start idity
2 global.set('h',msg.payload)
3 return msg;
```

Debug Console (Right Panel):

The debug console shows the following log entries:

- 11/20/2022, 1:30:58 AM node: f3998342f6a4ac51
msg.payload: string[7]
"lighton"
- 11/20/2022, 1:31:02 AM node: f3998342f6a4ac51
msg.payload: string[8]
"lightoff"
- 11/20/2022, 1:31:03 AM node: f3998342f6a4ac51
msg.payload: string[7]
"lighton"
- 11/20/2022, 1:31:07 AM node: f3998342f6a4ac51
msg.payload: string[8]
"lightoff"

Bottom Screenshot: Edit function node configuration

The **Edit function node** configuration window is shown, with the following details:

- Name:** Humidity
- Setup:** On Start
- Code:**

```
1 msg.payload=msg.payload; On Start idity
2 global.set('h',msg.payload)
3 return msg;
```

Debug Console (Right Panel):

The debug console shows the following log entries:

- 11/20/2022, 12:08:49 AM node: f2f2649a0d0d98
iot-2/type/random/id/1234/event/1/fmt/json :
msg.payload: Object
{ Temperature: 10, Humidity: 68 }
- 11/20/2022, 12:14:03 AM node: f2f2649a0d0d98
iot-2/type/random/id/1234/event/1/fmt/json :
msg.payload: Object
{ Temperature: 92, Humidity: 11 }
- 11/20/2022, 12:14:04 AM node: f2f2649a0d0d98
iot-2/type/random/id/1234/event/1/fmt/json :
msg.payload: Object
{ Temperature: 45, Humidity: 12 }
- 11/20/2022, 12:14:06 AM node: f2f2649a0d0d98
iot-2/type/random/id/1234/event/1/fmt/json :
msg.payload: Object
{ Temperature: 76, Humidity: 34 }
- 11/20/2022, 12:14:07 AM node: f2f2649a0d0d98
iot-2/type/random/id/1234/event/1/fmt/json :
msg.payload: Object
{ Temperature: 50, Humidity: 5 }

Service Details | IBM Watson IoT | Node-RED: node- | Welcome to Proj | IBM | MIT App Inventor | MIT App Inventor | +

node-red-jlwwn-2022-11-08.eu-gb.mybluemix.net/red/

Node-RED

filter nodes

Flow 1

function

function

switch

change

range

template

delay

trigger

filter

OpenWhisk

network

mqtt in

connected

get/set

Edit function node

Delete

Cancel

Done

Properties

Name

httpfunctionnode

Setup

On Start

On Message

On Stop

1 msg.payload={ "temperature":global.get("t"), "humidity":global.get("h") }

2 return msg;

Enabled

debug

all nodes

all

msg.payload: Object

{ Temperature: 77, Humidity: 80 }

11/20/2022, 12:08:49 AM node: f2c2649a-0d0d98

iot-2/type/1234/id/1234_1/evt/event_1/fmt/json :

msg.payload: Object

{ Temperature: 10, Humidity: 68 }

11/20/2022, 12:14:03 AM node: f2c2649a-0d0d98

iot-2/type/random/id/1234/evt/event_1/fmt/json :

msg.payload: Object

{ Temperature: 92, Humidity: 11 }

11/20/2022, 12:14:04 AM node: f2c2649a-0d0d98

iot-2/type/random/id/1234/evt/event_1/fmt/json :

msg.payload: Object

{ Temperature: 45, Humidity: 12 }

11/20/2022, 12:14:06 AM node: f2c2649a-0d0d98

iot-2/type/random/id/1234/evt/event_1/fmt/json :

msg.payload: Object

{ Temperature: 76, Humidity: 34 }

11/20/2022, 12:14:07 AM node: f2c2649a-0d0d98

iot-2/type/random/id/1234/evt/event_1/fmt/json :

msg.payload: Object

{ Temperature: 50, Humidity: 5 }

MIT APP INVENTOR

Projects | Connect | Build | Settings | Help | My Projects | View Trash | Guide | Report an Issue | English | mukilan1307@gmail.com

river_water

Screen1 | Add Screen | Remove Screen | Publish to Gallery

Designer

Blocks

built-in

Control

Logic

Math

Text

Lists

Dictionaries

Colors

Variables

Procedures

Screen1

HorizontalArrangement1

Label1

HorizontalArrangement2

Label2

TextBox1

HorizontalArrangement4

Viewer

set TextBox2 . Text to look up in pairs key pairs

call Web1 . JsonTextDecode

jsonText get responseContent

when Button1 . Click

do

set Web2 . Uri to https://node-red-jlwwn-2022-11-08.eu-gb.mybluemix.net/

call Web2 . Get

Show Warnings

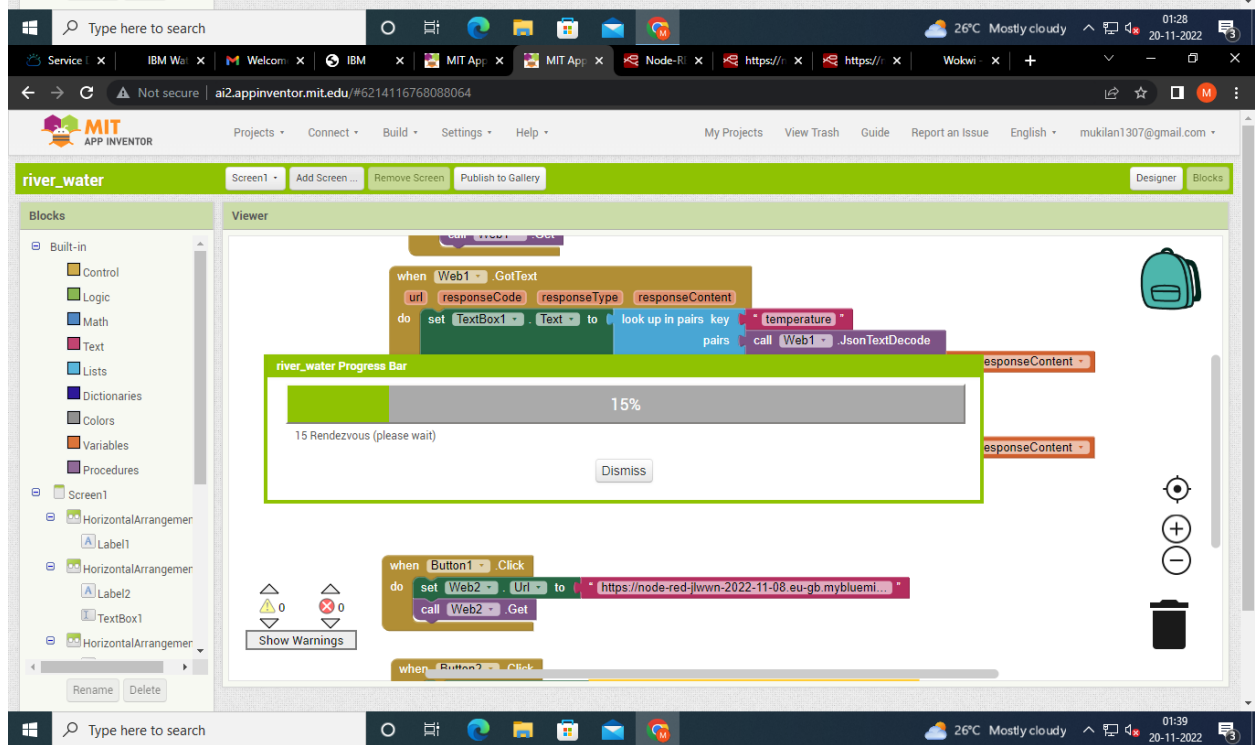
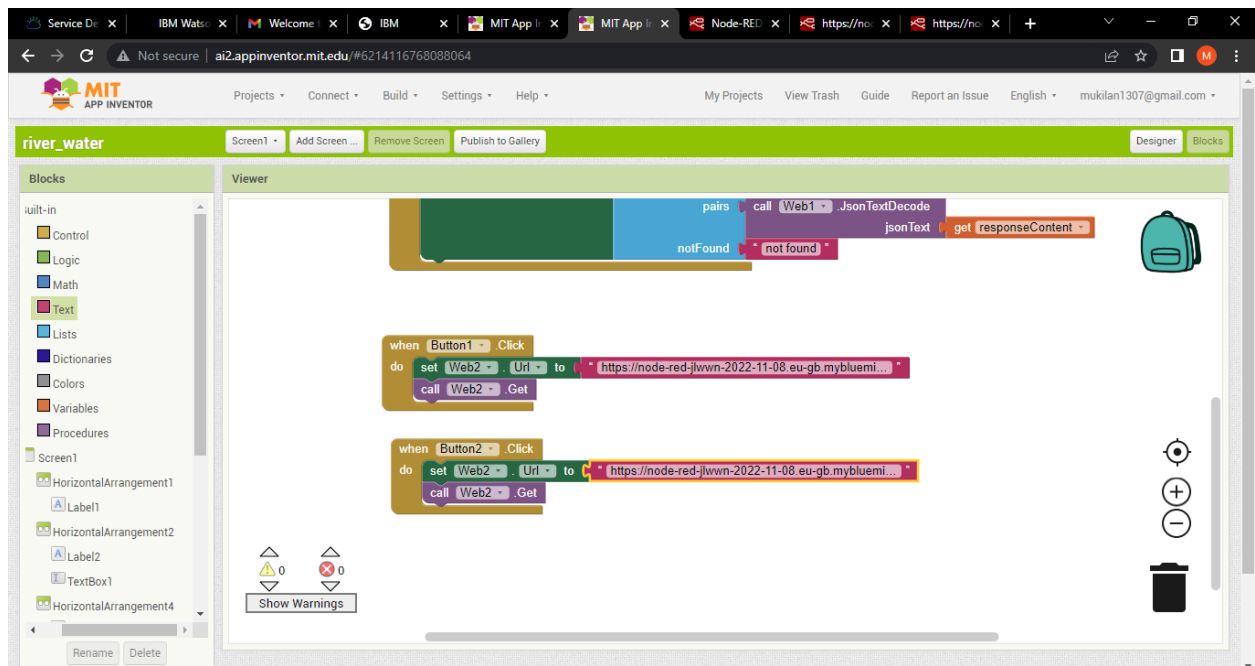
0

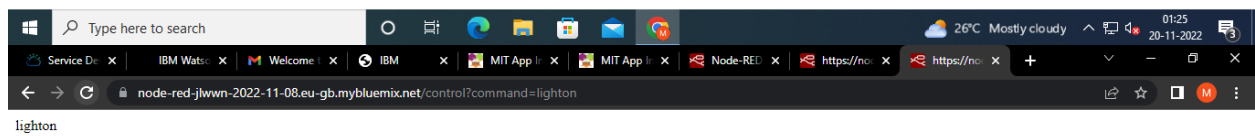
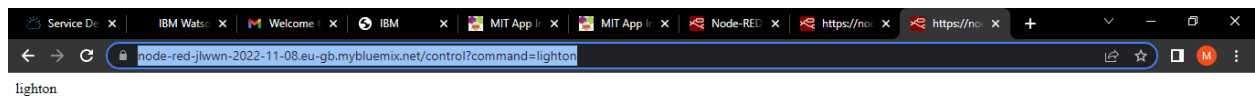
0

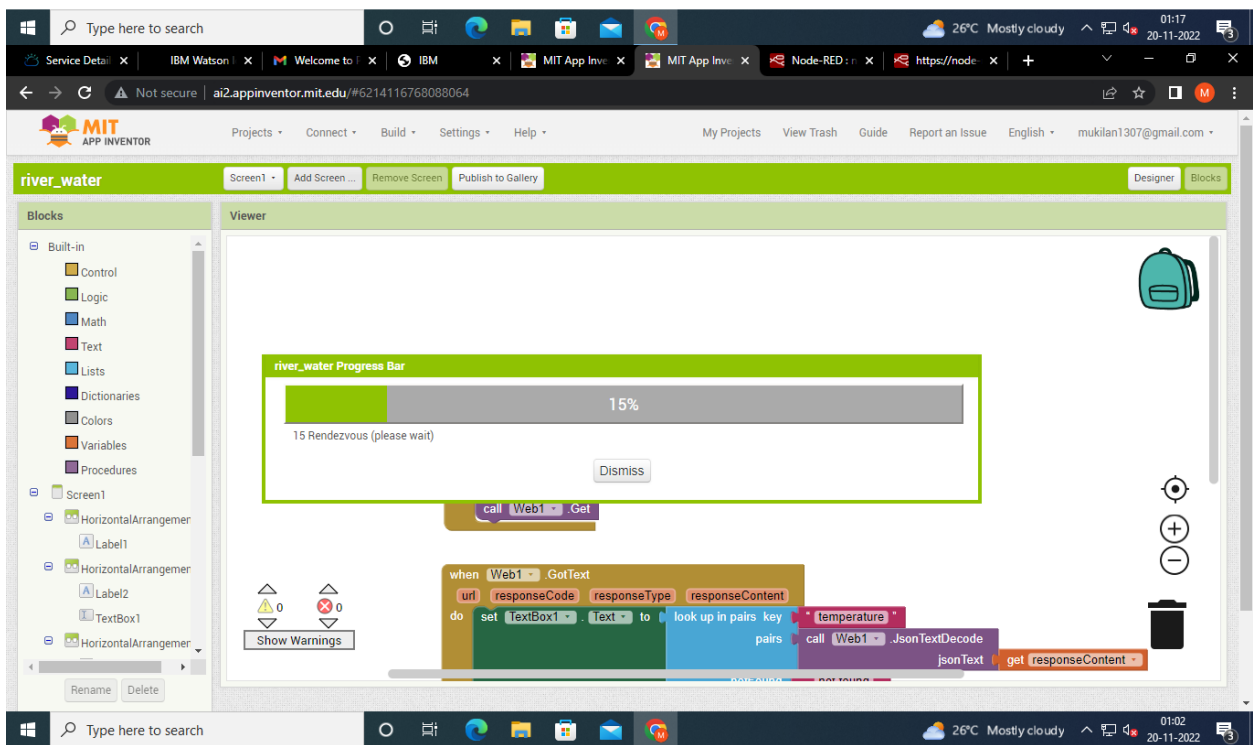
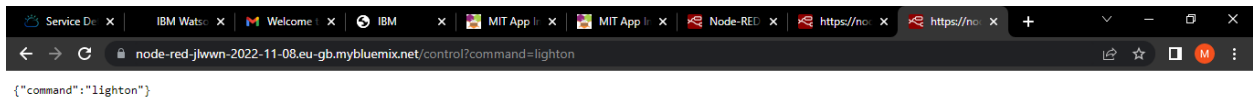
26°C Mostly cloudy

01:26

20-11-2022







Service Detail x IBM Watson x Welcome to x IBM x MIT App Inve x MIT App Inve x Node-RED: r x https://node. x

Not secure | ai2.appinventor.mit.edu/#6214116768088064

HorizontalArranger Label1 HorizontalArranger Label2 TextBox1 HorizontalArranger TextBox2 Label7 Label3 HorizontalArranger Label8 Label9 Label10 HorizontalArranger Label4 HorizontalArranger Label5

Rename Delete

Media Upload File ...

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Type here to search

26°C Mostly cloudy 00:52 20-11-2022

node-red-jlwn-2022-11-08.eu-gb.mybluemix.net/sensor

call Web1 . Get

when Web1 . GotText

do

set TextBox1 . Text to look up in pairs key temperature pairs call Web1 . JsonTextDecode jsonText get responseContent notFound not found

Show Warnings

0 0

00:28 20-11-2022

```
{"temperature":83,"humidity":32}
```

Type here to search

26°C Mostly cloudy 00:28 20-11-2022

12:10 PM | 3.9KB/s



Screen1

Weather monitoring

temperature

40

humidity

48

control

LIGHT ON

LIGHTOFF