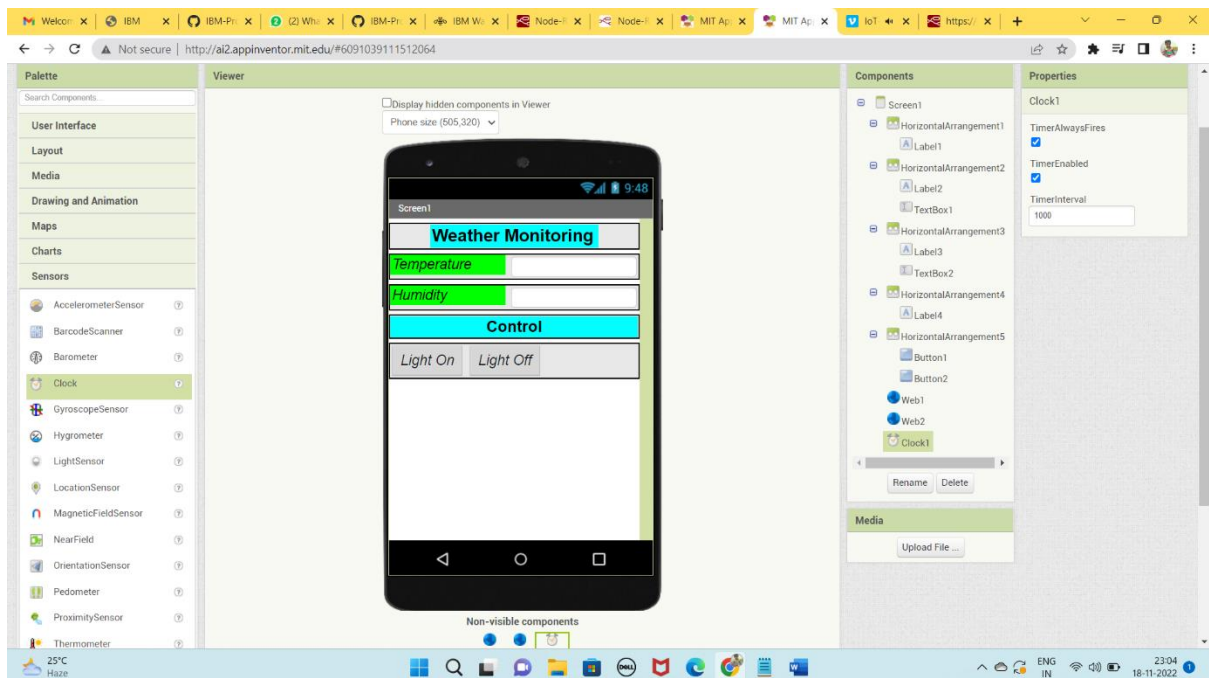
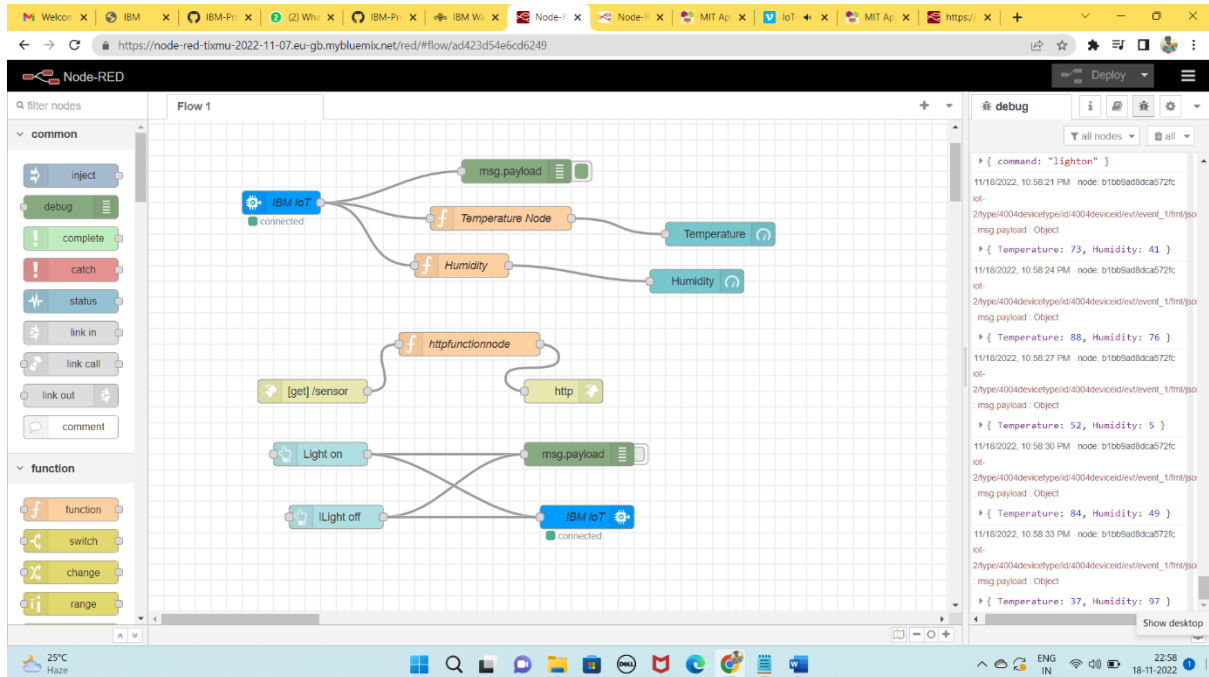
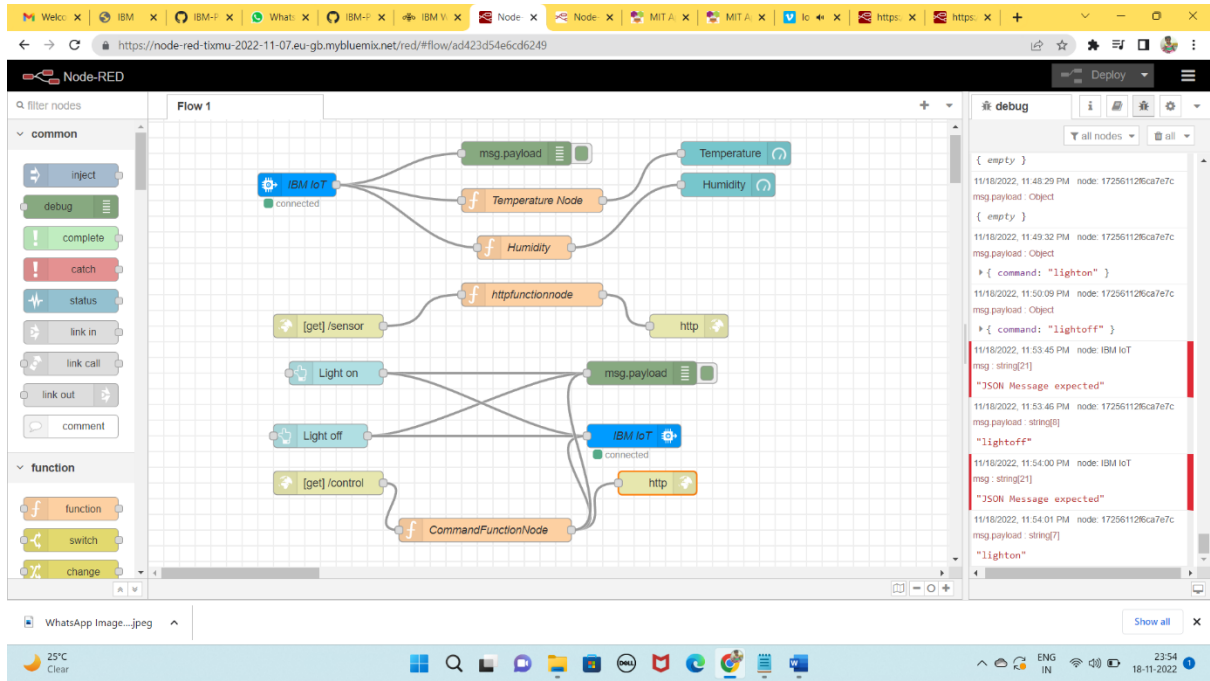


Develop a Web Application Using Node-Red



Node-RED interface showing a flow for controlling lights and monitoring temperature/humidity. The flow includes nodes for IBM IoT, msg.payload, Temperature Node, Humidity, httpfunctionnode, http, Light on, Light off, [get]/sensor, [get]/control, and CommandFunctionNode. The debug console shows messages from the IBM IoT node, including commands like "lighton" and "lightoff".

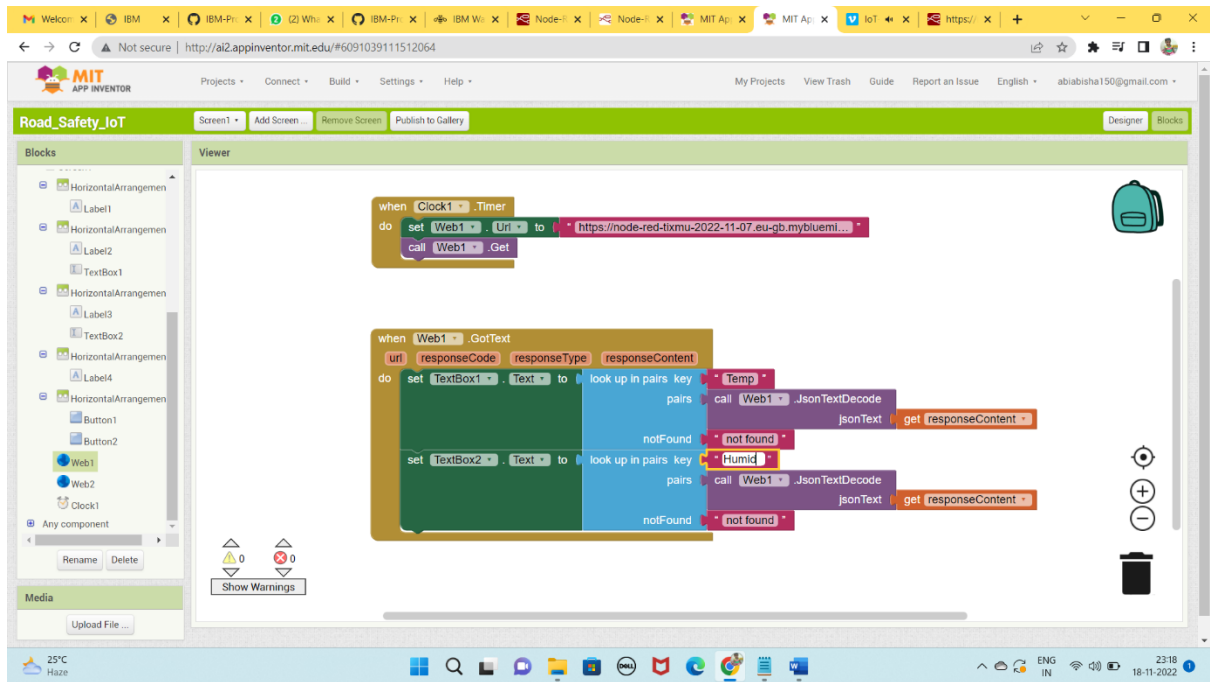


```
graph LR
    IBM_IoT[IBM IoT] --> msg_payload[msg.payload]
    msg_payload --> Temperature[Temperature]
    msg_payload --> Humidity[Humidity]
    msg_payload --> Light_on[Light on]
    msg_payload --> Light_off[Light off]
    msg_payload --> Control[Control]
    Temperature --> Temp_Node[Temperature Node]
    Humidity --> Humidity_Node[Humidity]
    Temp_Node --> httpfunctionnode[httpfunctionnode]
    Humidity_Node --> httpfunctionnode
    httpfunctionnode --> http[http]
    Light_on --> msg_payload2[msg.payload]
    Light_off --> msg_payload2
    Control --> CommandFunctionNode[CommandFunctionNode]
    msg_payload2 --> IBM_IoT2[IBM IoT]
```

Debug Console Log:

```
[empty]
11/18/2022, 11:48:29 PM node: 172561126ca7e7c
msg.payload: Object
{ empty }
11/18/2022, 11:49:32 PM node: 172561126ca7e7c
msg.payload: Object
{ command: "lighton" }
11/18/2022, 11:50:09 PM node: 172561126ca7e7c
msg.payload: Object
{ command: "lightoff" }
11/18/2022, 11:53:45 PM node: IBM IoT
msg: string[21]
"JSON Message expected"
11/18/2022, 11:53:46 PM node: 172561126ca7e7c
msg.payload: string[8]
"lightoff"
11/18/2022, 11:54:00 PM node: IBM IoT
msg: string[21]
"JSON Message expected"
11/18/2022, 11:54:01 PM node: 172561126ca7e7c
msg.payload: string[7]
"lighton"
```

MIT App Inventor interface showing a project named "Road_Safety_IoT". The Blocks palette includes HorizontalArrangemen, Label, TextBox, Button, Web, and Clock. The Viewer shows a logic block for when Web1.GotText, which sets the URL to "https://node-red-txmu-2022-11-07.eu-gb.mybluemix.net/ad423d546cd6249" and calls Web1.Get. The response is processed using look up in pairs, JsonTextDecode, and get(responseContent) to extract temperature and humidity data.



```
when Web1.GotText
do
  set Web1.Uri to "https://node-red-txmu-2022-11-07.eu-gb.mybluemix.net/ad423d546cd6249"
  call Web1.Get

  when Web1.GotText
  do
    set responseCode to responseCode
    set responseType to responseType
    set responseContent to responseContent
    look up in pairs key Temp
    call Web1.JsonTextDecode
    jsonText get(responseContent)
    not found not found
    look up in pairs key Humid
    call Web1.JsonTextDecode
    jsonText get(responseContent)
    not found not found
```

MIT APP INVENTOR

Projects Connect Build Settings Help

My Projects View Trash Guide Report an Issue English abibishah150@gmail.com

Road_Safety_IoT

Screen1 Add Screen Remove Screen Publish to Gallery Designer Blocks

Blocks

- HorizontalArrangemen
- Label1
- HorizontalArrangemen
- Label2
- TextBox1
- HorizontalArrangemen
- Label3
- TextBox2
- HorizontalArrangemen
- Label4
- Button1
- Button2
- Web1
- Web2
- Clock1
- Any component

Rename Delete

Media

Upload File ...

Viewer

when Web1 GotText

uri responseCode responseType responseContent

do

set TextBox1 Text to look up in pairs key Temp

call Web1 JsonTextDecode jsonText get responseContent

notFound not found

set TextBox2 Text to look up in pairs key Humid

call Web1 JsonTextDecode jsonText get responseContent

notFound not found

when Button1 Click

do

set Web2 Uri to https://node-red-tixmu-2022-11-07.eu-gb.myblueml...

call Web2 Get

when Button2 Click

do

set Web2 Uri to https://node-red-tixmu-2022-11-07.eu-gb.myblueml...

call Web2 Get

Show Warnings

25°C Clear

00:04 19-11-2022

11:32 PM | 2.2KB/s

Vo WiFi 92%

Screen1

Weather Monitoring

Temperature

69

Humidity

64

Control

Light On

Light Off

Node-RED interface showing a flow named "Flow 1" with various nodes and a debug console.

Flow 1 Diagram:

- Inputs:** `inject`, `debug`, `complete`, `catch`, `status`, `link in`, `link call`, `link out`, `comment`.
- Function Nodes:** `function`, `switch`, `change`, `range`.
- Flow Logic:**
 - `IBM IoT` (connected) feeds into `msg.payload`, `Temperature Node`, and `Humidity`.
 - `Temperature Node` feeds into `Temperature` and `Humidity`.
 - `Humidity` feeds into `Temperature` and `Humidity`.
 - `httpfunctionnode` feeds into `http`.
 - `[get] /sensor` feeds into `httpfunctionnode`.
 - `Light on` and `Light off` feed into `msg.payload`.
 - `msg.payload` feeds into `IBM IoT` (connected) and `http`.
 - `[get] /control` feeds into `CommandFunctionNode`.
 - `CommandFunctionNode` feeds into `http`.

Debug Console:

```
11/19/2022, 12:03:44 AM node: IBM IoT
msg: string[21]
"JSON Message expected"

11/19/2022, 12:03:45 AM node: 1725611285ca7e7c
msg.payload: string[7]
"lighton"

11/19/2022, 12:03:48 AM node: IBM IoT
msg: string[21]
"JSON Message expected"

11/19/2022, 12:03:48 AM node: 1725611285ca7e7c
msg.payload: string[8]
"lightoff"

11/19/2022, 12:04:14 AM node: IBM IoT
msg: string[21]
"JSON Message expected"

11/19/2022, 12:04:14 AM node: 1725611285ca7e7c
msg.payload: string[8]
"lightoff"
```