

Node-RED interface showing a flow titled "smart agriculture".

**Flow Diagram:**

- Inputs:** "inject" node.
- Processing:** "timestamp" node, "http request" node, and "Weather" node (with "function" nodes for "temp", "humidity", and "pressure").
- Outputs:** "msg.payload" nodes, "Atmospheric temperature", "Soil Humidity", "Soil temperature", "Motor status", "Regional Atmosphere temperature", "Atmosphere humidity", "pressure", "Regional Temperature", "Atmospheric humidity", and "Atmospheric pressure".
- Control:** "Motor ON" and "Motor OFF" nodes.
- Debug:** "debug" node.

**Debug Console:**

```
7/9/2020, 9:31:59 PM node: 17446cef.9e6ed3
msg.payload : Object
  { command: "motoron" }

7/9/2020, 9:32:00 PM node: 17446cef.9e6ed3
msg.payload : Object
  { command: "motoroff" }
```

Windows taskbar at the bottom shows the time as 9:32 PM on 09-Jul-20.

Node-RED

Student Dashboard

Node-RED Dashboard

127.0.0.1:1880/#flow/c4567db6.db7d4

Apps Excel Functions - E... India's Independen... Little Web Hut സത്യവേദപുസ്തകം... Sali Kaceli - Malayalam Bible C++ Program Struc... Open Curriculum -...

Node-RED

filter nodes

smart agriculture

common

- inject
- debug
- complete
- catch
- status
- link in
- link out
- comment

function

- function
- switch

IBM IoT

connected

temperature

humidity

Object tempera

Motor ON

Motor OFF

timestamp

http requ

temp

humid

press

Weather

function

Edit button node

Delete Cancel Done

Properties

Group [Controls] Control panel

Size auto

Icon optional icon

Label Motor ON

Tooltip optional tooltip

Colour optional text/icon color

Background optional background color

When clicked, send:

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

Enabled

debug

all nodes

7/9/2020, 9:31:59 PM node: 17446cef.9e6ed3  
msg.payload : Object  
▶ { command: "motoron" }

7/9/2020, 9:32:00 PM node: 17446cef.9e6ed3  
msg.payload : Object  
▶ { command: "motoroff" }

7/9/2020, 9:32:30 PM node: 17446cef.9e6ed3  
msg.payload : Object  
▶ { command: "motoron" }

9:33 PM 09-Jul-20

Node-RED

Student Dashboard

Node-RED Dashboard

127.0.0.1:1880/#flow/c4567db6.db7d4

filter nodes

smart agriculture

common

- inject
- debug
- complete
- catch
- status
- link in
- link out
- comment

function

- function
- switch

IBM IoT

connected

temperature

humidity

Object tempera

Motor ON

Motor OFF

http requ

timestamp

temp

humid

press

Weather

function

Edit text node

Delete

Cancel

Done

Properties

Group

[Controls] Control panel

Size

auto

Label

Motor status

Value format

{{msg.payload.command}}

Layout

label value

label value

label value

label value

label value

Name

Enabled

debug

all nodes

7/9/2020, 9:31:59 PM node: 17446cef.9e6ed3

msg.payload : Object

{ command: "motoron" }

7/9/2020, 9:32:00 PM node: 17446cef.9e6ed3

msg.payload : Object

{ command: "motoroff" }

7/9/2020, 9:32:30 PM node: 17446cef.9e6ed3

msg.payload : Object

{ command: "motoron" }

9:34 PM 09-Jul-20

Node-RED

Student Dashboard

Node-RED Dashboard

+

127.0.0.1:1880/ui/#/1?socketid=0oReyGHvcRfgIYUTAAAA

☆

Apps Excel Functions - E... India's Independen... Little Web Hut സത്യവേദപുസ്തകം... Sali Kaceli - Malayalam Bible C++ Program Struc... Open Curriculum -...

≡ Controls

Control panel

MOTOR ON

MOTOR OFF

Motor status **motoron**

Windows Taskbar

9:32 PM 09-Jul-20