

Configure The Application To Receive The Data From Cloud

Date	17 November 2022
Team Id	PNT2022TMID28572
Title	Hazardous Area Monitoring for Industrial Plant using IoT

Node red flow created to get values

The screenshot displays the Node-RED web interface in a browser. The main workspace shows a flow named 'Flow 1'. The flow starts with an 'IBM IoT' node (connected) that branches into two paths. The top path goes through a 'cloudant' node and then splits into two 'function' nodes. The first 'function' node outputs to 'temperature' and 'humidity' nodes. The second 'function' node outputs to a 'msg.payload' node. The bottom path goes through a '[get] /sensor' node, then a 'function' node, and finally an 'http' node. Another path goes through a '[get] /control' node, then a 'function' node, and finally an 'http' node. The flow ends with a 'msg.payload' node connected to an 'IBM IoT' node (connected). The left sidebar shows a list of nodes including 'csv', 'html', 'json', 'xml', 'yaml', 'storage' (with 'Db2 in', 'cloudant in', 'dashDB in', 'Db2 out', 'cloudant out', 'dashDB out'), and 'IBM Watson'. The right sidebar shows a 'debug' console with a message: '11/17/2022, 8:28:50 PM node: 53e007648c8dfe1a msg: error "TypeError: Cannot read properties of null (reading 'account'))"'. The bottom status bar shows the system clock as 20:41 on 17-11-2022.

Configuring function to fetch the desired value

The screenshot shows the Node-RED web interface in a browser. The left sidebar contains various node categories: 'filter nodes' (csv, html, json, xml, yaml), 'storage' (Db2 in, cloudant in, dashDB in, Db2 out, cloudant out, dashDB out), and 'IBM Watson'. The main workspace displays a flow with an 'IBM IoT' node connected to a 'function' node. The 'Edit function node' panel is open, showing the following JavaScript code:

```
1 msg.payload = msg.payload.temp;  
2 global.set('t',msg.payload)  
3 return msg;
```

The 'debug' console on the right shows an error message:

```
11/17/2022, 8:28:50 PM node: 53e07648c8dfe1a  
msg: error  
"TypeError: Cannot read properties of  
null (reading 'account')"
```

The screenshot shows the Node-RED web interface with the same flow as the first image. The 'Edit function node' panel is open, showing the following JavaScript code:

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

The 'debug' console on the right shows the same error message as in the first image:

```
11/17/2022, 8:28:50 PM node: 53e07648c8dfe1a  
msg: error  
"TypeError: Cannot read properties of  
null (reading 'account')"
```

App Blocks to render the values and display it in app

The screenshot displays the MIT App Inventor web interface in a browser. The address bar shows the URL `ai2.appinventor.mit.edu/#5439689839214592`. The interface includes a top navigation bar with links for Projects, Connect, Build, Settings, and Help. Below this is a project management bar with buttons for Screen3, Add Screen..., Remove Screen, and Publish to Gallery. The main workspace is divided into three sections: Blocks, Viewer, and a right-hand toolbar.

Blocks Section: The left sidebar shows the 'Built-in' blocks palette. Under the 'Text' category, 'Label1', 'TextBox1', 'Label2', and 'TextBox2' are listed. The 'Screen3' section also shows 'HorizontalArrangement' and 'Label1'.

Viewer Section: The central workspace shows the visual representation of the app. It features two web components, 'Web1' and 'Web2', each with a 'Get' button. The logic blocks for these components are as follows:

- Web1 Logic:**
 - When Clock1.Timer fires, do:
 - set Web1.Uri to `http://169.51.204.239:30739/sensor`
 - call Web1.Get
 - When Web1.GetText fires, do:
 - set TextBox1.Text to look up in pairs key 'temperature' pairs (call Web1.JsonTextDecode, jsonText, get responseContent)
 - set TextBox2.Text to look up in pairs key 'humidity' pairs (call Web1.JsonTextDecode, jsonText, get responseContent)
- Web2 Logic:**
 - When Button1.Click fires, do:
 - set Web2.Uri to `http://169.51.204.239:30739/control?command=alar...`
 - call Web2.Get

The right-hand toolbar contains icons for a backpack, a target, zoom in (+), zoom out (-), and a trash can. A 'Show Warnings' button is located at the bottom left of the workspace.

The bottom of the image shows a Windows taskbar with various application icons, including a search bar, and a system tray displaying the date and time as 23:06 on 17-11-2022.