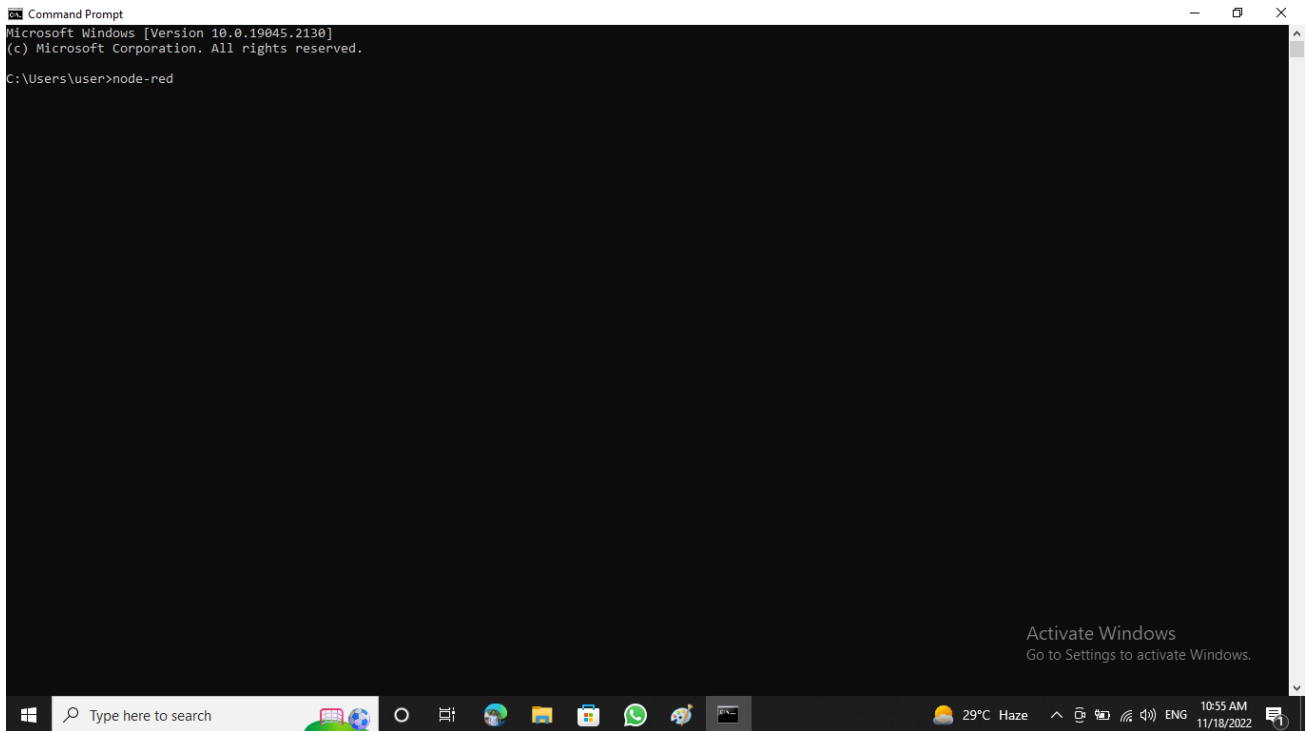


[Type text]

## Project Development Phase Delivery of Sprint 2

<b>DATE</b>	05 NOVEMBER 2022
<b>TEAM ID</b>	PNT2022TMID45387
<b>PROJECT NAME</b>	GAS LEAKAGE DETECTION AND ALERTING system for industries
<b>MAXIMUM MARKS</b>	20 MARKS

***Step1: Install node red and open node red in command prompt***



```
Command Prompt
Microsoft Windows [Version 10.0.19045.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\user>node-red
```

The screenshot shows a Windows Command Prompt window. The title bar reads 'Command Prompt'. The window content shows the standard Windows startup text: 'Microsoft Windows [Version 10.0.19045.2130] (c) Microsoft Corporation. All rights reserved.' followed by the command prompt 'C:\Users\user>'. The command 'node-red' has been entered at the prompt. The Windows taskbar is visible at the bottom, showing the search bar, taskbar icons, and system tray with the date and time '10:55 AM 11/18/2022'.

[Type text]

## Step 2: Select IBM IoT input in node

The screenshot shows the Node-RED web interface in a browser. The main workspace displays a flow named 'Flow 1'. On the left sidebar, the 'common' category is selected, showing various nodes like inject, debug, complete, catch, status, link in, link call, link out, and comment. The 'function' category is also visible. In the workspace, an 'IBM IoT' node (labeled 'connected') is connected to two function nodes: 'Temperature node' and 'Humidity node'. These function nodes are then connected to 'msg.payload' and 'Temperature'/'Humidity' output nodes respectively. The right sidebar shows a 'debug' panel with 'all nodes' selected. The bottom of the screen shows a Windows taskbar with the date and time as 11:08 AM on 11/18/2022.

## Step 3: In IBM Watson platform, go to apps

The screenshot shows the IBM Watson IoT Platform 'Browse Devices' page. The page has a dark sidebar with navigation icons. The main content area is titled 'Browse Devices' and includes tabs for 'All Devices' and 'Diagnose'. Below the tabs, there is a search bar and a 'Device Simulator' toggle. A table lists the devices, with one device shown: 'trainingid' with status 'Disconnected', device type 'ayyanar1234', class ID 'Device', and date added '16 Nov 2022 11:25'. The bottom of the screen shows a Windows taskbar with the date and time as 9:15 AM on 11/18/2022.

Device ID	Status	Device Type	Class ID	Date Added
trainingid	Disconnected	ayyanar1234	Device	16 Nov 2022 11:25

[Type text]

## Step 4: Click on generate API keys

The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. The 'Browse' tab is active, displaying the 'Browse Devices' page. A sidebar on the left contains icons for various functions. The main content area shows a table of devices. The table has columns for 'Device ID', 'Status', 'Device Type', 'Class ID', and 'Date Added'. One device is listed with ID 'trainingid', status 'Disconnected', and device type 'ayyanar1234'. Below the table, there is a search bar and a 'Device Simulator' toggle. The bottom of the screen shows a Windows taskbar with the date and time as 11:18 AM on 11/18/2022.

Device ID	Status	Device Type	Class ID	Date Added
trainingid	Disconnected	ayyanar1234	Device	16 Nov 2022 11:25

## Step5: Click gauge from the dashboard node and fill the details

The screenshot shows the Node-RED interface. The left sidebar contains a list of nodes, including 'inject', 'debug', 'complete', 'catch', 'status', 'link in', 'link call', 'link out', 'comment', and 'function'. The main workspace shows a flow with a 'debug' node and a 'function' node. The 'Edit ibmiot in node' configuration panel is open, showing the following settings:

- Authentication: API Key
- API Key: ibmiot 1
- Input Type: Device Event
- Device Type: All or ayyanar1234
- Device Id: All or trainingid
- Event: All or +
- Format: All or json
- QoS: 0
- Name: IBM IoT

The bottom of the screen shows a Windows taskbar with the date and time as 11:22 AM on 11/18/2022.

[Type text]

## Step 6: Add functions to the gauge

The screenshot shows the Node-RED web interface in a browser. The top bar includes tabs for 'Node-RED : node-red-cgqlw-202...', 'Service Details - IBM Cloud', and 'IBM Watson IoT Platform'. The address bar shows the URL 'node-red-cgqlw-2022-11-10-eu-gb.mybluemix.net/red/#flow/cfc49c3133b37395'. The main workspace displays a flow named 'Flow 1'. On the left, the 'common' node palette is visible, showing nodes like 'inject', 'debug', 'complete', 'catch', 'status', 'link in', 'link call', 'link out', and 'comment'. The 'function' node palette is also visible. In the workspace, an 'IBM IoT' node (labeled 'connected') is connected to two function nodes: 'Temperature node' and 'Humidity node'. These function nodes are then connected to 'Temperature' and 'Humidity' gauge nodes respectively. A 'msg.payload' node is also connected to the 'Temperature' gauge. The right sidebar shows the 'debug' console with 'all nodes' selected. The Windows taskbar at the bottom shows the date and time as 11:22 AM on 11/18/2022.

## Step 7: Add another gauge and functions

The screenshot shows the Node-RED web interface with the 'Edit gauge node' dialog box open. The dialog box has a 'Delete' button, 'Cancel' and 'Done' buttons, and a 'Properties' tab. The 'Properties' tab shows the following settings: 'Group' is '[Home] Default', 'Size' is 'auto', 'Type' is 'Gauge', 'Label' is 'Temperature', 'Value format' is '{{value}}', 'Units' is 'C', 'Range' is 'min 0 max 100', 'Colour gradient' is a gradient from green to yellow to red, and 'Sectors' are '0', 'optional', 'optional', and '100'. The 'Enabled' checkbox is checked. The background shows the same flow as in Step 6, but the 'Temperature' gauge node is now highlighted. The Windows taskbar at the bottom shows the date and time as 11:23 AM on 11/18/2022.

[Type text]

### Step8: finally add alarm on and off buttons to IBM iot and debug.step

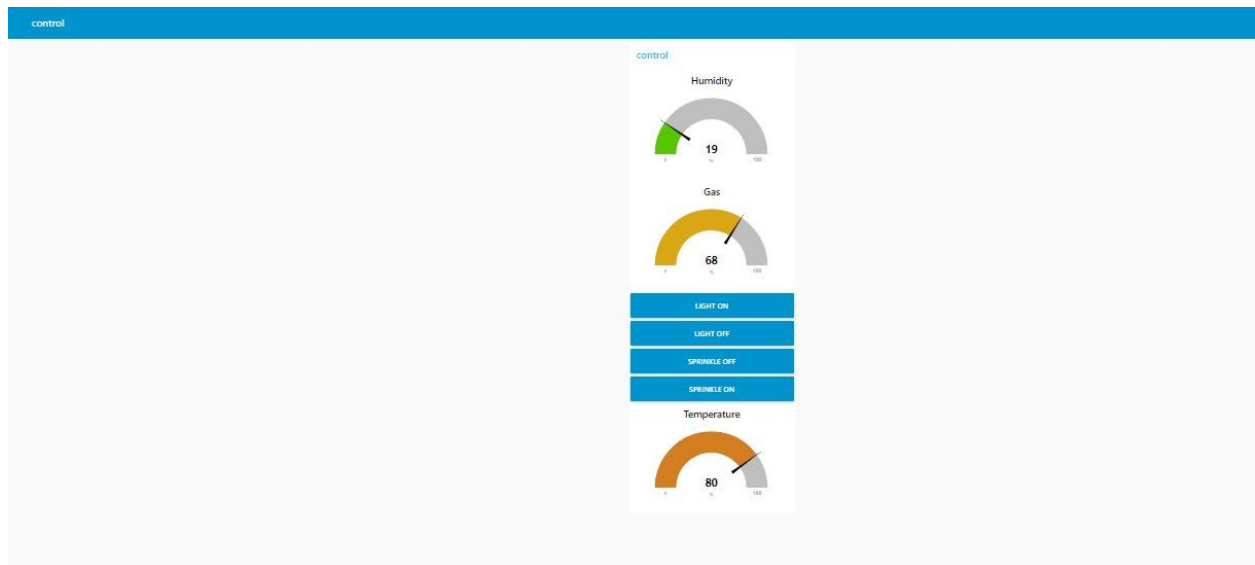
The screenshot shows the Node-RED web interface in a browser. The left sidebar contains a 'filter nodes' search bar and a 'dashboard' section with various UI widgets like buttons, dropdowns, switches, sliders, numeric inputs, text inputs, and date pickers. The main workspace displays two flows. Flow 1 includes an 'IBM IoT' node connected to 'Temperature node' and 'Humidity node', which are then connected to 'msg.payload' and 'msg.topic' nodes. Flow 2 includes 'Alarm on', 'Alarm off', and 'Sprinkler on' buttons connected to a 'function' node, which is then connected to a 'msg.payload' node. The right sidebar shows a 'debug' console with a list of messages, including 'temp: undefined, Humidity: undefined' and 'command: "Alarm on"', along with their respective timestamps and node IDs.

### Step9: Output from node red

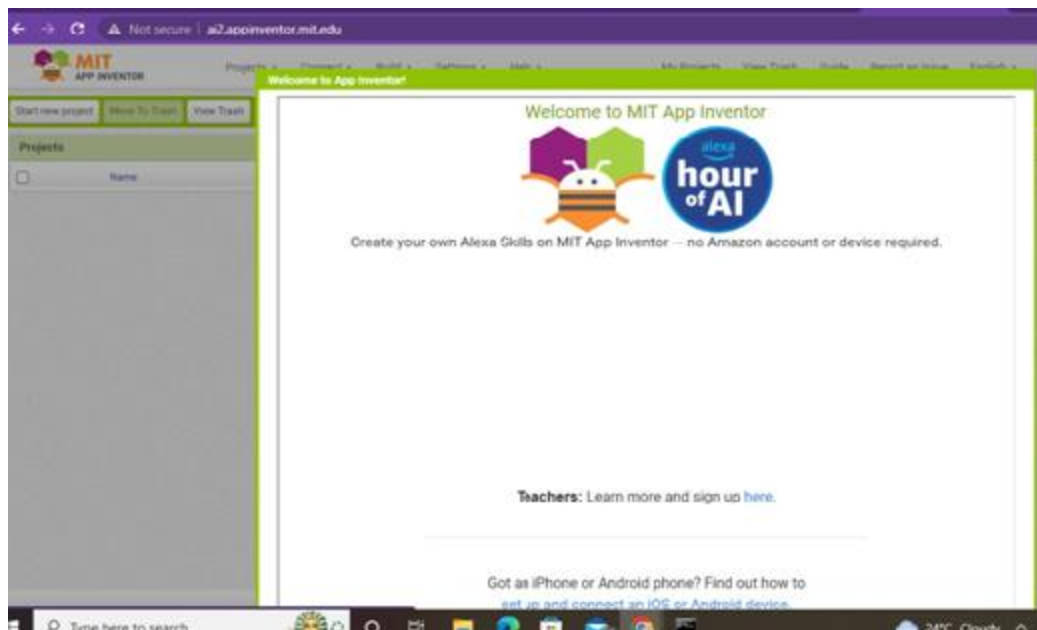
The screenshot shows a web dashboard with a blue header bar labeled 'Home'. The main content area features two circular gauges. The top gauge is labeled 'Humidity' and shows a value of 89 units on a scale from 0 to 100. The bottom gauge is labeled 'Temperature' and shows a value of 50°C on a scale from 0 to 100. The gauges are styled with orange and yellow segments. In the bottom right corner, there is a 'Activate Windows' watermark with the text 'Go to Settings to activate Windows.' The browser's taskbar at the bottom shows the time as 11:24 AM on 11/18/2022.

### Step10: Output with light on and off button

[Type text]



***Step 11: Login to MIT app inventor and design***



[Type text]

## Step 12: The Output

