

## SPRINT 2

TEAM ID	PNT2022TMID36752
PROJECT NAME	REAL-TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM
TEAM LEADER	DHARANIKUMAR.B
TEAM MEMBER 1	HARI.N
TEAM MEMBER 2	JAYACHANDRAN.R
TEAM MEMBER 3	JOHN YABAZ.S
TEAM MEMBER 4	SURESH.S

## CODE

<https://wokwi.com/projects/348635341987512915>

The screenshot displays the Wokwi web IDE interface. On the left, the 'sketch.ino' file is open, showing the following code:

```
1 #include <WiFi.h> //library for wifi
2 #include <PubSubClient.h> //library for MQTT
3 #include "DHT.h" // Library for dht11
4 #define DHTPIN 15 // what pin we're connected to
5 #define DHTTYPE DHT22 // define type of sensor DHT 11
6 #define LED 2
7 DHT dht (DHTPIN, DHTTYPE); // creating the instance by passing pin
8
9 void callback(char* subscribetopic, byte* payload, unsigned int pa
10
11 //-----credentials of IBM Accounts-----
12
13 #define ORG "910vsj" //IBM ORGANITION ID
14 #define DEVICE_TYPE "demo123" //Device type mentioned in ibm watson
15 #define DEVICE_ID "demo123" //Device ID mentioned in ibm watson IOT
16 #define TOKEN "demo1234" //Token
17 String data3;
18 float t,h;
19
20
21 //----- Customise the above values -----
22 char server[] = ORG ".messaging.internetofthings.ibmcloud.com"; //
23 char publishTopic[] = "iot-2/evt/Data/fmt/json"; // topic name and
24 char subscribetopic[] = "iot-2/cmd/command/fmt/String"; // cmd REF
25 char authMethod[] = "use-token-auth"; // authentication method
```

On the right, the 'Simulation' window shows a visual representation of the hardware. It includes an ESP32 development board, a red LED connected to pin 2 through a resistor, and a DHT22 digital temperature and humidity sensor module connected to pins 15 and ground.

The bottom of the screenshot shows a Windows taskbar with the search bar and various application icons. The system clock indicates the date is 19 November 2022, Saturday, at 08:55.

<https://node-red-eheqi-2022-11-12.eu-gb.mybluemix.net/red/#flow/366dfb6a751f52c5>

The screenshot displays a Node-RED web interface in a browser. The main workspace shows a flow named 'Flow 1' with the following components:

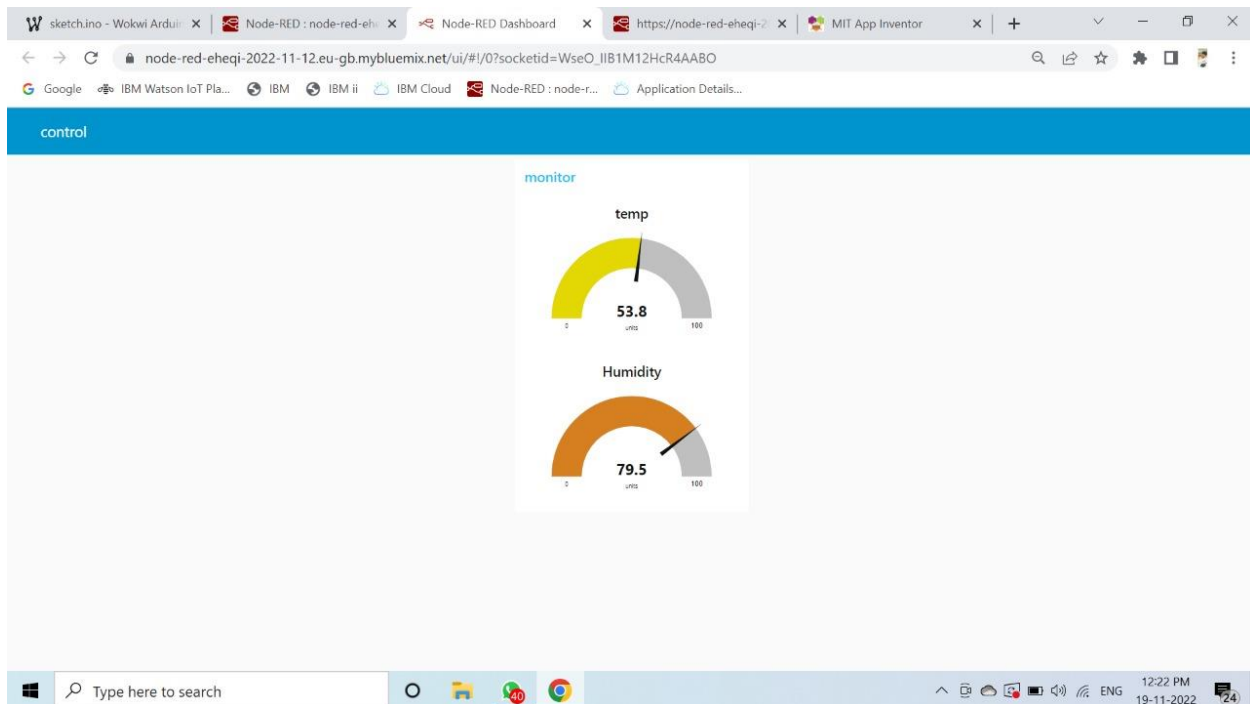
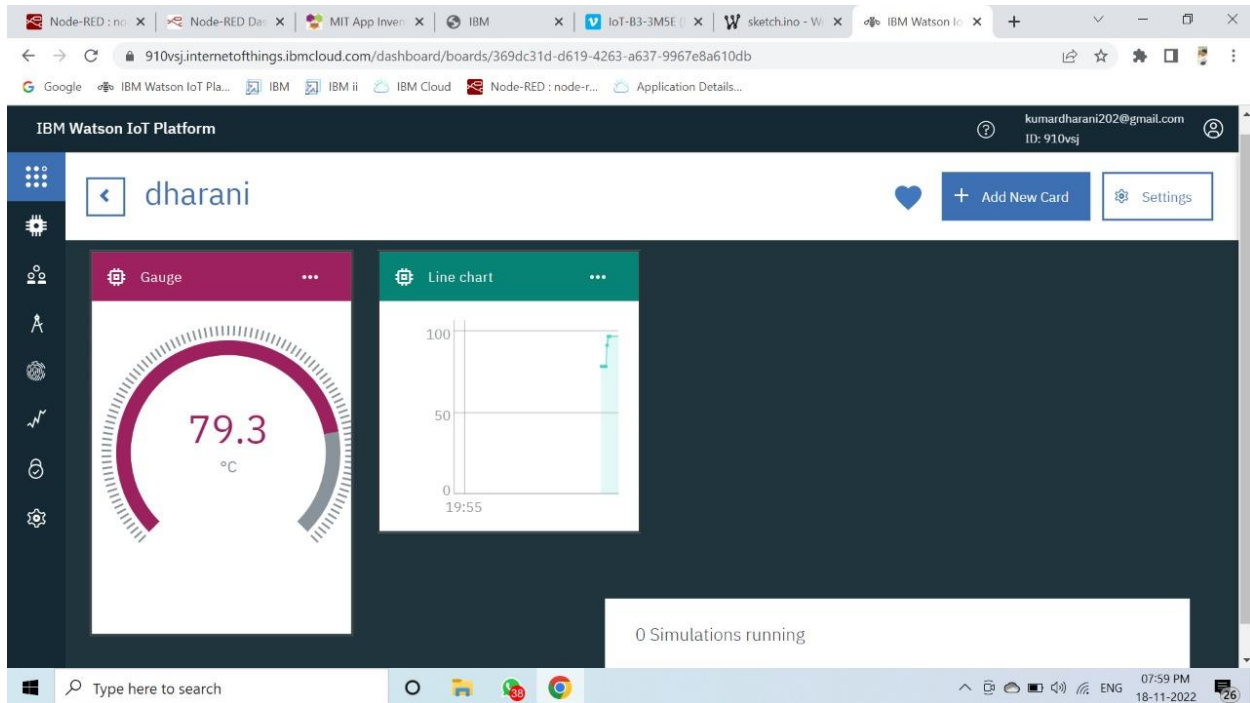
- iot-wot** node (connected) connected to a **msg.payload** node.
- A **function** node connected to the **msg.payload** node.
- Two more **function** nodes connected to the first **function** node.
- The first **function** node is connected to a **Humidity** node.
- The second **function** node is connected to a **temperature** node.
- A **[get]/sensor** node connected to an **http** node.
- The **http** node is connected to a **function** node.

The right-hand side of the interface shows a **debug** console with the following log entries:

```
let 2fypdemo123fdbdemo123evlDataFnfnjgon: msg.payload: Object
* { temperature: 38.9, humidity: 69.5 }
11/18/2022, 8:37:31 PM node: 2da5e920b1cd029e
function: (error)
"TypeError: Cannot read properties of undefined
(reading 'temp')"
```

The bottom of the image shows a Windows taskbar with the search bar and system tray icons.

**OUTPUT**



## URL REFERENCE

<https://wokwi.com/projects/348674569513468499>