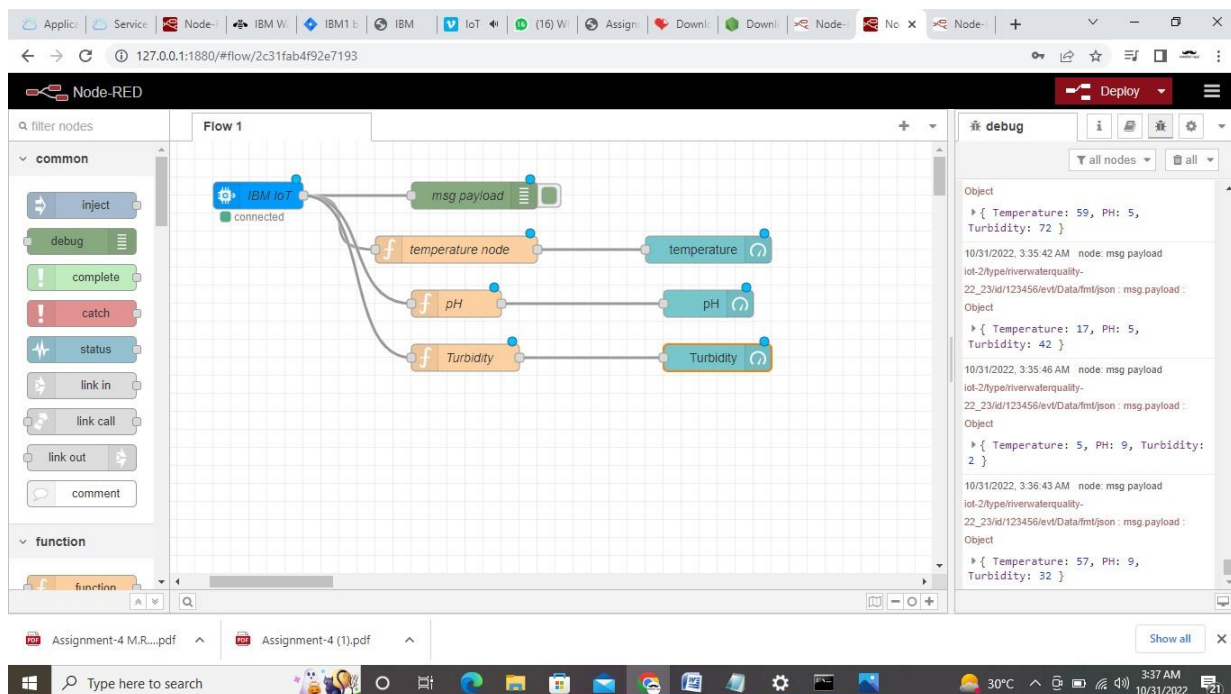


**Team id:** PNT2022TMID05726

**Project title:** Real-Time River Water Quality Monitoring and Control System

## USE DASHBOARD NODES FOR CREATING UI

- The dashboard nodes in Node-red has been used to design the flow.
- The design flow can be used to create UI.



Node-RED interface showing a flow for water quality monitoring. The flow includes an IBM IoT node connected to a msg payload node, which then branches into three function nodes: temperature, pH, and Turbidity. These function nodes are connected to corresponding output nodes (temperature, pH, Turbidity). Below this, there is a [get] /sensor node connected to an http function node, which is connected to an http node. At the bottom, there are two input nodes: Allow water flow and Restrict water flow, both connected to an IBM IoT node and a msg payload node.

Debug console output:

```
10/31/2022, 11:50:51 PM node: msg payload
iot-2/type/riverwaterquality-
22_23/id/123456/ev/Data/fmt/json : msg.payload :
Object
  { Temperature: 38, PH: 11,
    Turbidity: 17 }
10/31/2022, 11:50:54 PM node: msg payload
iot-2/type/riverwaterquality-
22_23/id/123456/ev/Data/fmt/json : msg.payload :
Object
  { Temperature: 55, PH: 3,
    Turbidity: 73 }
10/31/2022, 11:50:58 PM node: msg payload
iot-2/type/riverwaterquality-
22_23/id/123456/ev/Data/fmt/json : msg.payload :
Object
  { Temperature: 28, PH: 5,
    Turbidity: 50 }
10/31/2022, 11:51:01 PM node: msg payload
iot-2/type/riverwaterquality-
22_23/id/123456/ev/Data/fmt/json : msg.payload :
Object
  { Temperature: 48, PH: 8,
    Turbidity: 65 }
```

Node-RED interface showing a flow for water quality monitoring. The flow includes an IBM IoT node connected to a msg payload node, which then branches into three function nodes: Temperature, Ph, and Turbidity. These function nodes are connected to corresponding output nodes (Temperature, Ph, Turbidity). Below this, there is a [get] /sensor node connected to an http function node, which is connected to an http node. At the bottom, there are two input nodes: Light on and Light off, both connected to an IBM IoT node and a msg payload node. There is also a [get] /control node connected to an http node.

Debug console output:

```
10/30/2022, 11:28:42 PM node: adfaeb10e97c8c7c
iot-2/type/riverwaterquality-
22_23/id/123456/ev/Data/fmt/json : msg.payload :
Object
  { Temperature: 68, PH: 11,
    Turbidity: 62 }
10/30/2022, 11:28:45 PM node: adfaeb10e97c8c7c
iot-2/type/riverwaterquality-
22_23/id/123456/ev/Data/fmt/json : msg.payload :
Object
  { Temperature: 12, PH: 6,
    Turbidity: 26 }
10/30/2022, 11:28:48 PM node: adfaeb10e97c8c7c
iot-2/type/riverwaterquality-
22_23/id/123456/ev/Data/fmt/json : msg.payload :
Object
  { Temperature: 51, PH: 2,
    Turbidity: 10 }
10/30/2022, 11:28:51 PM node: adfaeb10e97c8c7c
iot-2/type/riverwaterquality-
22_23/id/123456/ev/Data/fmt/json : msg.payload :
Object
  { Temperature: 12, PH: 3,
    Turbidity: 96 }
```