

## Project Development Phase

### Project Development Template (Sprint-4)

Date	17 November 2022
Team ID	PNT2022TMID29879
Project Name	Project - Real Time River Water Monitoring and Control system
Maximum Marks	Marks

## IOT DEVICE CREATION:

The screenshot displays the IBM Watson IoT Platform interface. The main content area shows the details for a device named 'waterdevice1', which is currently 'Disconnected'. The device is of type 'waterdevicetype1' and was added on 'Oct 25, 2022 9:34 AM'. Below this, the 'Recent Events' tab is selected, showing a live stream of data. The events table lists five entries, each representing a sensor reading for pH and Turbidity.

Event	Value	Format	Last Received
IoT Sensor	{\"pHvalue\":2,\"Turbidity\":328}	json	a few seconds ago
IoT Sensor	{\"pHvalue\":12,\"Turbidity\":193}	json	a few seconds ago
IoT Sensor	{\"pHvalue\":8,\"Turbidity\":200}	json	a few seconds ago
IoT Sensor	{\"pHvalue\":2,\"Turbidity\":281}	json	a few seconds ago
IoT Sensor	{\"pHvalue\":4,\"Turbidity\":345}	json	a few seconds ago

# NODE-RED OUTPUT:

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

- Inputs:** A `[get] /sensor` node connects to a `function` node (labeled 'pH node' and 'Turbidity node').
- Processing:** The `function` node outputs to two separate `msg.payload` nodes. One `msg.payload` node connects to a `pHvalue` node, and the other connects to a `Turbidity` node.
- Control Logic:** A `[get] /control` node connects to a `function` node (labeled 'httpfunction node'). This node connects to an `http` node, which then connects to an `IBM IoT` node (labeled 'connected').
- Motor Control:** The `IBM IoT` node connects to `motoron` and `motoroff` nodes. These nodes connect to `msg.payload` nodes, which then connect to an `http` node.

The right sidebar shows the 'debug' console with the following log entries:

```
11/15/2022, 10:30:35 PM node: 96ec1d377c31b4cc  
iot-  
2/type/waterdevicetype1/id/waterdevicid1/evt/IoTSensor/fi  
: msg.payload : Object  
  { pHvalue: 11, Turbidity: 577 }  
11/15/2022, 10:30:35 PM node: 96ec1d377c31b4cc  
iot-  
2/type/waterdevicetype1/id/waterdevicid1/evt/IoTSensor/fi  
: msg.payload : Object  
  { pHvalue: 13, Turbidity: 193 }  
11/15/2022, 10:30:35 PM node: 96ec1d377c31b4cc  
iot-  
2/type/waterdevicetype1/id/waterdevicid1/evt/IoTSensor/fi  
: msg.payload : Object  
  { pHvalue: 6, Turbidity: 850 }  
11/15/2022, 10:30:35 PM node: 96ec1d377c31b4cc  
iot-  
2/type/waterdevicetype1/id/waterdevicid1/evt/IoTSensor/fi  
: msg.payload : Object  
  { pHvalue: 12, Turbidity: 679 }  
11/15/2022, 10:30:35 PM node: 96ec1d377c31b4cc  
iot-  
2/type/waterdevicetype1/id/waterdevicid1/evt/IoTSensor/fi  
: msg.payload : Object  
  { pHvalue: 14, Turbidity: 556 }
```

The bottom status bar shows the system temperature as 25°C, 'Partly cloudy', and the time as 22:30 on 15-11-2022.

# MIT APPLICATION:

Service Details - IBM x Node-RED : node-red x IBM Watson IoT Platf x MIT App Inventor x MIT App Inventor x Node-RED Dashboar x https://node-red-jkab x +

Not secure | ai2.appinventor.mit.edu/#5662922811244544

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weather Screen1 Add Screen ... Remove Screen Publish to Gallery Designer Blocks

Palette Search Components... User Interface Button ? CheckBox ? DatePicker ? Image ? Label ? ListPicker ? ListView ? Notifier ? PasswordTextBox ? Slider ? Spinner ? Switch ? TextBox ? TimePicker ? WebView ?

Viewer ☐ Display hidden components in Viewer Phone size (505,320) v

Screen1

Water Monitoring and control

pH value

Turbidity

CONTROL

MOTOR ON MOTOR OFF

Components Screen1 HorizontalArrangement1 Label1 HorizontalArrangement2 Label2 TextBox1 HorizontalArrangement3 Label3 TextBox2 HorizontalArrangement4 Label4 HorizontalArrangement5 Button1 Button2 Web1 Web2 Clock1

Media

Properties Screen1 AboutScreen AccentColor Default AlignHorizontal Left : 1 AlignVertical Top : 1 AppName weather BackgroundColor Default BackgroundImage None... BigDefaultText BlocksToolkit All CloseScreenAnimation Default DefaultFileScope App

25°C Partly cloudy

22:30 15-11-2022

