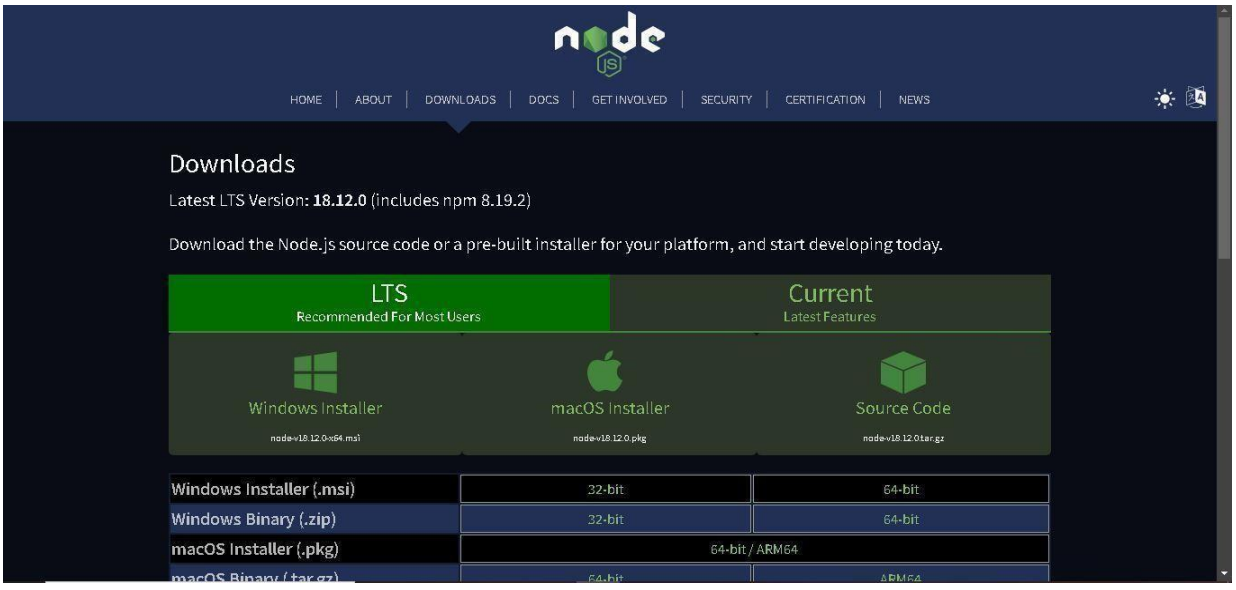
SPRINT 2

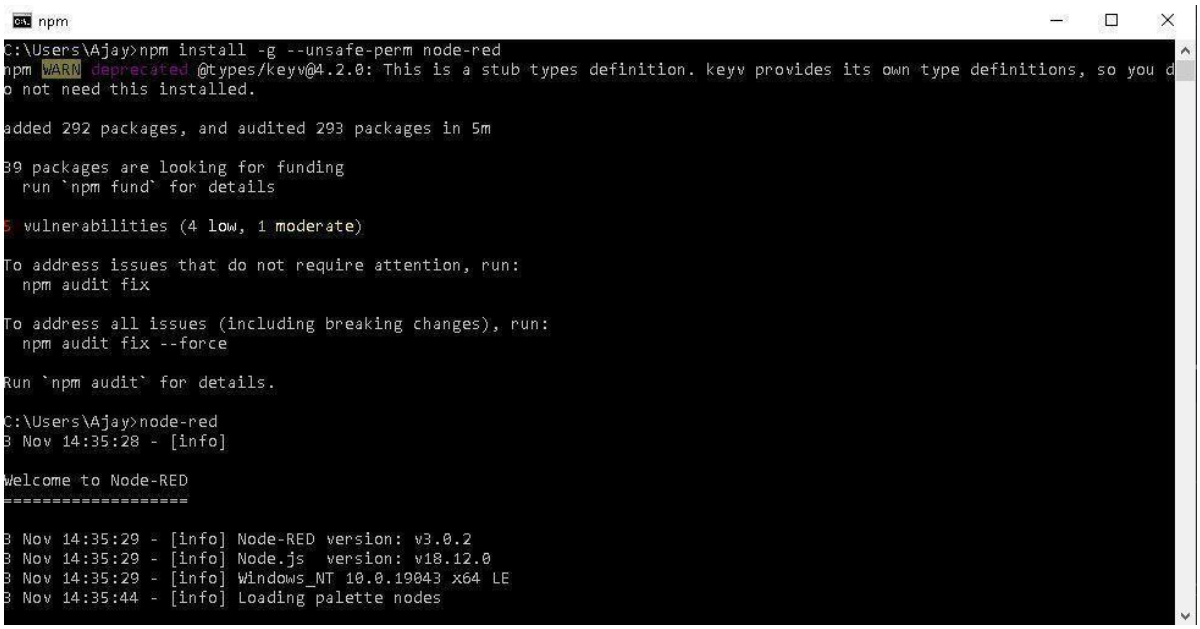
Date	November 10, 2022
Team ID	PNT2022TMID26105
Project Name	Real-Time River Water Quality Monitoring and Control System
Maximum Mark	

The following steps are involved:

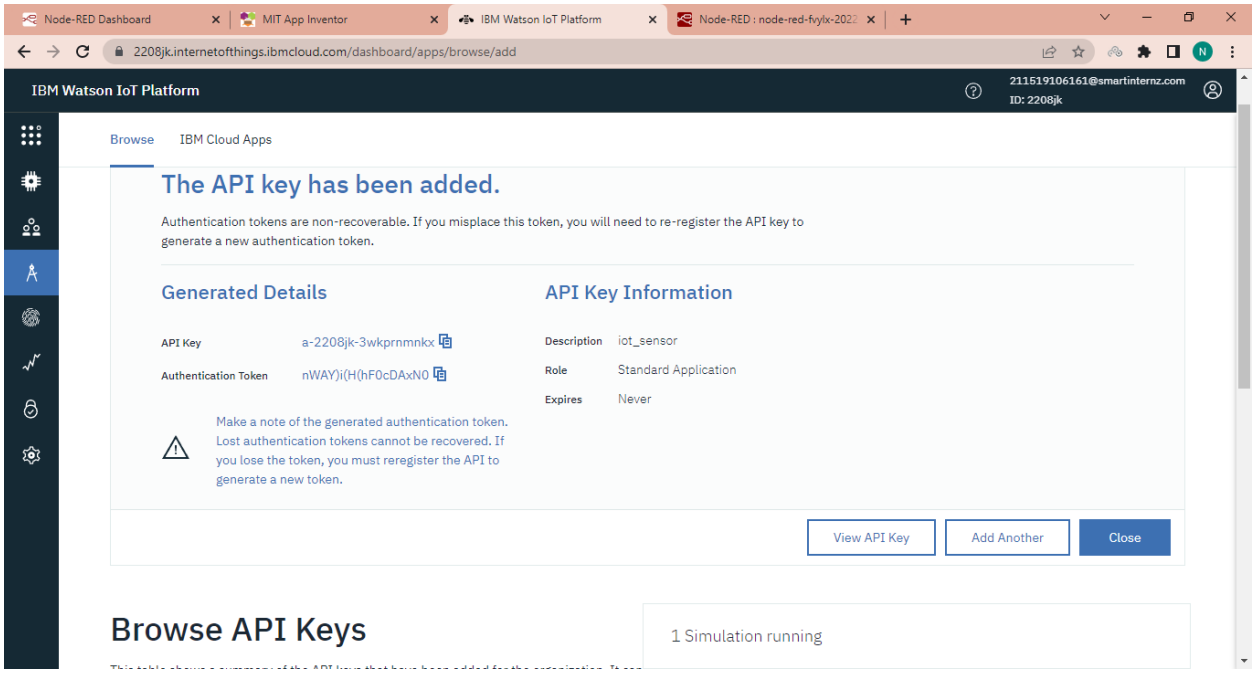
STEP 1: Download and Install node.js.



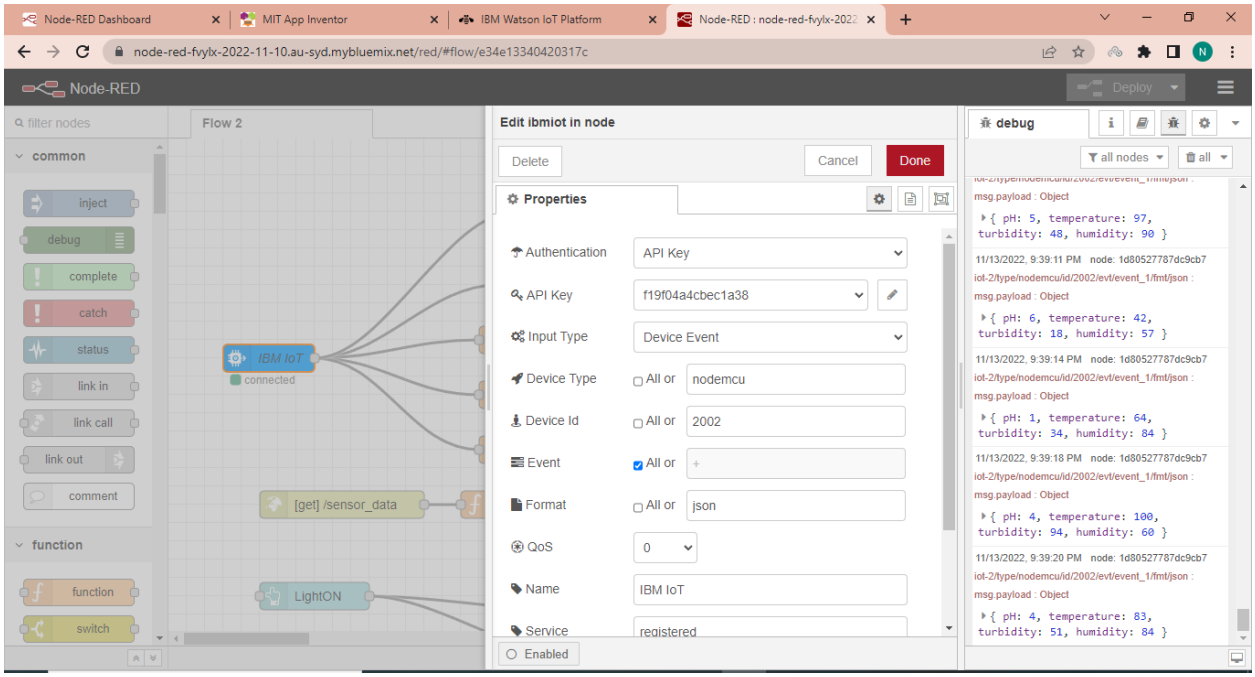
STEP 2: Setup node.js and configure command prompt for error check. Open node-red from the generated link.



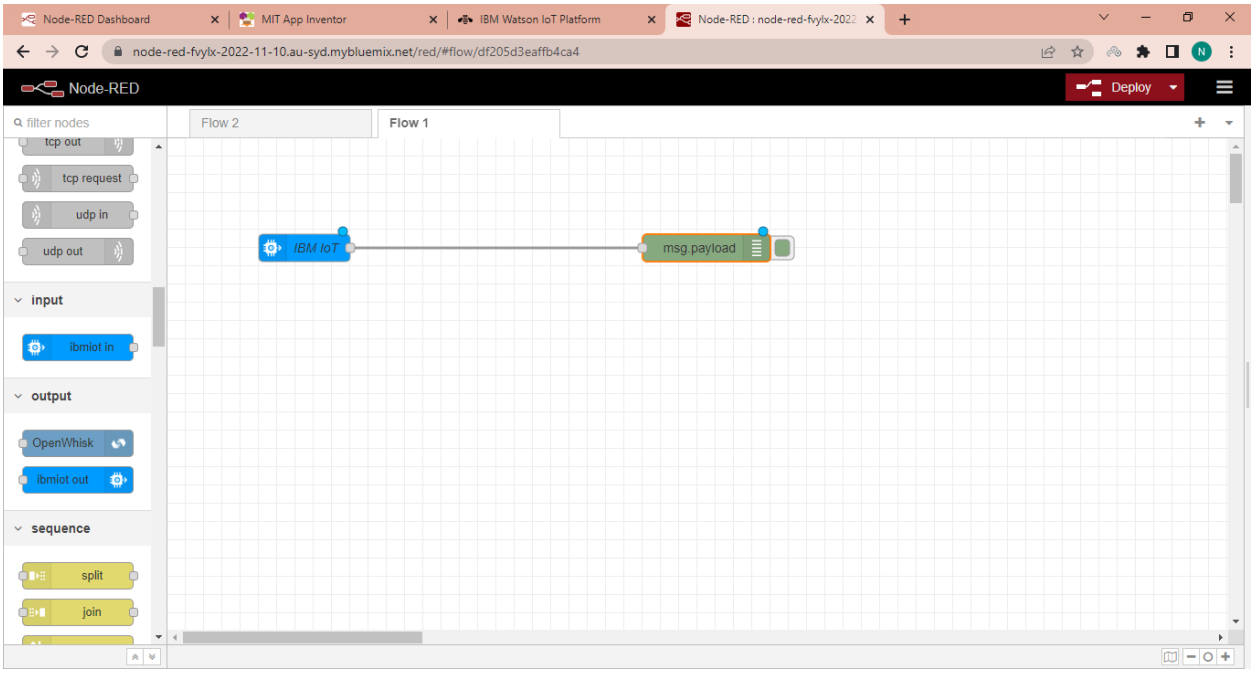
STEP 3: Generating API key and Authentication token.



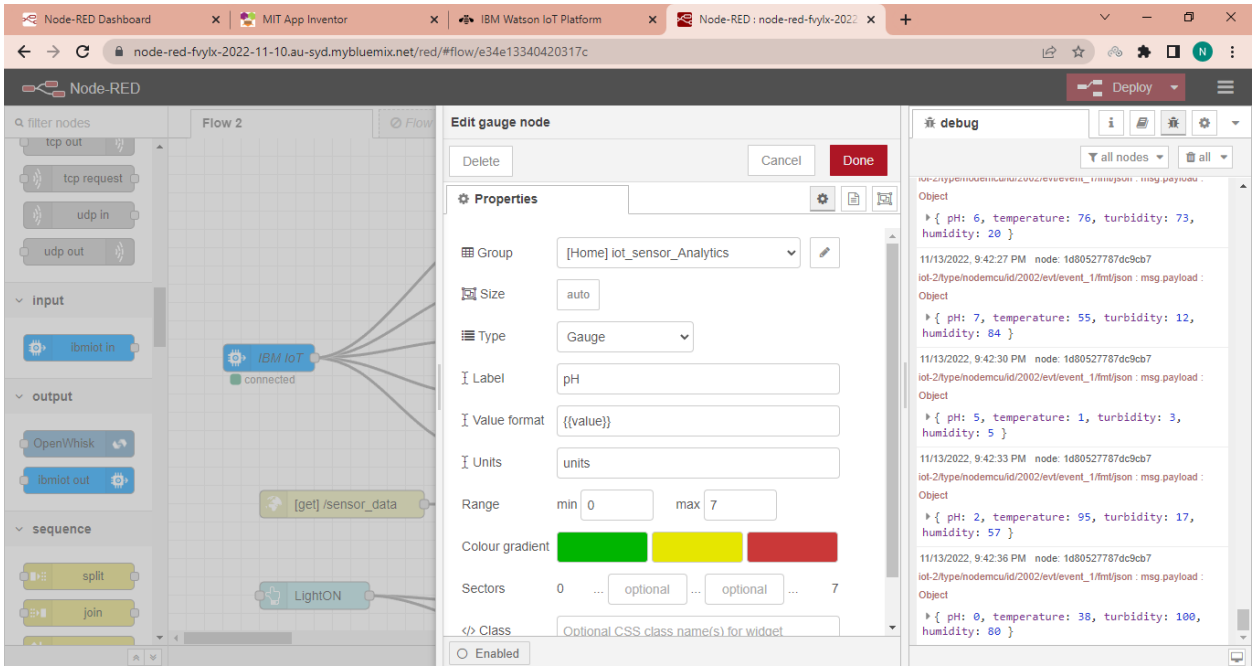
STEP 4: Edit Ibmiot in node.

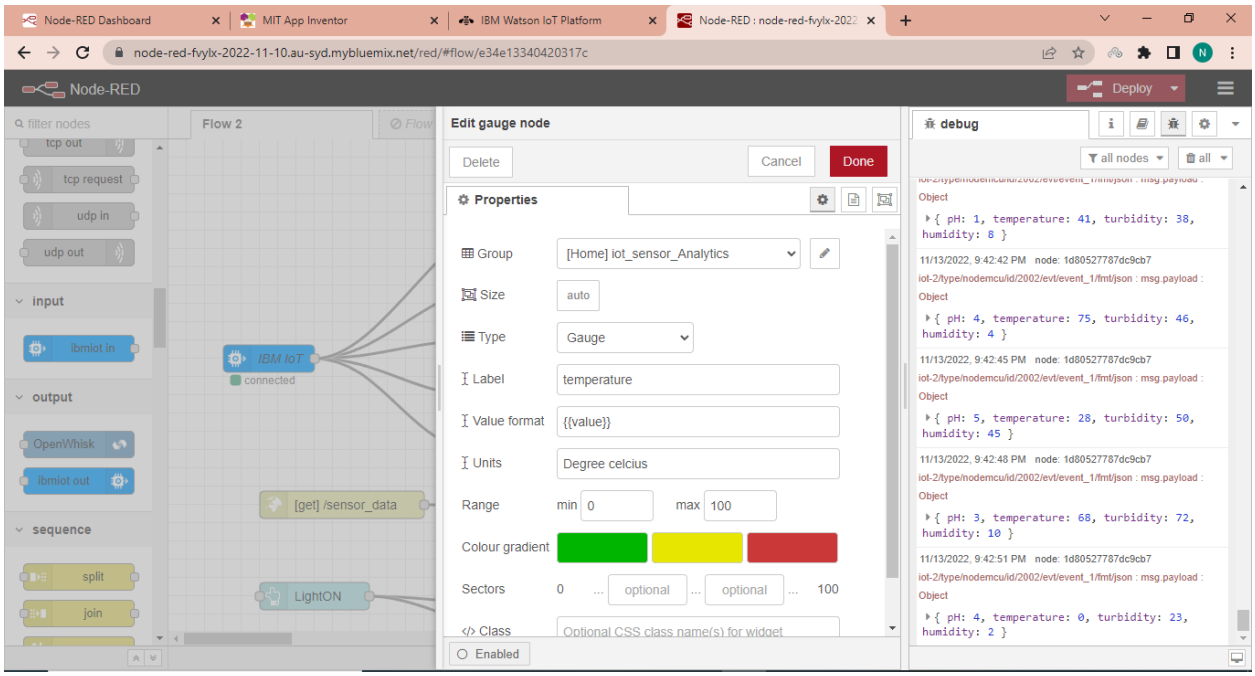


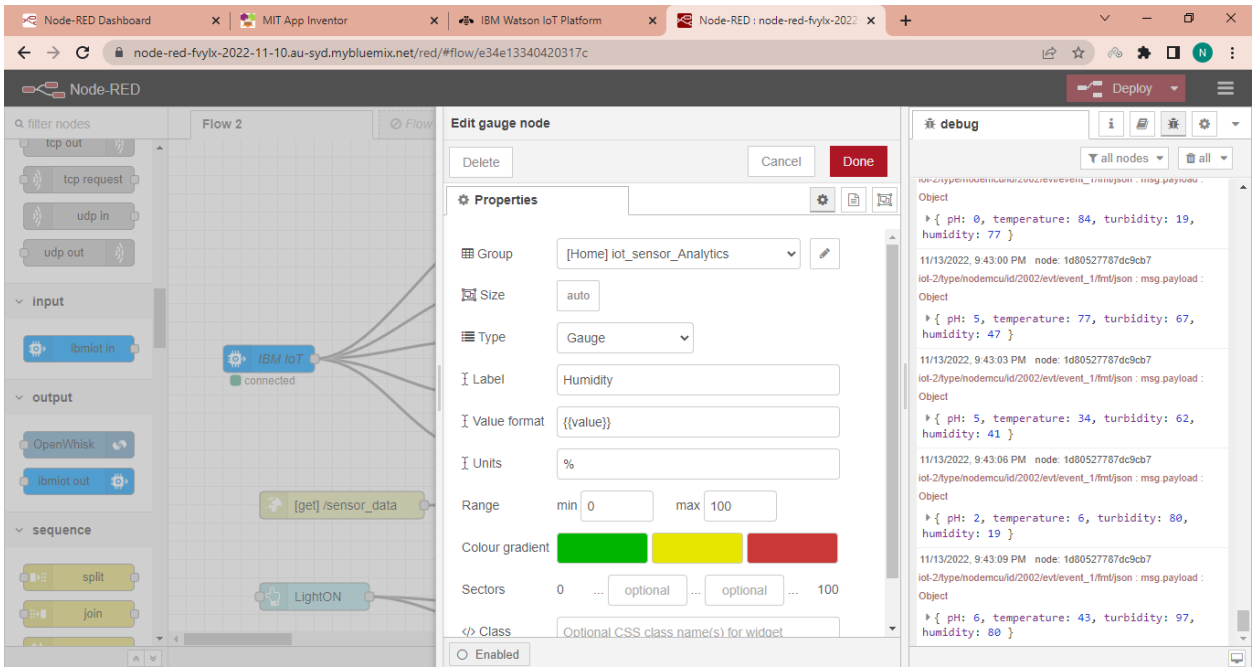
STEP 5: Connect Ibmiot in and debug 1 and deploy.

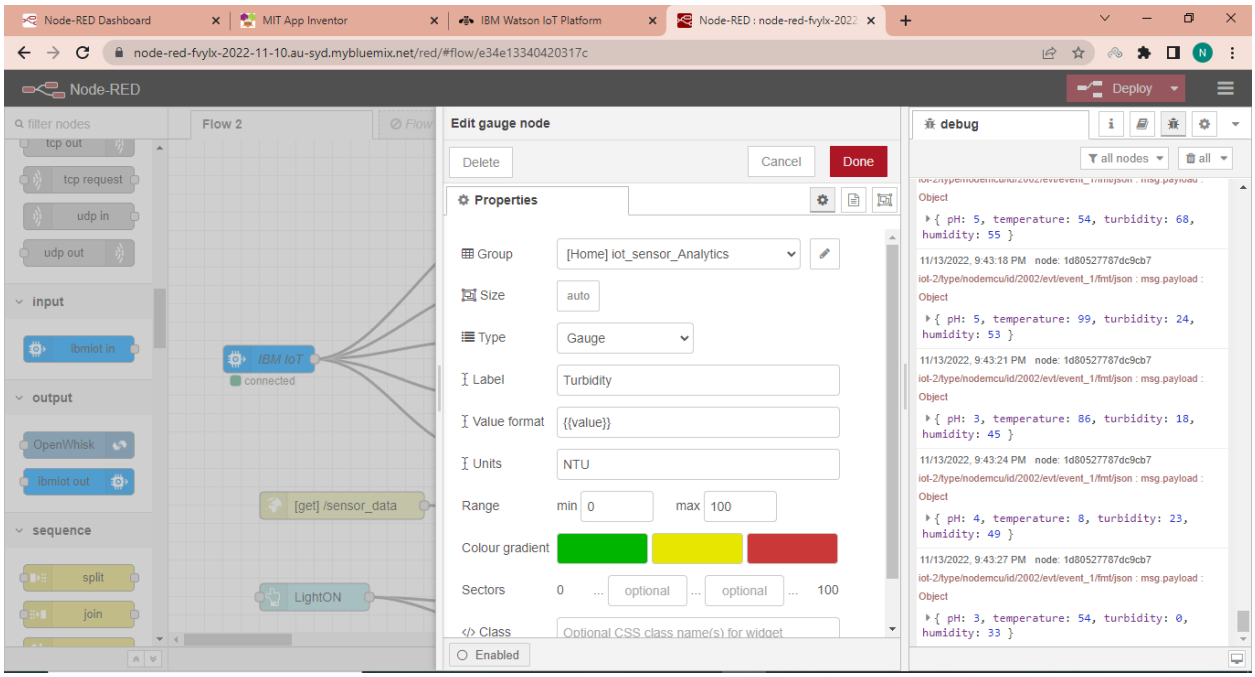


STEP 6: Edit gauge node (here the gauge nodes are named as Temperature, pHand Turbidity).

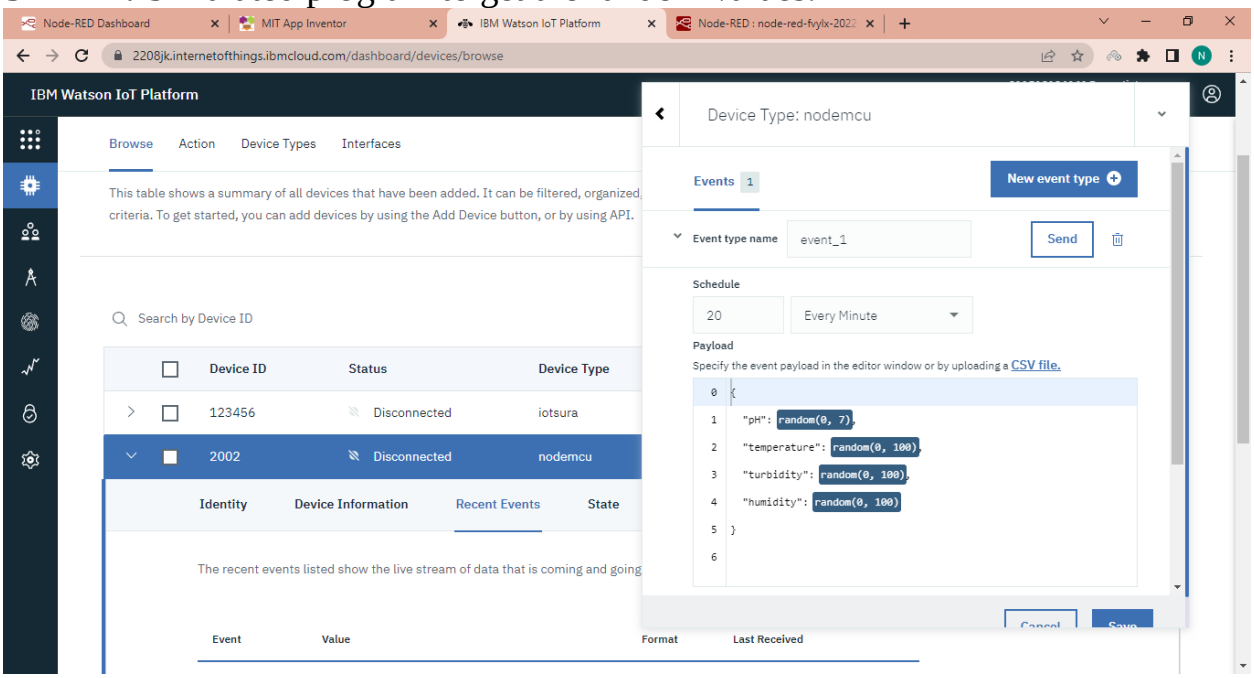




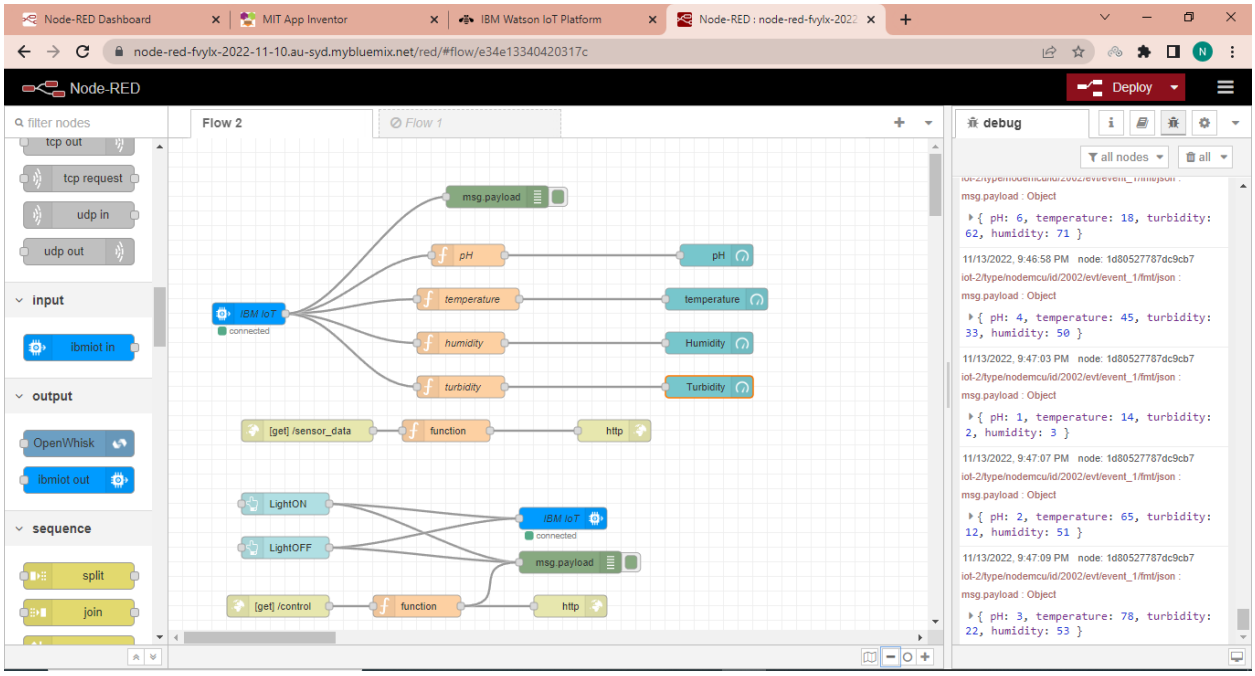

Node-RED Dashboard
MIT App Inventor
IBM Watson IoT Platform
Node-RED : node-red-fvylx-2022
node-red-fvylx-2022-11-10.au-syd.mybluemix.net/red/#flow/e34e13340420317c
Node-RED
Deploy
Flow 2
Edit gauge node
Delete
Cancel
Done
Properties
Group
[Home] iot_sensor_Analytics
Size
auto
Type
Gauge
Label
Humidity
Value format
{{value}}
Units
%
Range
min 0
max 100
Colour gradient
Sectors
0 ... optional ... optional ... 100
Class
Optional CSS class name(s) for widget
Enabled
debug
all nodes
all
tcp out
tcp request
udp in
udp out
input
ibmiot in
output
OpenWhisk
ibmiot out
sequence
split
join
IBM IoT
connected
[get] /sensor_data
LightON
Object
{ pH: 0, temperature: 84, turbidity: 19, humidity: 77 }
11/13/2022, 9:43:00 PM node: 1d80527787dc9cb7
iot-2/type/nodemcu/id/2002/evt/event_1/fmt/json : msg.payload : Object
{ pH: 5, temperature: 77, turbidity: 67, humidity: 47 }
11/13/2022, 9:43:03 PM node: 1d80527787dc9cb7
iot-2/type/nodemcu/id/2002/evt/event_1/fmt/json : msg.payload : Object
{ pH: 5, temperature: 34, turbidity: 62, humidity: 41 }
11/13/2022, 9:43:06 PM node: 1d80527787dc9cb7
iot-2/type/nodemcu/id/2002/evt/event_1/fmt/json : msg.payload : Object
{ pH: 2, temperature: 6, turbidity: 80, humidity: 19 }
11/13/2022, 9:43:09 PM node: 1d80527787dc9cb7
iot-2/type/nodemcu/id/2002/evt/event_1/fmt/json : msg.payload : Object
{ pH: 6, temperature: 43, turbidity: 97, humidity: 80 }


Node-RED Dashboard
MIT App Inventor
IBM Watson IoT Platform
Node-RED : node-red-fvylx-2022
node-red-fvylx-2022-11-10.au-syd.mybluemix.net/red/#flow/e34e13340420317c
Node-RED
Deploy
Flow 2
Edit gauge node
Delete
Cancel
Done
Properties
Group
[Home] iot_sensor_Analytics
Size
auto
Type
Gauge
Label
Turbidity
Value format
{{value}}
Units
NTU
Range
min 0
max 100
Colour gradient
Sectors
0 ... optional ... optional ... 100
Class
Optional CSS class name(s) for widget
Enabled
debug
all nodes
all
tcp out
tcp request
udp in
udp out
input
ibmiot in
output
OpenWhisk
ibmiot out
sequence
split
join
IBM IoT
connected
[get] /sensor_data
LightON
Object
{ pH: 5, temperature: 54, turbidity: 68, humidity: 55 }
11/13/2022, 9:43:18 PM node: 1d80527787dc9cb7
iot-2/type/nodemcu/id/2002/evt/event_1/fmt/json : msg.payload : Object
{ pH: 5, temperature: 99, turbidity: 24, humidity: 53 }
11/13/2022, 9:43:21 PM node: 1d80527787dc9cb7
iot-2/type/nodemcu/id/2002/evt/event_1/fmt/json : msg.payload : Object
{ pH: 3, temperature: 86, turbidity: 18, humidity: 45 }
11/13/2022, 9:43:24 PM node: 1d80527787dc9cb7
iot-2/type/nodemcu/id/2002/evt/event_1/fmt/json : msg.payload : Object
{ pH: 4, temperature: 8, turbidity: 23, humidity: 49 }
11/13/2022, 9:43:27 PM node: 1d80527787dc9cb7
iot-2/type/nodemcu/id/2002/evt/event_1/fmt/json : msg.payload : Object
{ pH: 3, temperature: 54, turbidity: 0, humidity: 33 }

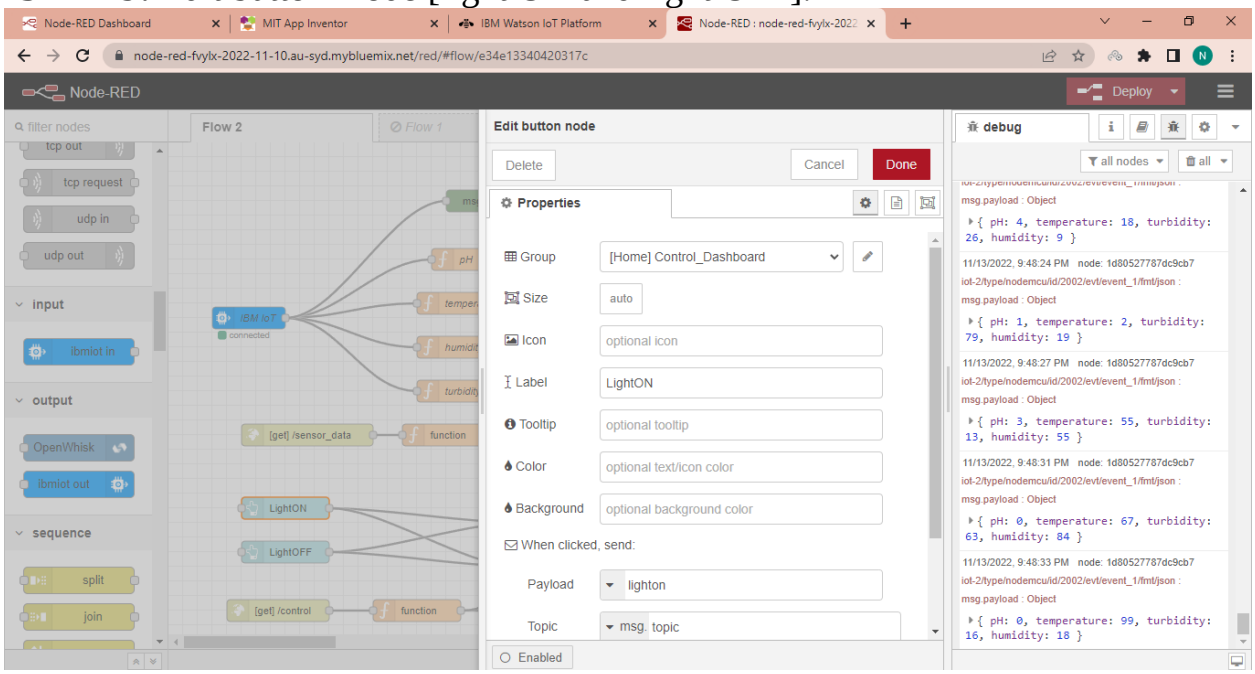
STEP 7: Simulated program to get the random values.



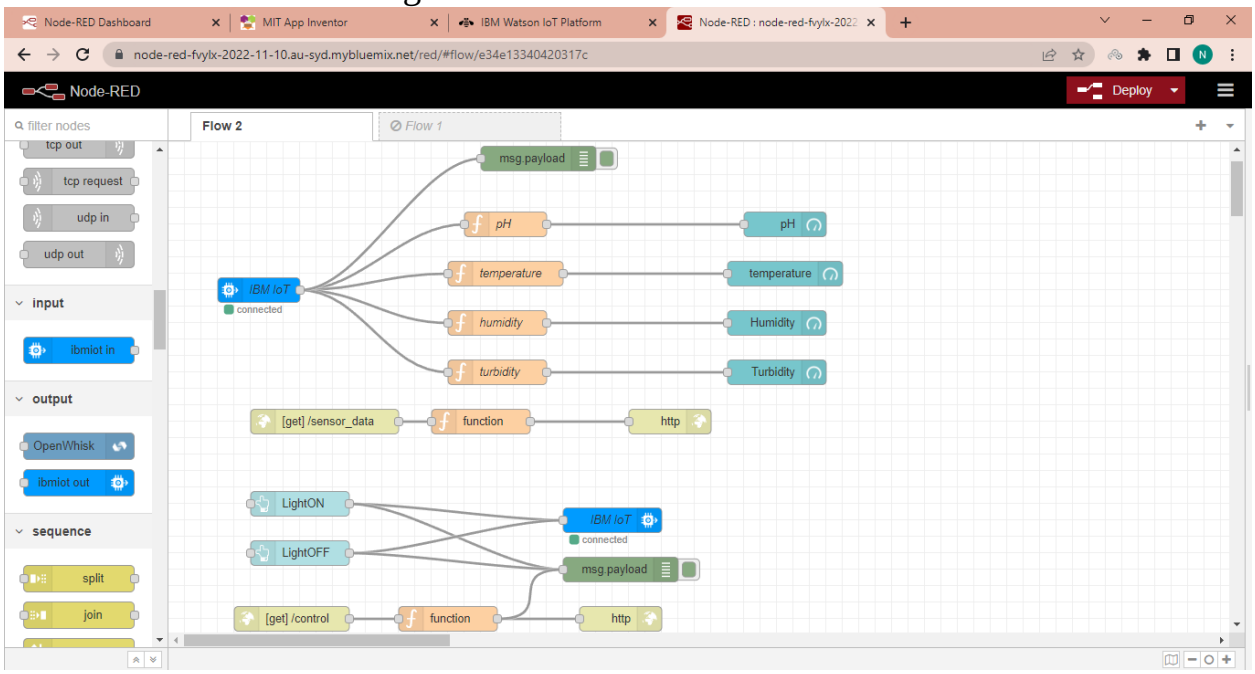
STEP 8: Generate debug message from IBM Watson IoT Platform and connect the nodes.



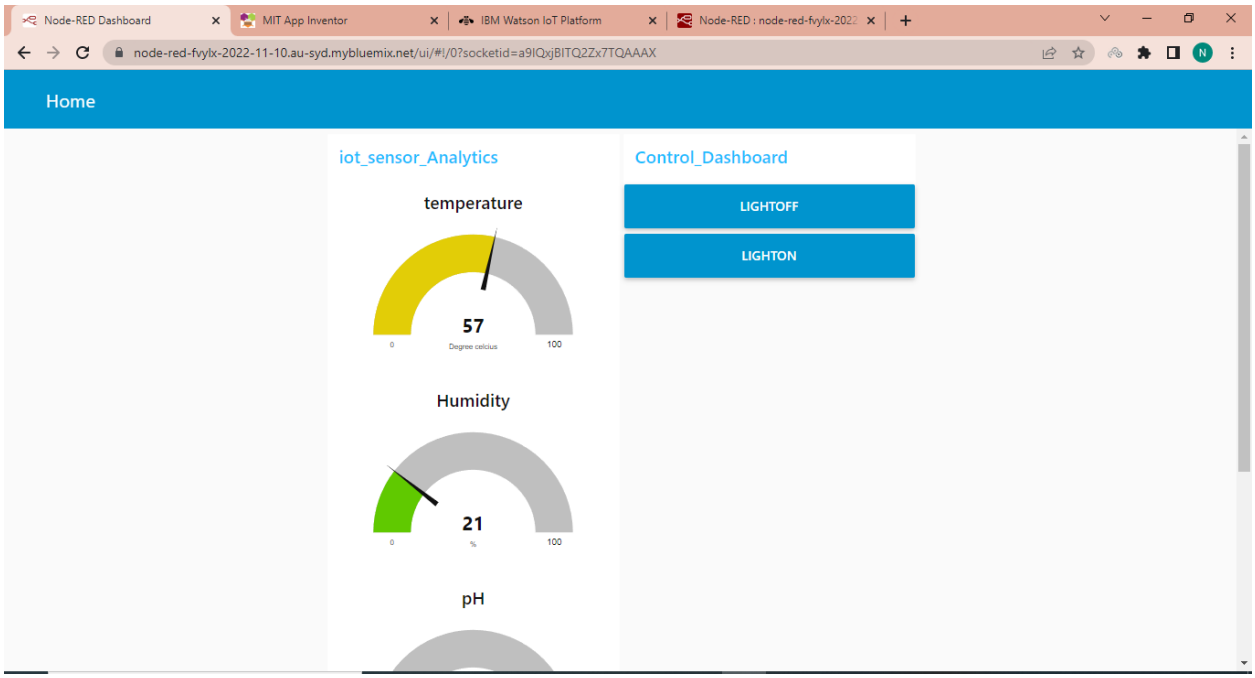
STEP 9: Edit button mode [light ON and light OFF].

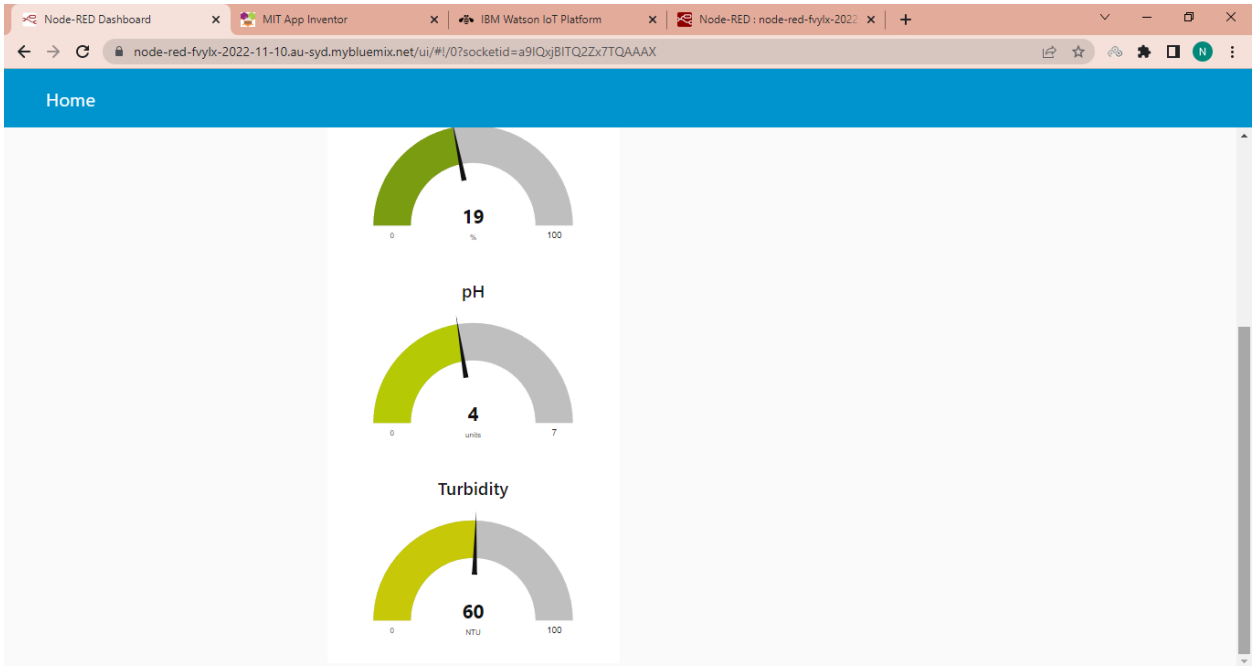


STEP 10: Entire flow diagram in Node-RED.



STEP 11: Generate the output from recent events.





STEP 12: Implementing url in the function node to generate output