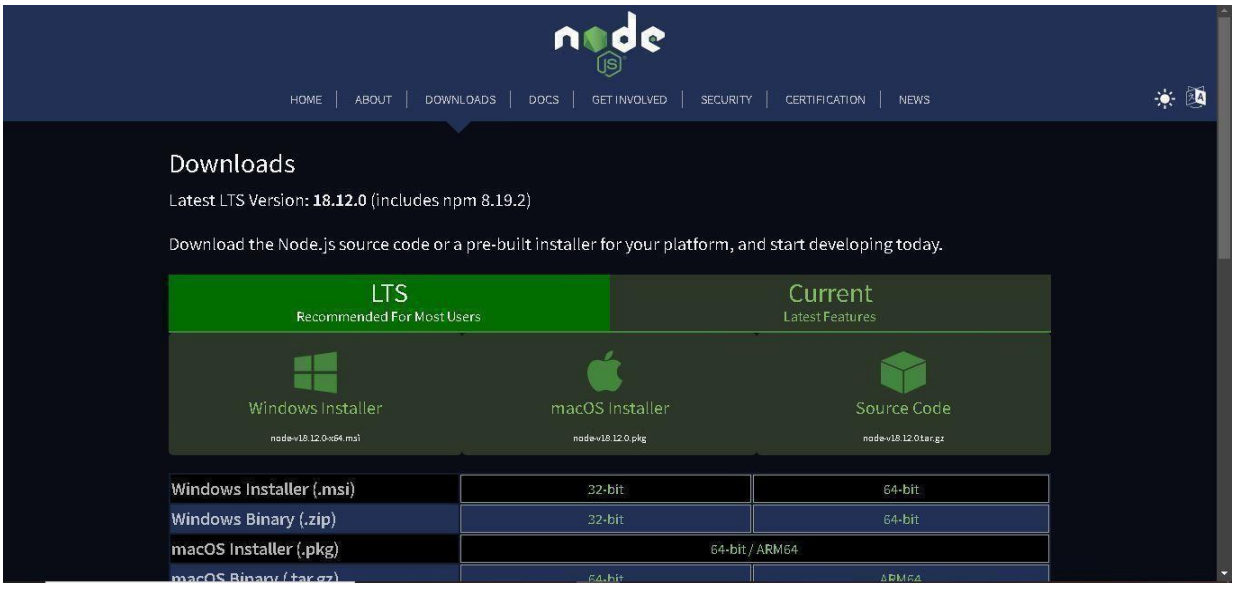
SPRINT 2

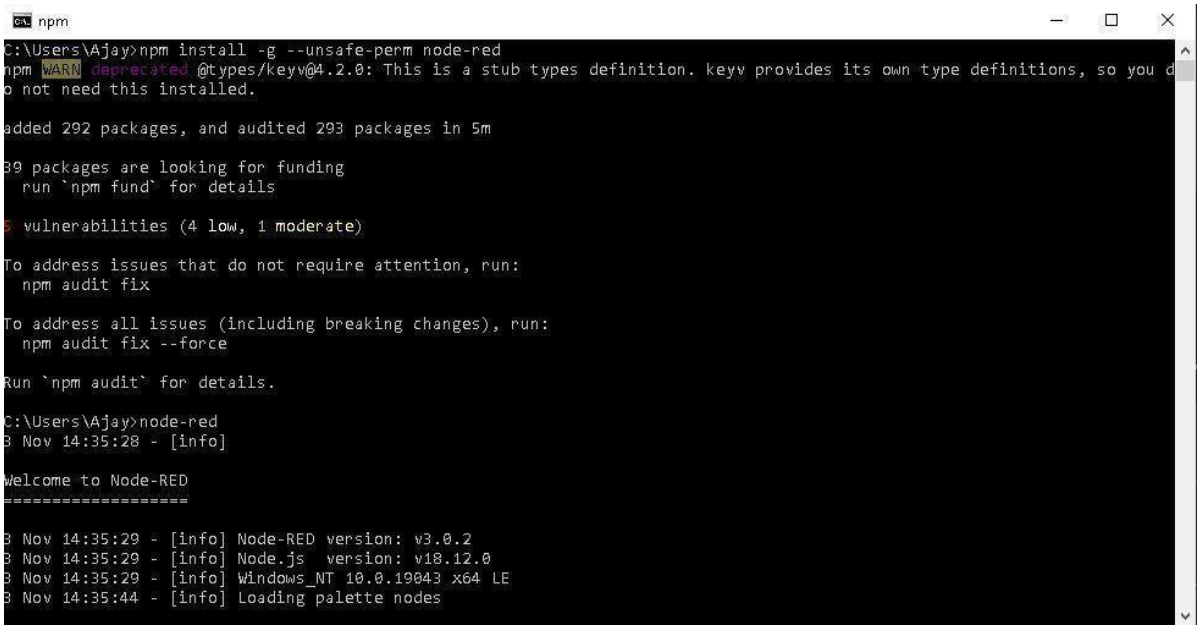
Date	November 13, 2022
Team ID	PNT2022TMID13167
Project Name	Real-Time River Water Quality Monitoring and Control System
Maximum Mark	

The following steps are involved:

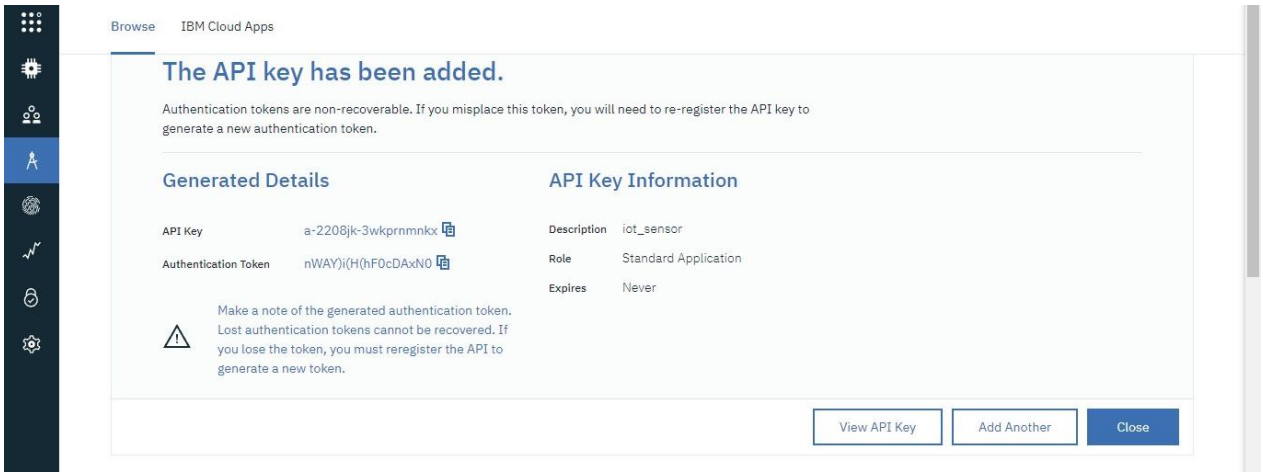
STEP 1: Download and Install node.js.



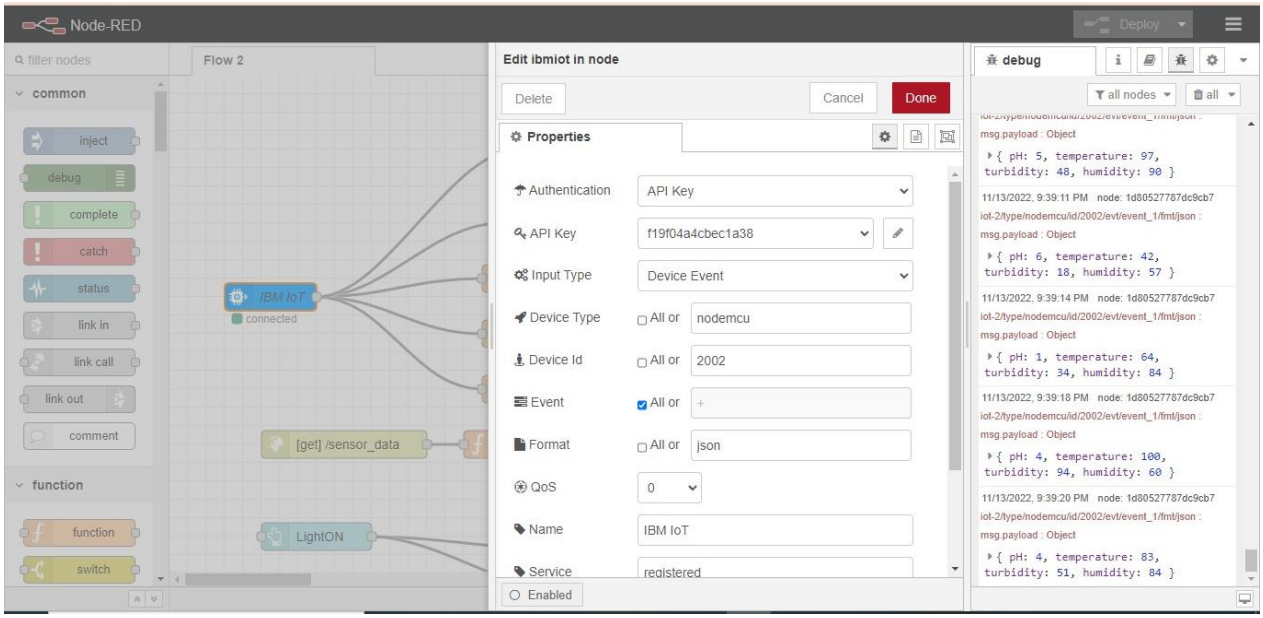
STEP 2: Setup node.js and configure command prompt for error check. Open node-red from the generated link.



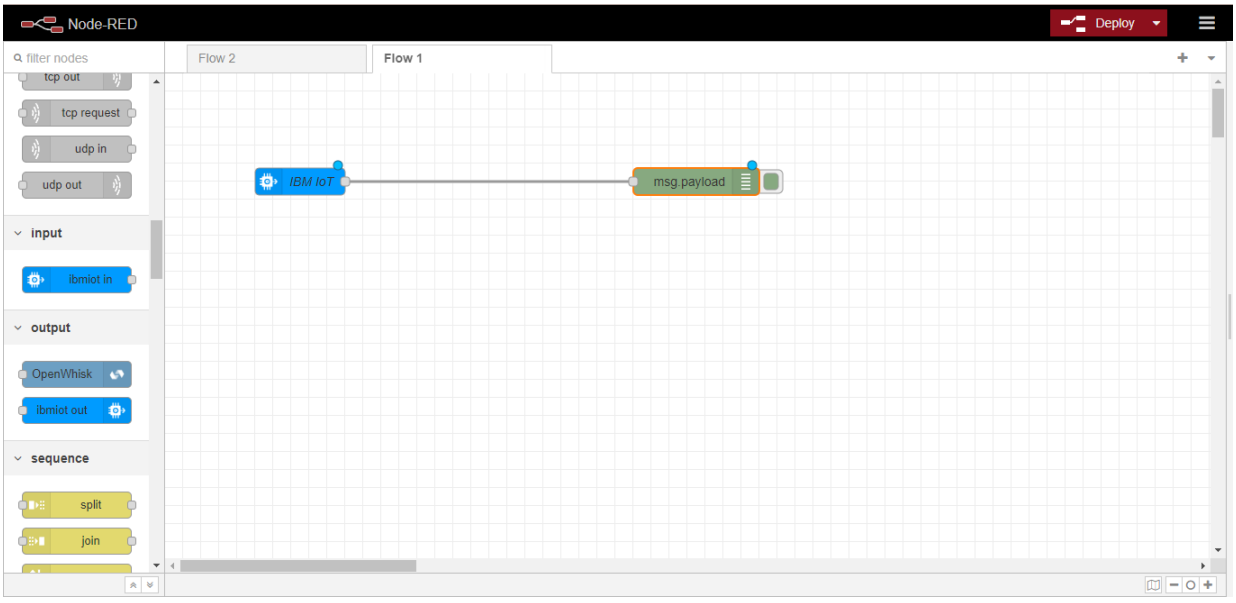
STEP 3: Generating API key and Authentication token.



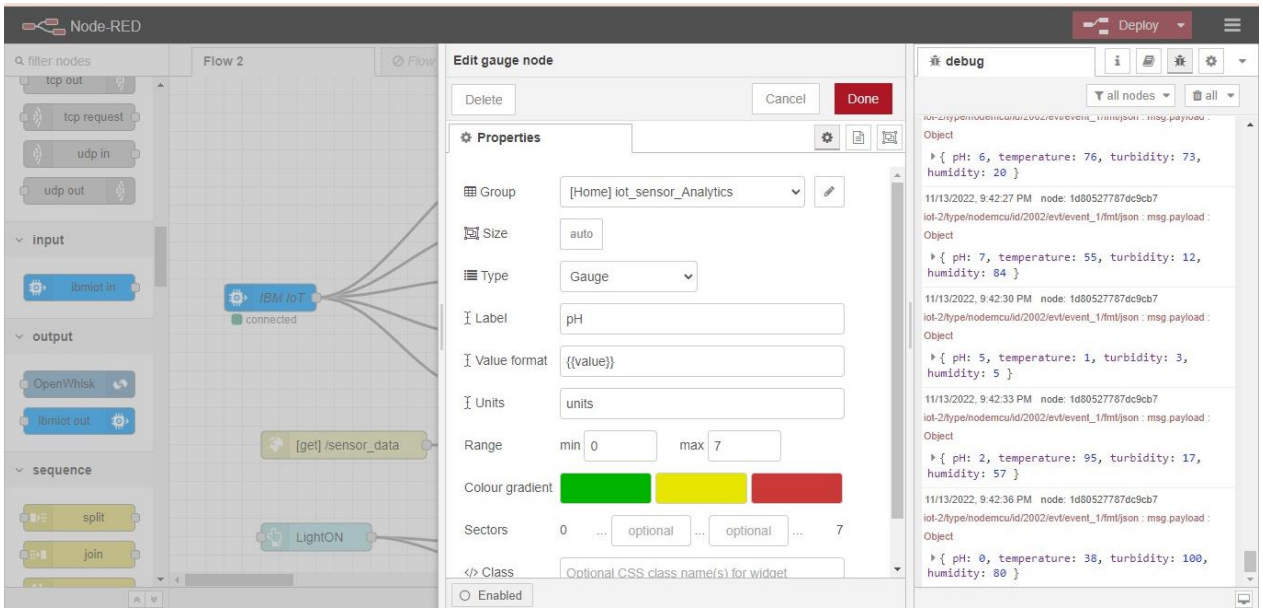
STEP 4: Edit Ibmiot in node.

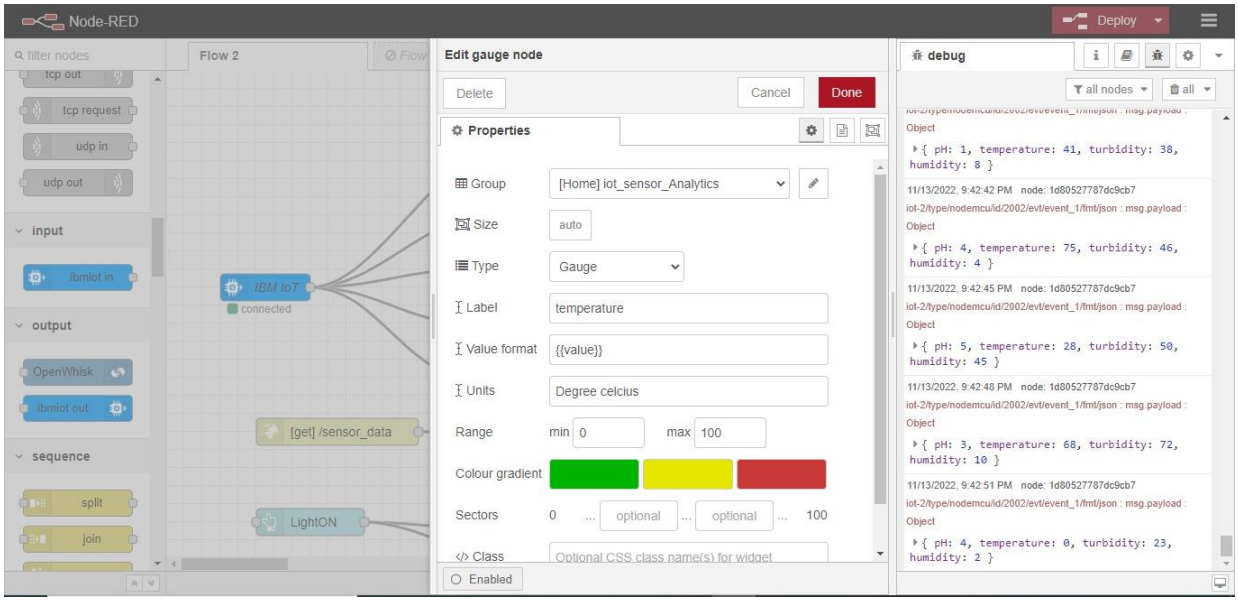


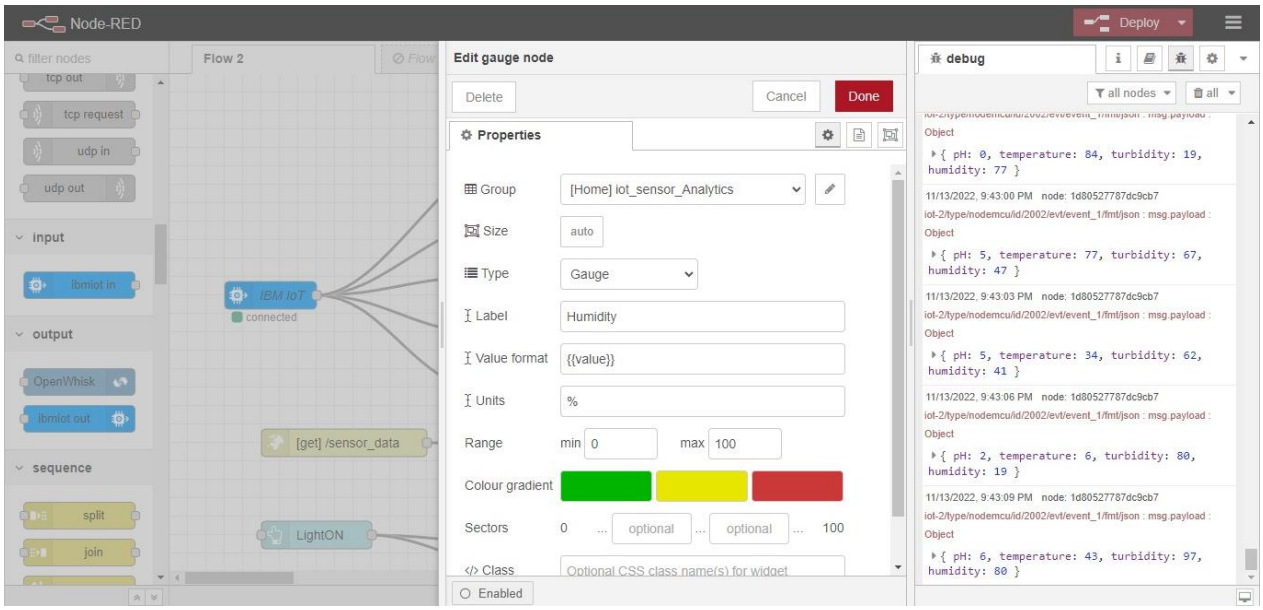
STEP 5: Connect Ibmiot in and debug 1 and deploy.

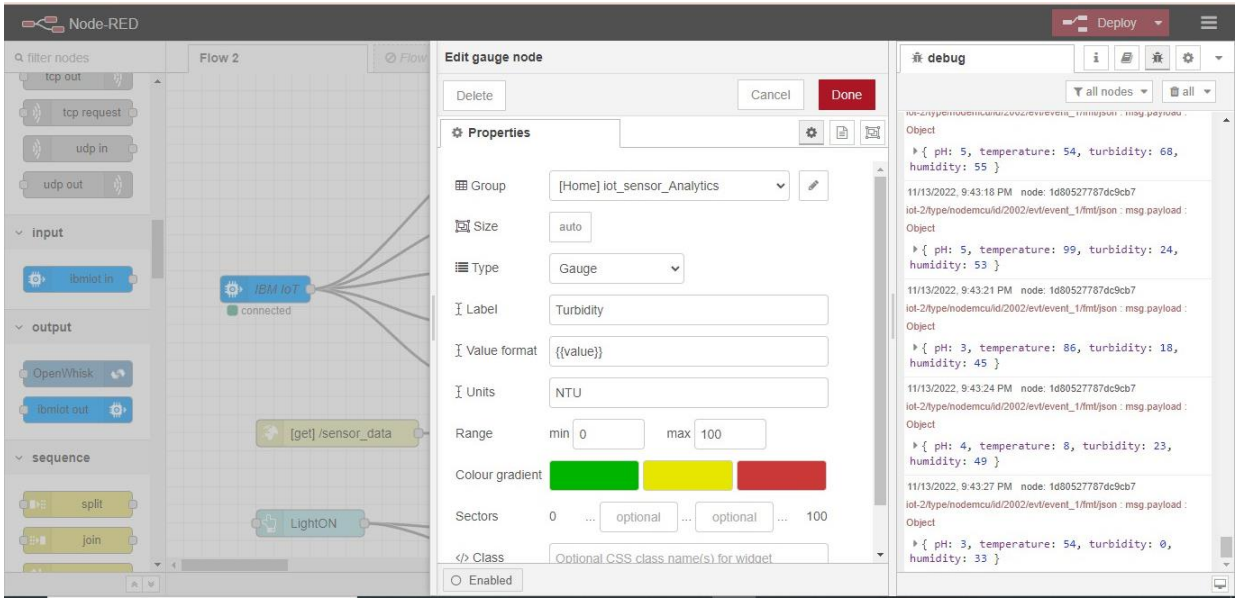


STEP 6: Edit gauge node (here the gauge nodes are named as Temperature, pHand Turbidity).

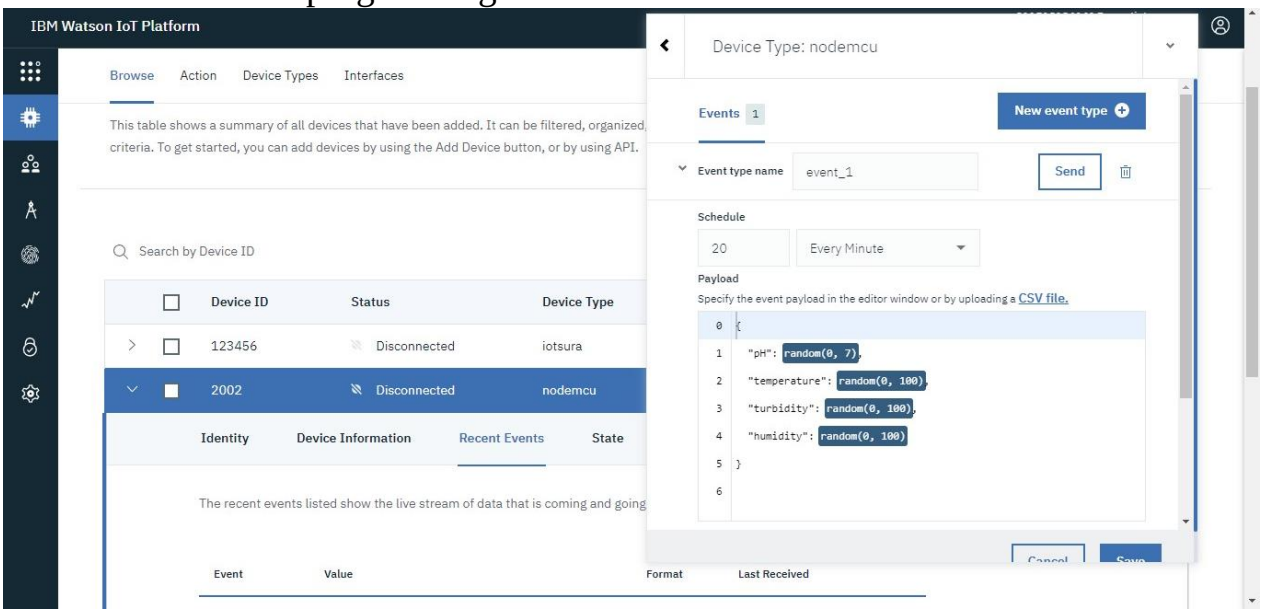




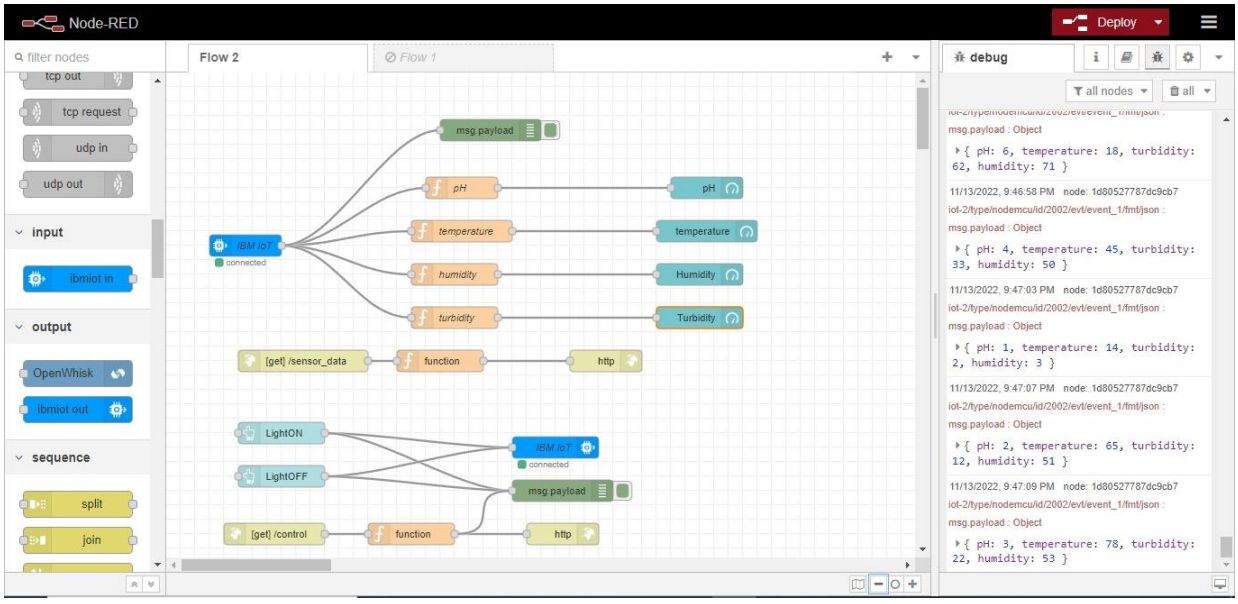

Node-RED
Deploy
Flow 2
Edit gauge node
Delete
Cancel
Done
Properties
Group
[Home] iot_sensor_Analytics
Size
auto
Type
Gauge
Label
Humidity
Value format
{{value}}
Units
%
Range
min 0
max 100
Colour gradient
Sectors
0 ... optional ... optional ... 100
Class
Optional CSS class name(s) for widget
Enabled
debug
all nodes
all
{ pH: 0, temperature: 84, turbidity: 19, humidity: 77 }
{ pH: 5, temperature: 77, turbidity: 67, humidity: 47 }
{ pH: 5, temperature: 34, turbidity: 62, humidity: 41 }
{ pH: 2, temperature: 6, turbidity: 80, humidity: 19 }
{ pH: 6, temperature: 43, turbidity: 97, humidity: 80 }
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


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
{ pH: 5, temperature: 54, turbidity: 68, humidity: 55 }
{ pH: 5, temperature: 99, turbidity: 24, humidity: 53 }
{ pH: 3, temperature: 86, turbidity: 18, humidity: 45 }
{ pH: 4, temperature: 8, turbidity: 23, humidity: 49 }
{ pH: 3, temperature: 54, turbidity: 0, humidity: 33 }
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

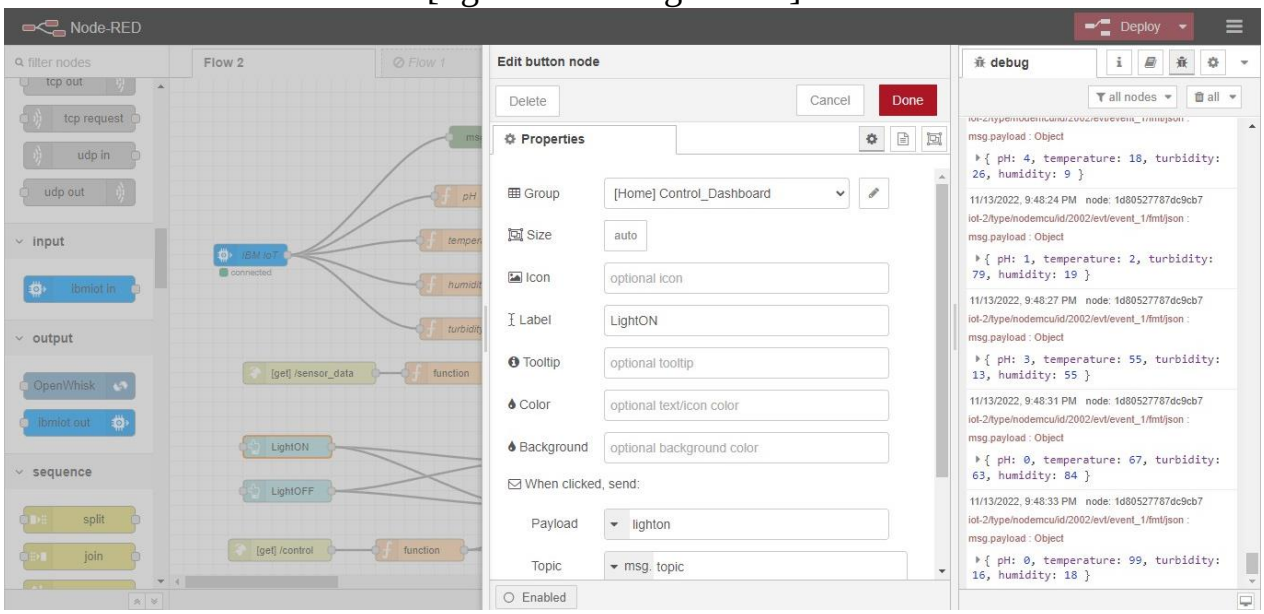
STEP 7: Simulated program to get the random values.



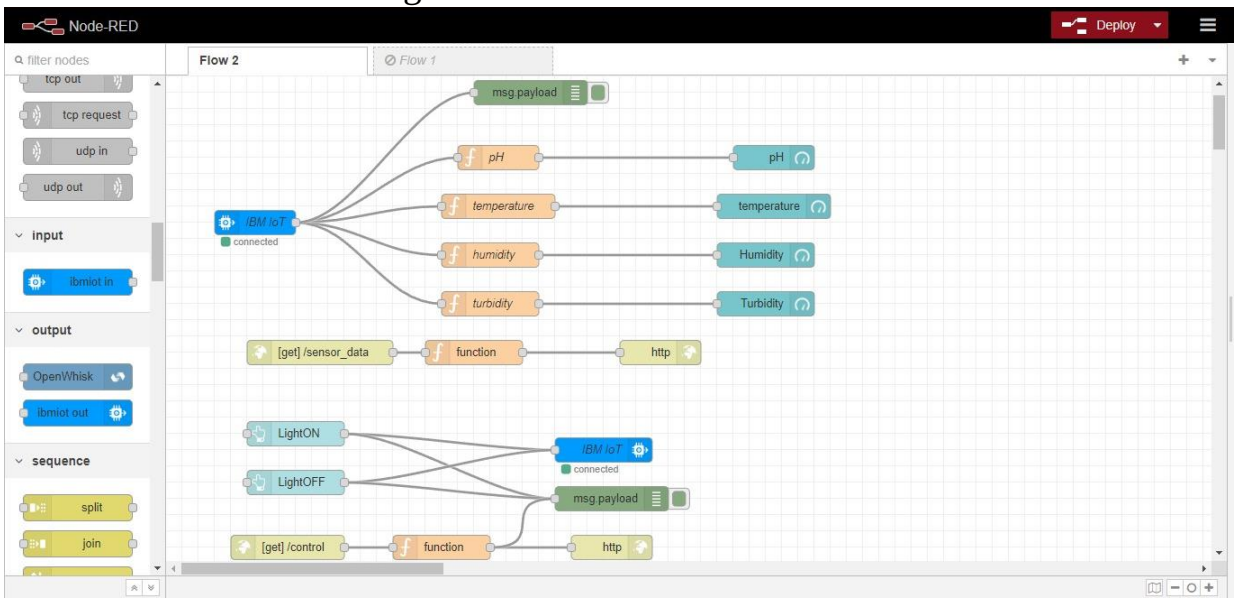
STEP 8: Generate debug message from IBM Watson IoT Platform and connect the nodes.



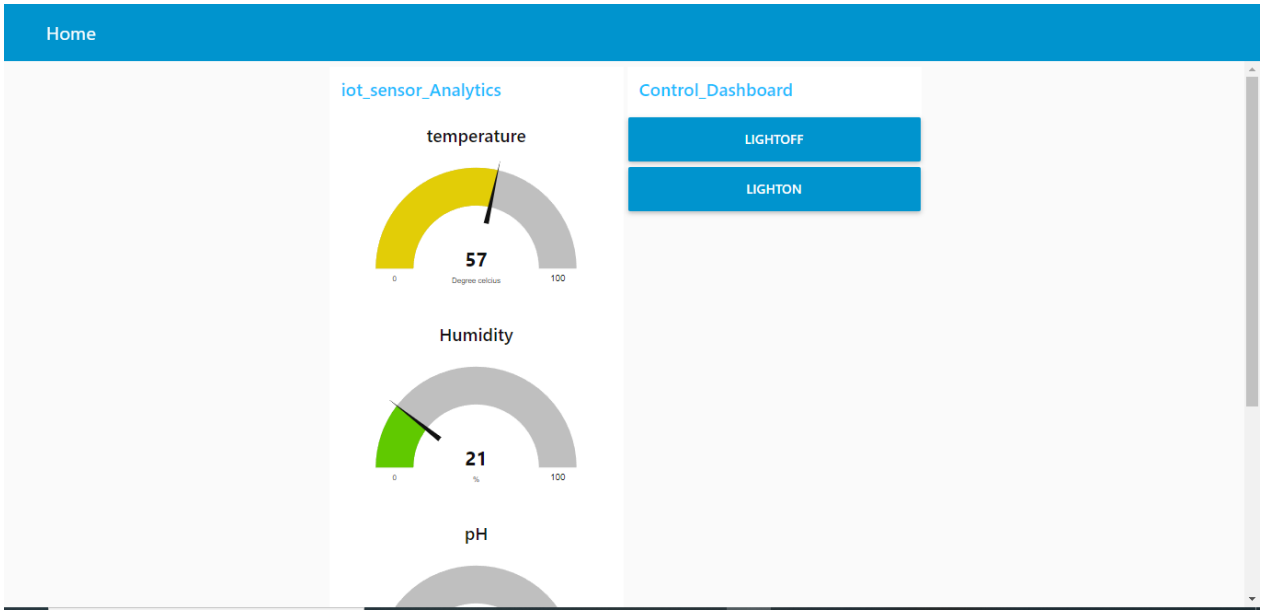
STEP 9: Edit button mode [light ON and light OFF].

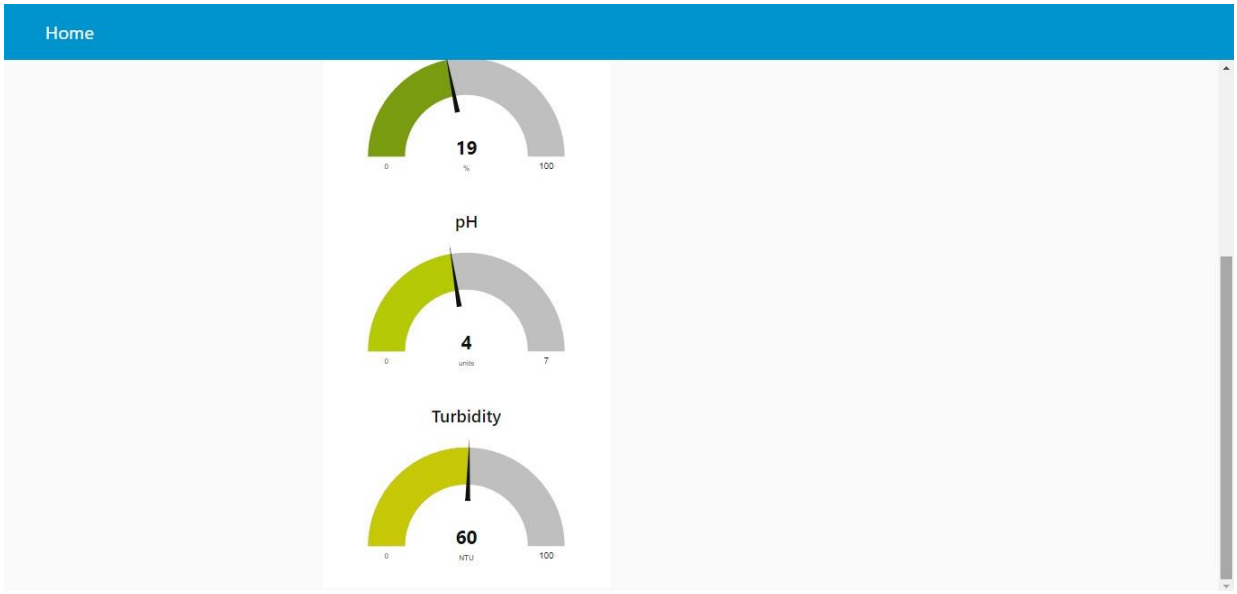


STEP 10: Entire flow diagram in Node-RED.

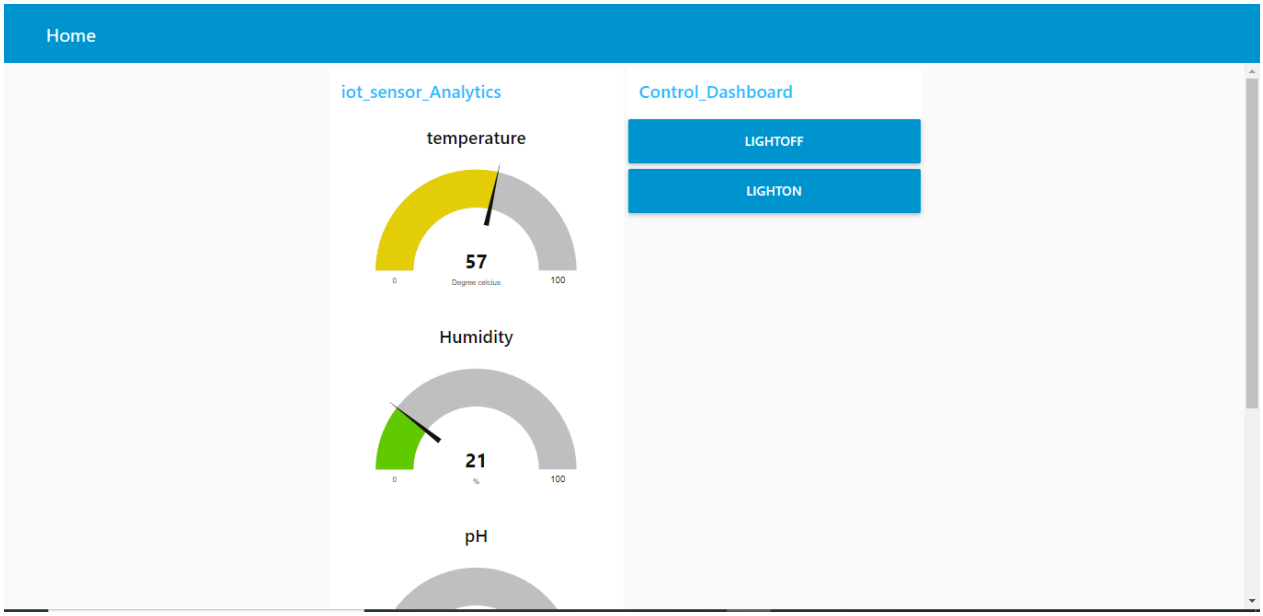


STEP 11: Generate the output from recent events.





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



{"temperature":100,"humidity":72,"pH":4,"turbidity":46}