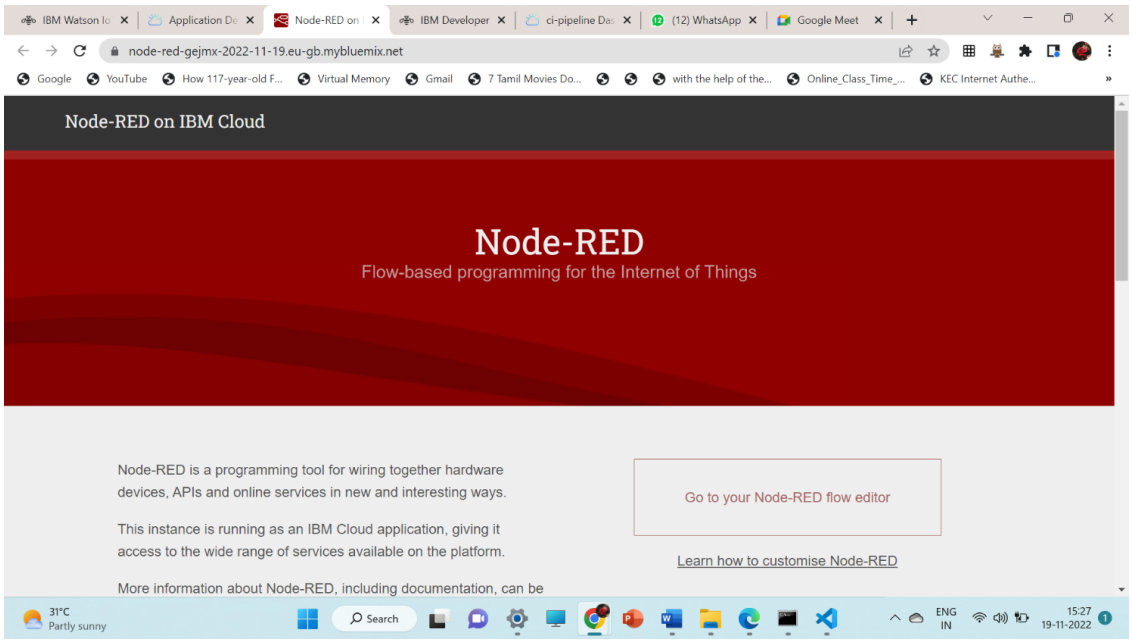
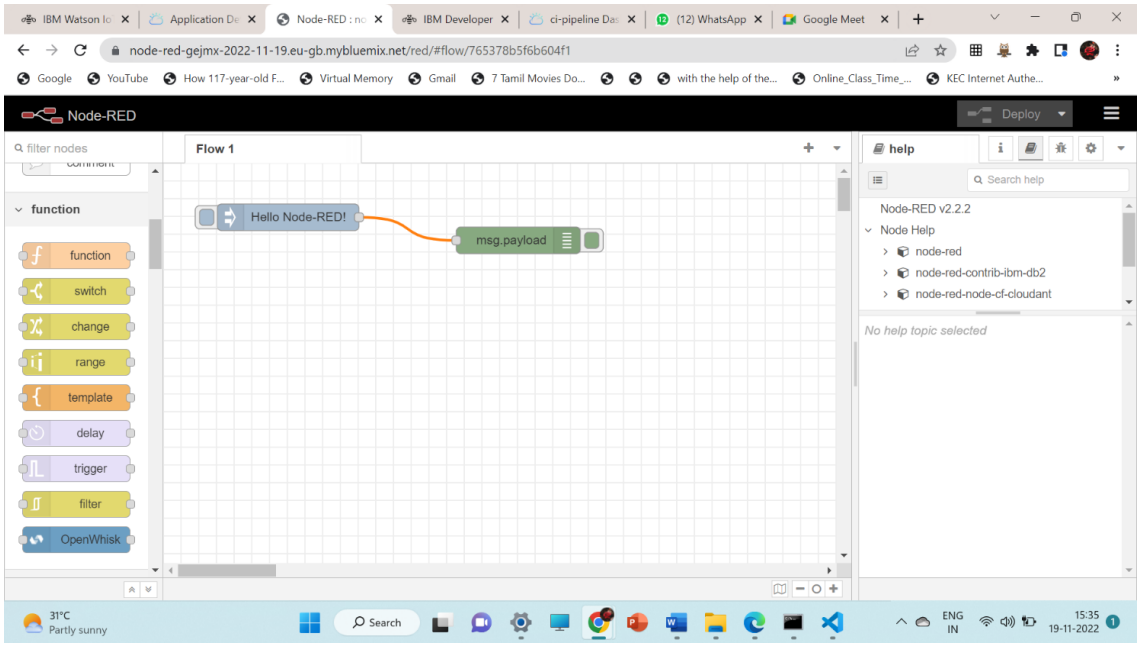
SPRINT 2:

Date	29 October 2022
Team ID	PNT2022TMID04463
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

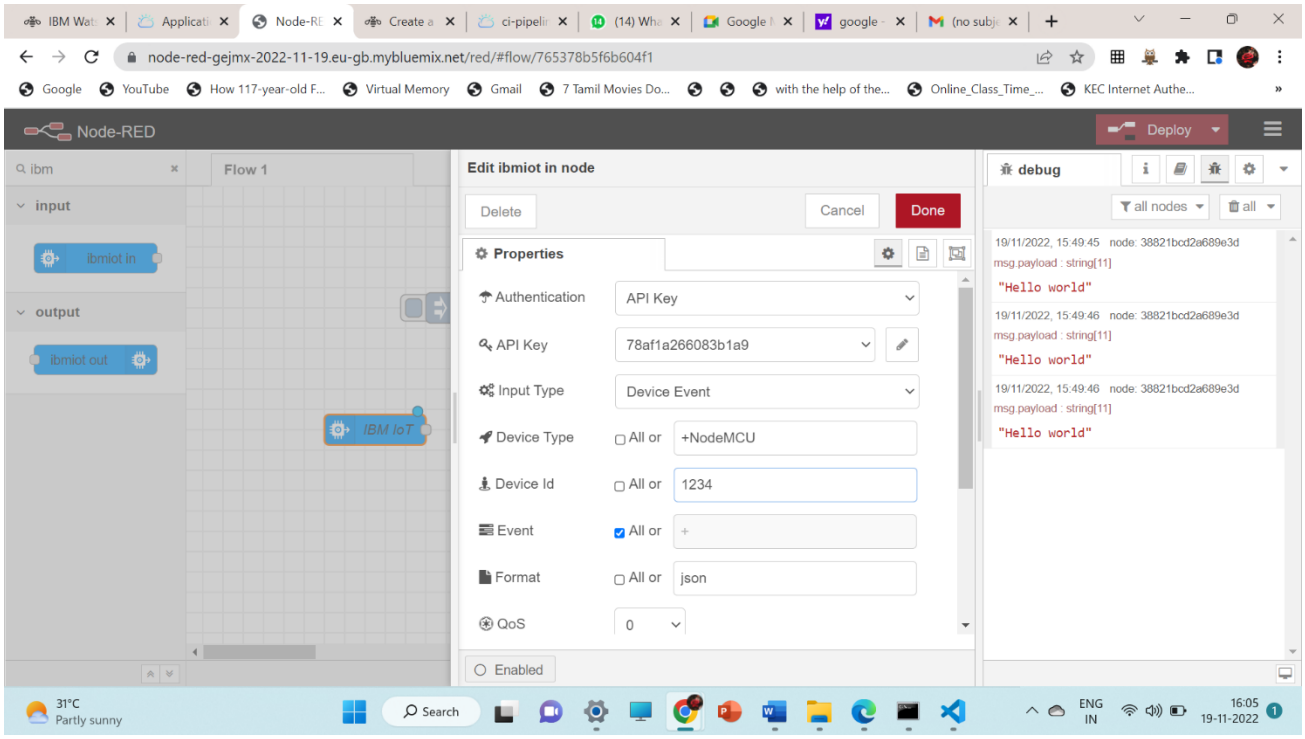
NODE-RED:



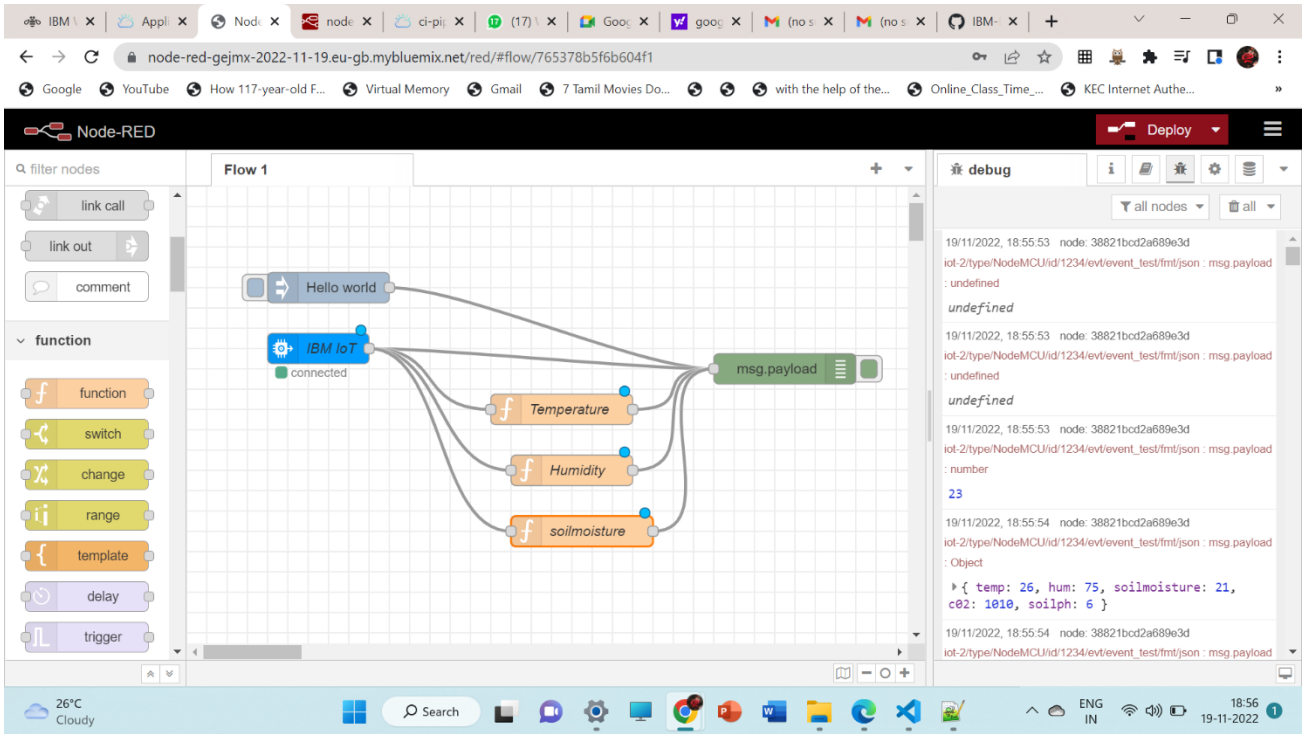


Configuration of Node-Red to collect IBM cloud data

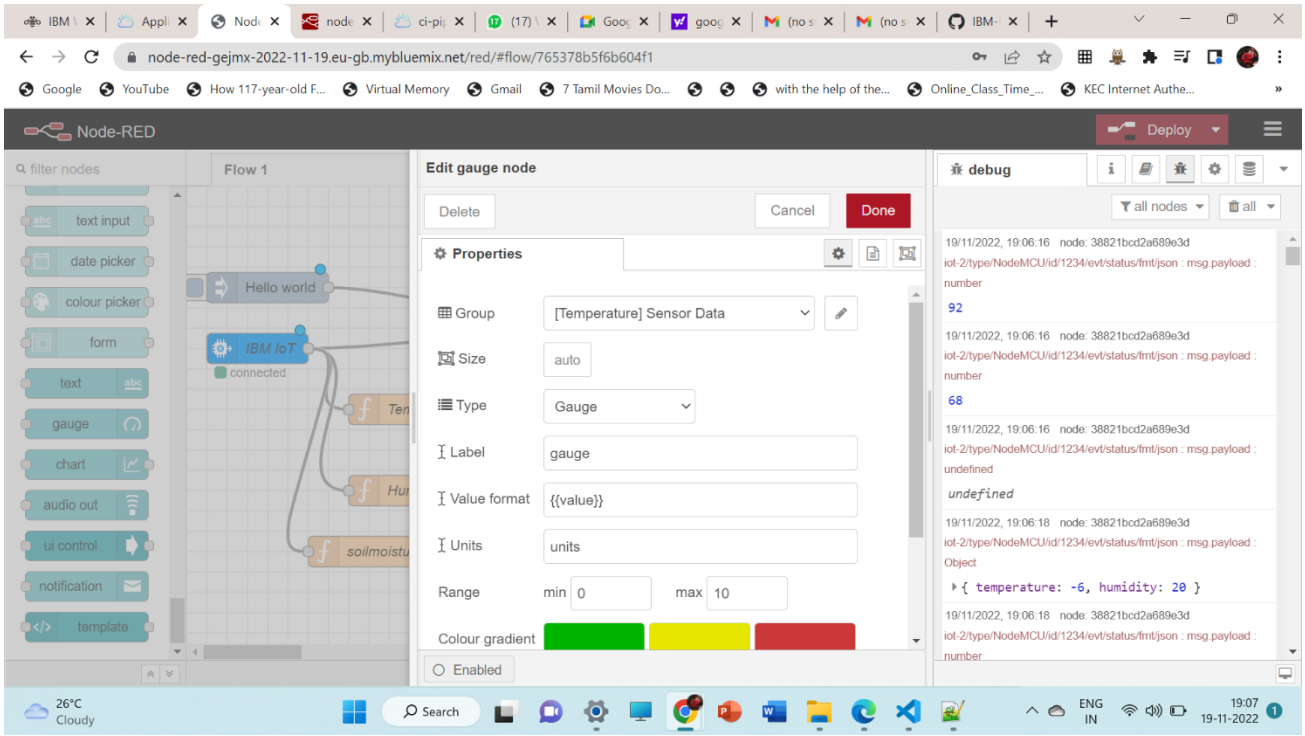
The node IBM IoT App In is added to the Node-Red workflow.
Then the appropriate device credentials obtained earlier are entered into the node to connect and fetch device telemetry to Node-Red.

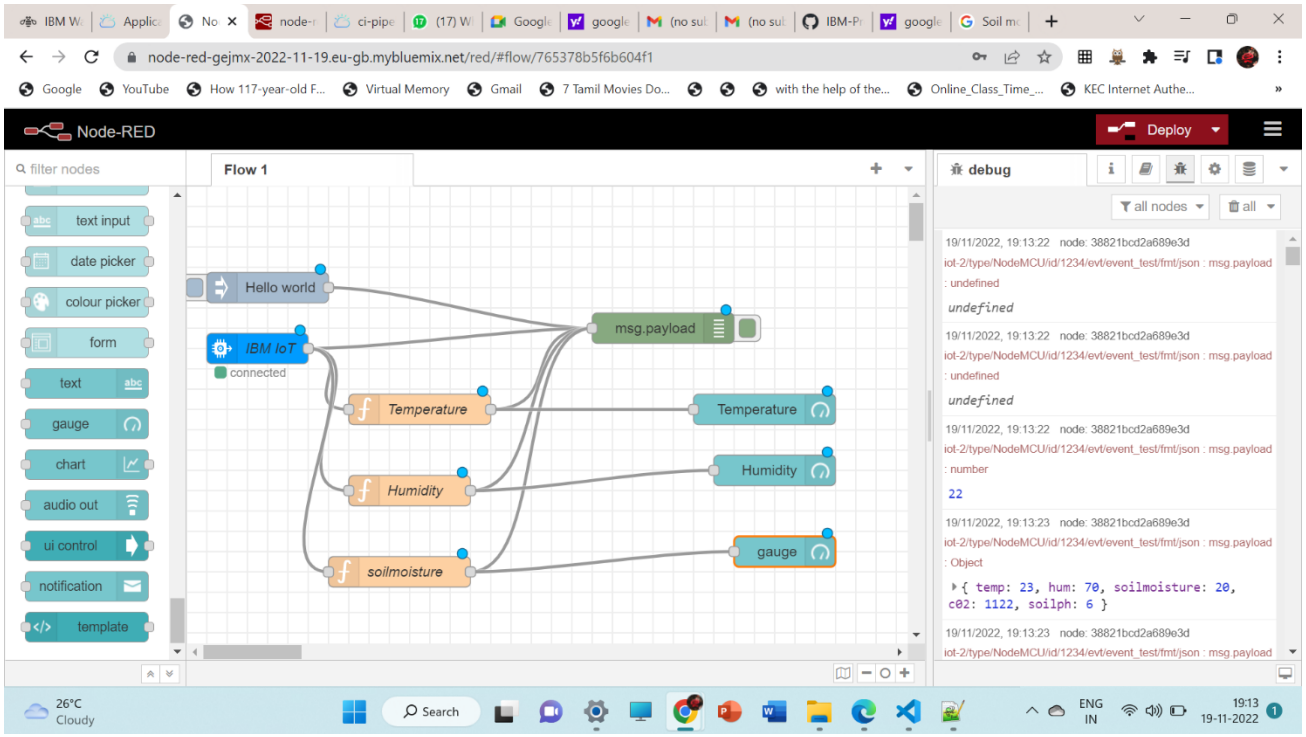


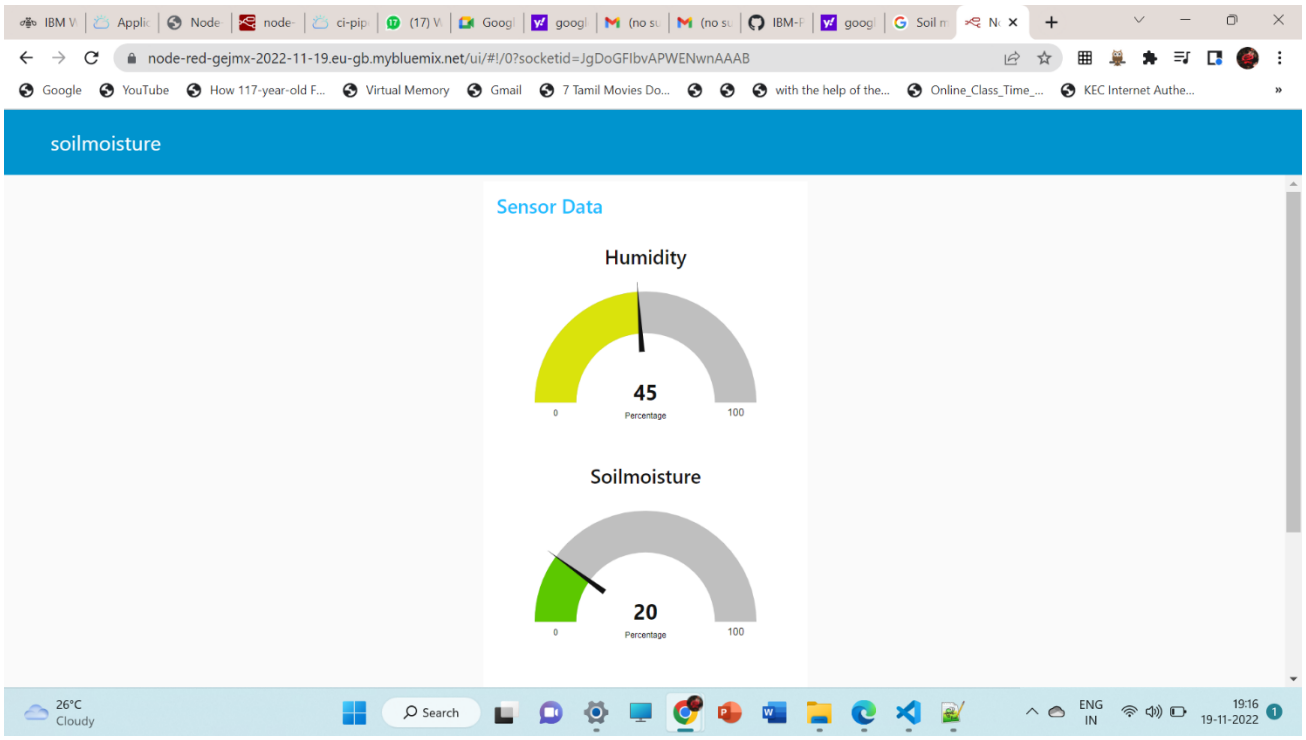
- Once it is connected Node-Red receives data from the device
- Display the data using debug node for verification
- Connect function node and write the Java script code to get each reading separately.
- The Java script code for the function node is:
  msg.payload=msg.payload.d.temperature return msg;
- Finally connect Gauge nodes from dashboard to see the data in UI

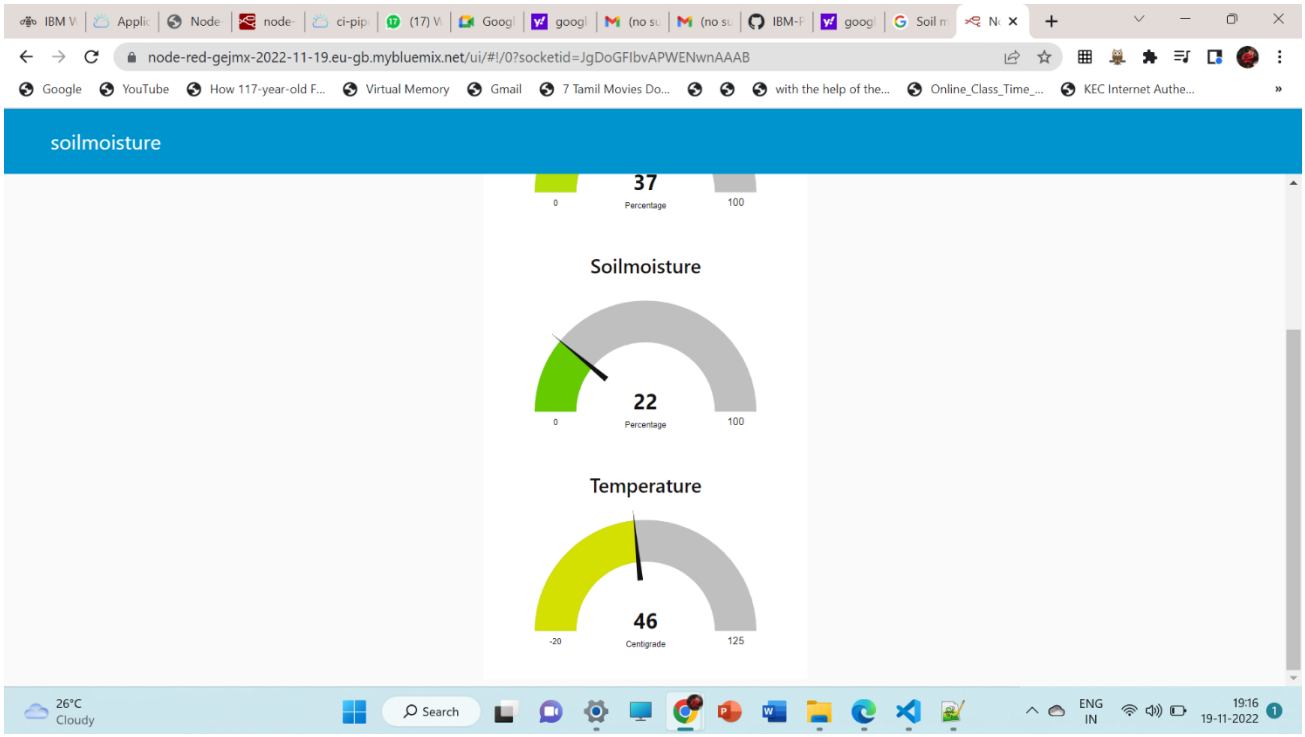


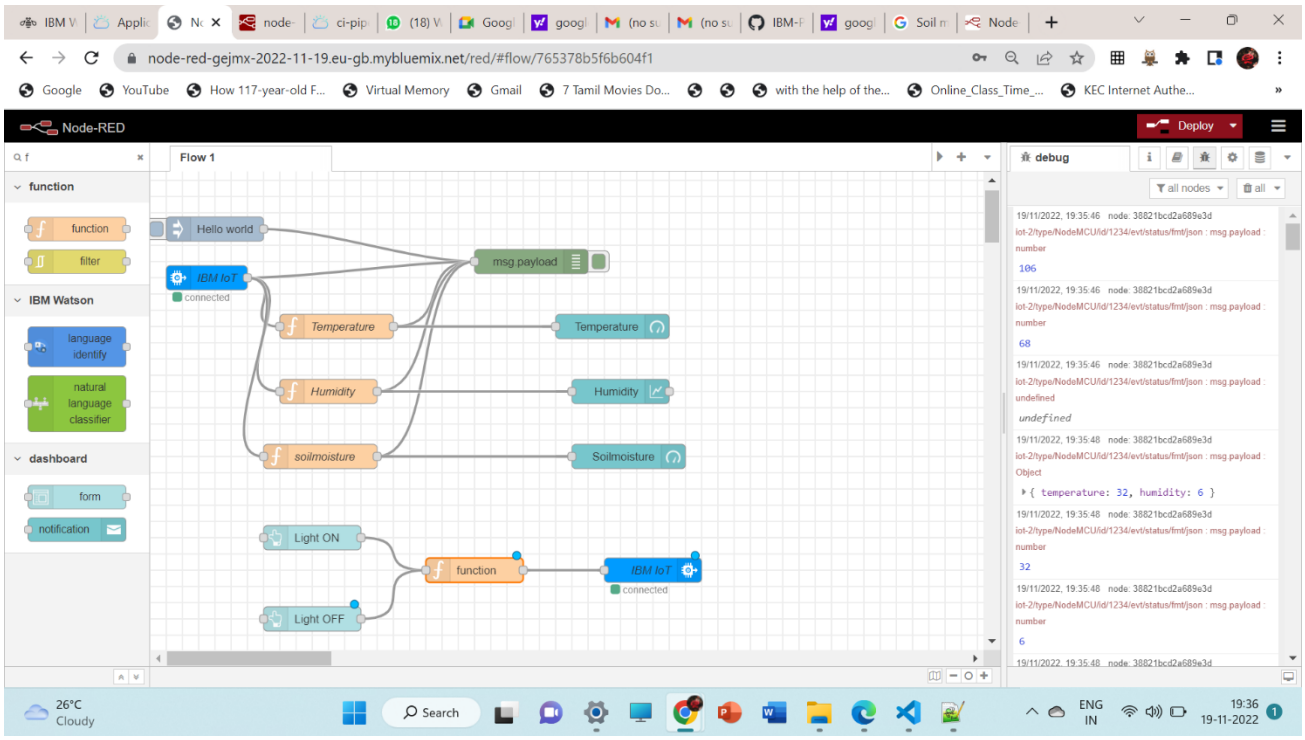
Nodes connected in following manner to get each reading separately

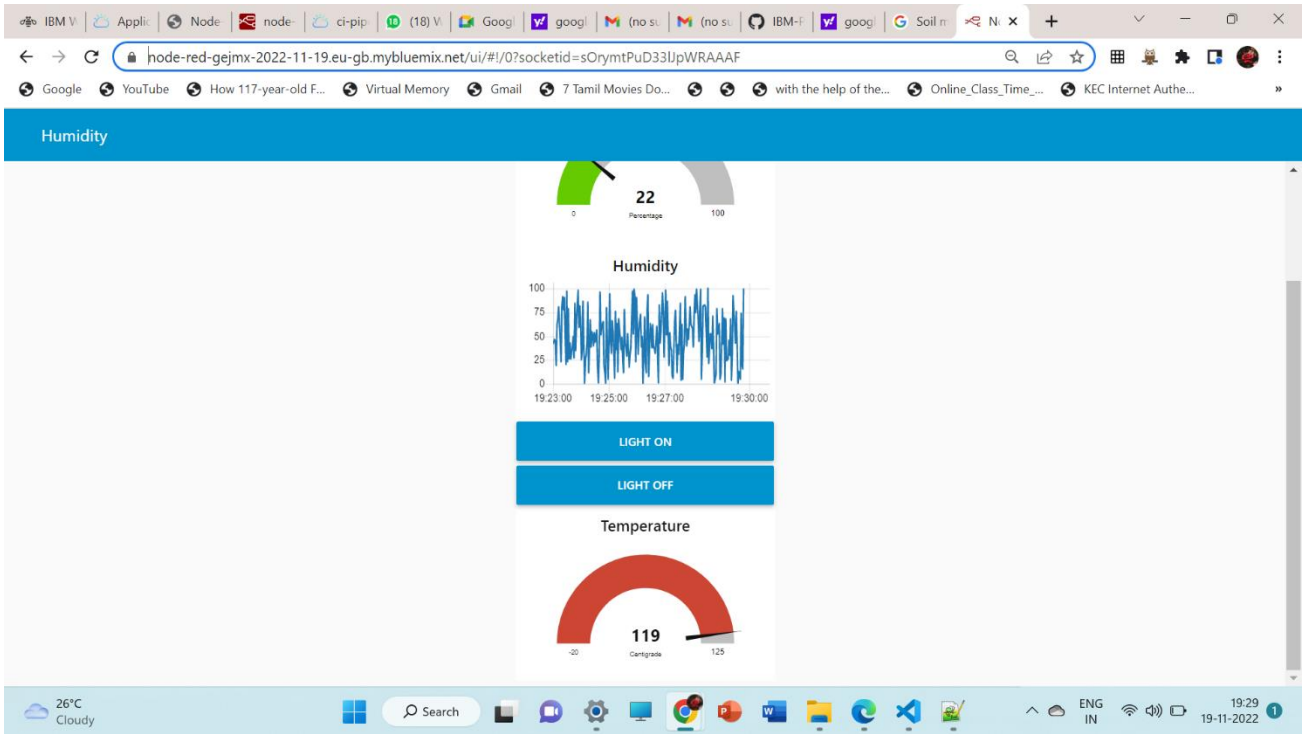


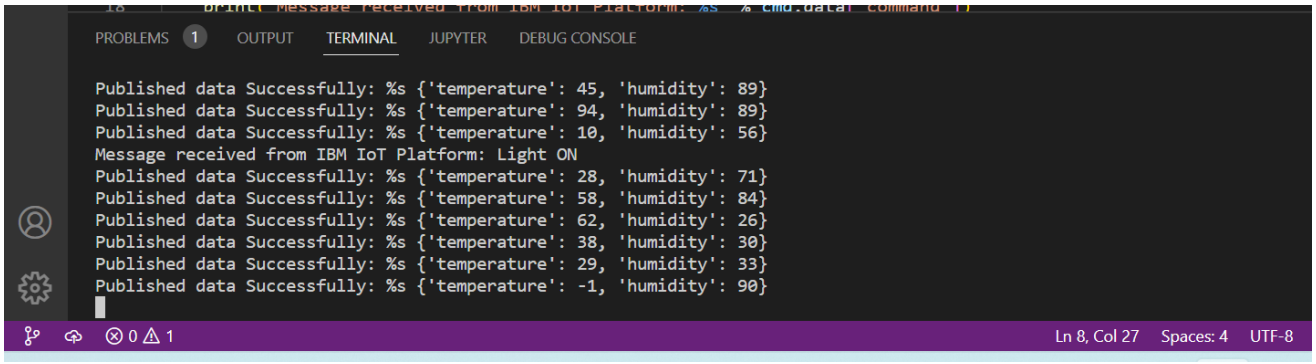

node-red-gejmx-2022-11-19.eu-gb.mybluemix.net/red/#flow/765378b5f6b604f1
Node-RED
Deploy
Flow 1
filter nodes
text input
date picker
colour picker
form
text
gauge
chart
audio out
ui control
notification
template
Hello world
IBM IoT
connected
msg.payload
Temperature
Humidity
soilmoisture
Temperature
Humidity
gauge
debug
all nodes
all
19/11/2022, 19:13:22 node: 38821bcd2a689e3d
iot-2/type/NodeMCU/id/1234/evt/event_test/fmt/json : msg.payload : undefined
undefined
19/11/2022, 19:13:22 node: 38821bcd2a689e3d
iot-2/type/NodeMCU/id/1234/evt/event_test/fmt/json : msg.payload : undefined
undefined
19/11/2022, 19:13:22 node: 38821bcd2a689e3d
iot-2/type/NodeMCU/id/1234/evt/event_test/fmt/json : msg.payload : number
22
19/11/2022, 19:13:23 node: 38821bcd2a689e3d
iot-2/type/NodeMCU/id/1234/evt/event_test/fmt/json : msg.payload : Object
{ temp: 23, hum: 70, soilmoisture: 20, c02: 1122, soilph: 6 }
19/11/2022, 19:13:23 node: 38821bcd2a689e3d
iot-2/type/NodeMCU/id/1234/evt/event_test/fmt/json : msg.payload
26°C
Cloudy
Search
ENG
IN
19:13
19-11-2022


node-red-gejmx-2022-11-19.eu-gb.mybluemix.net/ui/#!/0?socketid=JgDoGFIbvAPWENwnAAAB
soilmoisture
Sensor Data
Humidity
45
0
Percentage
100
Soilmoisture
20
0
Percentage
100
26°C
Cloudy
Search
ENG
IN
19:16
19-11-2022


node-red-gejmx-2022-11-19.eu-gb.mybluemix.net/ui/#!/0?socketid=JgDoGFIbvAPWENwnAAAB
soilmoisture
37
Percentage
0
100
Soilmoisture
22
Percentage
0
100
Temperature
46
Centigrade
-20
125
26°C
Cloudy
Search
ENG
IN
19:16
19-11-2022


node-red-gejmx-2022-11-19.eu-gb.mybluemix.net/red/#flow/765378b5f6b604f1
Node-RED
Deploy
Flow 1
debug
function
IBM Watson
dashboard
Hello world
IBM IoT
connected
msg.payload
Temperature
Humidity
soilmoisture
Soilmoisture
Light ON
Light OFF
function
IBM IoT
connected
26°C
Cloudy
Search
ENG
IN
19:36
19-11-2022


node-red-gejmx-2022-11-19.eu-gb.mybluemix.net/ui/#!/0?socketid=sOrymtPuD33IJpWRAAAF
Humidity
22
Humidity
LIGHT ON
LIGHT OFF
Temperature
119
26°C
Cloudy
Search
ENG
IN
19:29
19-11-2022


PROBLEMS 1
OUTPUT
TERMINAL
JUPYTER
DEBUG CONSOLE
Published data Successfully: %s {'temperature': 45, 'humidity': 89}
Published data Successfully: %s {'temperature': 94, 'humidity': 89}
Published data Successfully: %s {'temperature': 10, 'humidity': 56}
Message received from IBM IoT Platform: Light ON
Published data Successfully: %s {'temperature': 28, 'humidity': 71}
Published data Successfully: %s {'temperature': 58, 'humidity': 84}
Published data Successfully: %s {'temperature': 62, 'humidity': 26}
Published data Successfully: %s {'temperature': 38, 'humidity': 30}
Published data Successfully: %s {'temperature': 29, 'humidity': 33}
Published data Successfully: %s {'temperature': -1, 'humidity': 90}
Ln 8, Col 27
Spaces: 4
UTF-8