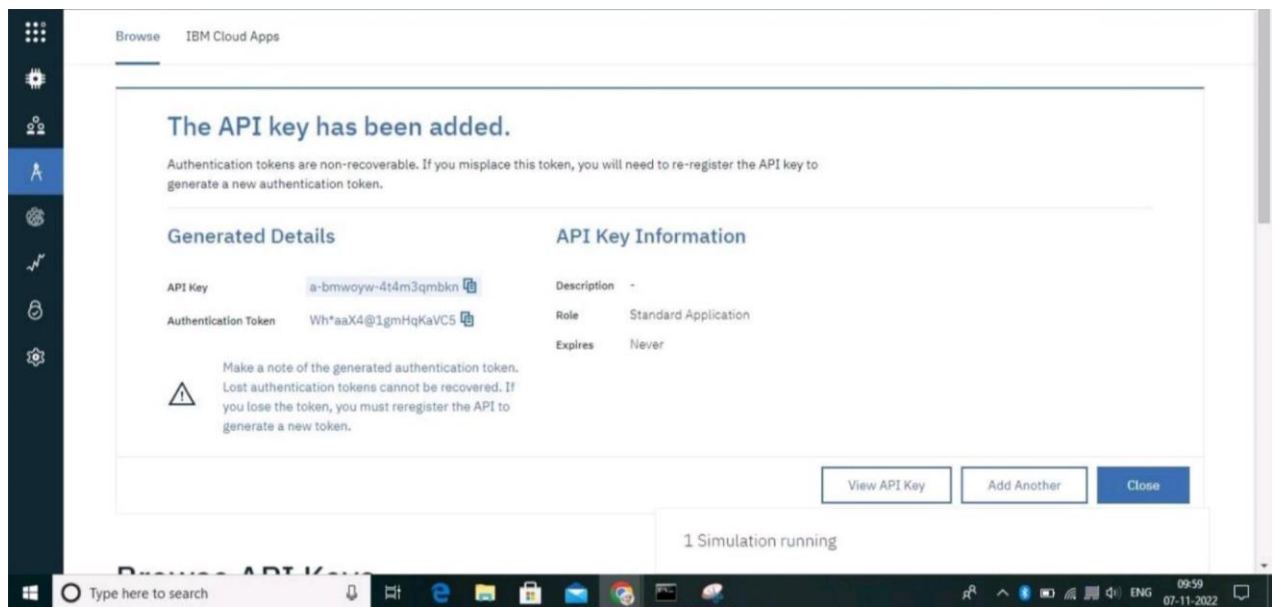


Date		10 November 2022
Team ID		PNT2022TMID21782
Project name		Signs with smart connectivity for better road safety
Maximum marks		20 marks
Sprint-2	US-I	Configure the connection security and create API keys that are used in the Node-RED service for accessing the IBM IOT Platform.
Sprint-2	US-2	Create a Node-RED service.

US-I Configure the connection security and create API keys that are used in the Node-red service for accessing the IBM IOT platform



US-2 Create a Node-red service

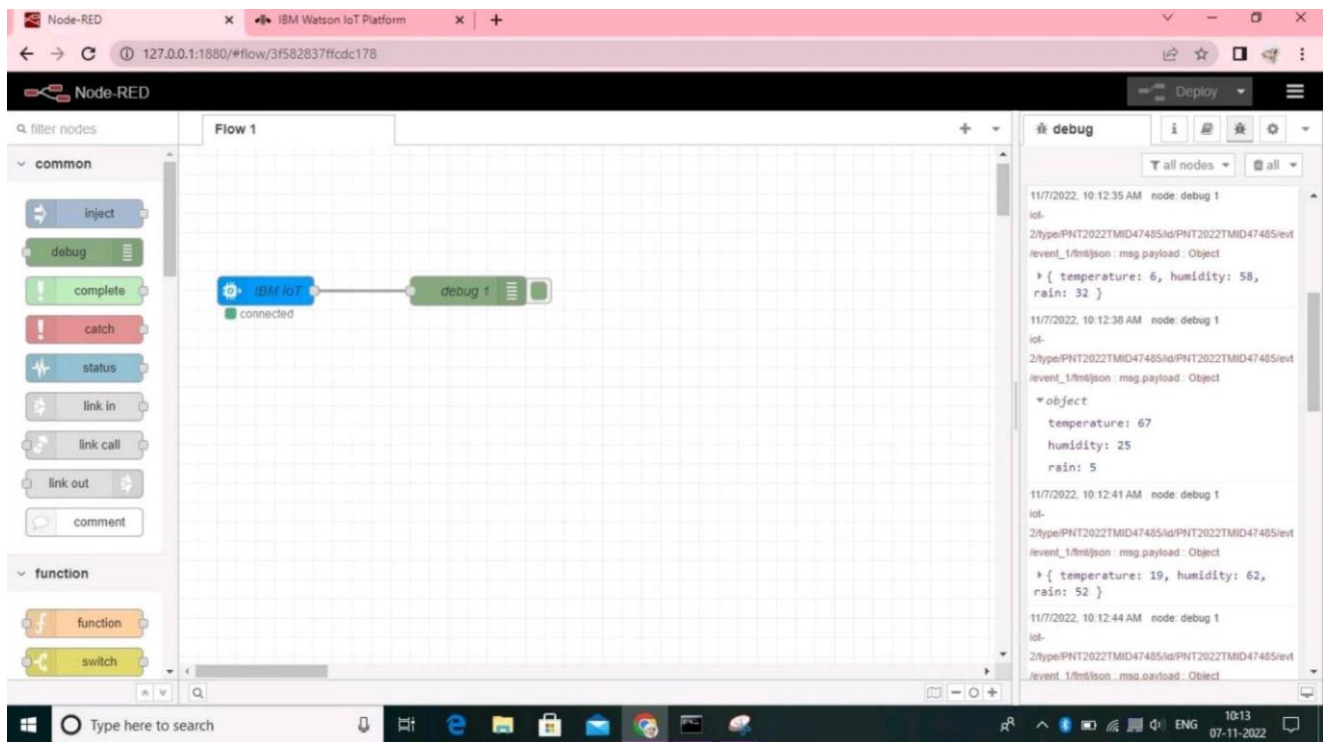
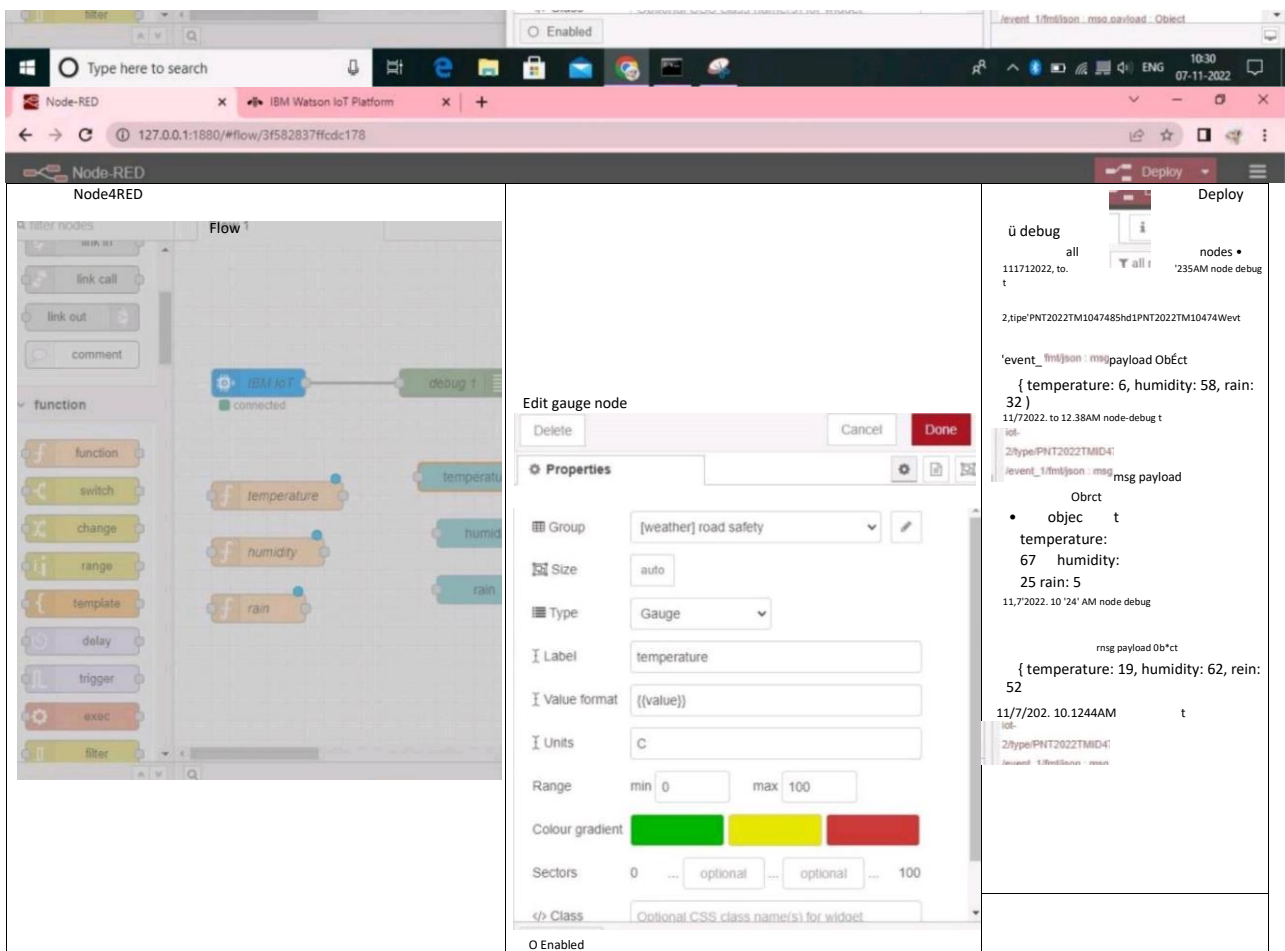


Fig: Monitoring the sensor values- temperature, humidity, rain .



Node-RED interface showing a flow with an IBM IoT node connected to a debug node. The 'Edit gauge node' panel is open, displaying properties for a gauge widget. The gauge is configured with the following settings:

- Group: [weather] road safety
- Size: auto
- Type: Gauge
- Label: humidity
- Value format: {{value}}
- Units: units
- Range: min 0, max 100
- Colour gradient: [Green, Yellow, Red]
- Sectors: 0, optional, optional, 100
- Class: Optional CSS class name(s) for widget

The debug console shows the following log entries:

```
11/7/2022, 10:12:35 AM node: debug 1
iot-
2/type/PNT2022TMD47485/id/PNT2022TMD47485/ev
/event_1/fmt/json : msg.payload : Object
{ temperature: 6, humidity: 58,
rain: 32 }

11/7/2022, 10:12:38 AM node: debug 1
iot-
2/type/PNT2022TMD47485/id/PNT2022TMD47485/ev
/event_1/fmt/json : msg.payload : Object
{ object:
  temperature: 67
  humidity: 25
  rain: 5

11/7/2022, 10:12:41 AM node: debug 1
iot-
2/type/PNT2022TMD47485/id/PNT2022TMD47485/ev
/event_1/fmt/json : msg.payload : Object
{ temperature: 19, humidity: 62,
rain: 52 }

11/7/2022, 10:12:44 AM node: debug 1
iot-
2/type/PNT2022TMD47485/id/PNT2022TMD47485/ev
/event_1/fmt/json : msg.payload : Object
```

Node-RED interface showing the same flow, but the 'Edit gauge node' panel is now configured for a gauge widget displaying 'rain' instead of 'humidity'. The gauge is configured with the following settings:

- Group: [weather] road safety
- Size: auto
- Type: Gauge
- Label: rain
- Value format: {{value}}
- Units: units
- Range: min 0, max 100
- Colour gradient: [Green, Yellow, Red]
- Sectors: 0, optional, optional, 100
- Class: Optional CSS class name(s) for widget

The debug console shows the following log entries:

```
11/7/2022, 10:12:35 AM node: debug 1
iot-
2/type/PNT2022TMD47485/id/PNT2022TMD47485/ev
/event_1/fmt/json : msg.payload : Object
{ temperature: 6, humidity: 58,
rain: 32 }

11/7/2022, 10:12:38 AM node: debug 1
iot-
2/type/PNT2022TMD47485/id/PNT2022TMD47485/ev
/event_1/fmt/json : msg.payload : Object
{ object:
  temperature: 67
  humidity: 25
  rain: 5

11/7/2022, 10:12:41 AM node: debug 1
iot-
2/type/PNT2022TMD47485/id/PNT2022TMD47485/ev
/event_1/fmt/json : msg.payload : Object
{ temperature: 19, humidity: 62,
rain: 52 }

11/7/2022, 10:12:44 AM node: debug 1
iot-
2/type/PNT2022TMD47485/id/PNT2022TMD47485/ev
/event_1/fmt/json : msg.payload : Object
```

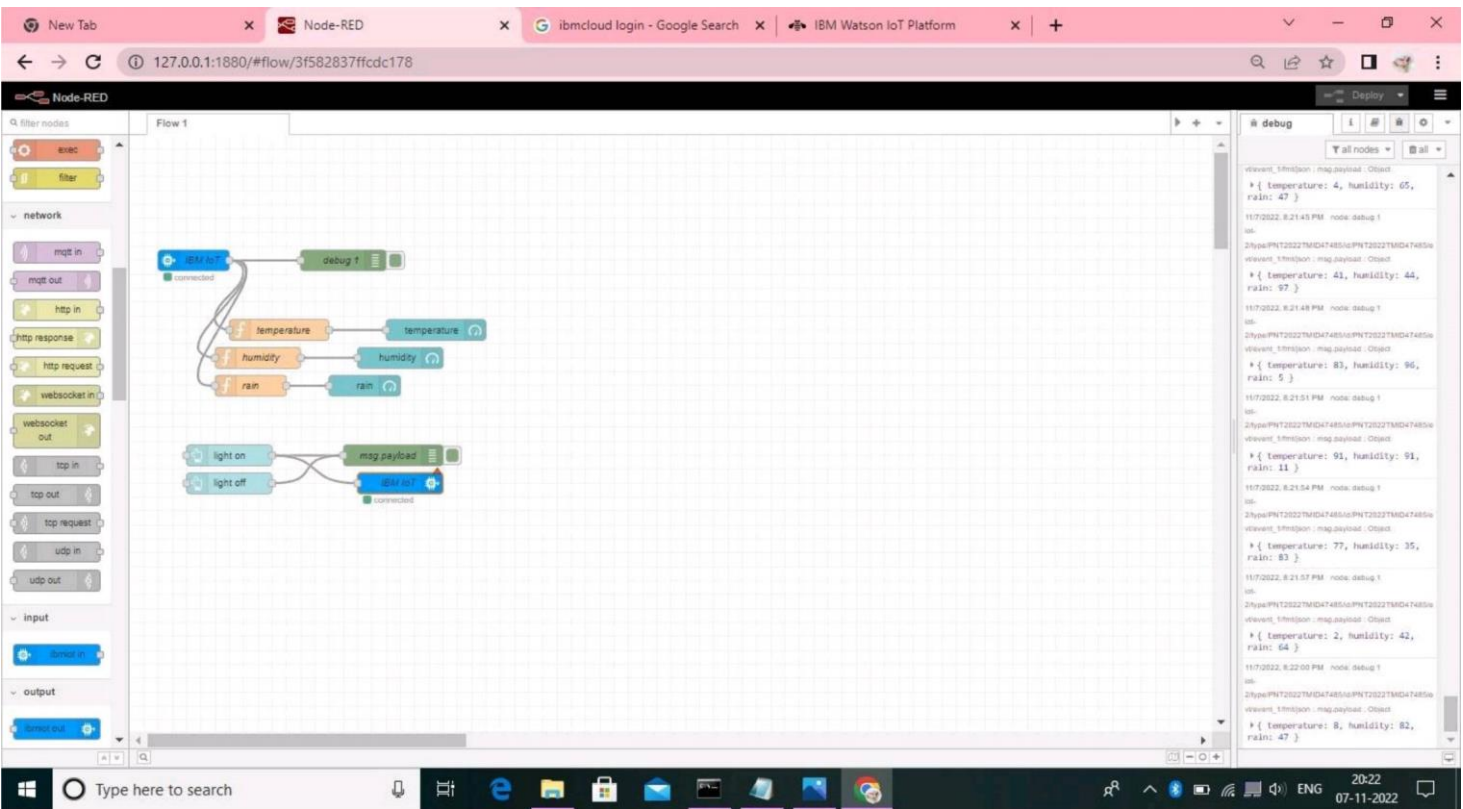
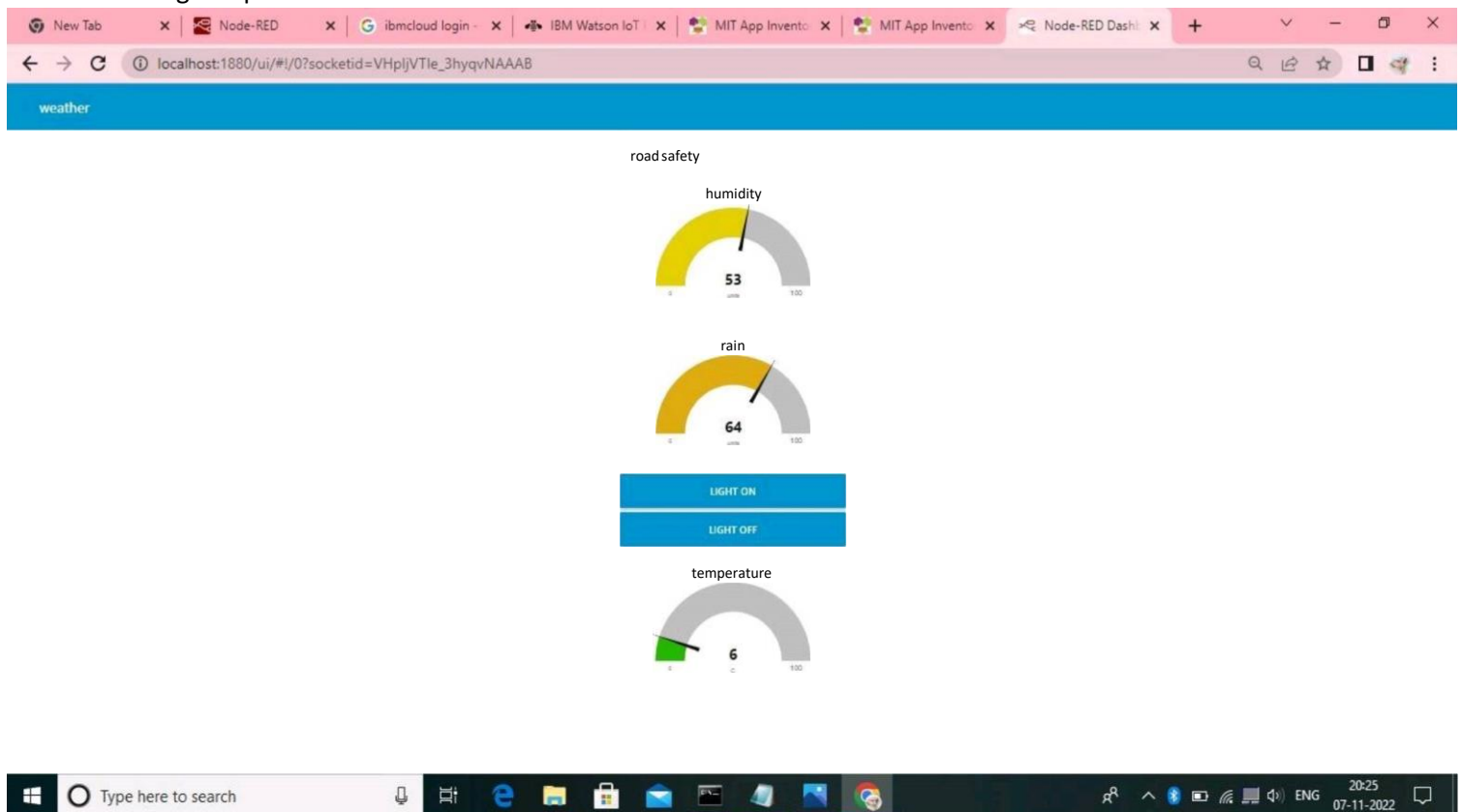


Fig: output from recent events

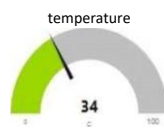


road safety



LIGHT ON

LIGHT OFF





## MIT APP INVERTER TO DESIGN THE APP:

