SPRINT DELIVERY – 3

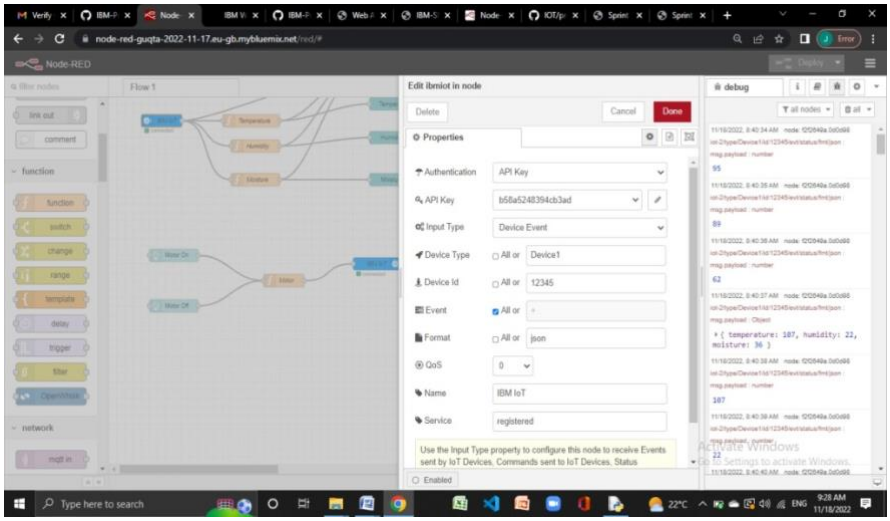
Team ID	PNT2022TMID16026
Project Name	Smart Farmer-IoT Enabled Smart Farming Application

Configuration of Node-Red to send commands to IBM cloud

We used IBM IOT in node to get IBM Watson to Node Red.IBM out node to send data from Node-Red to IBM Watson device. So, after adding it to the flow we need to configure it with credentials of our Watson device.

Here we add two buttons in UI

1 -> for motor on
2 -> for motor off



PROGRAM:

Sensor data:

```
msg.payload={
   "temperature":global.get('t'),
   "humidity":global.get('h'),
   "moisture":global.get('m')
}
return msg;
```

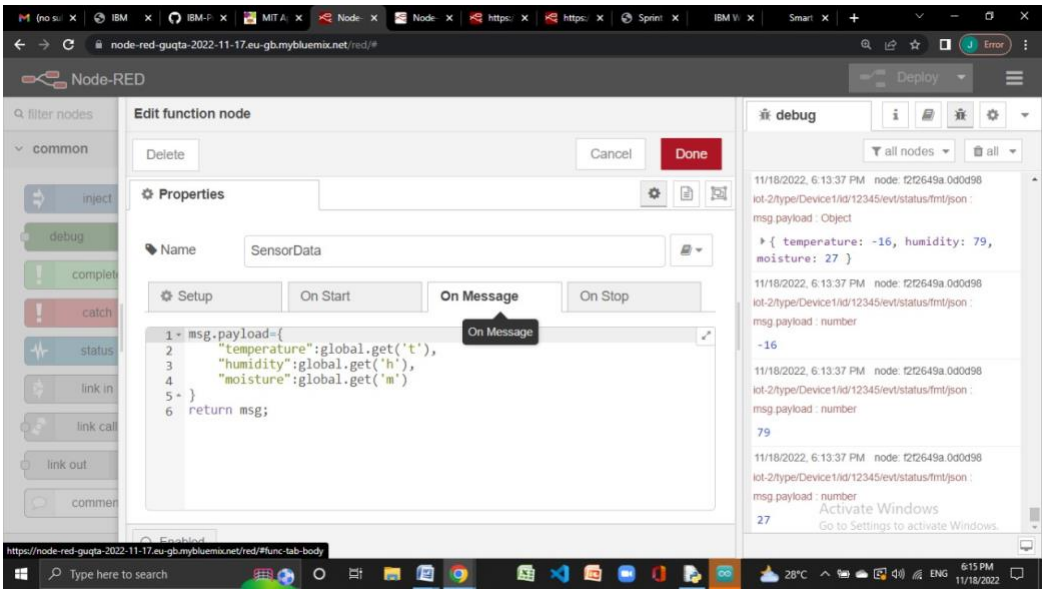
Temp:

```
msg.payload=msg.payload.temperature
global.set('t',msg.payload);
return msg;
```

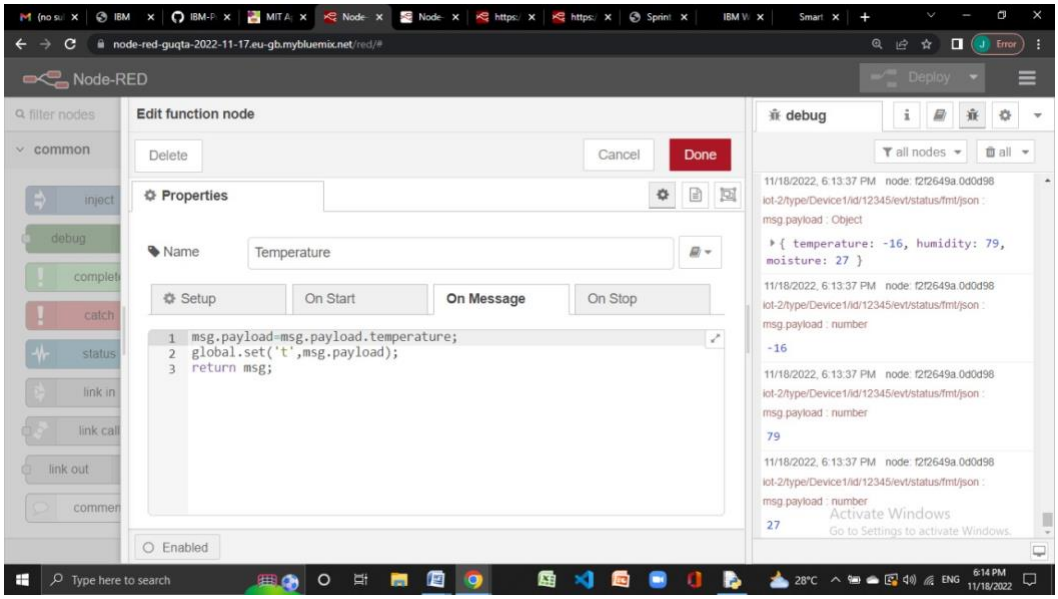
Motor:

```
msg.payload={
   "command": msg.payload
}
return msg;
```

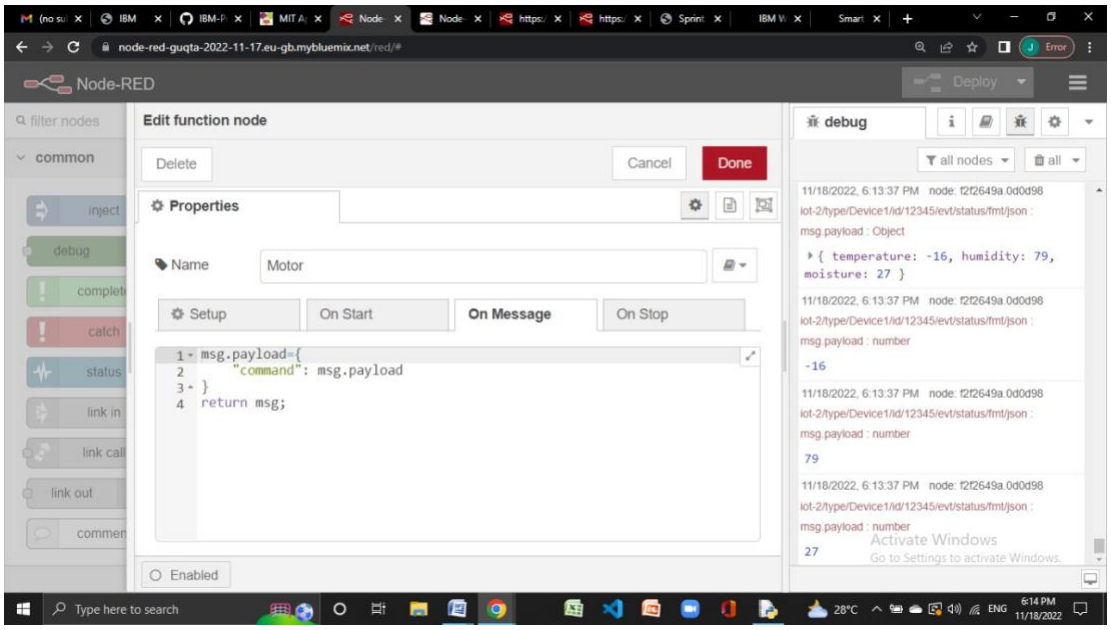
SENSOR DATA:

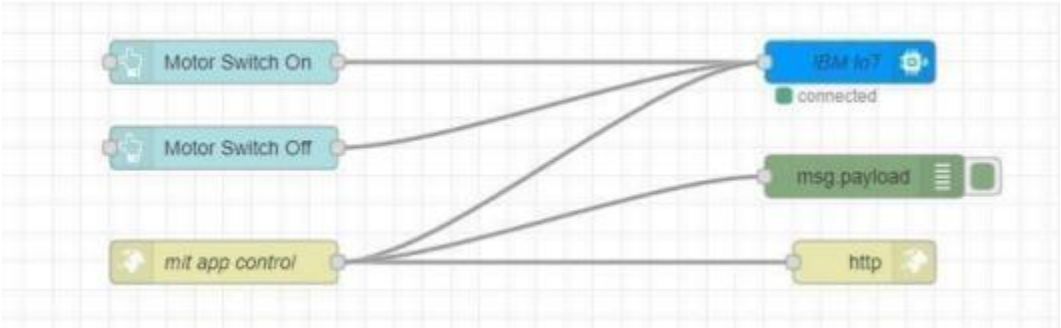


TEMPERATURE:



MOTOR:

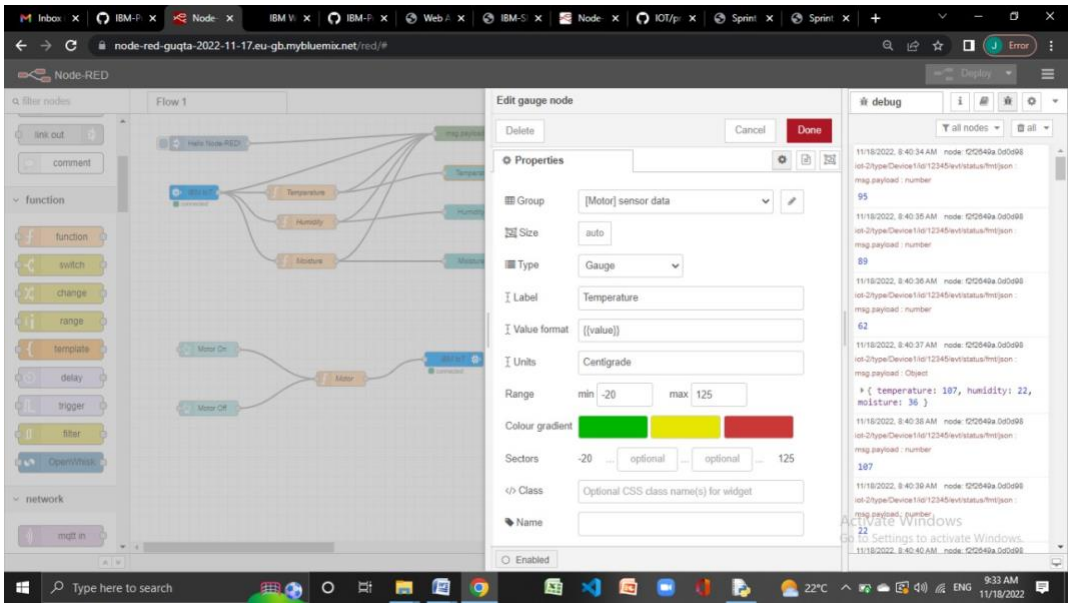




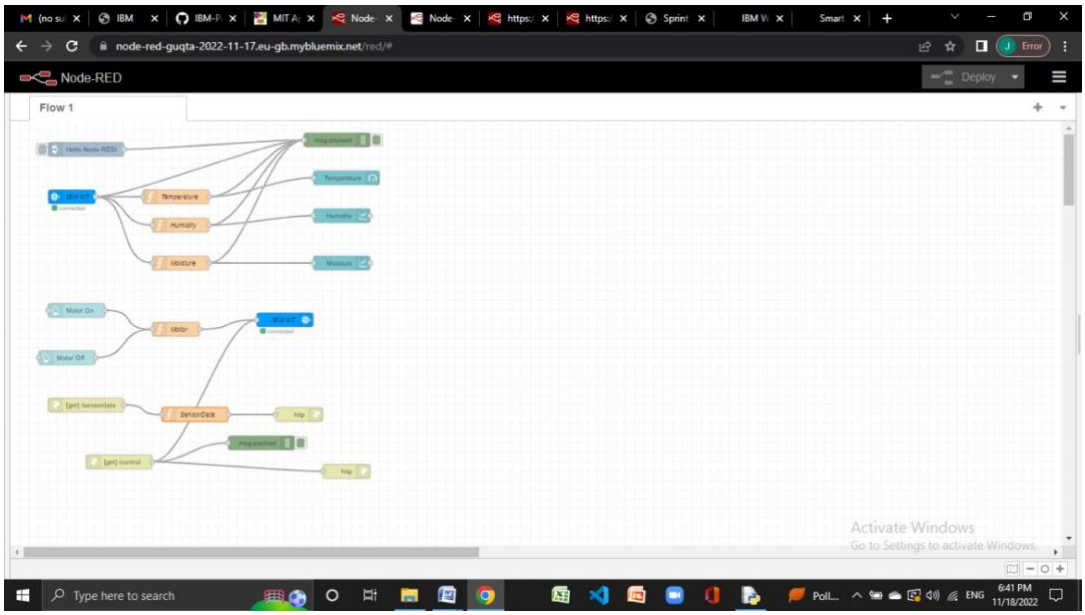
This is the program flow for sending commands to IBM cloud.

Adjusting User Interface

In order to display the parsed JSON data a Node-Red dashboard is created Here we are using Gauges, text and button nodes to display in the UI and helps to monitor the parameters and control the farm equipment. Below images are the Gauge, text and button node configurations.

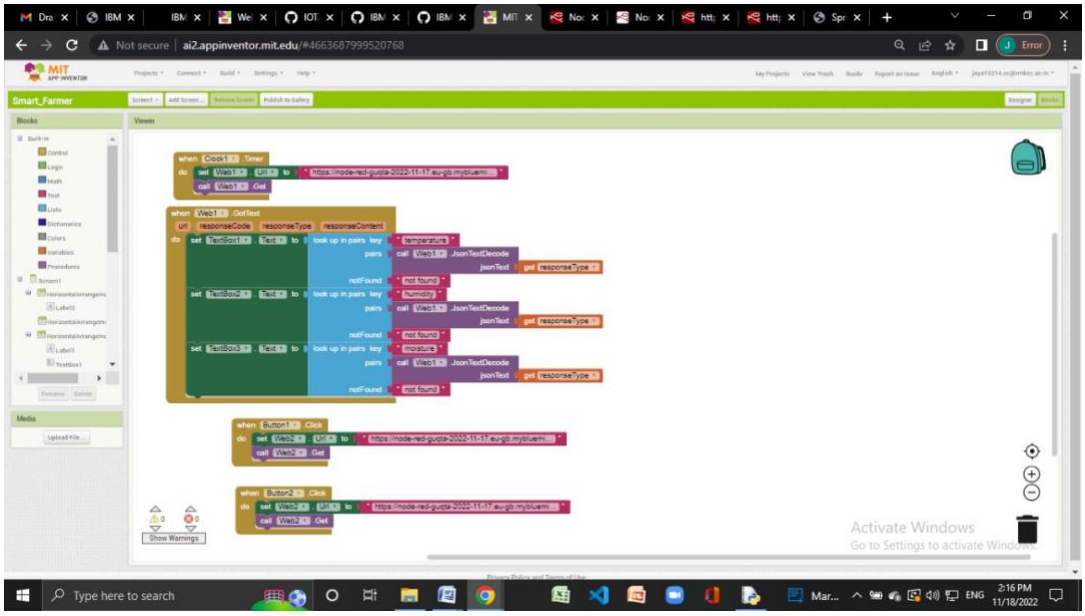


Complete Program Flow



MOBILE APP WEB :

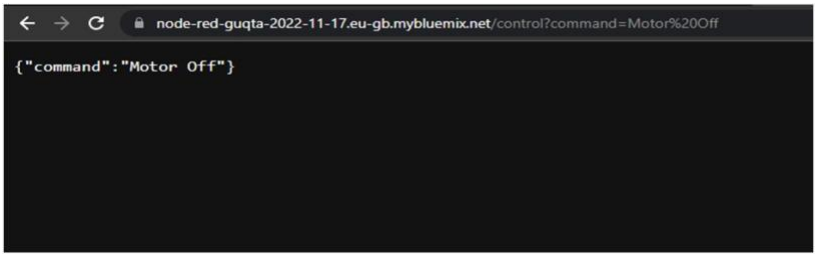
BLOCK DIAGRAM



To get information from Node Red to MIT APP. The following are used:

SENSOR DATA

COMMAND:



Web APP UI Home Tab