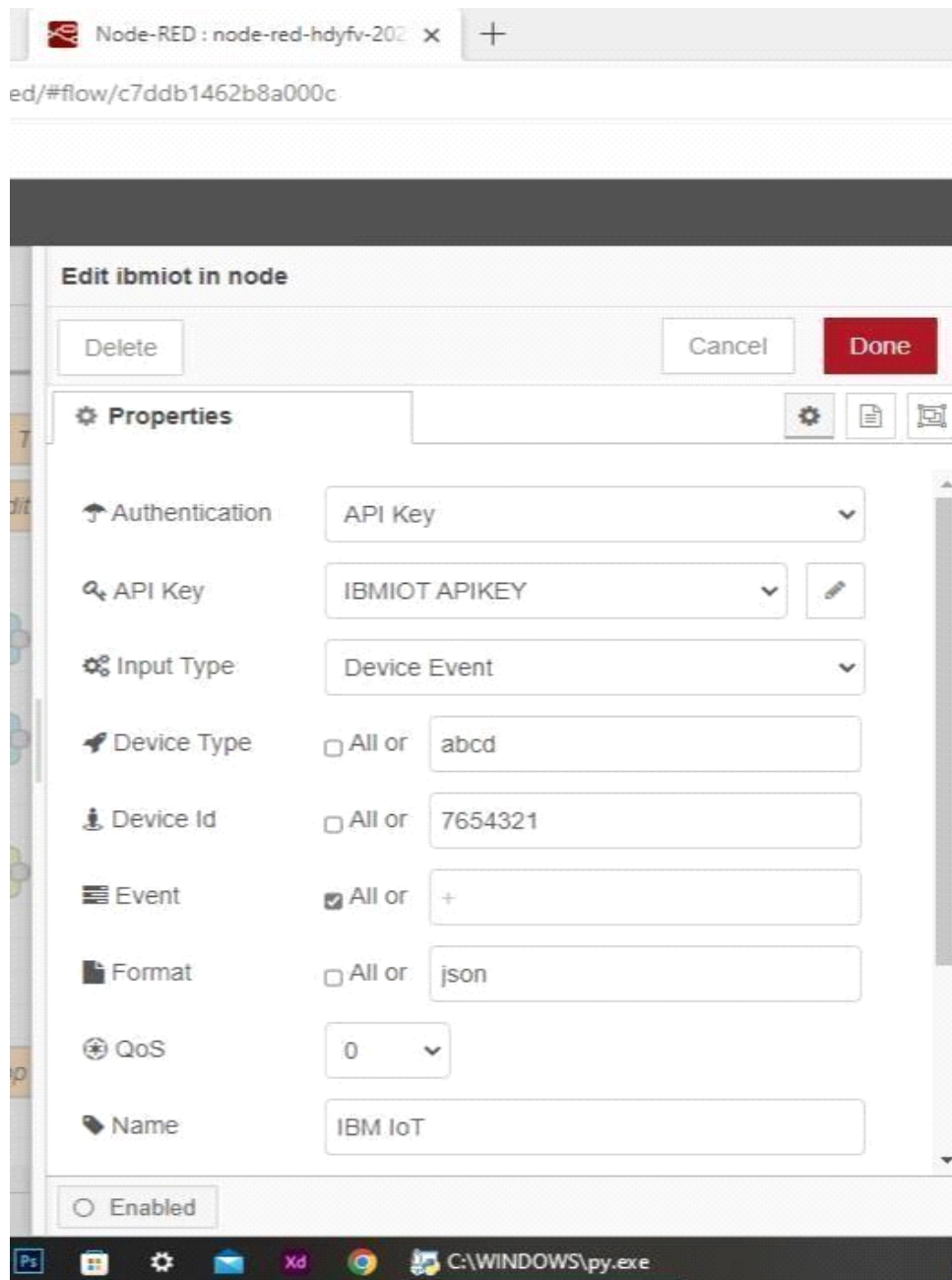# IOT ENABLED SMART FARMINGAPPLICATION SPRINT DELIVERY – 3

TEAMID :
PNT2022TMID37007

- **Configuration of Node-Red to send commands to IBM cloud**

ibmiot out node I used 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 Watsondevice.

Here we add two buttons in UI

1 ->
for
mot
or

on2

->

for

mot

or

off

We used a function node to analyses the data received and assign command toeach number.

The Java script code for the

analyses is:if(msg.payload===1)

msg.payload={"command": "ON"};
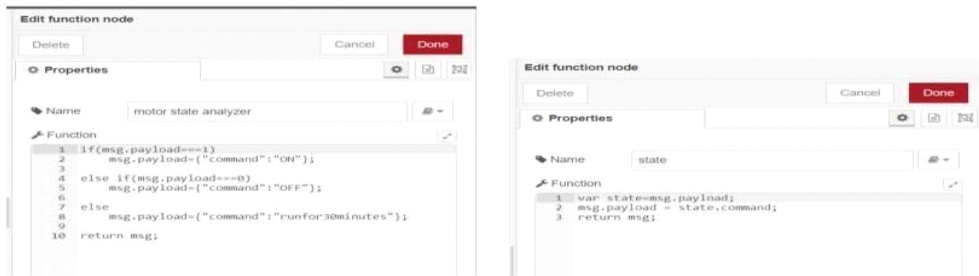
else

if(msg.payload===0)

msg.payload={"comm

and": "OFF"};

Then we use another function node to parse the data and get the command and represent it visually with text node.
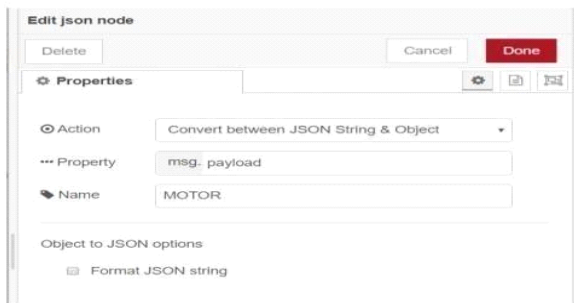
The Java script code for that function node is:

```
var state=msg.payload;
msg.payload = state.command;
return msg;
```
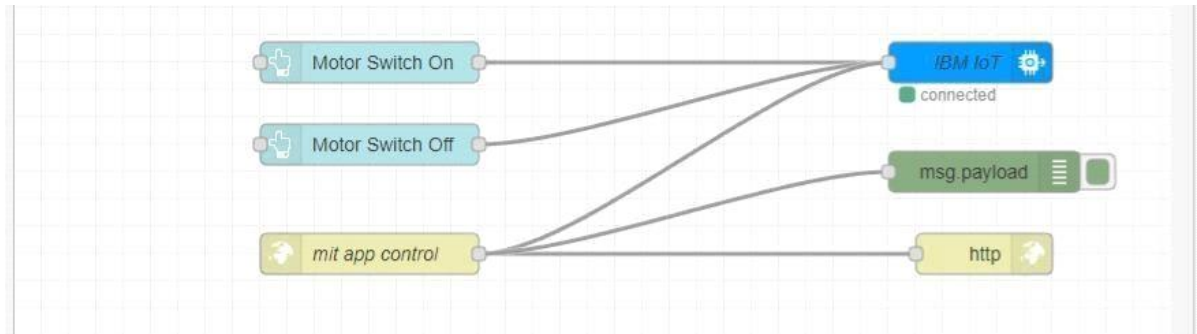

The above images show the java script codes of analyser and state function nodes.

Then we add edit Json node to the conversion between JSON string & object and finally connect it to IBM IoT Out.

Edit JSON node needs to be configured like this

This is the program flow for sending commands to IBM cloud.
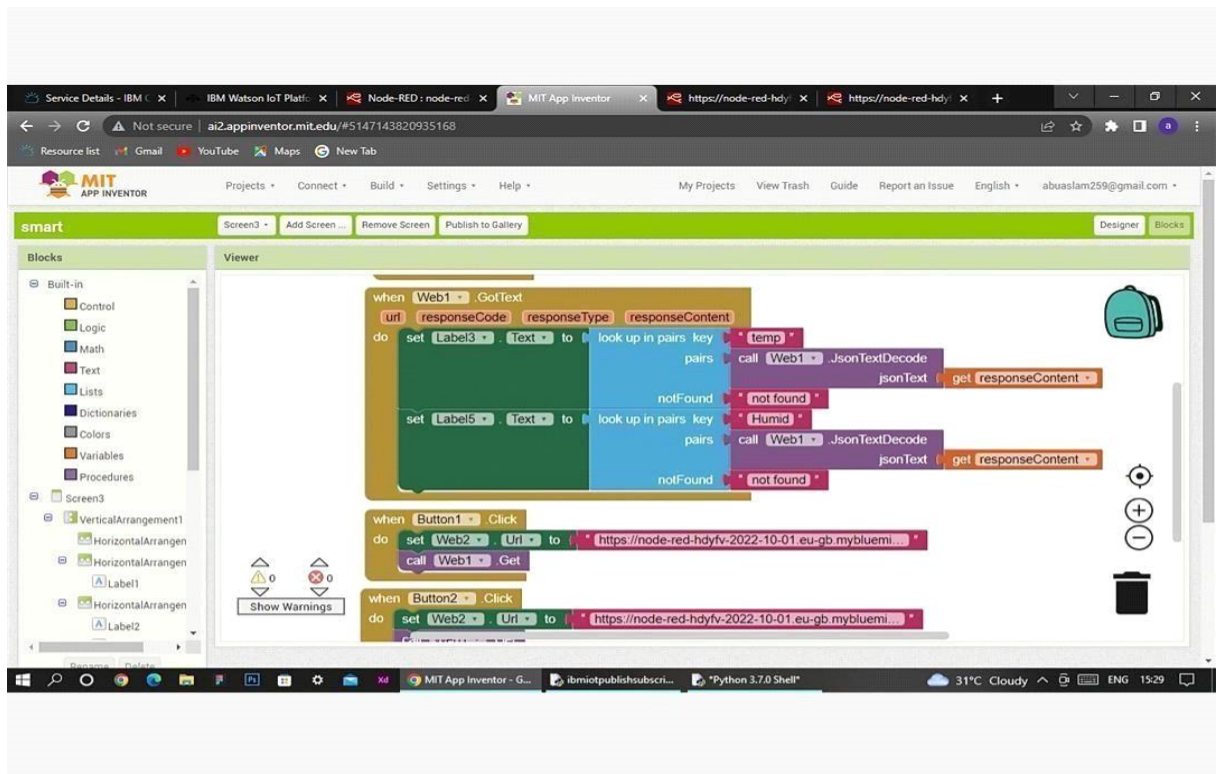
- Adjusting User Interface

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 tomonitor the parameters and control the farm equipment.
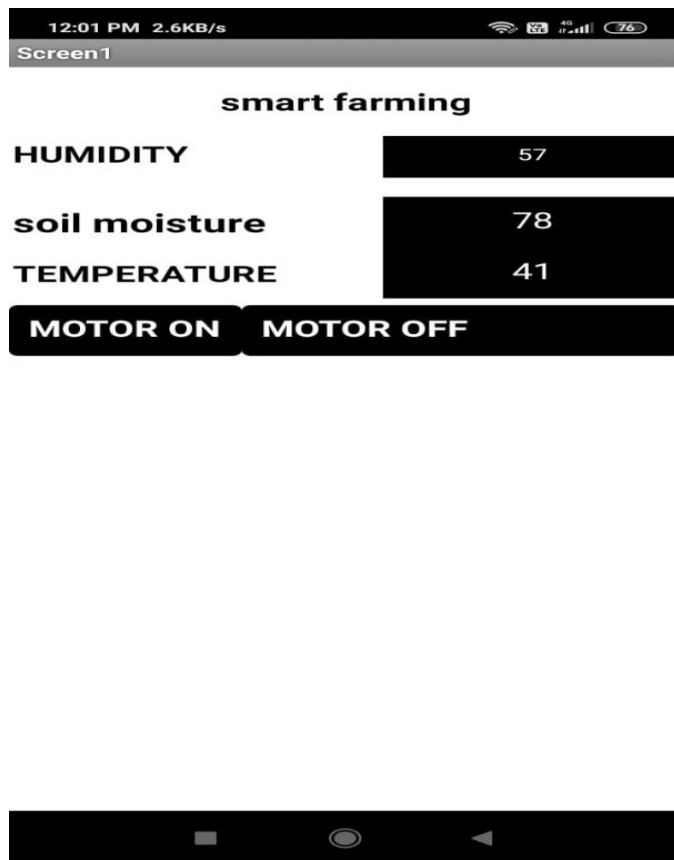
Below images are the Gauge, text and button node configurations.
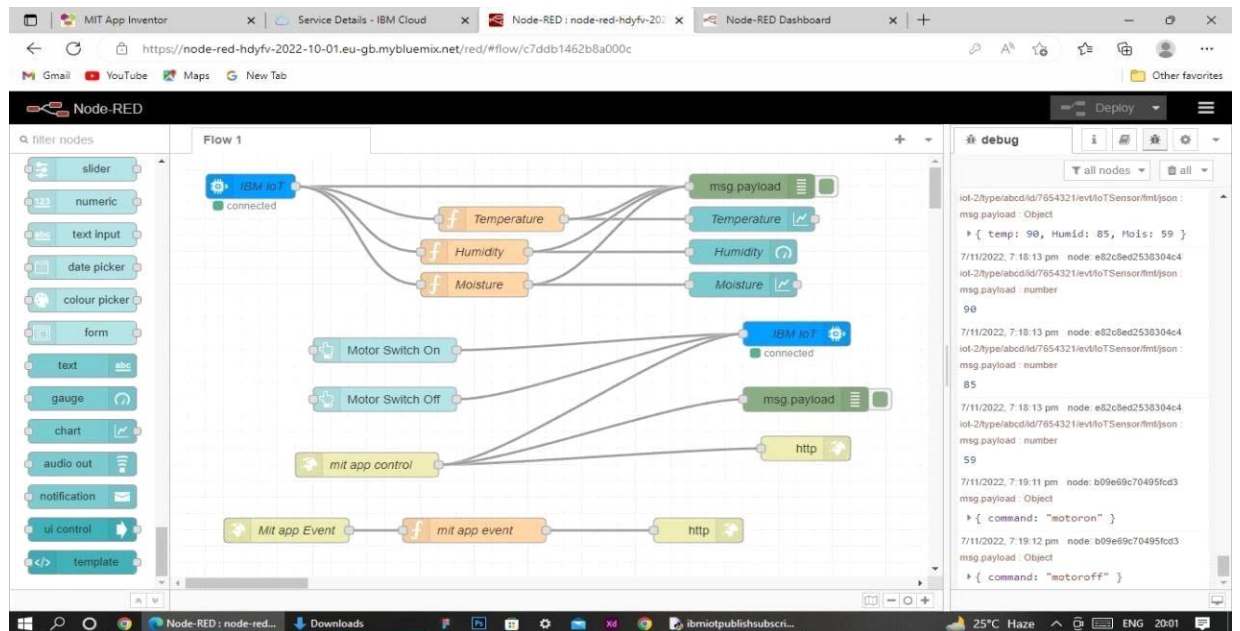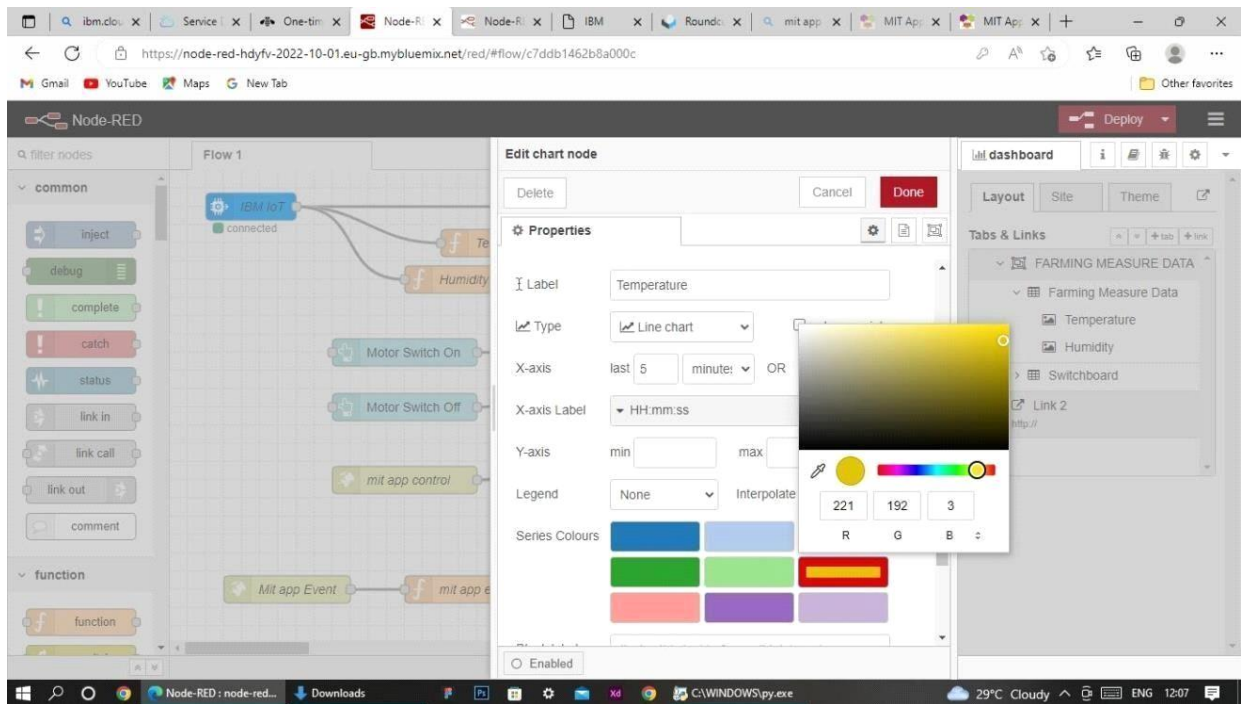
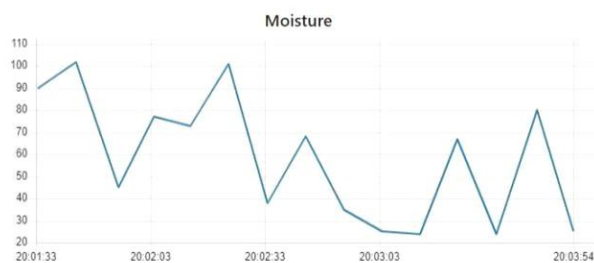Complete Program Flow
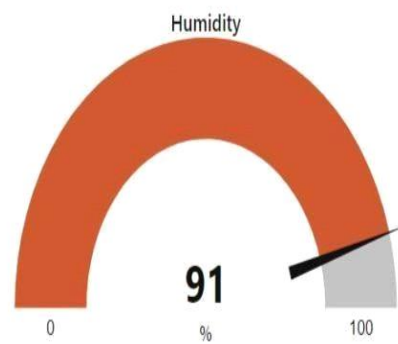
MOBILE APP WEB :

BLOCK DIAGRAM

SCREEN

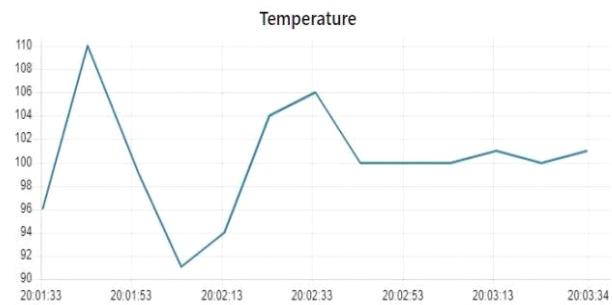Web APP UI Home Tab

Farming Measure Data

Temperature

Humidity

91
%

0   100

Moisture

Switchboard

MOTOR SWITCH ON

MOTOR SWITCH OFF