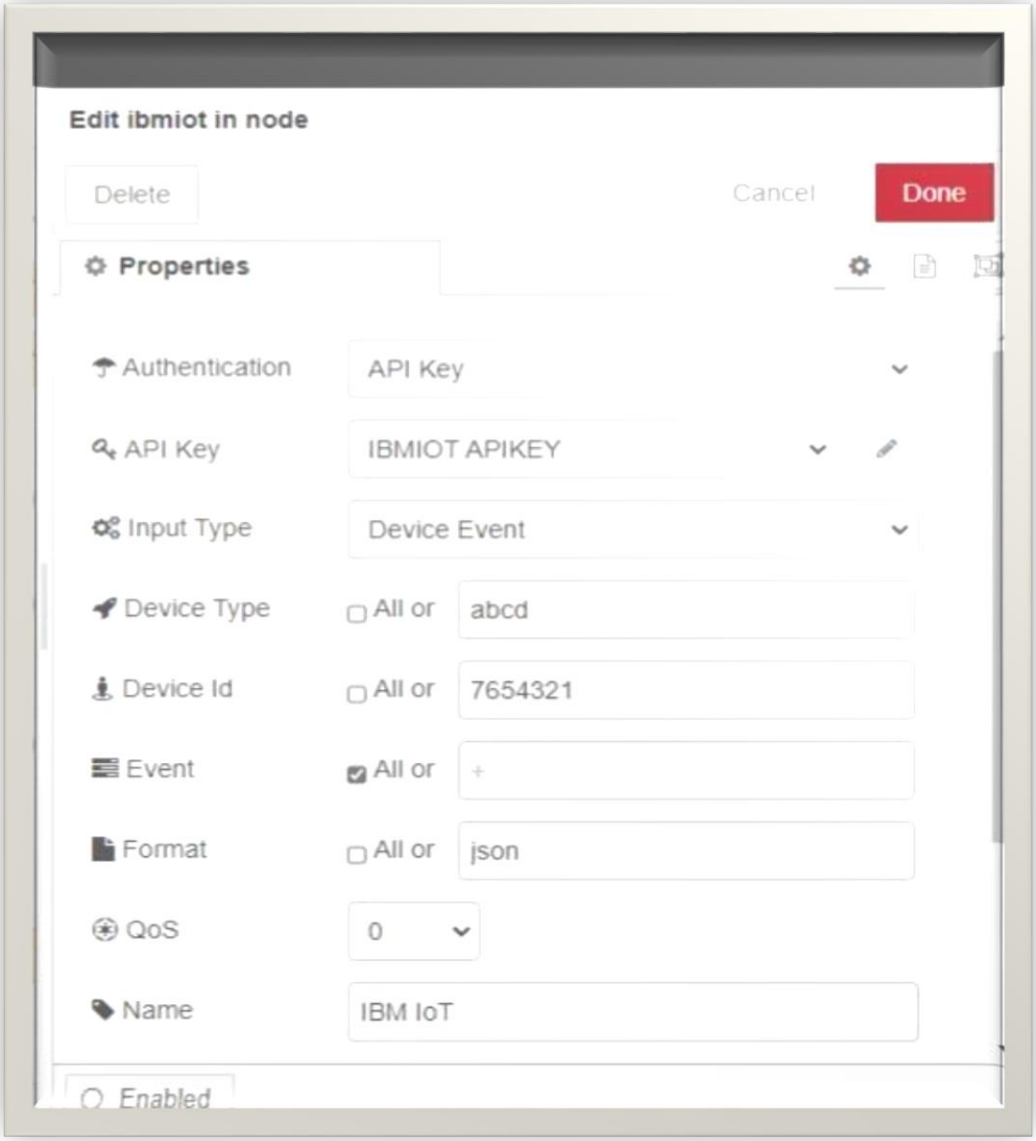
IOT ENABLED SMART FARMING APPLICATION

SPRINT DELIVERY – 3

TEAME ID:PNT2022TMID34190

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 the credentials of our Watsondevice.



Here we add two buttons in UI

1 -> for motor on

2 -> for motor off

We used a function node to analyse the data received and assign commands to each number.

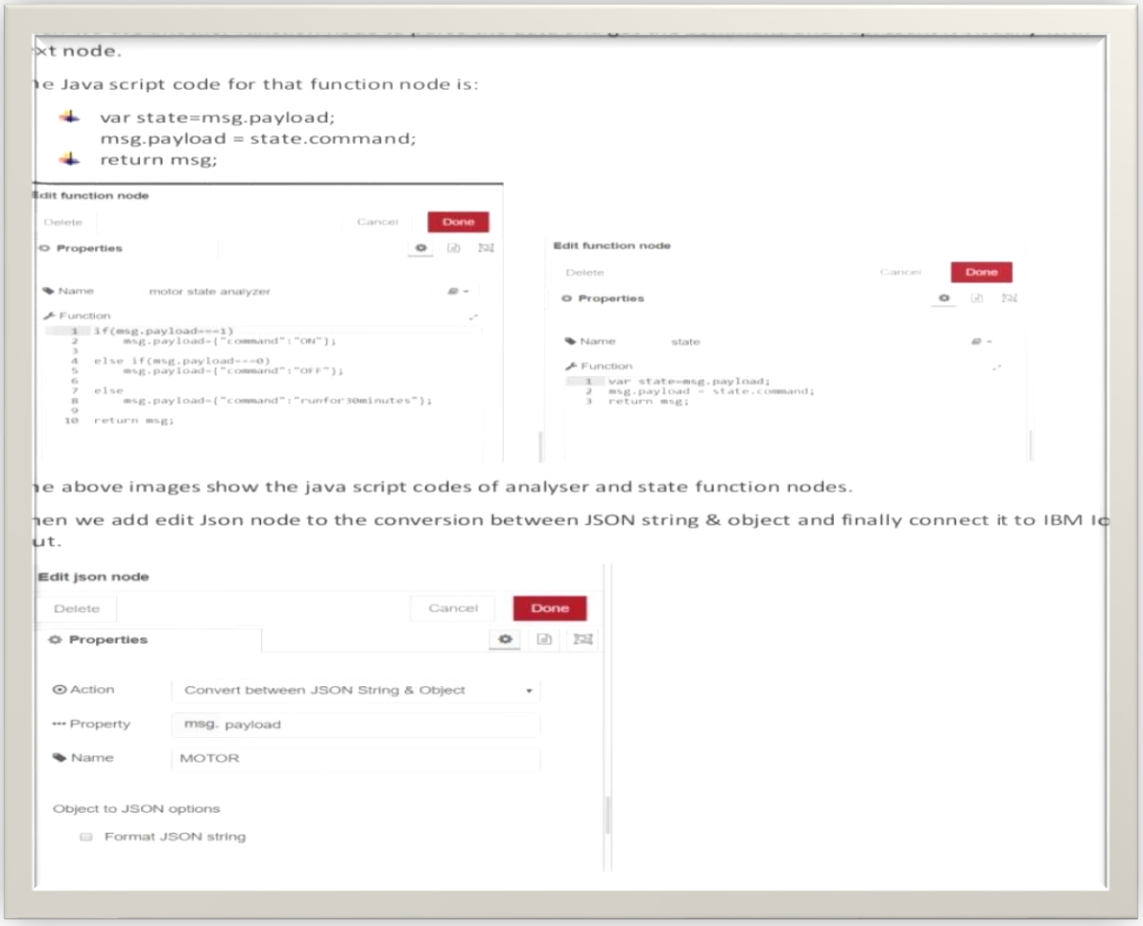
The Javascript code for the analyses is:

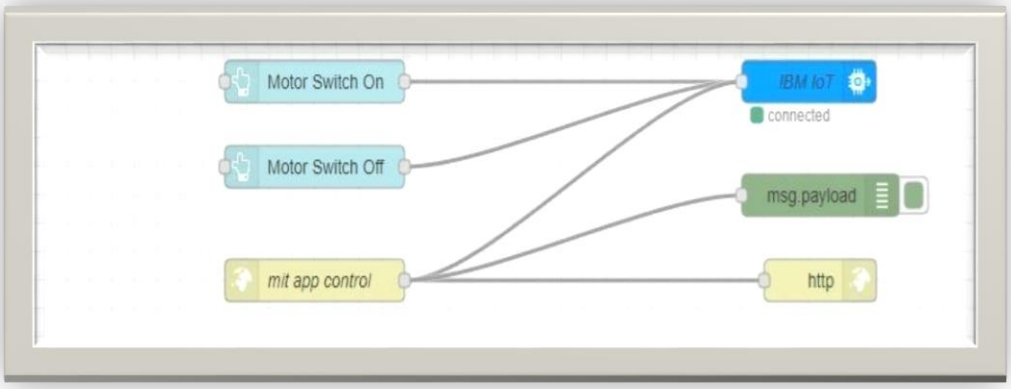
if(msg.payload===1)

msg.payload={"command”: “ON"};

else if(msg.payload===0)

msg.payload={"command”: “OFF"};





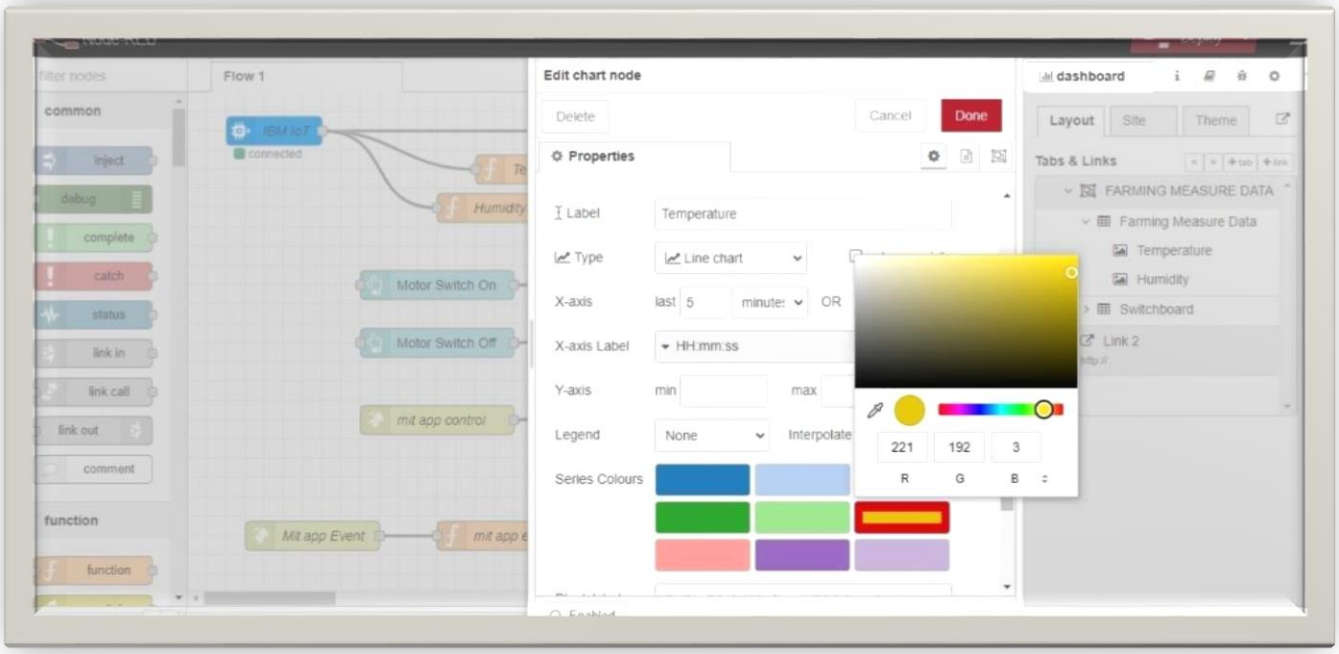
This is the program flow for sending commands to IBM the cloud.

Adjusting User Interface

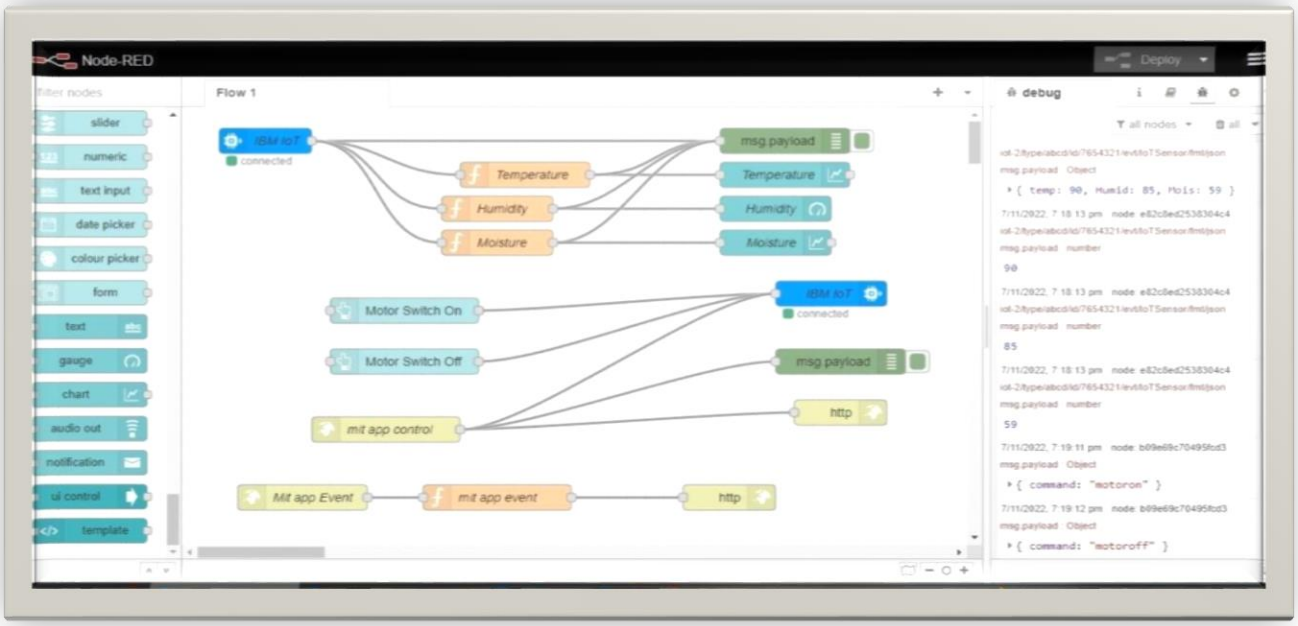
In order to display the parsed JSON data a Node-Red dashboard is created

Here we are using Gauges, text, and button nodes to display in the UI and help to monitor the parameters and control the farm equipment.

Below images are the Gauge, text and button node configurations.

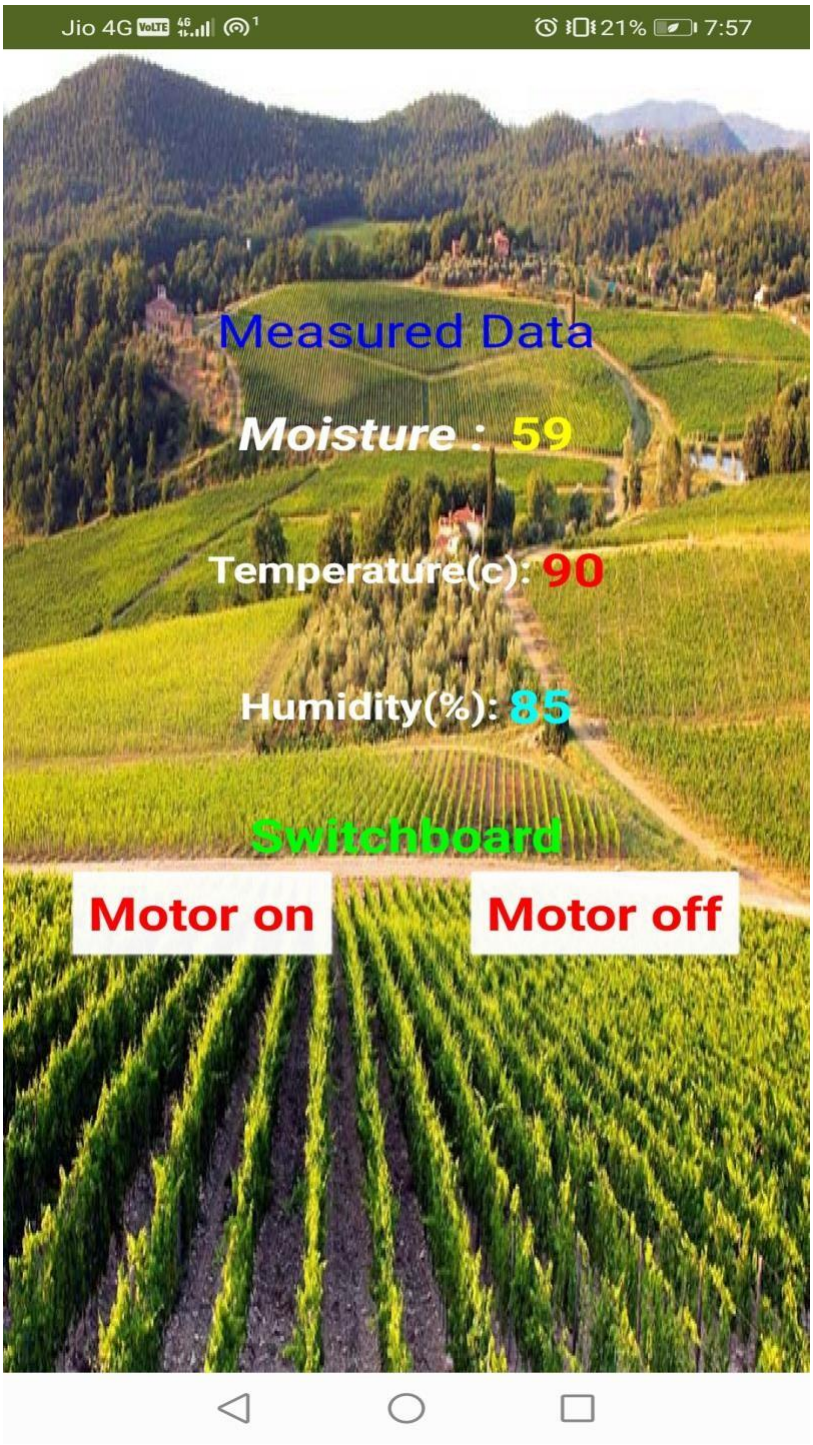


COMPLETE PROGRAM FLOW



MOBILE APP WEB :

BLOCK DIAGRAM


Jio 4G
21%
7:57
Measured Data
Moisture : 59
Temperature(c): 90
Humidity(%): 85
Switchboard
Motor on
Motor off

Web APP UI Home Tab