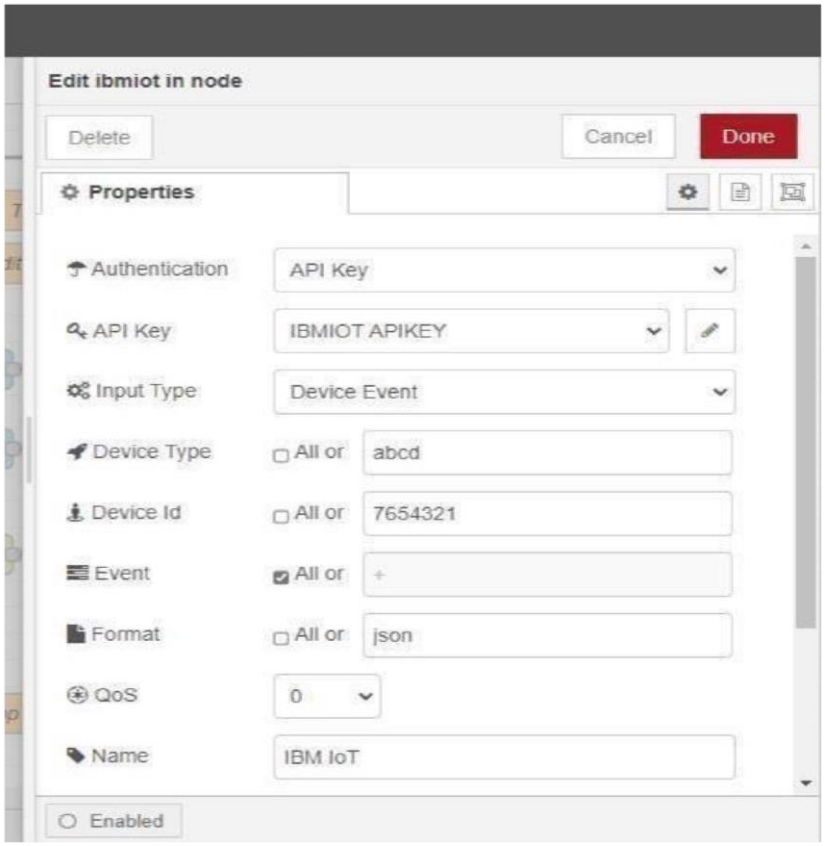
Project Development Phase
Delivery of Sprint 3

Date	15 November 2022
Team ID	PNT2022TMID14459
Project Name	SmartFarmer – IoT Enabled Smart Farming Application

Configuration of Node-Red to send commands to IBM cloud



1 -> for motor on

2 -> for motor off

We used a function node to analyses the data received and assign command to each number. The Java script code for the analyses is:

if(msg.payload===1)

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

else if(msg.payload===0)

msg.payload={"command": "OFF"};

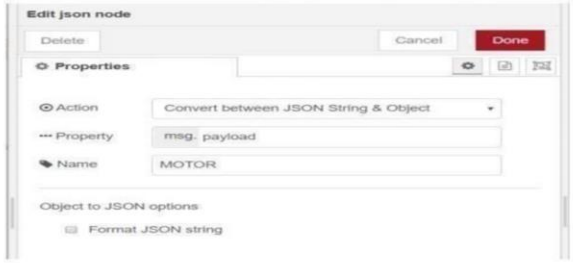
Then we use another function node to parse the data and get the command and represent it visually with text node.

The Java script code for that function node is:

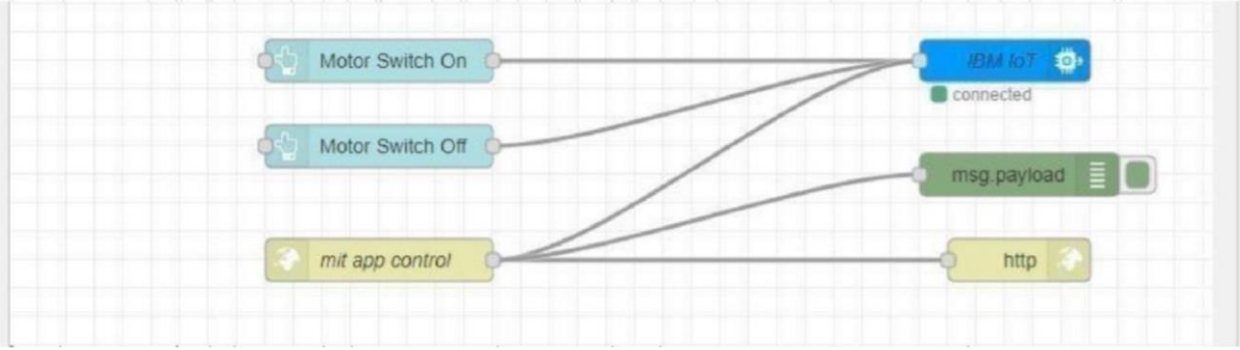
```
var state=msg.payload;
msg.payload = state.command;
return msg;
```

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

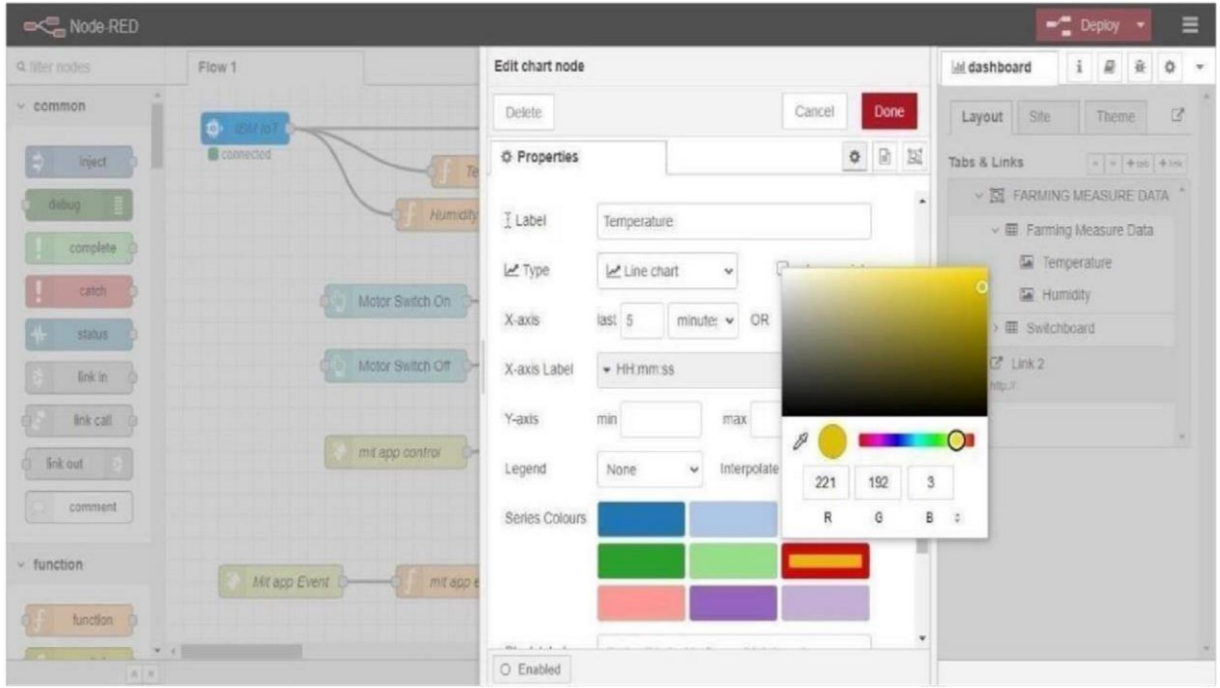
Then we add edit Json node to the conversion between JSON string & object and finally connect it to IBM IoT Out.



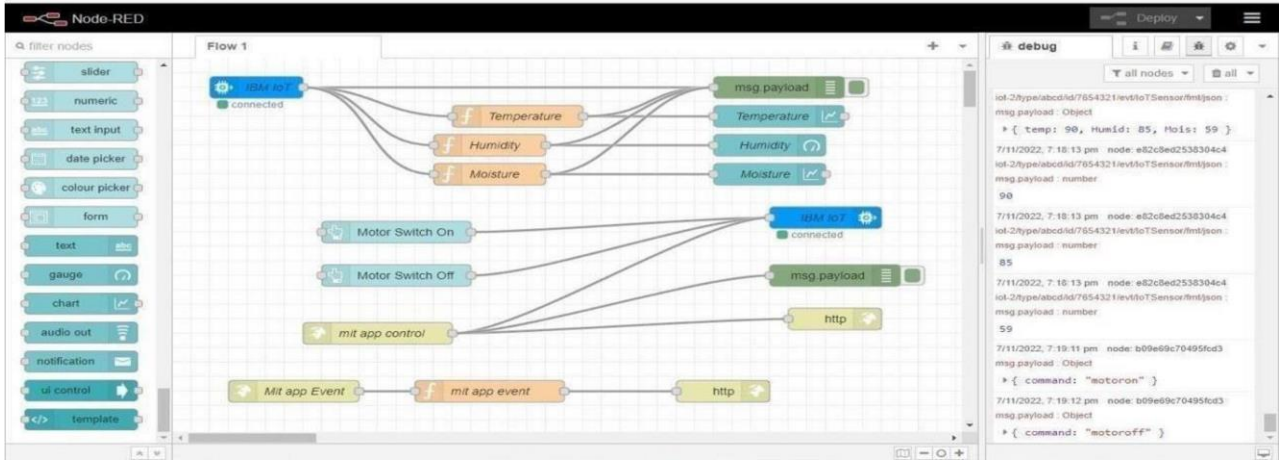
Edit JSON node needs to be configured like this



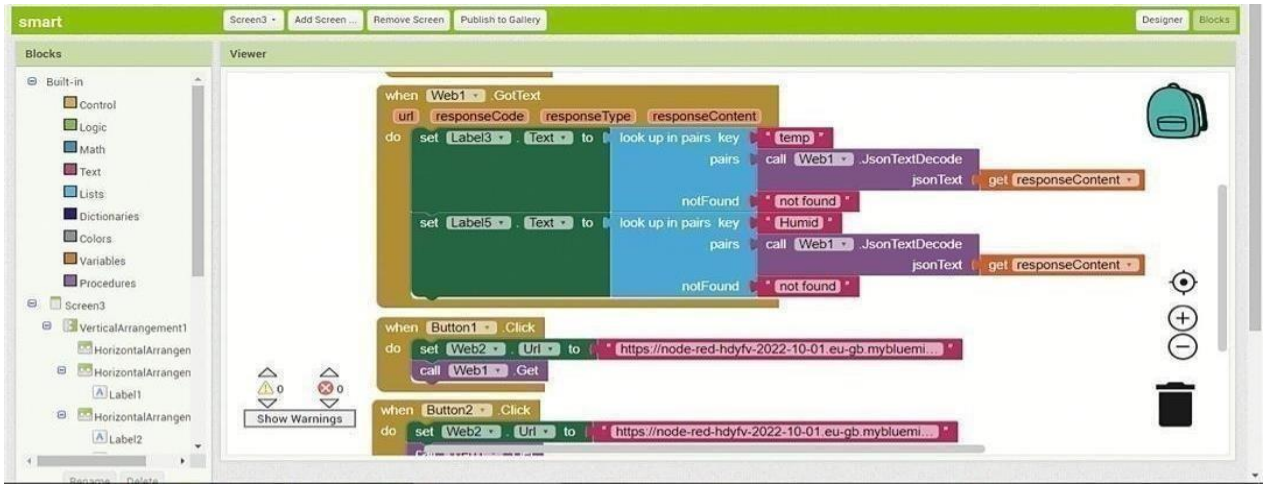
ADJUSTING USER INTERFACE

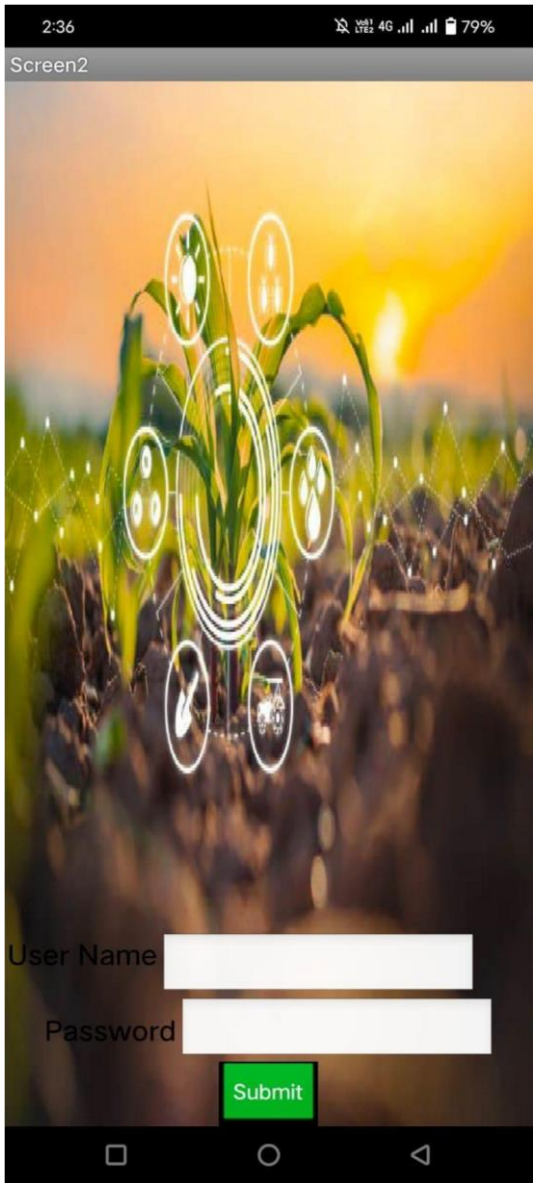


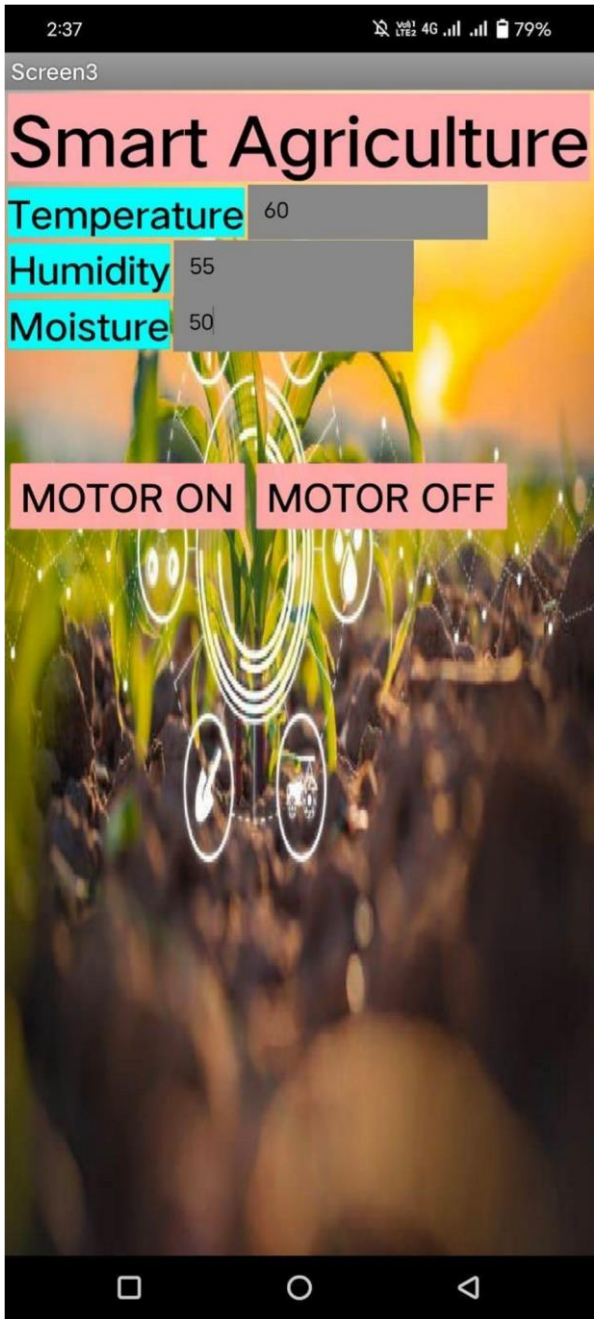
COMPLETE PROGRAM FLOW



MOBILE APP

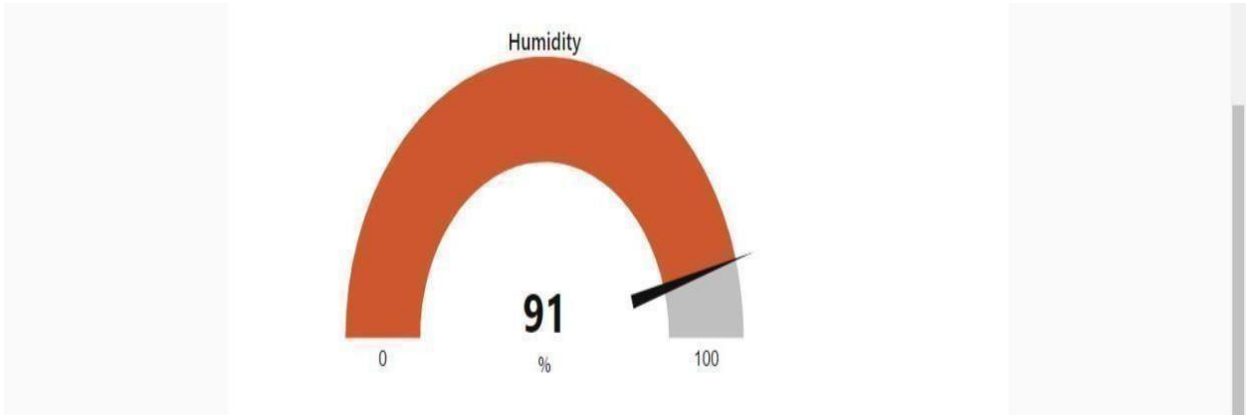



2:36
79%
Screen2
User Name
Password
Submit


2:37
79%
Screen3
Smart Agriculture
Temperature
60
Humidity
55
Moisture
50
MOTOR ON
MOTOR OFF

WEB APP UI


FARMING MEASURE DATA
Farming Measure Data
Temperature
110
108
106
104
102
100
98
96
94
92
90
20:01:33
20:01:53
20:02:13
20:02:33
20:02:53
20:03:13
20:03:34


Humidity
91
%
0
100


Moisture
110
100
90
80
70
60
50
40
30
20
20:01:33
20:02:03
20:02:33
20:03:03
20:03:54
Switchboard
MOTOR SWITCH ON
MOTOR SWITCH OFF