SPRINT DELIVERY – 3

Team ID PNT2022TMID03577

Project Name Smart farming -IoT Enabled Smart

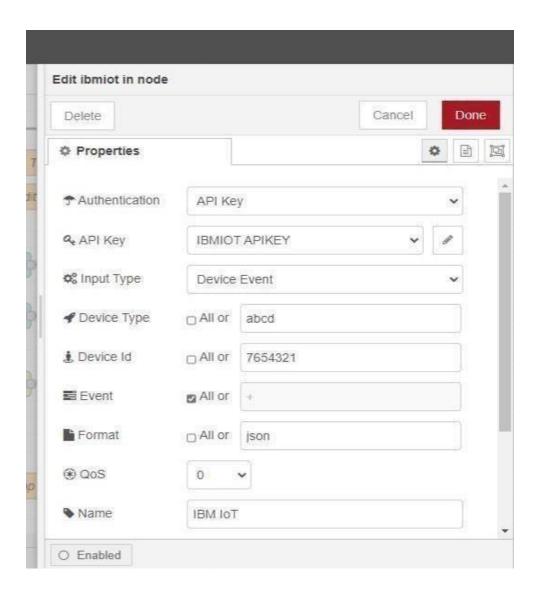
Farming Application

Date 12 November 2022

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 toth e flow we need to configure it with credentials of our Watson device.

Here we add two buttons in UI



1 -> for motor on

$2 \rightarrow \text{for motor off}$

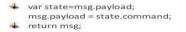
We used a function node to analyses the data received and assign command to each number.

The Java script code for the analyses is:

```
if(msg.payload===1)
msg.payload={"com mand": "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:



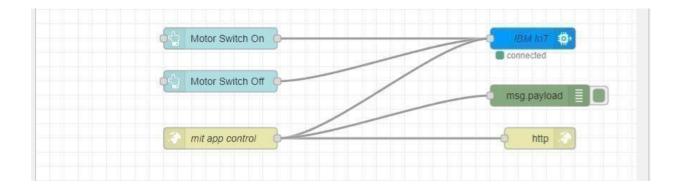


The above images show the java script codes of analyser and state function nodes.

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

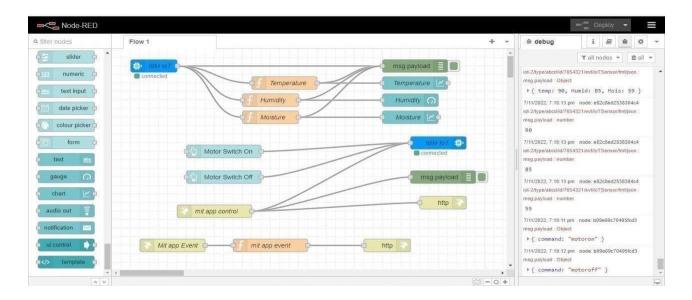
In order to display the parsed JSON data a Node-Red dashboard is created

Here we are using Gauges, text and button nodes to display in the UI and helps to monitortheparameters and control the farm equipment.

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

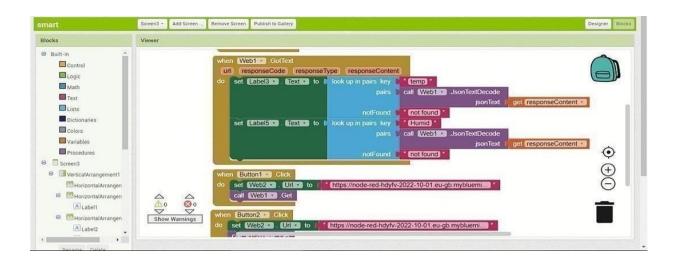


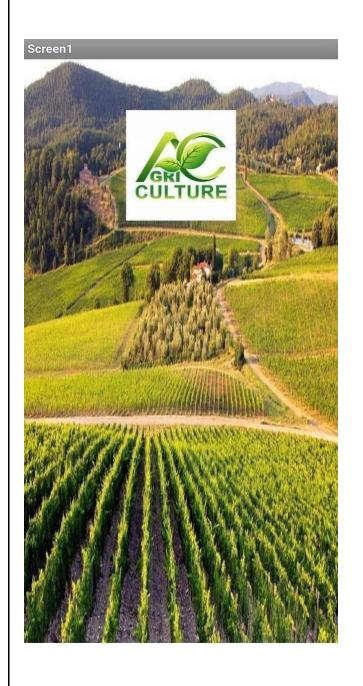
Complete Program Flow



MOBILE APP WEB:

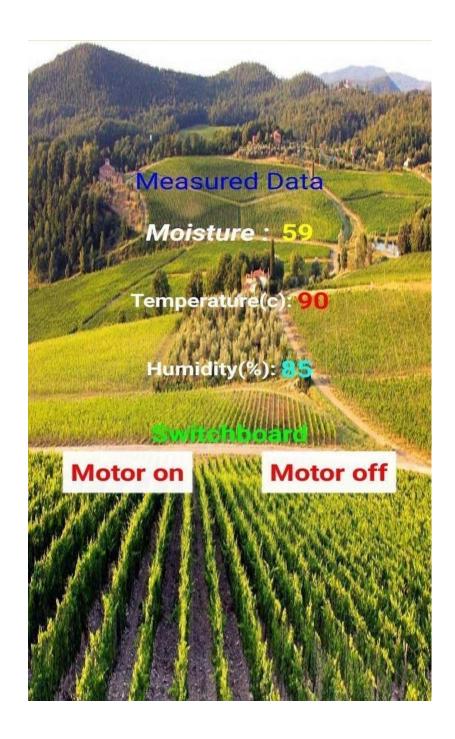
BLOCK DIAGRAM







SCREEN - 1 SCREEN - 2



SCREEN - 3

Web APP UI Home Tab

