SPRINT - 3

Date	15 November 2022
Team ID	PNT2022TMID04642
Project Name	Smart Farmer-IoT Enabled Smart Farming Application

Configuring Node-Red

Ibm iot 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 Watson device. Here we add two buttons in UI

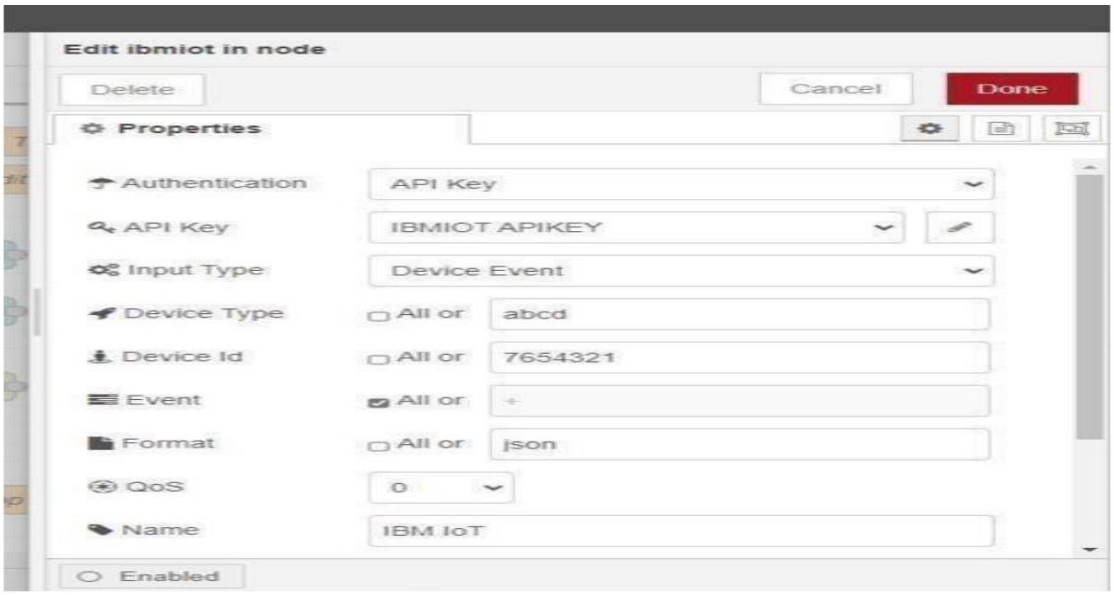
1 -> for motor on

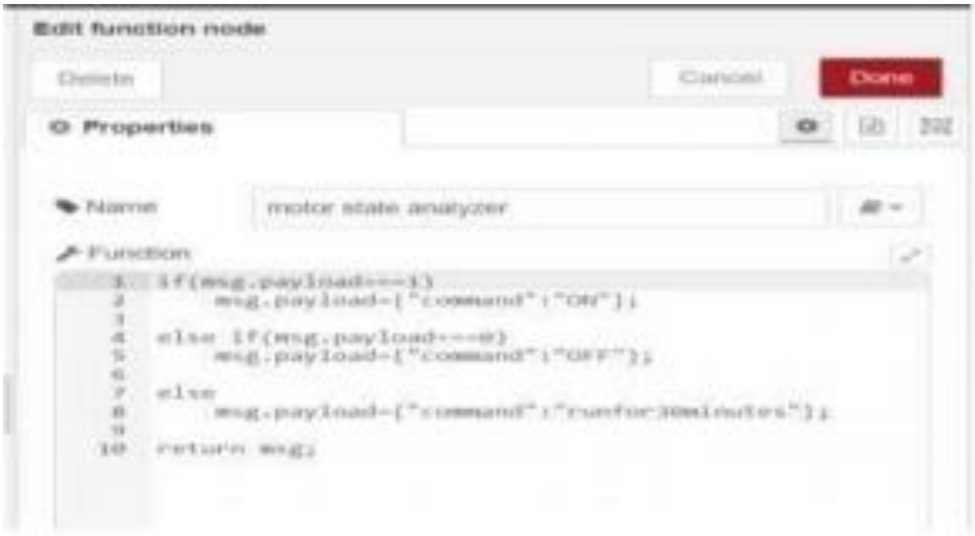
2 -> for motor off

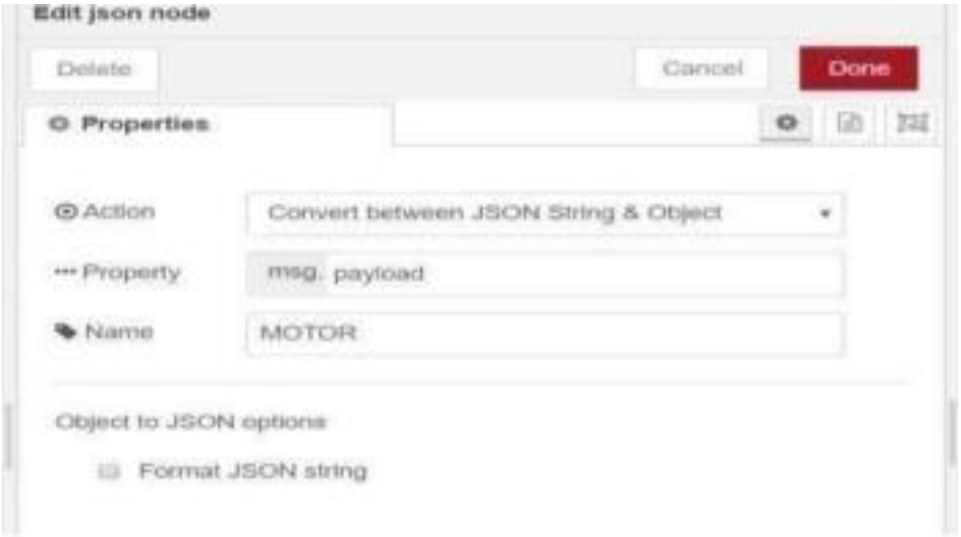
We used a function node to analyses the data received and assign command to each number.

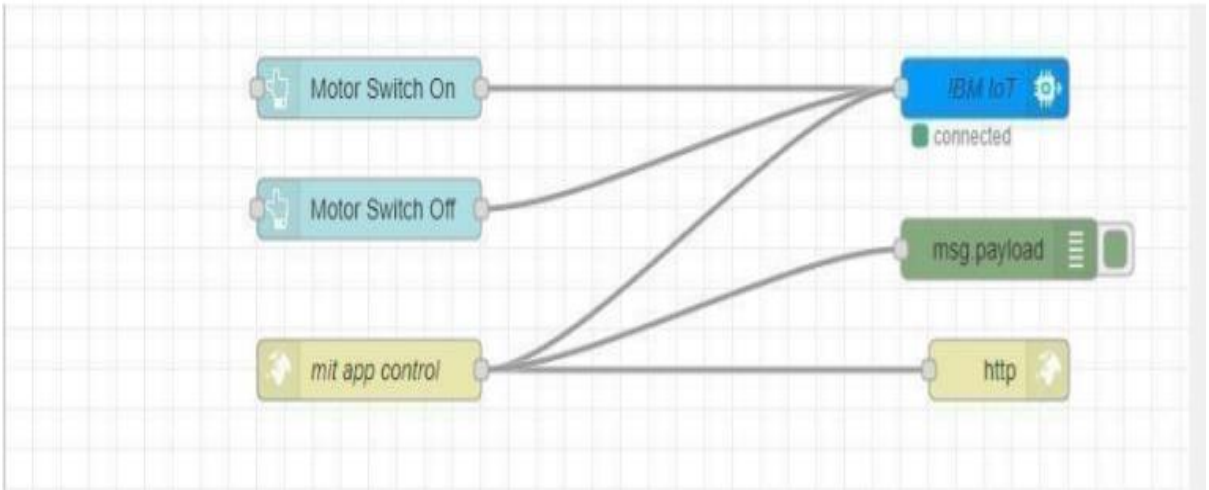
The Java script code for the analyses is:

```
if(msg.payload===1)
 msg.payload={"command": "ON"};
 else if(msg.payload===0)
msg.payload={"command": "OFF"};
```









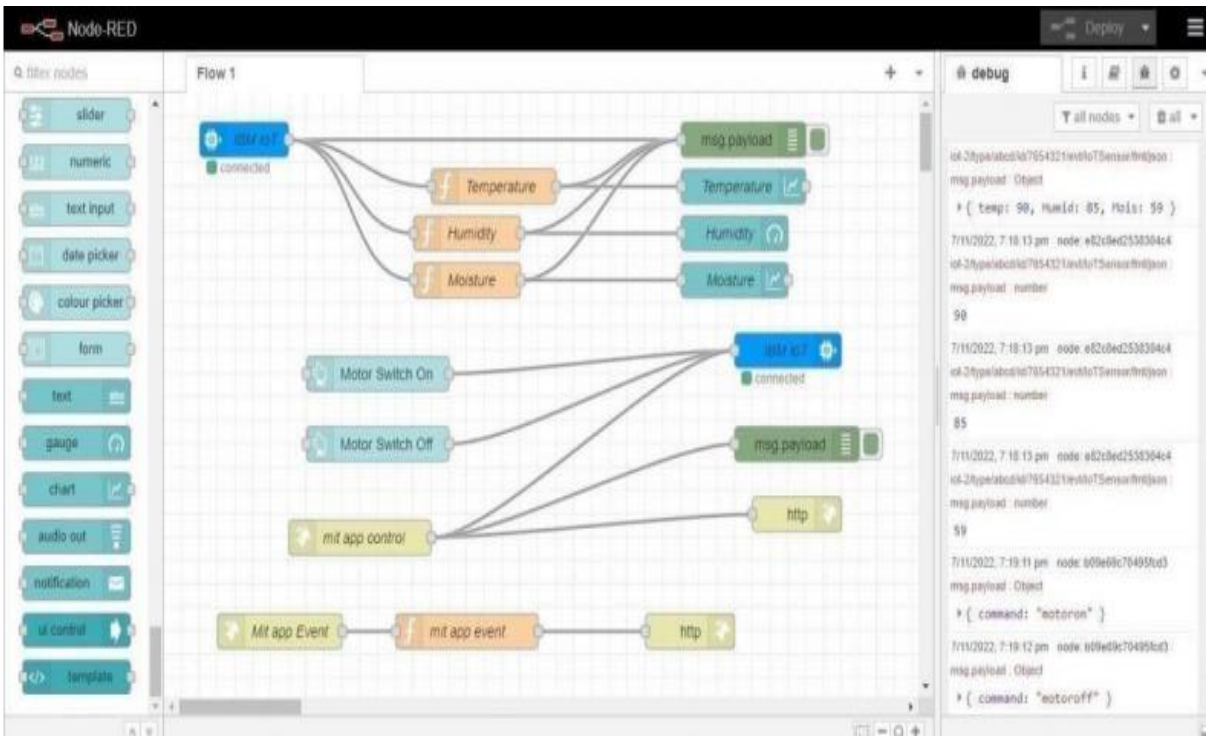
This is the program flow for sending commands to IBM cloud.

Adjusting User Interface

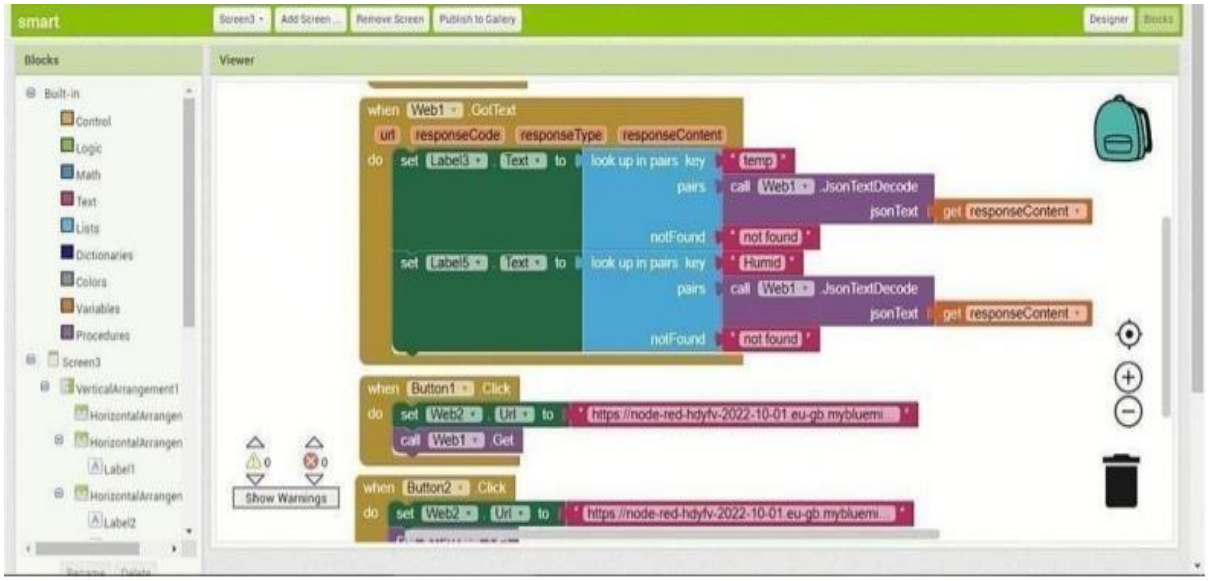
In order to display the parsed JSON data a Node-Red dashboard is created

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 configuration.

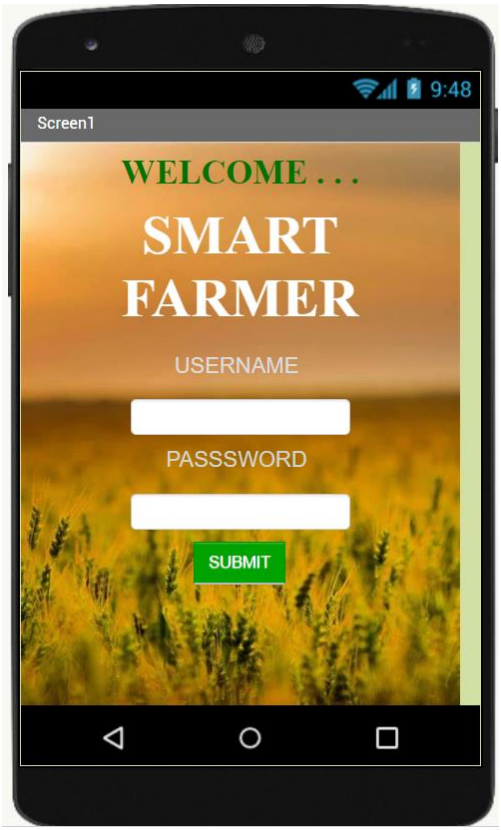
Program Flow



Mobile App


smart
Screen3
Add Screen ...
Remove Screen
Publish to Gallery
Designer
Blocks
Blocks
Viewer
Built-in
Control
Logic
Math
Text
Lists
Dictionaries
Colors
Variables
Procedures
Screen3
VerticalArrangement1
HorizontalArrangen
HorizontalArrangen
Label1
HorizontalArrangen
Label2
Show Warnings
when Web1 GotText
url responseCode responseType responseContent
do set Label3 Text to look up in pairs key temp
pairs call Web1 JsonTextDecode
jsonText get responseContent
notFound not found
set Label5 Text to look up in pairs key Humid
pairs call Web1 JsonTextDecode
jsonText get responseContent
notFound not found
when Button1 Click
do set Web2 Url to https://node-red-hdyfv-2022-10-01.eu-gb.mybluemi...
call Web1 Get
when Button2 Click
do set Web2 Url to https://node-red-hdyfv-2022-10-01.eu-gb.mybluemi...


9:48
Screen1
WELCOME . . .


9:48
Screen1
WELCOME . . .
SMART
FARMER
USERNAME
PASSSWORD
SUBMIT