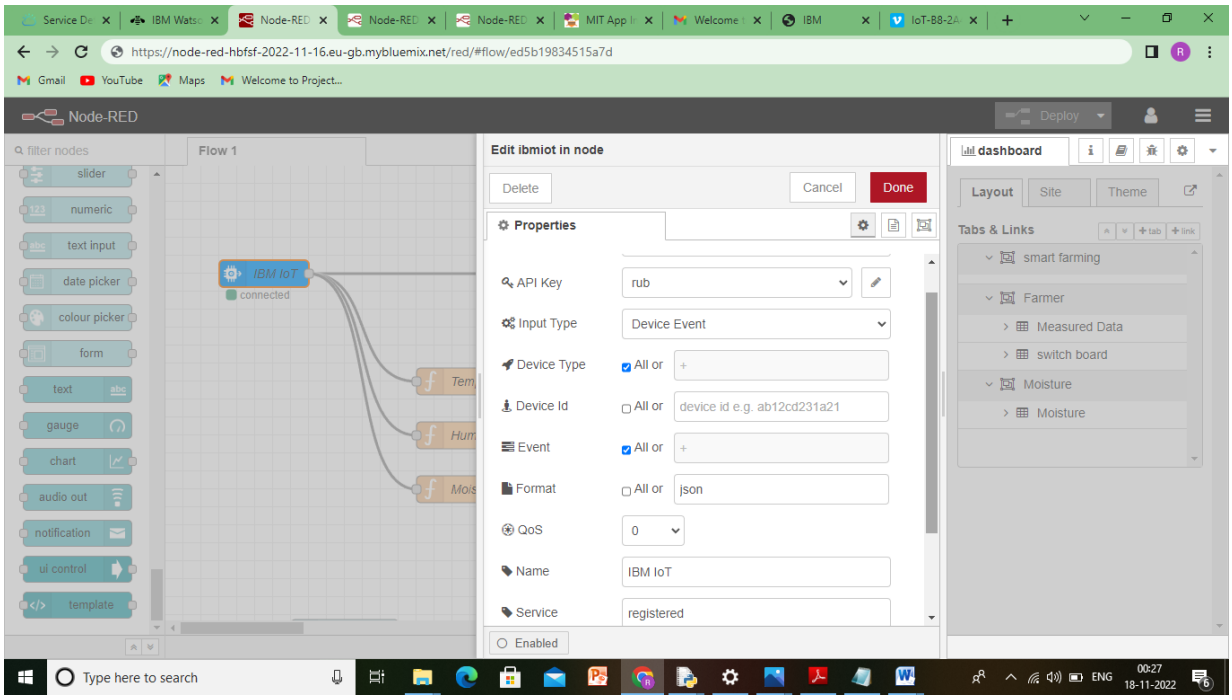
IOT ENABLED SMART FARMINGAPPLICATION

SPRINT DELIVERY – 3

Date	17.11.2022
Team ID	PNT2022TMID06965
Project Name	SMART FARMER - IOT ENABLED SMART FARMINGAPPLICATION SYSTEM

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 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:

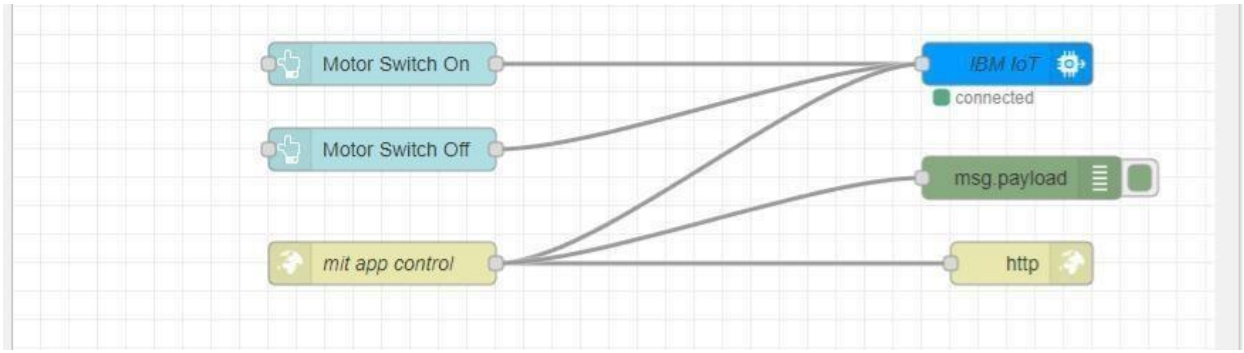
```
if(msg.payload===1)

msg.payload={"command”: “ON"};

else if(msg.payload===0)

msg.payload={"command”:

“OFF"};
```



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

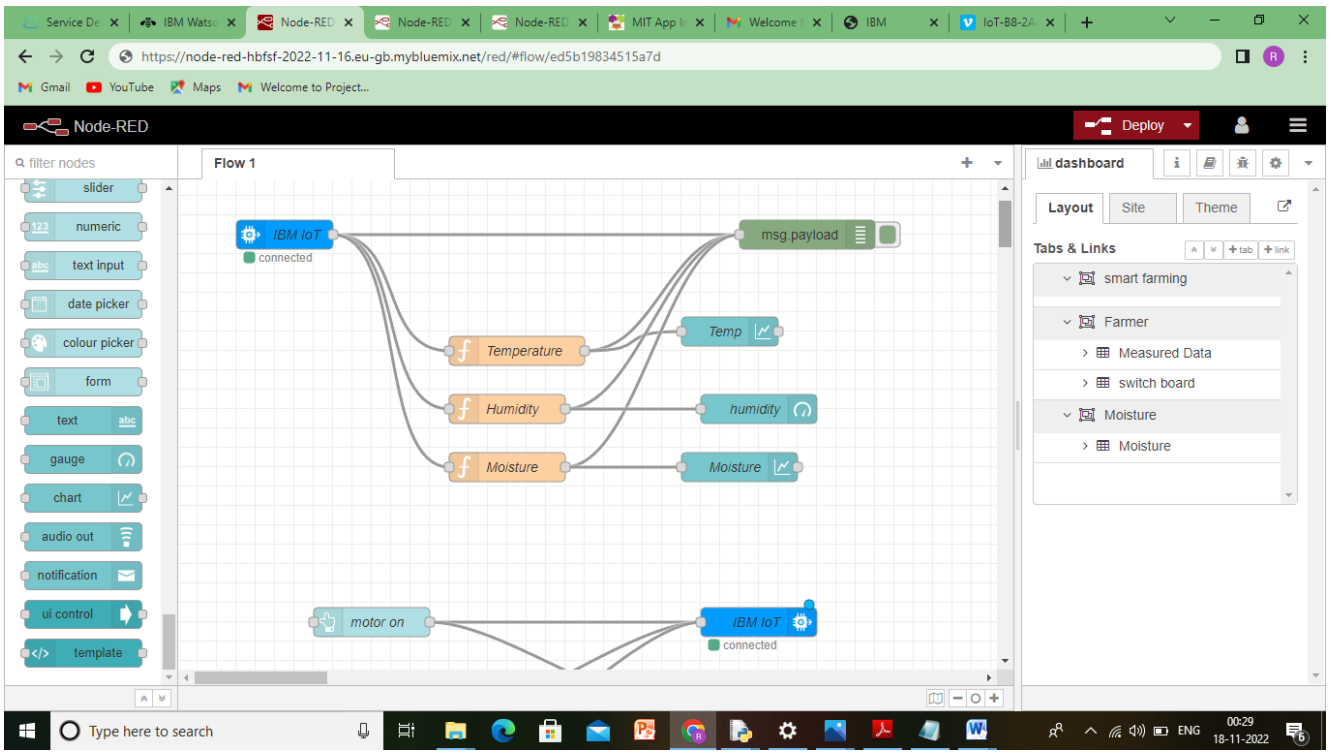
Adjusting User Interface

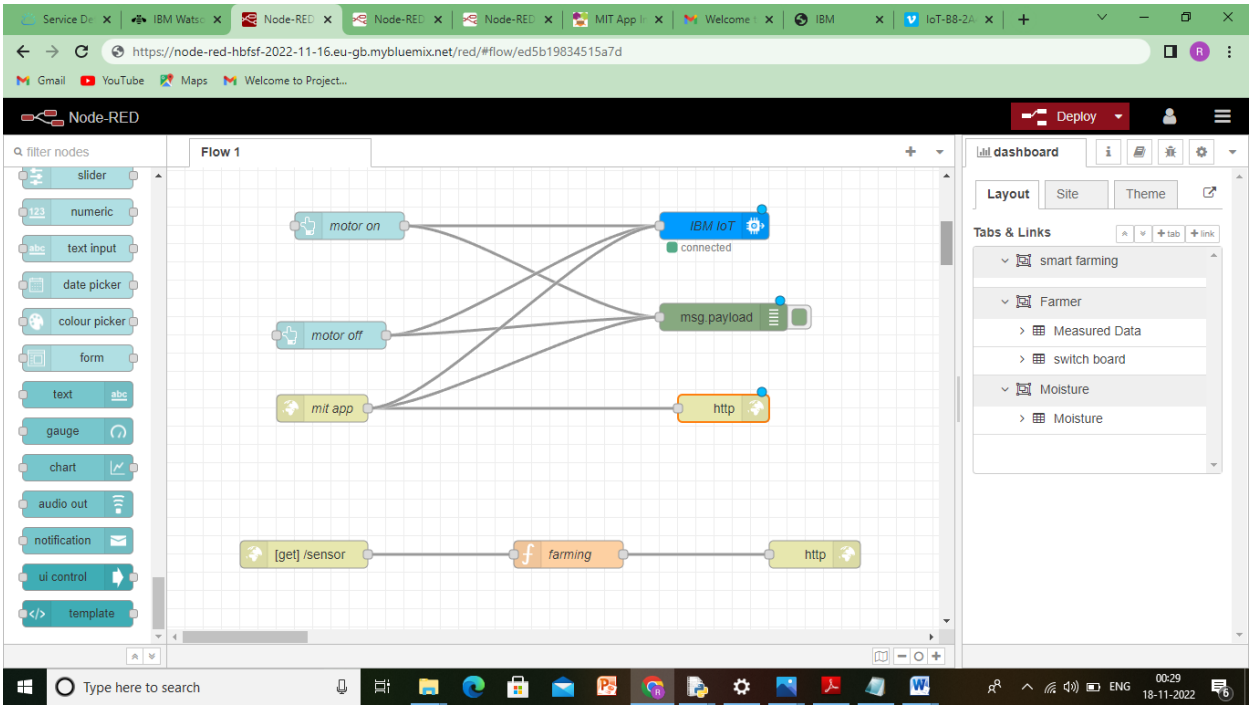
In order to display the parsed JSON data a Node-Red dashboard is created

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.

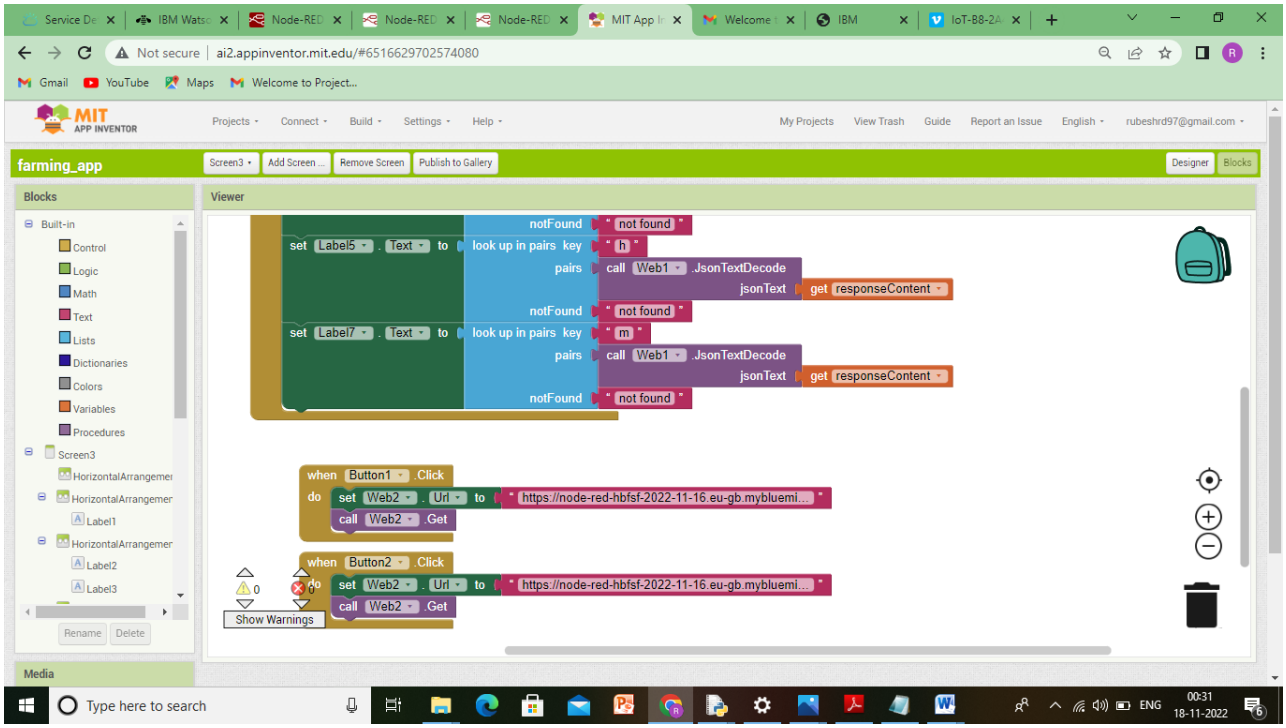
Below images are the Gauge, text and button node configurations.

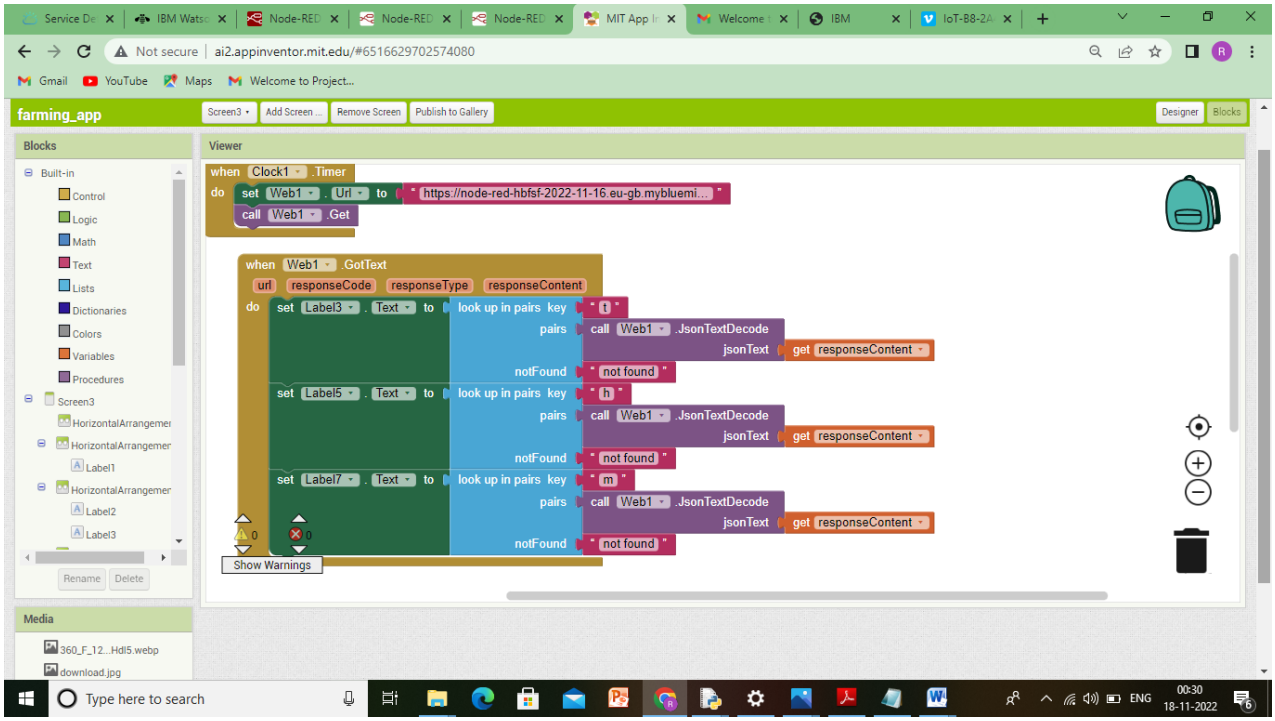
Complete Program Flow

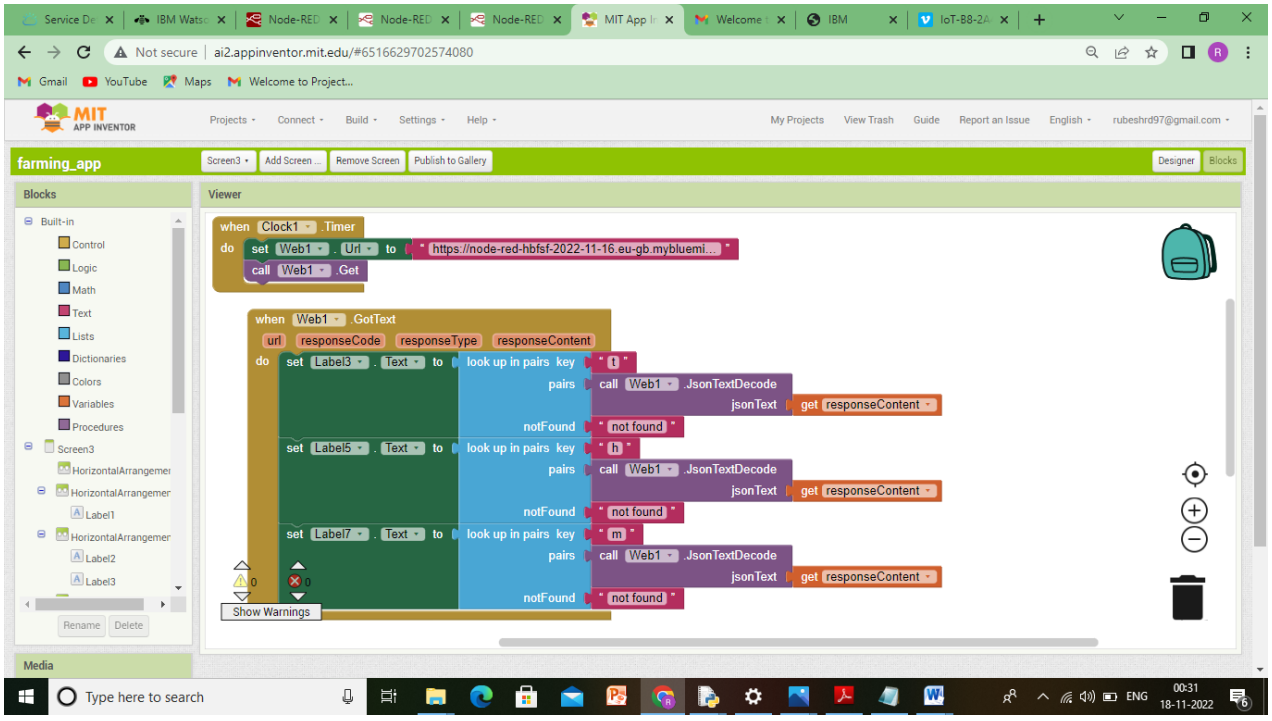




MOBILE APP WEB



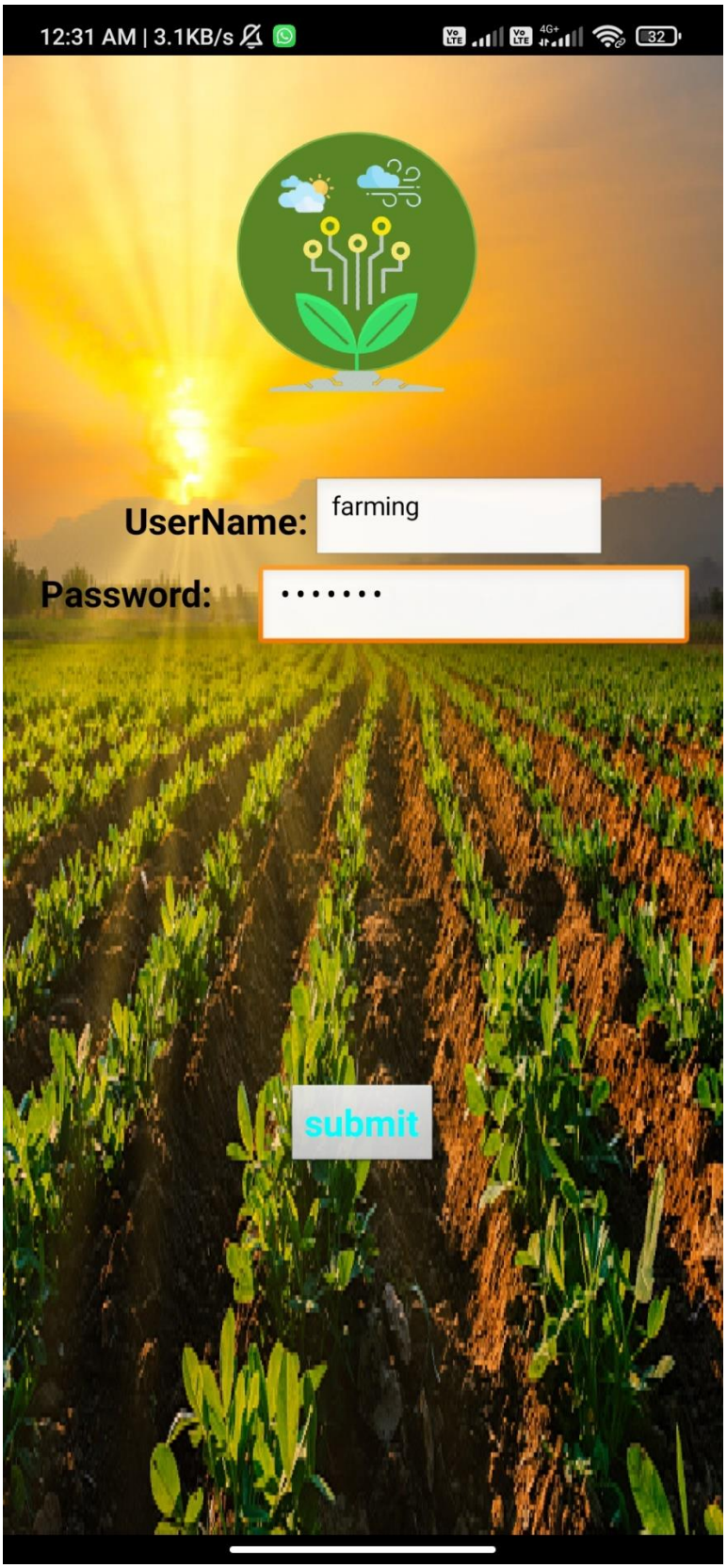

farming_app
Screen3
Add Screen ...
Remove Screen
Publish to Gallery
Designer
Blocks
Viewer
when Clock1 .Timer
do set Web1 Url to https://node-red-hbfsf-2022-11-16.eu-gb.mybluemi...
call Web1 .Get
when Web1 .GotText
url responseCode responseType responseContent
set Label3 Text to look up in pairs key t
pairs call Web1 .JsonTextDecode
jsonText get responseContent
notFound not found
set Label5 Text to look up in pairs key h
set Label7 Text to look up in pairs key m
Show Warnings
Media
360_F_12...Hdl5.webp
download.jpg
Type here to search
ENG
00:30
18-11-2022


MIT APP INVENTOR
Projects
Connect
Build
Settings
Help
My Projects
View Trash
Guide
Report an Issue
English
rubeshrd97@gmail.com
farming_app
Screen3
Add Screen ...
Remove Screen
Publish to Gallery
Designer
Blocks
Viewer
when Clock1 .Timer
do set Web1 Url to https://node-red-hbfsf-2022-11-16.eu-gb.mybluemi...
call Web1 .Get
when Web1 .GotText
url responseCode responseType responseContent
set Label3 Text to look up in pairs key t
pairs call Web1 .JsonTextDecode
jsonText get responseContent
notFound not found
set Label5 Text to look up in pairs key h
set Label7 Text to look up in pairs key m
Show Warnings
Media
Type here to search
ENG
00:31
18-11-2022

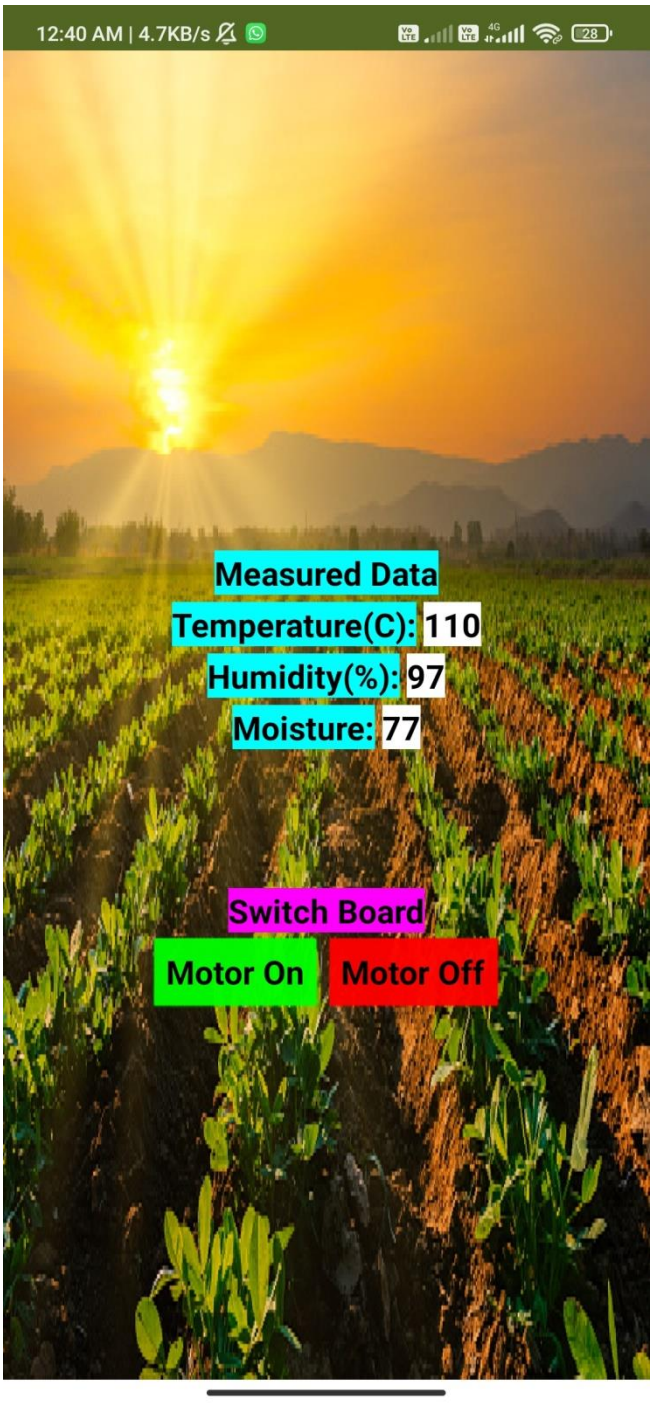
Output

Screen-1

Screen-2



Screen-3


12:40 AM | 4.7KB/s
Measured Data
Temperature(C): 110
Humidity(%): 97
Moisture: 77
Switch Board
Motor On
Motor Off

Web APP UI Home Tab