

# SPRINT 3

Date	07 November 2022
Team ID	PNT2022TMID46860
Project Name	Project – Smart Farmer- IoT based Smart Farming Application

## NODE-RED

The screenshot displays the Node-RED web interface in a browser. The top navigation bar shows several open tabs: Node-RED: 159.122.175.72, Node-RED Dashboard, Service Details - IBM Cloud, IBM Watson IoT Platform, and an email inbox. The browser address bar shows the URL: 159.122.175.72:30777/red/#flow/ec16665cb8fad74. The Node-RED interface itself has a left sidebar with a search bar and two main sections: 'common' and 'function'. The 'common' section includes nodes like inject, debug, complete, catch, status, link in, link call, link out, and comment. The 'function' section includes nodes like function, switch, change, and range. The central workspace is divided into two flows, Flow 1 and Flow 2. Flow 1 starts with an inject node, followed by three function nodes for temperature, humidity, and soilmoisture, which all connect to a msg.payload node. Flow 2 starts with a [get] sensor node, followed by a function node, which then connects to an http node. Below this, there are two motor control nodes (motor on and motor off) that connect to a [set] on node and a [set] off node, which both connect to a msg.payload node. The [set] on and [set] off nodes also connect to an http node. The right sidebar contains a debug console with a 'selected nodes' dropdown and a list of messages. The messages are timestamped 11/18/2022, 4:36:49 PM and 4:36:50 PM, and show the node ID and the msg.payload: number.

## USE API KEY

The screenshot shows the Node-RED web interface in a browser. The main workspace displays a flow with nodes for 'inject', 'debug', 'complete', 'catch', 'status', 'link in', 'link call', 'link out', 'comment', 'function', 'switch', 'change', and 'range'. The 'Edit ibmiot in node' dialog box is open, showing the following properties:

- Authentication: API Key
- API Key: IBMIotapi
- Input Type: Device Event
- Device Type: All or +
- Device Id: All or device id e.g. ab12cd231a21
- Event: All or +
- Format: All or json
- QoS: 0
- Name: IBM IoT
- Service: registered

Below the properties, there is a note: "Use the Input Type property to configure this node to receive Events sent by IoT Devices, Commands sent to IoT Devices, Status". The 'Enabled' checkbox is checked.

## JSON FORMAT USING COMMAND

The screenshot shows the Node-RED web interface in a browser. The main workspace displays a flow with nodes for 'inject', 'debug', 'complete', 'catch', 'status', 'link in', 'link call', 'link out', 'comment', 'function', 'switch', 'change', and 'range'. The 'Edit function node' dialog box is open, showing the following properties:

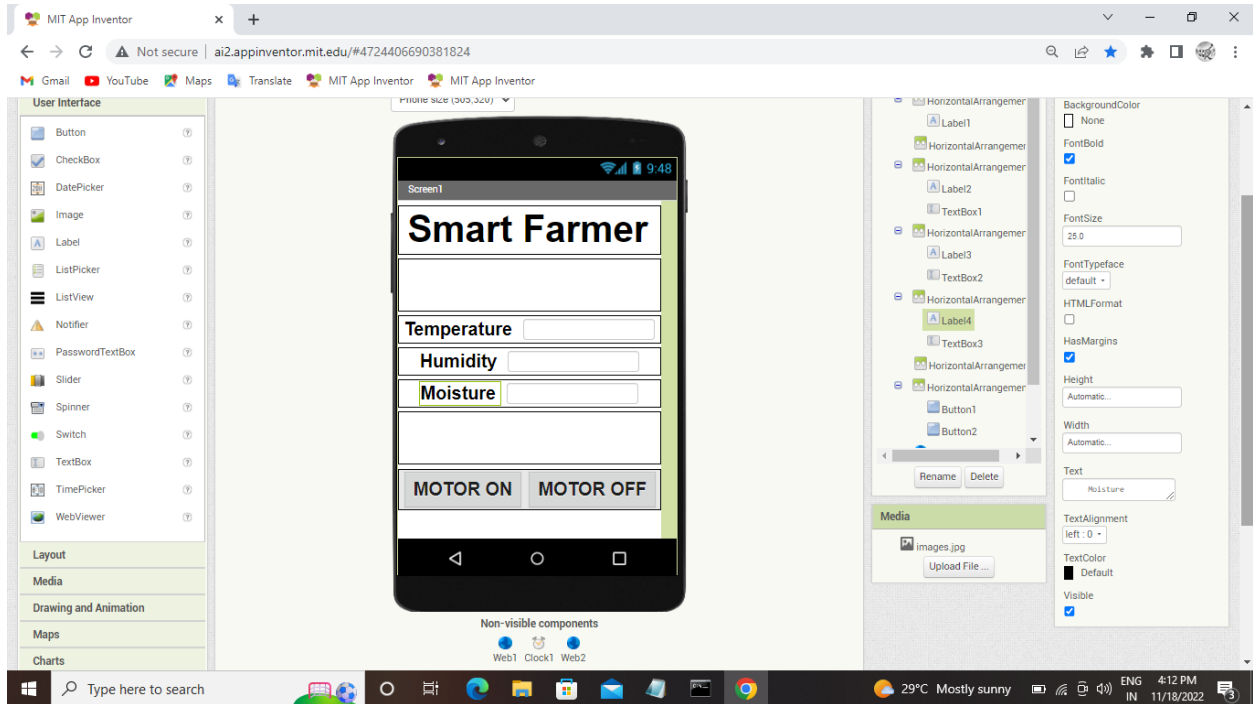
- Name: Name
- Setup: On Start, On Message, On Stop

The code editor contains the following JavaScript code:

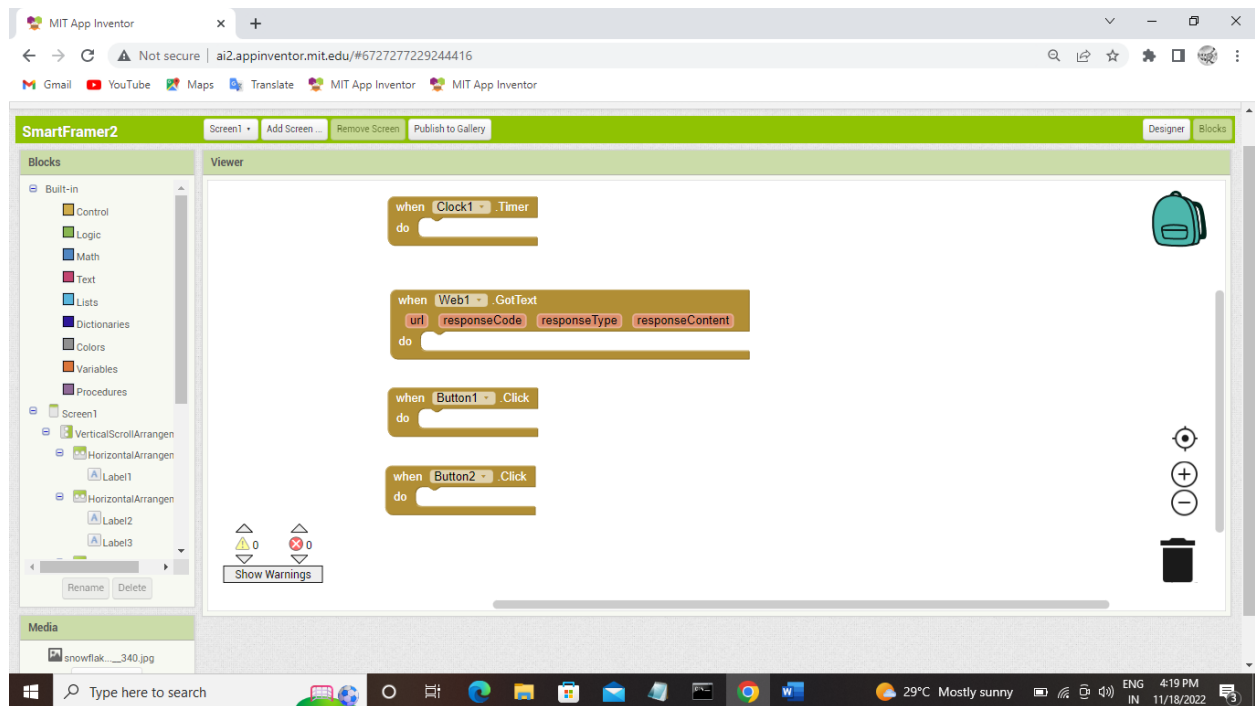
```
1 msg.payload = {  
2   "temp":global.get("t"),  
3   "Humid":global.get("h"),  
4   "soil_moisture":global.get("s")  
5 }  
6 return msg;
```

The 'Enabled' checkbox is checked.

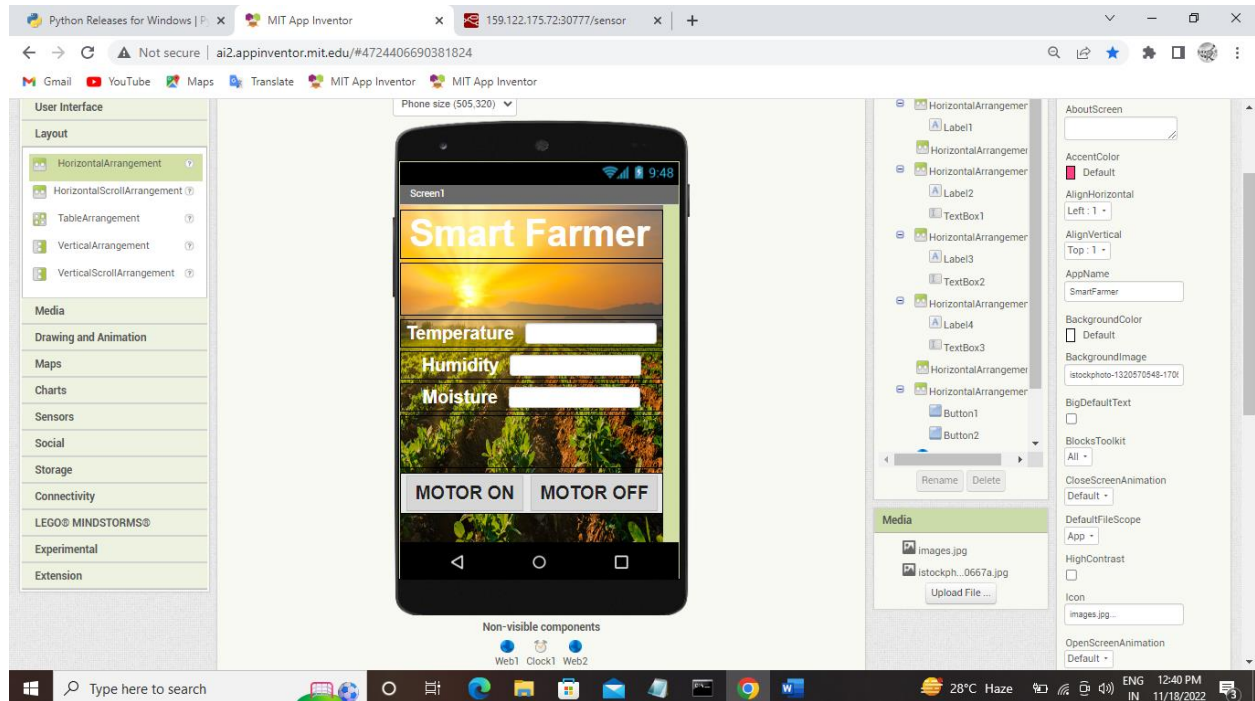
## MIT APP BASIC HOME PAGE



## BACK END FLOW DIAGRAM



## MOBILE APP WEB



## MOBILE APP WEB BLOCK DIAGRAM



