

## SPRINT 3

### SmartFarmer - IoT Enabled Smart Farming Application

Team ID: PNT2022TMID46217

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 Watson device.

The screenshot shows the 'Edit ibmiot node' configuration window in Node-Red. The window has a title bar 'Edit ibmiot in node > Edit ibmiot node' and three buttons: 'Delete', 'Cancel', and 'Update'. Below the buttons is a 'Properties' tab with a gear icon and a document icon. The configuration fields are as follows:

- Name:** API
- API Key:** a-3lnltf-mwywupc9w1
- API Token:** .....
- Server-Name:** orgid.messaging.internetofthings.ibmcloud.com
- Scalable:** ☐
- Application ID:** (empty field)
- Keep Alive:** 60 Seconds
- Use Clean Session:** ☒

1 -> for motor on

2 -> for motor off

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

The Java script code for the analyses is:

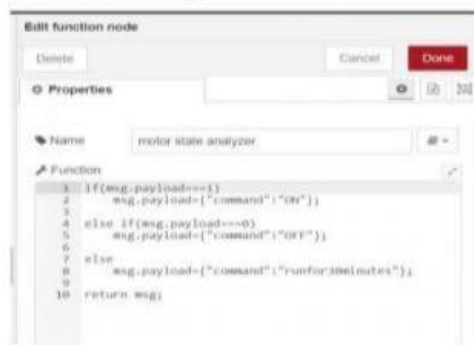
```
if(msg.payload===1) msg.payload={"command": "ON"};
```

```
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.

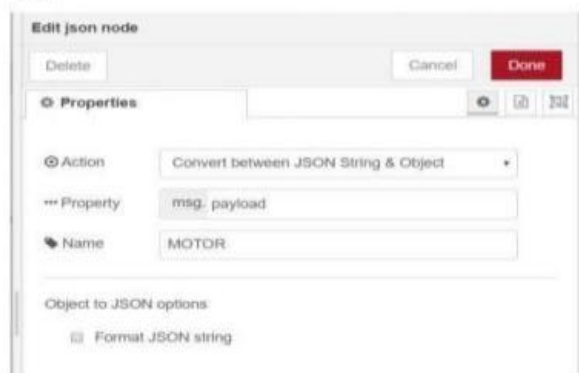
The Java script code for that function node is:

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

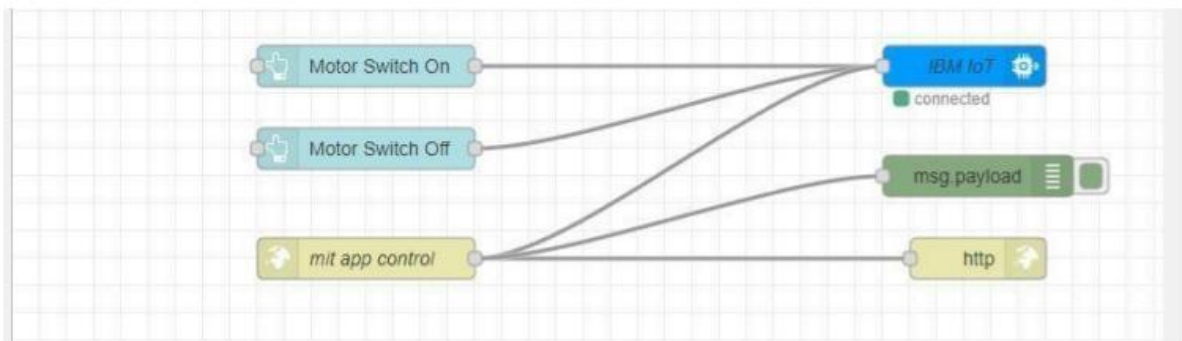


The above images show the java script codes of analyser and state function nodes.

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

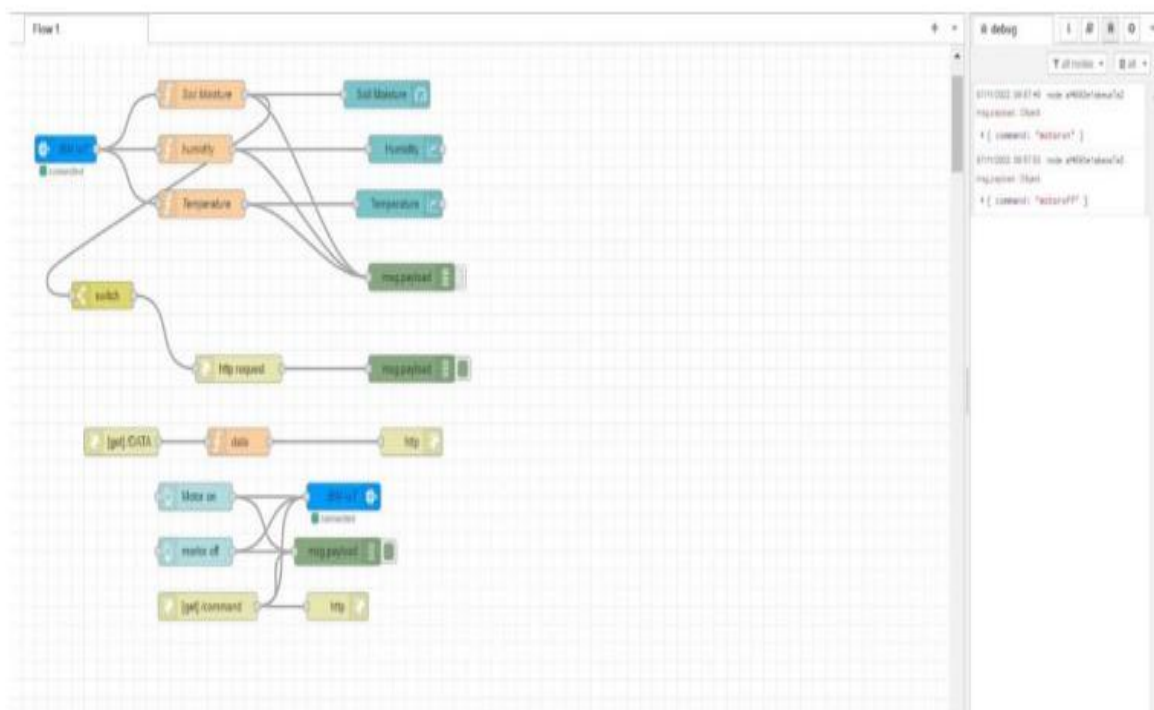


Edit JSON node needs to be configured like this



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

## Complete Program Flow



# MOBILE APP WEB:

