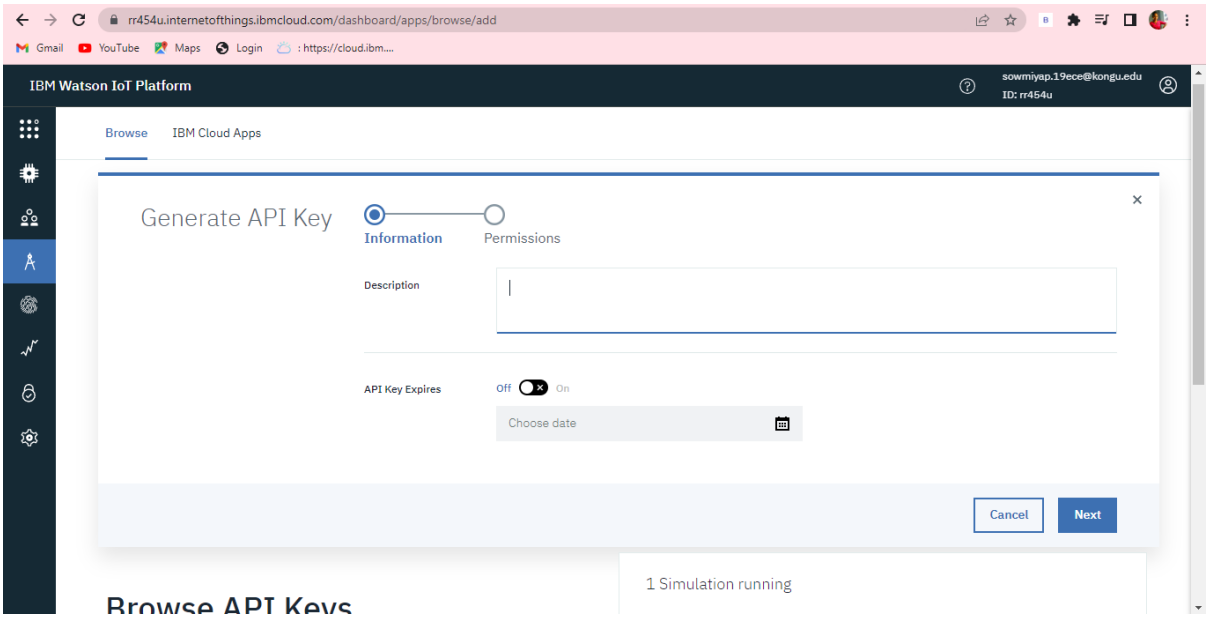
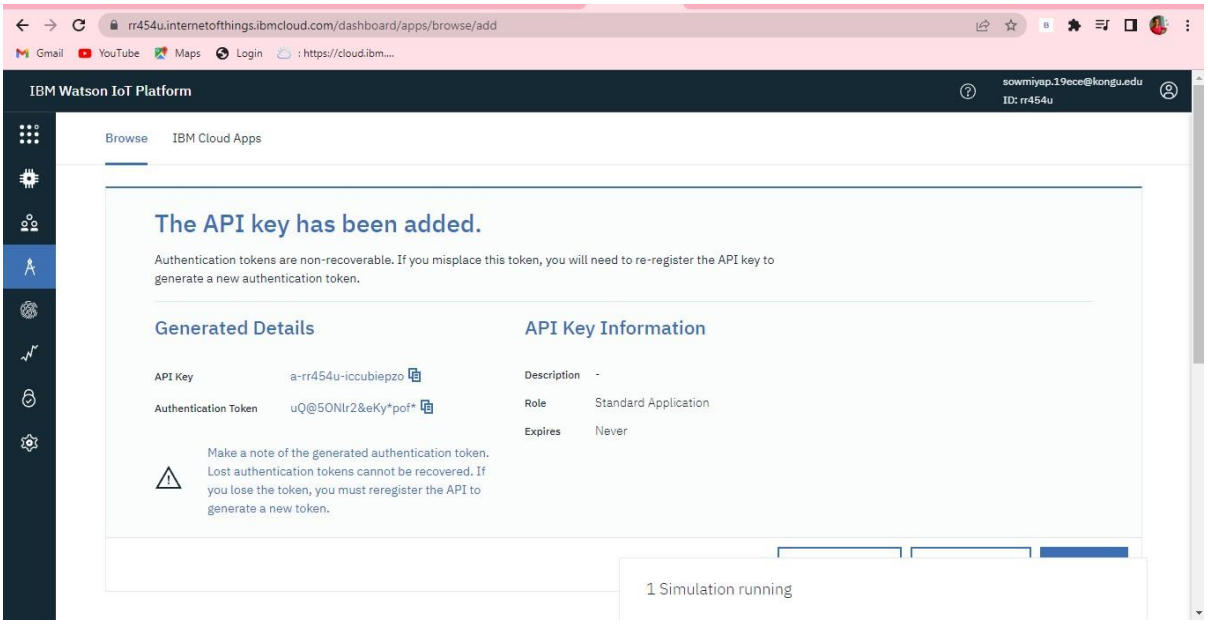
Build A Web Application Using Node-RED

Team ID	PNT2022TMID04728
Project Name	Smart Farmer-IOT Enabled Smart FarmingApplication

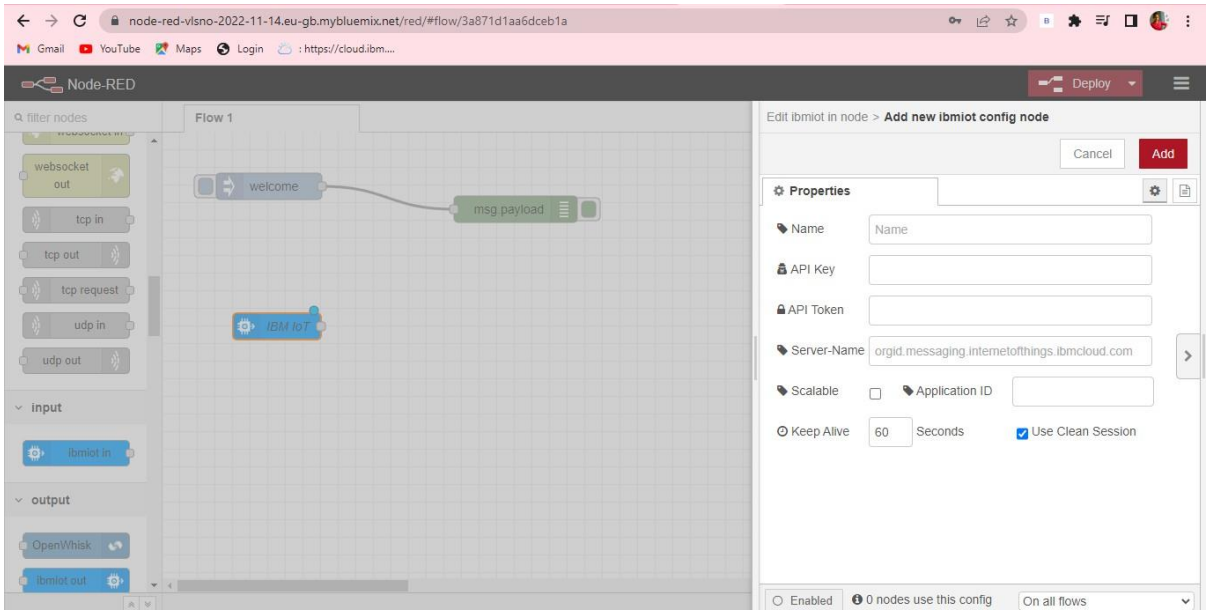
From cloud go to node red platform



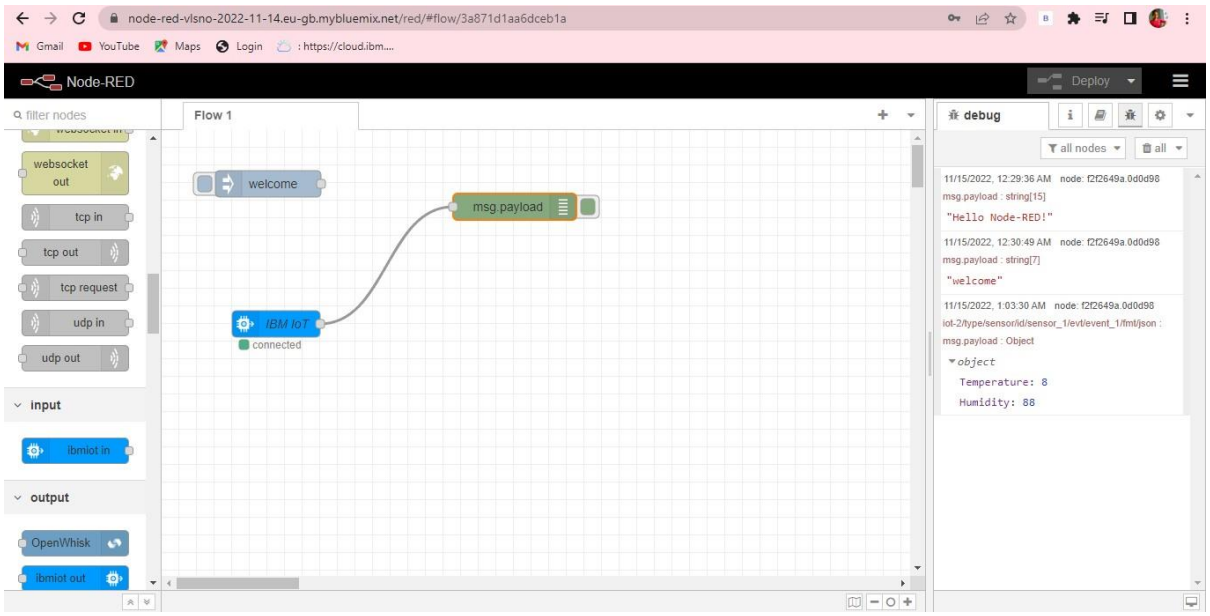
open IBM Watson and click Apps and Generate API key



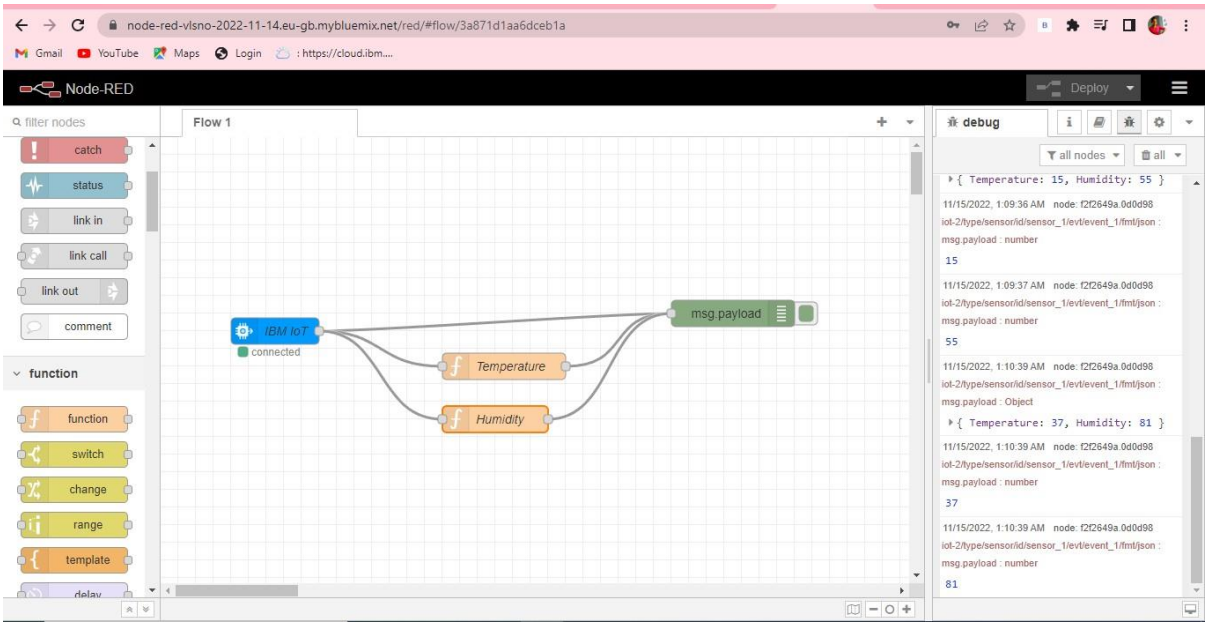
First open Node RED workspace and drag IBM IOT input into the workspace. It will as Ask API key, device id ,device type etc.

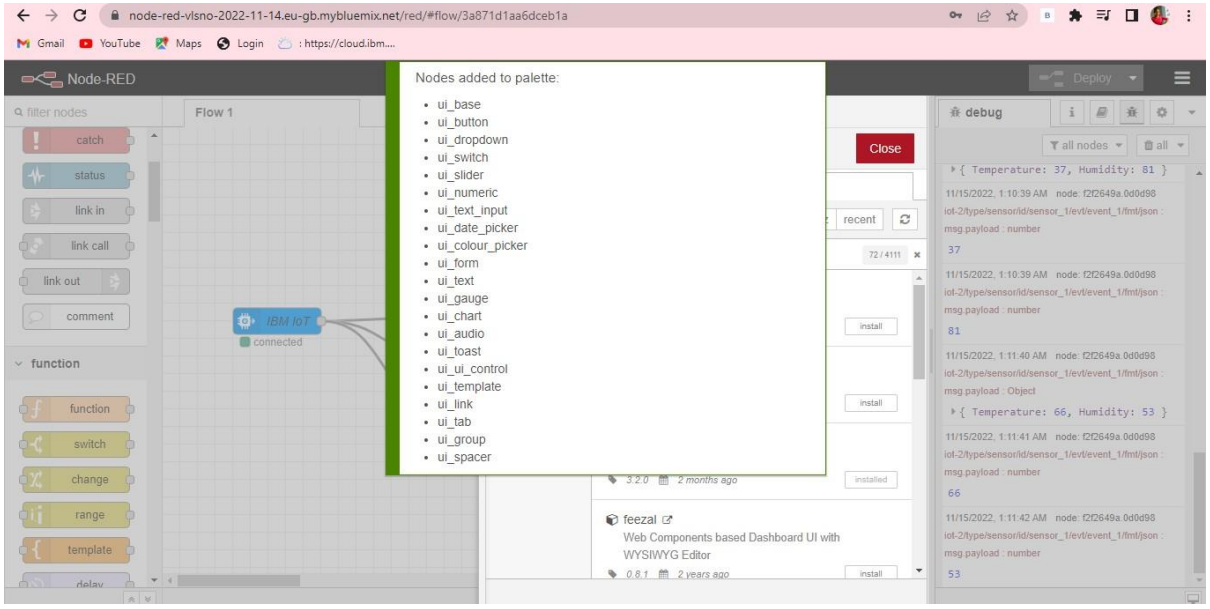


Output from IBM IOT

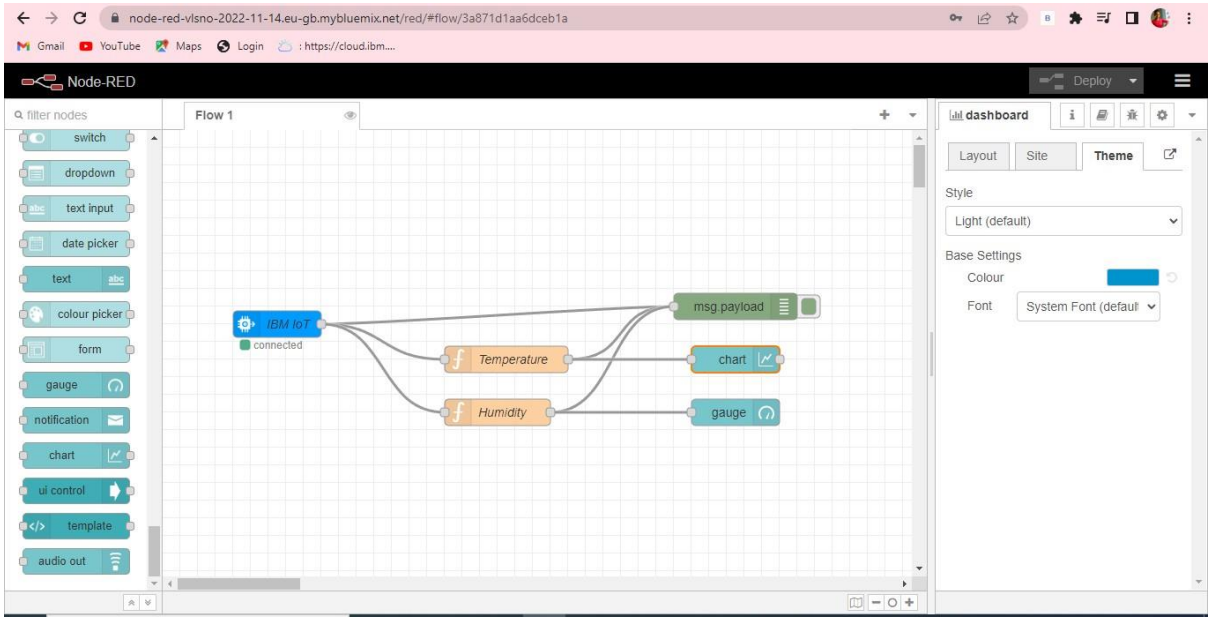


And take a function node and rename it

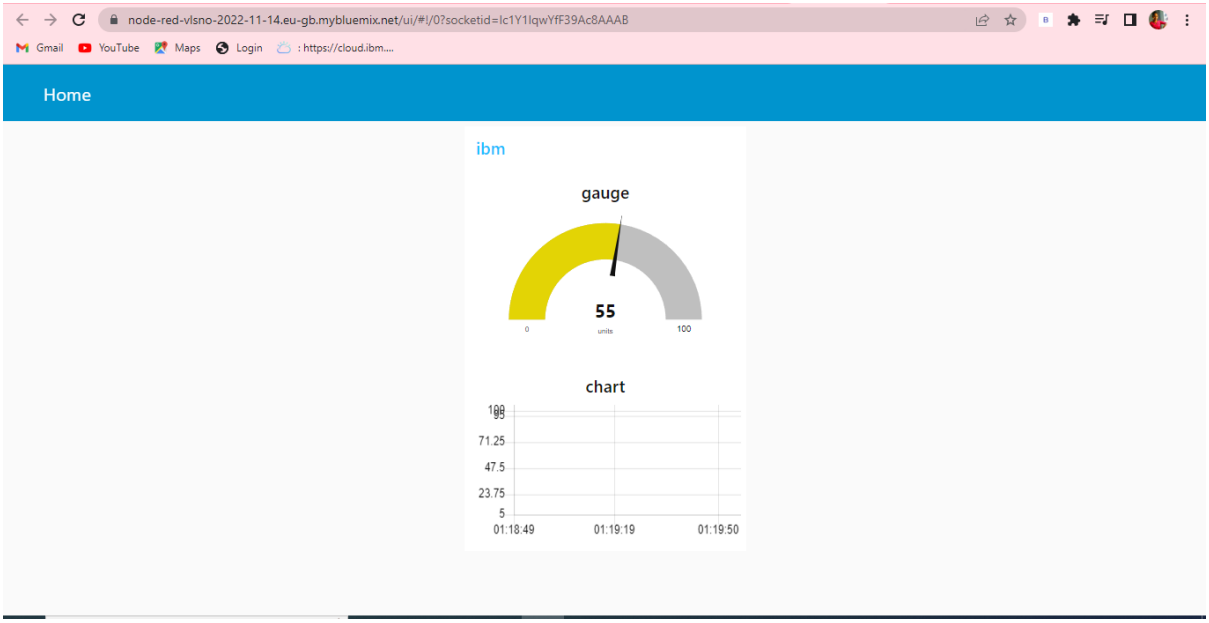




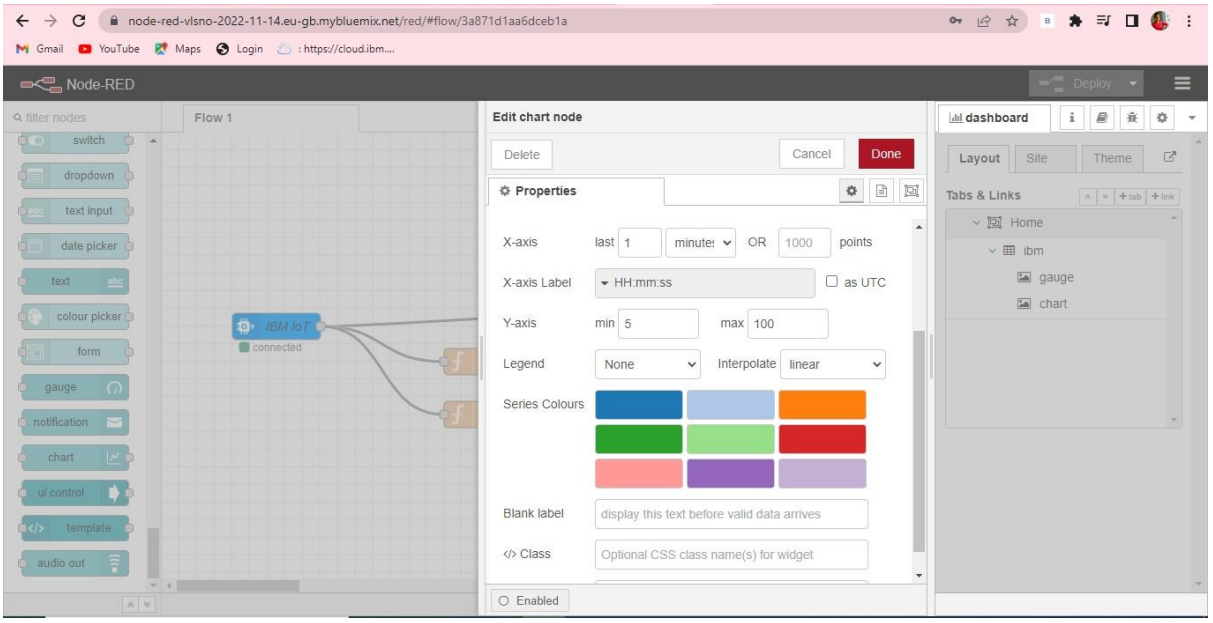
After deploying we can see the output

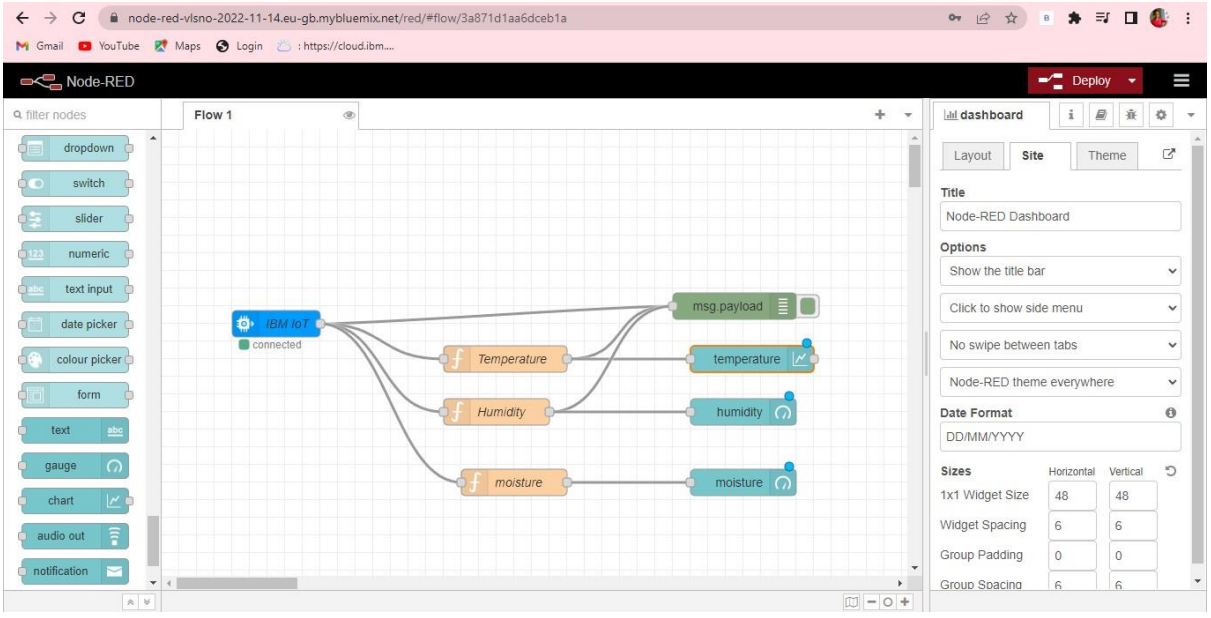


Output

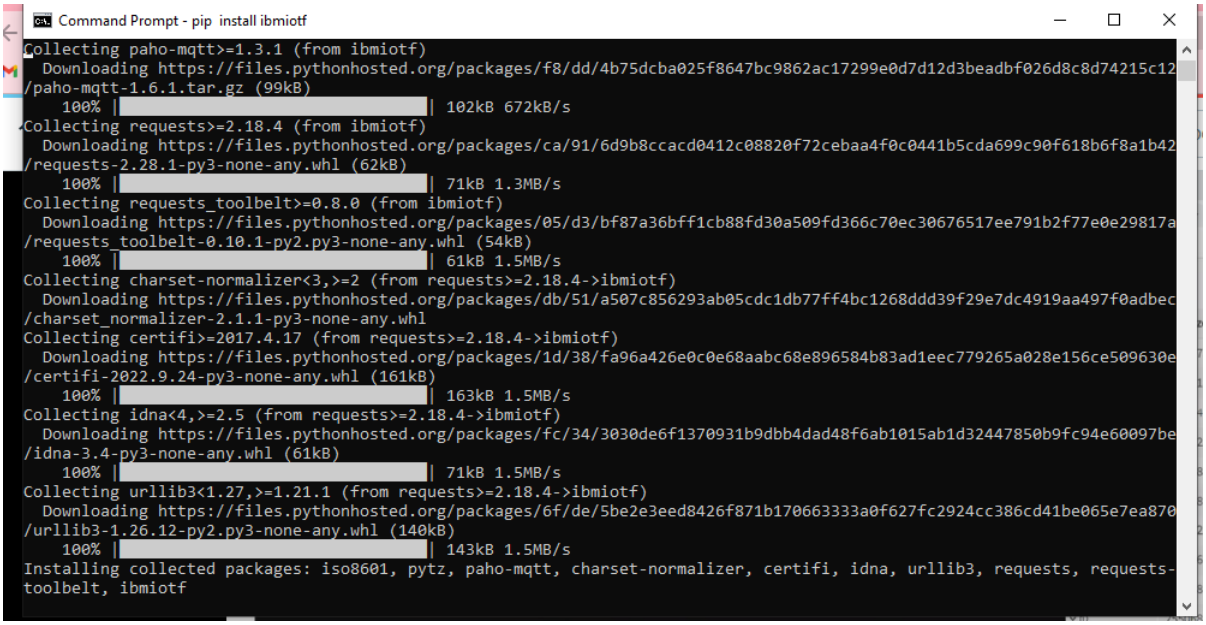


Set the values:

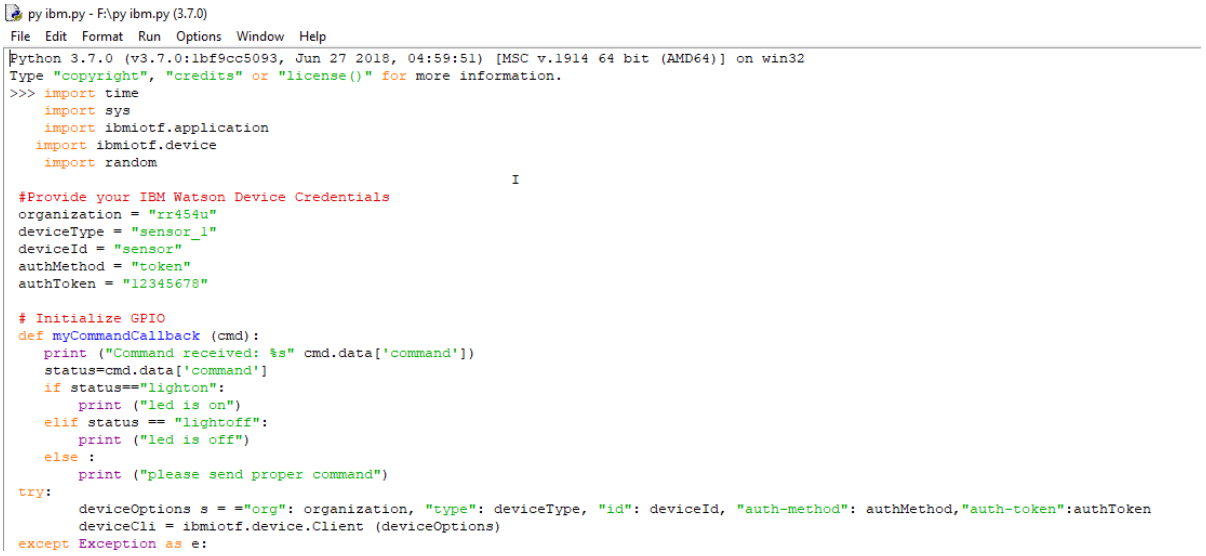


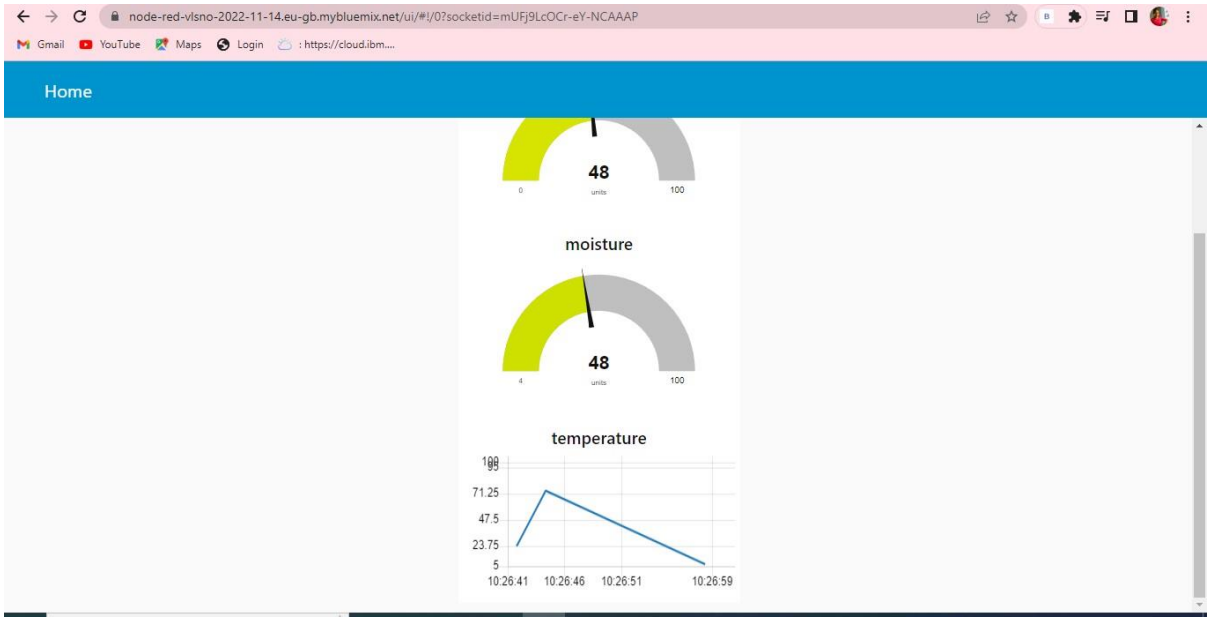


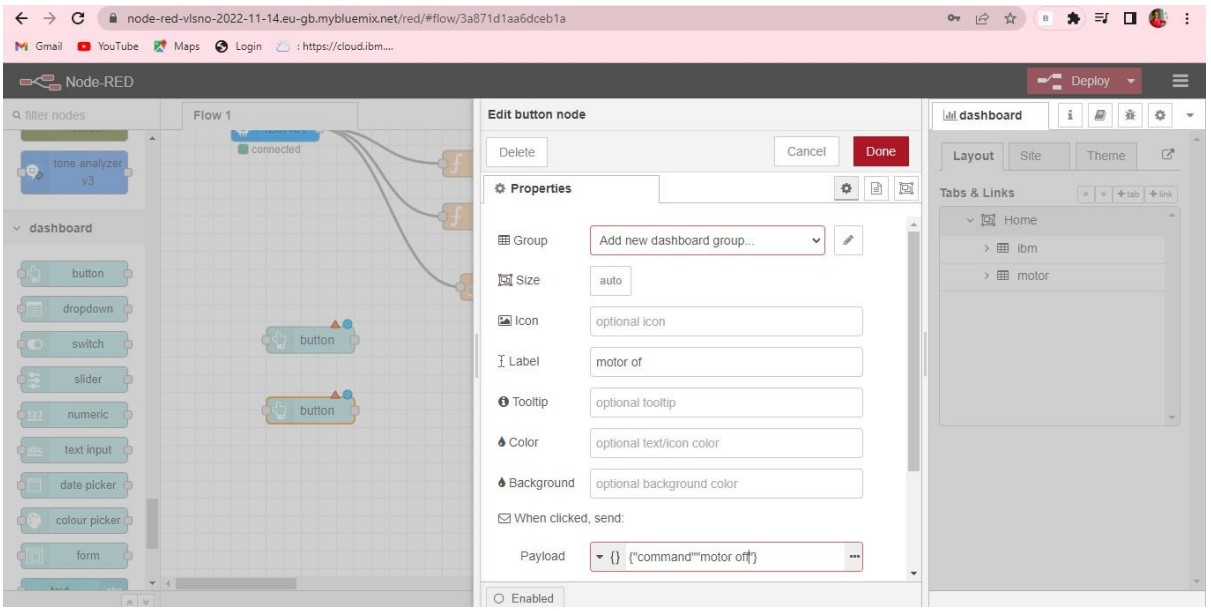
PIP install command

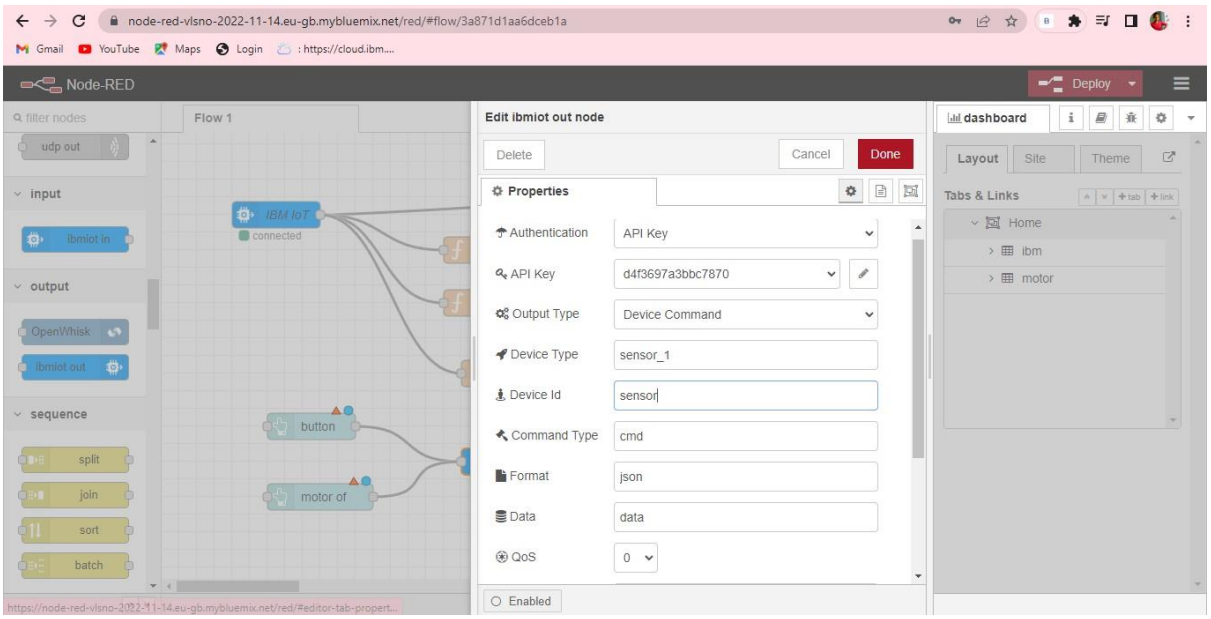


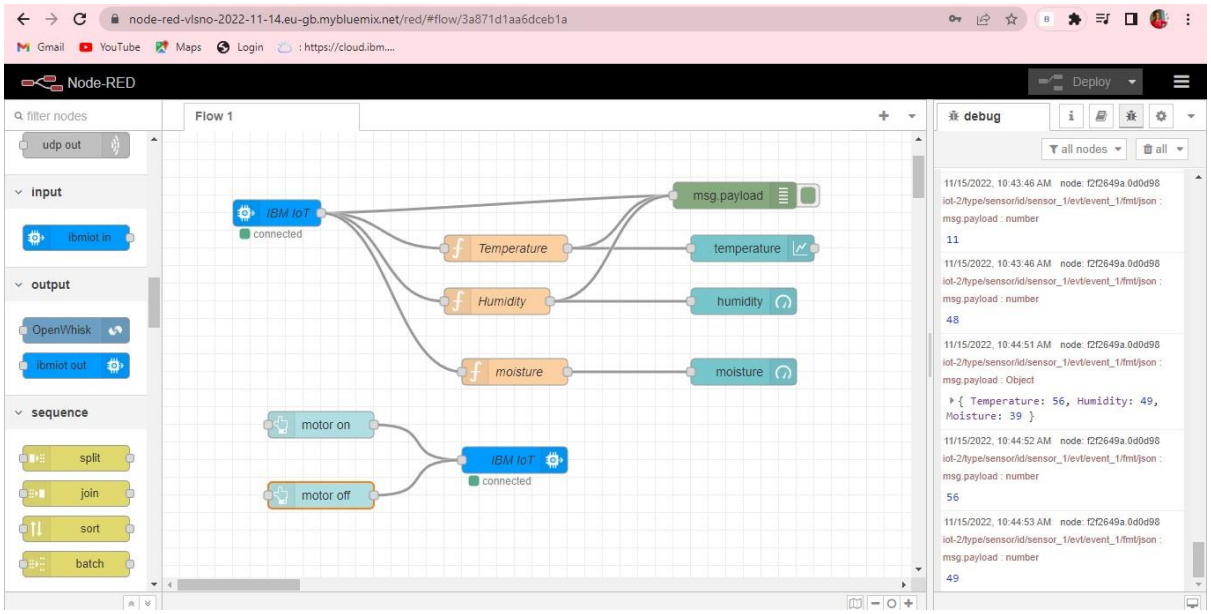
Python code

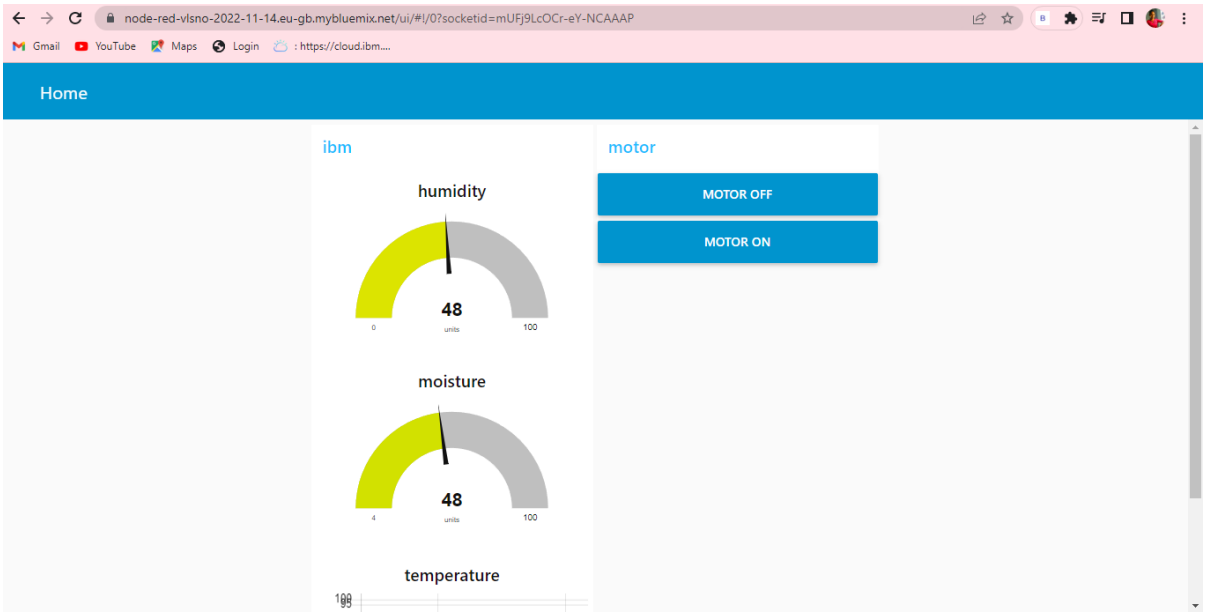


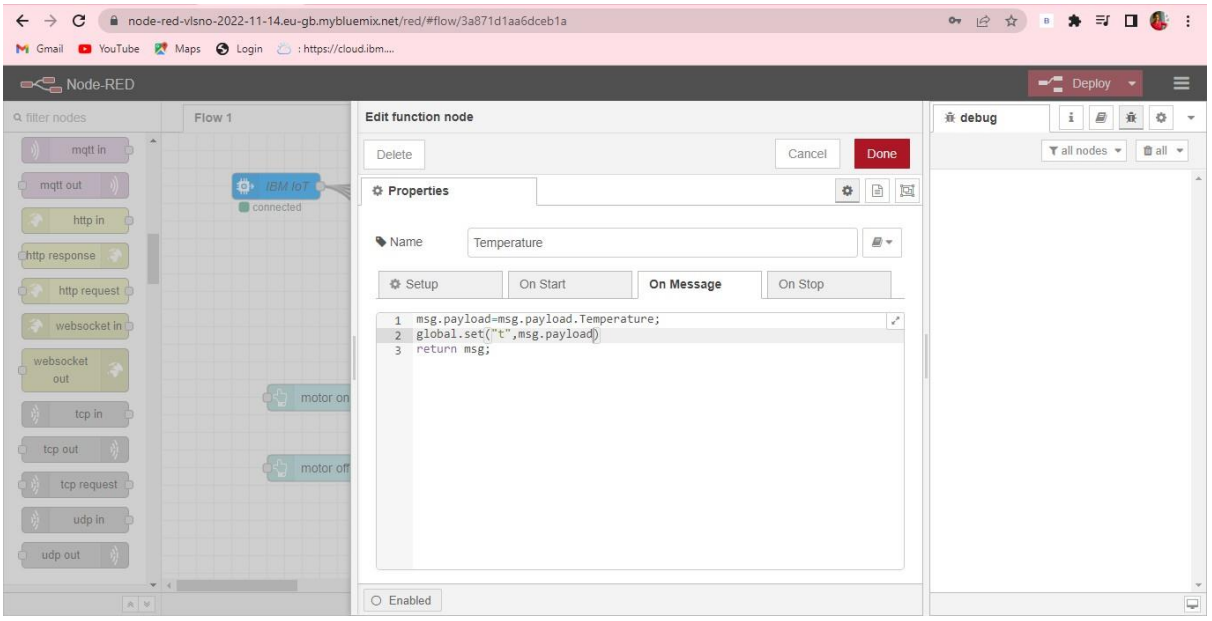

node-red-vlsno-2022-11-14.eu-gb.mybluemix.net/ui/#!/0?socketid=mUFj9LcOCr-eY-NCAAAP
Gmail
YouTube
Maps
Login
: https://cloud.ibm....
Home
48
0
units
100
moisture
48
4
units
100
temperature
100
95
71.25
47.5
23.75
5
10:26:41
10:26:46
10:26:51
10:26:59

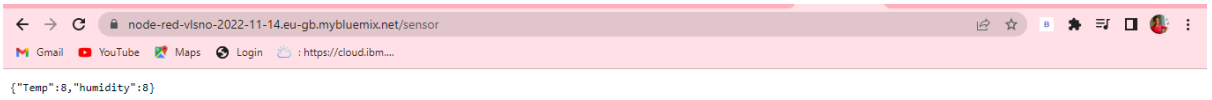

node-red-vlsno-2022-11-14.eu-gb.mybluemix.net/red/#flow/3a871d1aa6dceb1a
Gmail
YouTube
Maps
Login
: https://cloud.ibm....
Node-RED
Deploy
filter nodes
Flow 1
connected
tone analyzer v3
dashboard
button
dropdown
switch
slider
numeric
text input
date picker
colour picker
form
button
button
Edit button node
Delete
Cancel
Done
Properties
Group
Add new dashboard group...
Size
auto
Icon
optional icon
Label
motor of
Tooltip
optional tooltip
Color
optional text/icon color
Background
optional background color
When clicked, send:
Payload
{} {"command""motor off"}
Enabled
dashboard
Layout
Site
Theme
Tabs & Links
Home
ibm
motor


node-red-vlsno-2022-11-14.eu-gb.mybluemix.net/red/#flow/3a871d1aa6dceb1a
Node-RED
Deploy
Flow 1
Edit ibmiot out node
Delete
Cancel
Done
Properties
Authentication
API Key
API Key
d4f3697a3bbc7870
Output Type
Device Command
Device Type
sensor_1
Device Id
sensor
Command Type
cmd
Format
json
Data
data
QoS
0
Enabled
dashboard
Layout
Site
Theme
Tabs & Links
Home
ibm
motor
IBM IoT
connected
button
motor of

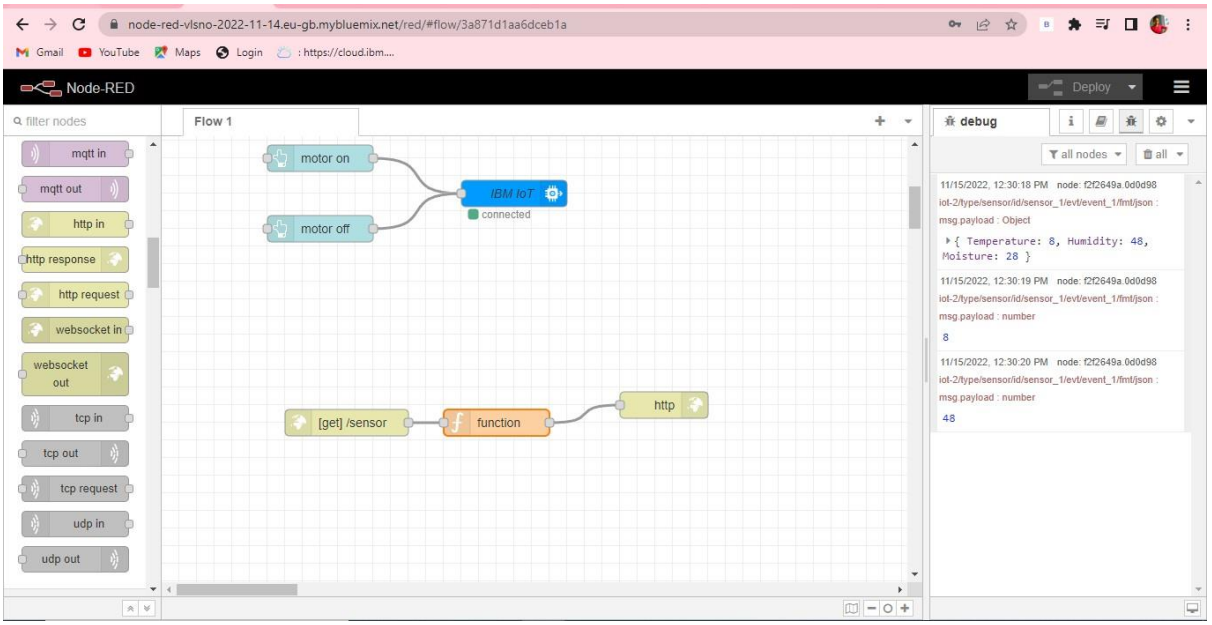

node-red-vlsno-2022-11-14.eu-gb.mybluemix.net/red/#flow/3a871d1aa6dceb1a
Node-RED
Deploy
Flow 1
debug
all nodes
IBM IoT
connected
msg.payload
Temperature
temperature
Humidity
humidity
moisture
moisture
motor on
motor off
IBM IoT
connected
11/15/2022, 10:43:46 AM node: f2f2649a.0d0d98
msg.payload : number
11
11/15/2022, 10:43:46 AM node: f2f2649a.0d0d98
msg.payload : number
48
11/15/2022, 10:44:51 AM node: f2f2649a.0d0d98
msg.payload : Object
{ Temperature: 56, Humidity: 49, Moisture: 39 }
11/15/2022, 10:44:52 AM node: f2f2649a.0d0d98
msg.payload : number
56
11/15/2022, 10:44:53 AM node: f2f2649a.0d0d98
msg.payload : number
49


node-red-vlsno-2022-11-14.eu-gb.mybluemix.net/ui/#!/0?socketid=mUFj9LcOCr-eY-NCAAAP
Home
ibm
humidity
48
moisture
48
temperature
motor
MOTOR OFF
MOTOR ON

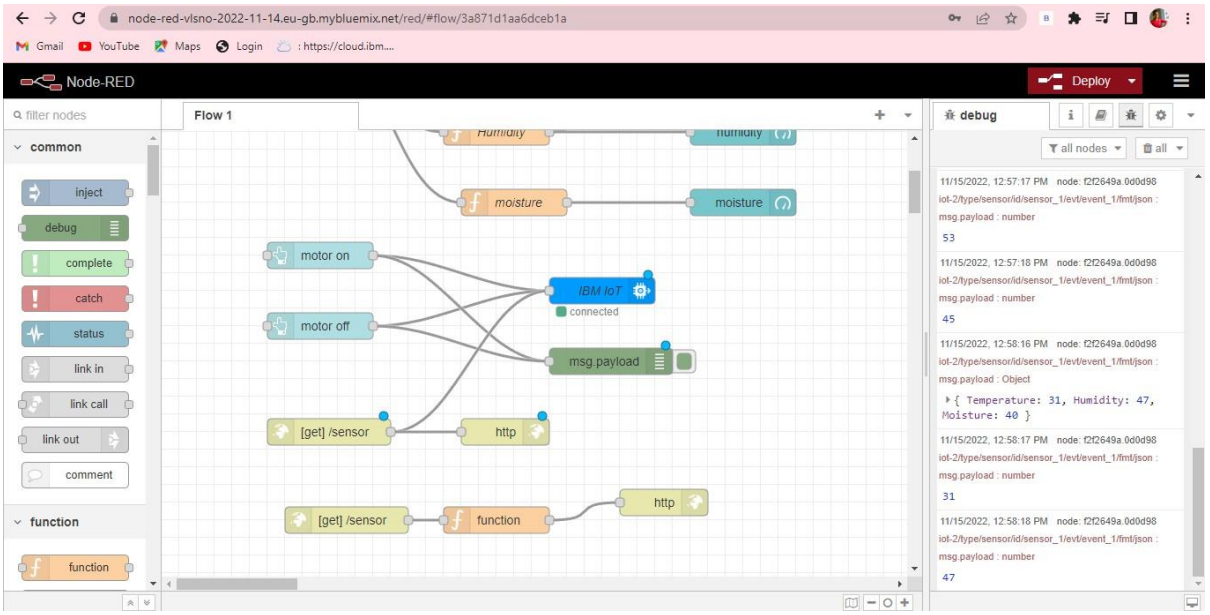


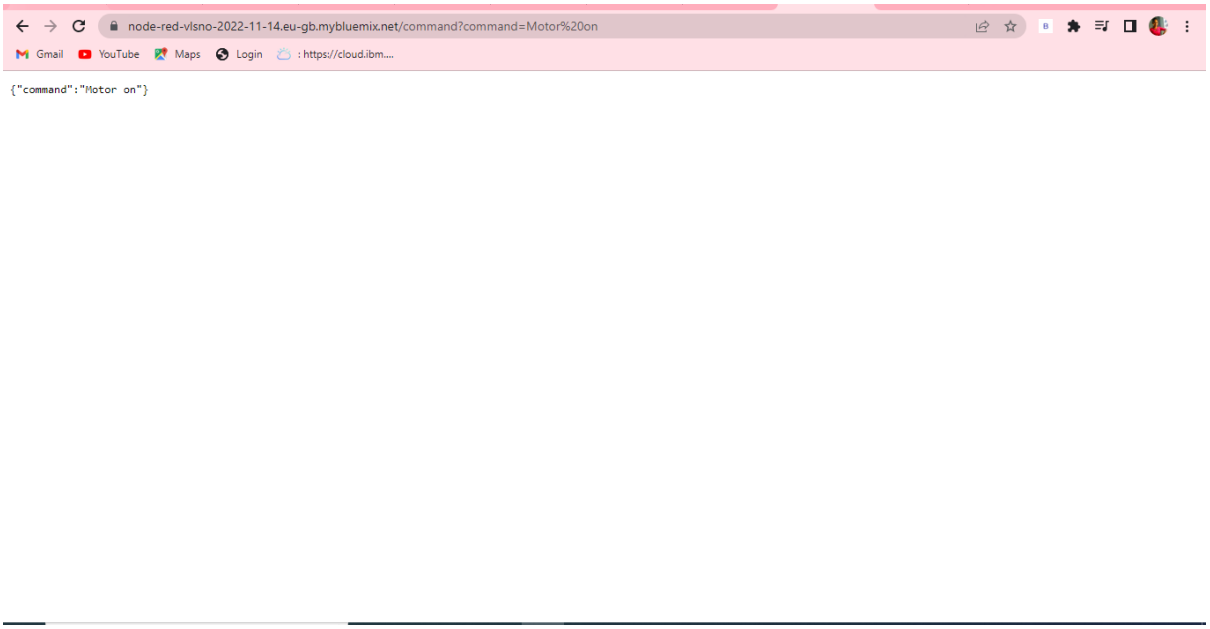


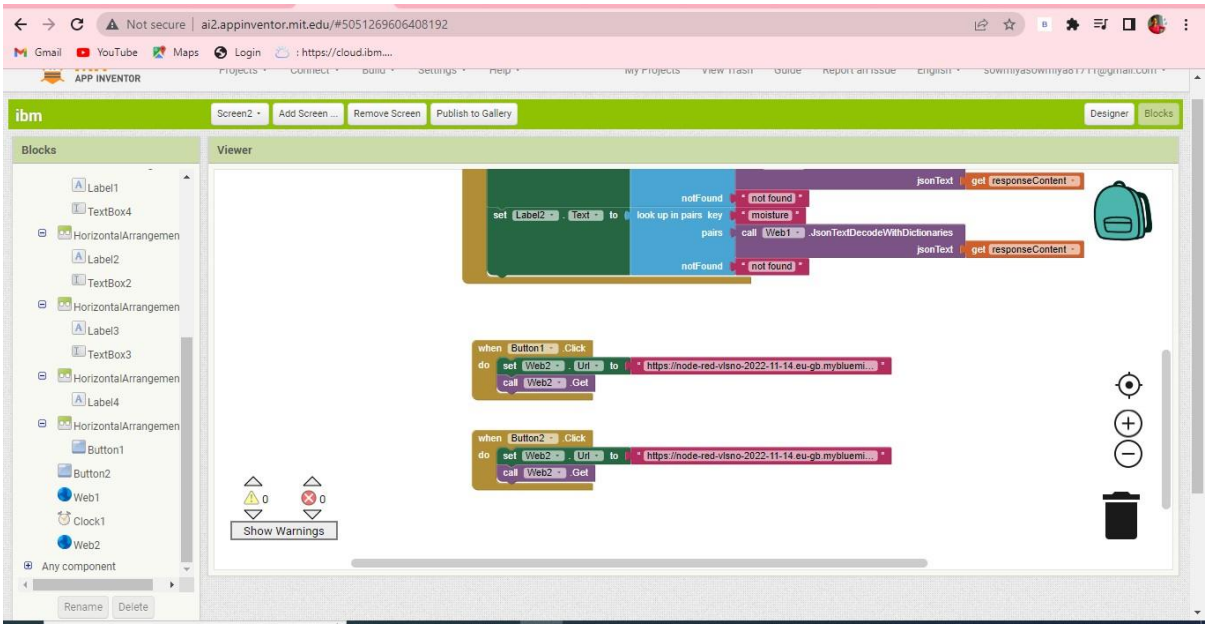
Add the motor



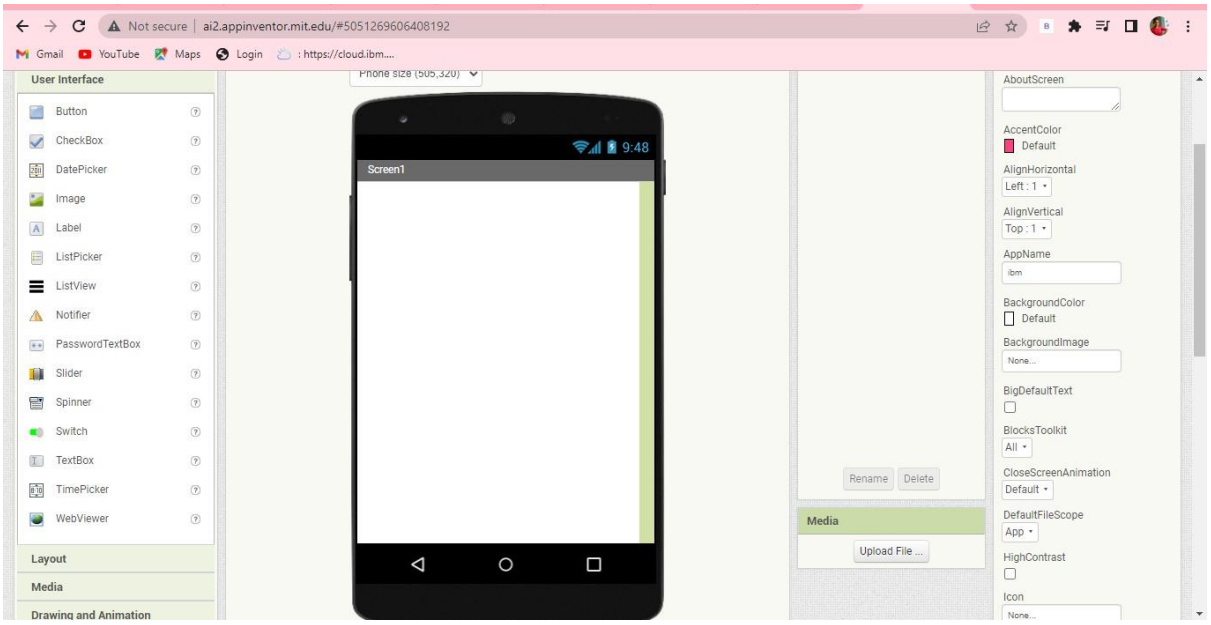
Final connection of Node Red

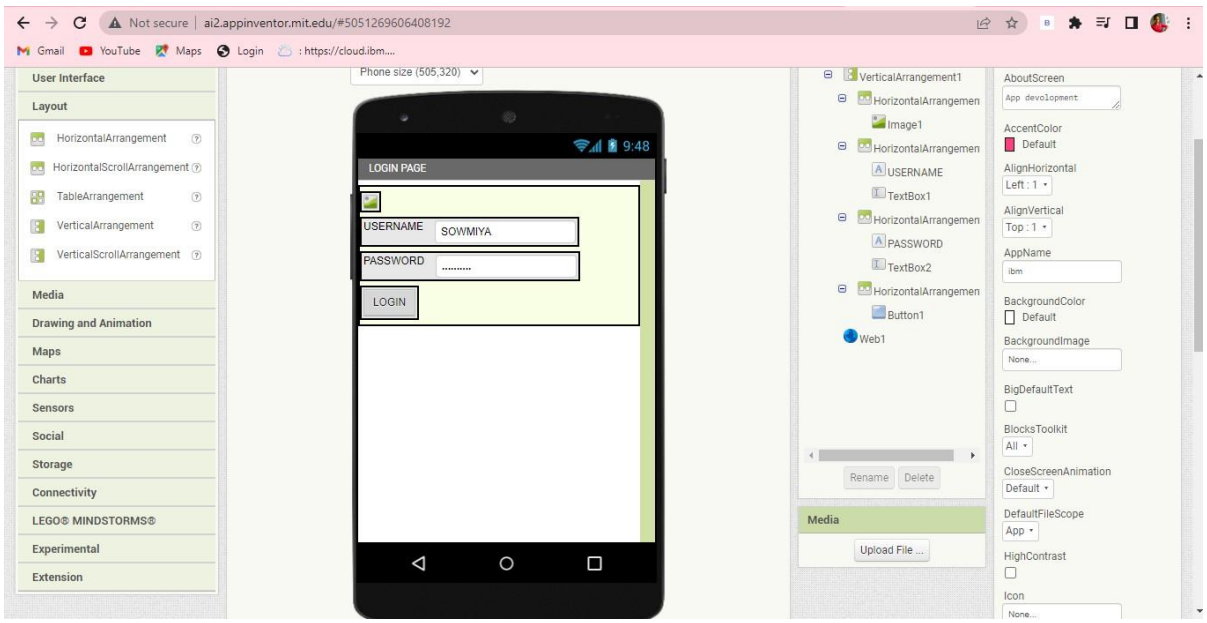






Mit App Inventor

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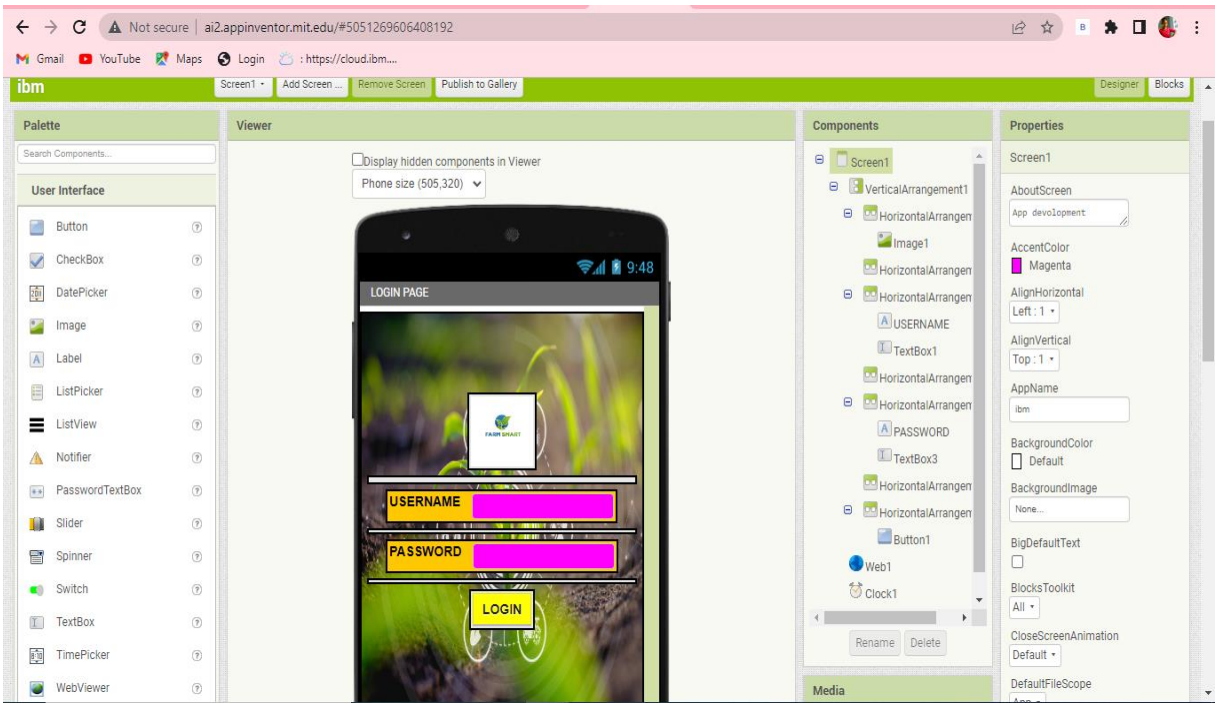
Gmail YouTube Maps Login : https://cloud.ibm....
User Interface
Layout
HorizontalArrangement
HorizontalScrollArrangement
TableArrangement
VerticalArrangement
VerticalScrollArrangement
Media
Drawing and Animation
Maps
Charts
Sensors
Social
Storage
Connectivity
LEGO® MINDSTORMS®
Experimental
Extension
Phone size (505,320)
9:48
LOGIN PAGE
USERNAME
SOWMIYA
PASSWORD
LOGIN
VerticalArrangement1
HorizontalArrangemen
Image1
USERNAME
TextBox1
PASSWORD
TextBox2
Button1
Web1
Rename
Delete
Media
Upload File ...
AboutScreen
App development
AccentColor
Default
AlignHorizontal
Left : 1
AlignVertical
Top : 1
AppName
ibm
BackgroundColor
Default
BackgroundImage
None...
BigDefaultText
BlocksToolkit
All
CloseScreenAnimation
Default
DefaultFileScope
App
HighContrast
Icon
None...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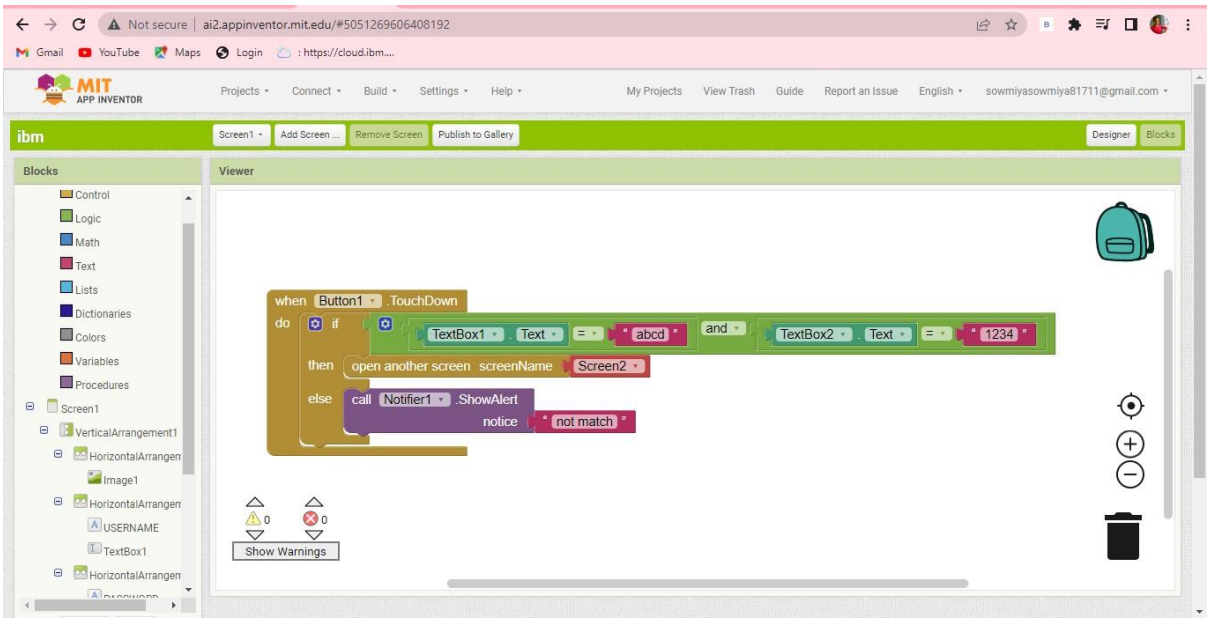
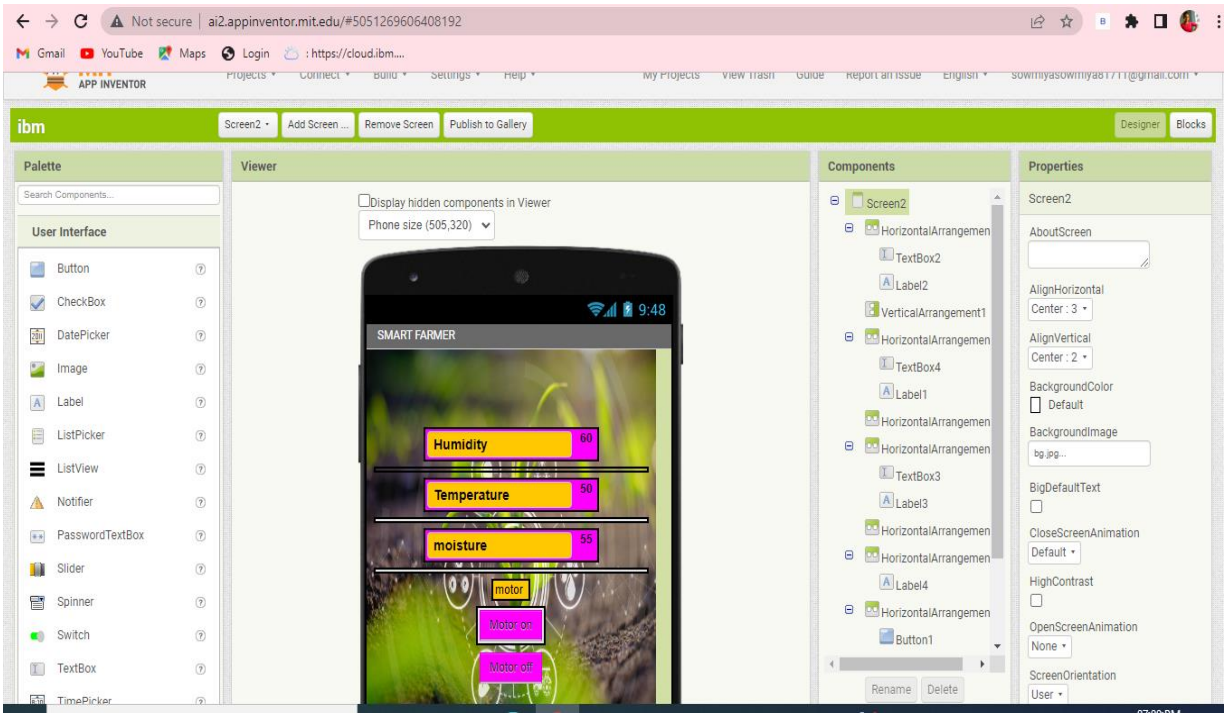
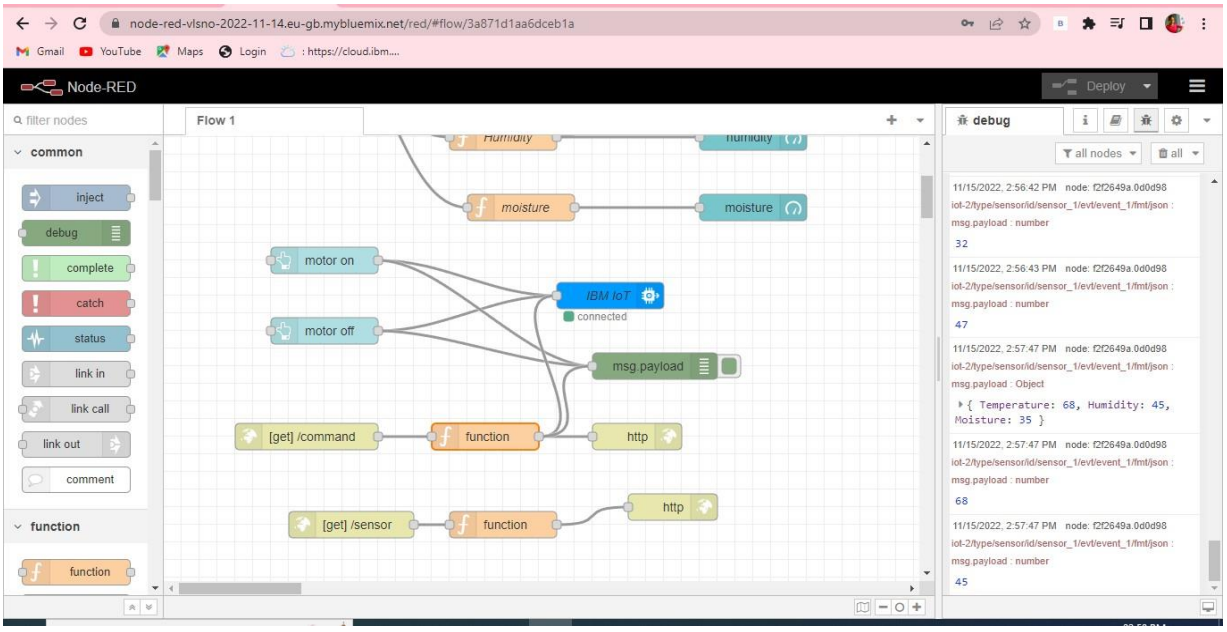
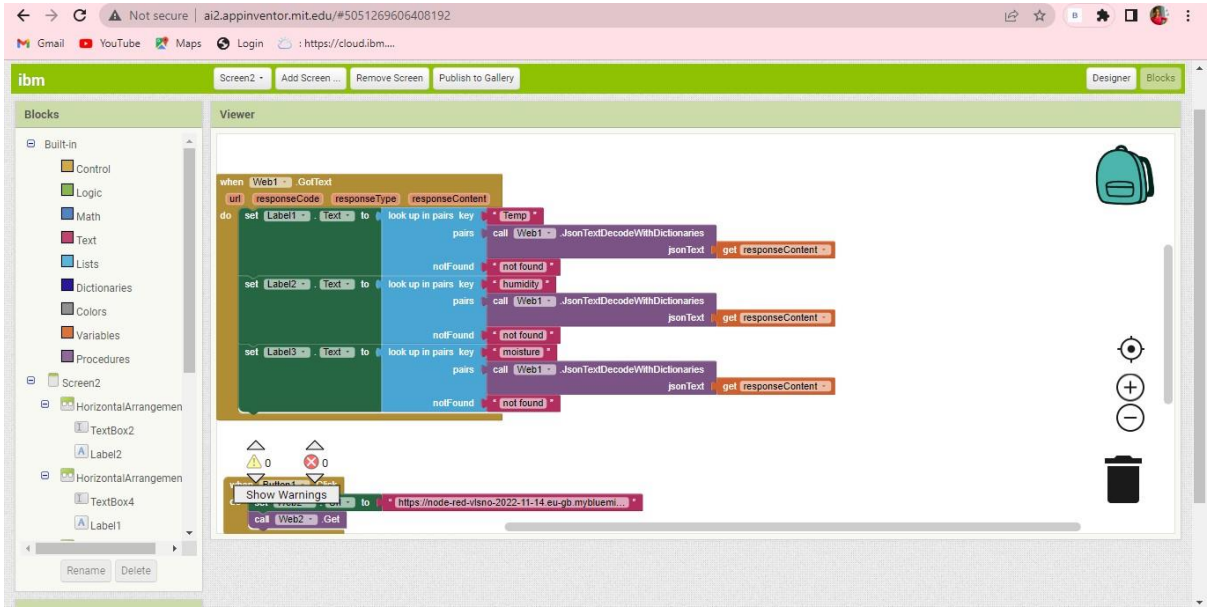
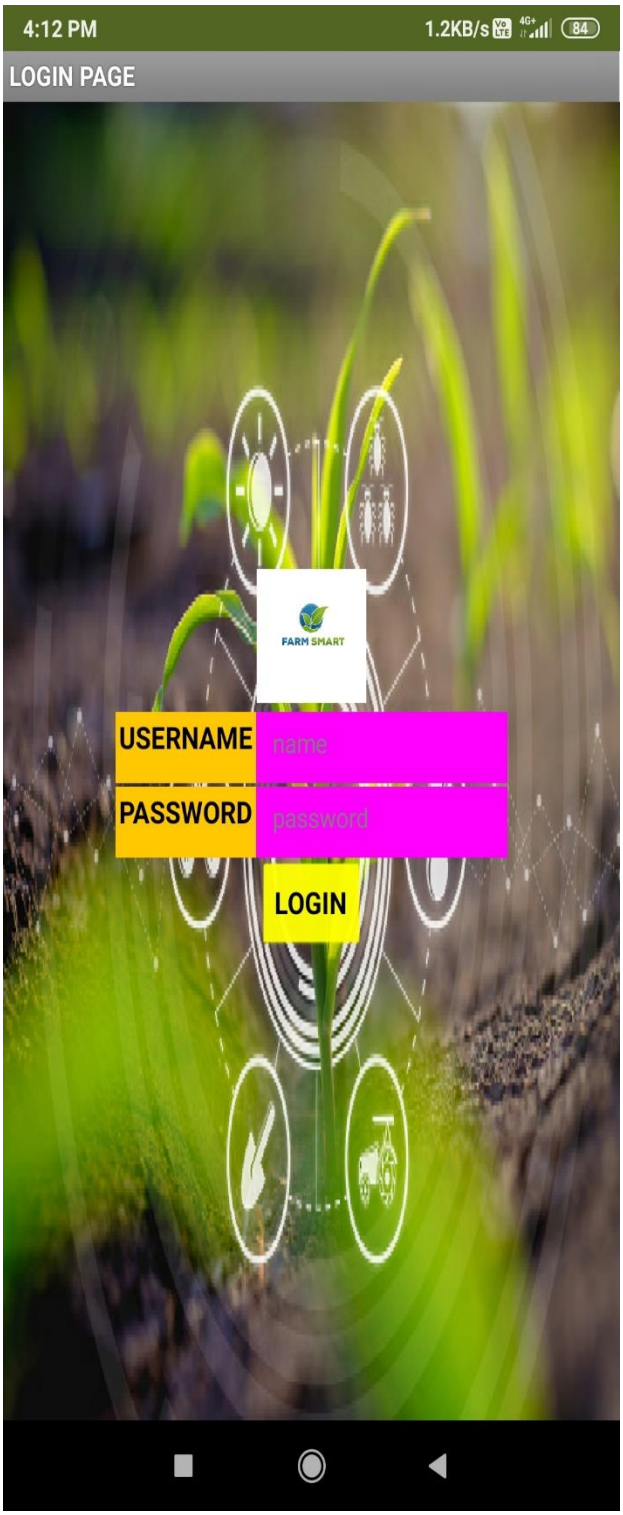
Gmail YouTube Maps Login : https://cloud.ibm....
ibm
Screen1
Add Screen ...
Remove Screen
Publish to Gallery
Designer
Blocks
Palette
Search Components...
User Interface
Button
CheckBox
DatePicker
Image
Label
ListPicker
ListView
Notifier
PasswordTextBox
Slider
Spinner
Switch
TextBox
TimePicker
WebViewer
Viewer
Display hidden components in Viewer
Phone size (505,320)
9:48
LOGIN PAGE
USERNAME
PASSWORD
LOGIN
Components
Screen1
VerticalArrangement1
Image1
USERNAME
TextBox1
PASSWORD
TextBox3
Button1
Web1
Clock1
Rename
Delete
Media
Properties
Screen1
AboutScreen
App development
AccentColor
Magenta
AlignHorizontal
Left : 1
AlignVertical
Top : 1
AppName
ibm
BackgroundColor
Default
BackgroundImage
None...
BigDefaultText
BlocksToolkit
All
CloseScreenAnimation
Default
DefaultFileScope

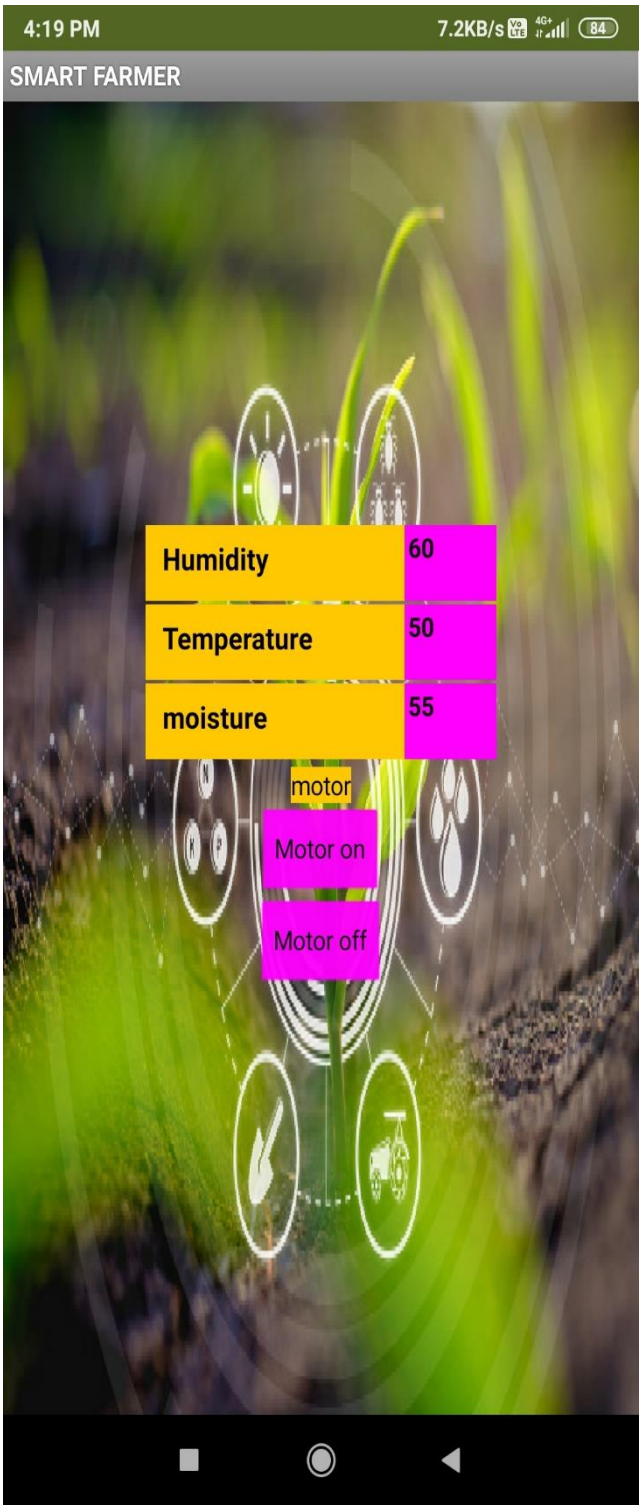

Not secure | ai2.appinventor.mit.edu/#5051269606408192
Gmail YouTube Maps Login : https://cloud.ibm....
MIT APP INVENTOR
Projects
Connect
Build
Settings
Help
My Projects
View Trash
Guide
Report an Issue
English
sowmiyasowmiya81711@gmail.com
ibm
Screen1
Add Screen ...
Remove Screen
Publish to Gallery
Designer
Blocks
Blocks
Control
Logic
Math
Text
Lists
Dictionaries
Colors
Variables
Procedures
Screen1
VerticalArrangement1
Image1
USERNAME
TextBox1
Viewer
when Button1 .TouchDown
do if TextBox1 . Text = " abcd " and TextBox2 . Text = " 1234 "
then open another screen screenName Screen2
else call Notifier1 .ShowAlert
notice " not match "
Show Warnings


Not secure | ai2.appinventor.mit.edu/#5051269606408192
Gmail YouTube Maps Login : https://cloud.ibm....
APP INVENTOR
ibm
Screen2 Add Screen ... Remove Screen Publish to Gallery
Designer Blocks
Palette
Search Components...
User Interface
Button
CheckBox
DatePicker
Image
Label
ListPicker
ListView
Notifier
PasswordTextBox
Slider
Spinner
Switch
TextBox
TimePicker
Viewer
Display hidden components in Viewer
Phone size (505,320)
9:48
SMART FARMER
Humidity 60
Temperature 50
moisture 55
motor
Motor on
Motor off
Components
Screen2
HorizontalArrangemen
TextBox2
Label2
VerticalArrangement1
HorizontalArrangemen
TextBox4
Label1
HorizontalArrangemen
HorizontalArrangemen
TextBox3
Label3
HorizontalArrangemen
HorizontalArrangemen
Label4
HorizontalArrangemen
Button1
Rename Delete
Properties
Screen2
AboutScreen
AlignHorizontal
Center : 3
AlignVertical
Center : 2
BackgroundColor
Default
BackgroundImage
bg.jpg...
BigDefaultText
CloseScreenAnimation
Default
HighContrast
OpenScreenAnimation
None
ScreenOrientation
User


node-red-vlsno-2022-11-14.eu-gb.mybluemix.net/red/#flow/3a871d1aa6dceb1a
Gmail YouTube Maps Login : https://cloud.ibm....
Node-RED
Deploy
filter nodes
Flow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
moisture
moisture
motor on
motor off
IBM IoT
connected
msg.payload
[get] /command
function
http
[get] /sensor
function
http
debug
all nodes
all
11/15/2022, 2:56:42 PM node: f2f2649a.0d0d98
iot-2/type/sensor/id/sensor_1/evt/event_1/fmt/json : msg.payload : number
32
11/15/2022, 2:56:43 PM node: f2f2649a.0d0d98
iot-2/type/sensor/id/sensor_1/evt/event_1/fmt/json : msg.payload : number
47
11/15/2022, 2:57:47 PM node: f2f2649a.0d0d98
iot-2/type/sensor/id/sensor_1/evt/event_1/fmt/json : msg.payload : Object
{ Temperature: 68, Humidity: 45, Moisture: 35 }
11/15/2022, 2:57:47 PM node: f2f2649a.0d0d98
iot-2/type/sensor/id/sensor_1/evt/event_1/fmt/json : msg.payload : number
68
11/15/2022, 2:57:47 PM node: f2f2649a.0d0d98
iot-2/type/sensor/id/sensor_1/evt/event_1/fmt/json : msg.payload : number
45


Not secure | ai2.appinventor.mit.edu/#5051269606408192
Gmail YouTube Maps Login : https://cloud.ibm....
ibm
Screen2 Add Screen ... Remove Screen Publish to Gallery
Designer Blocks
Blocks
Built-in
Control
Logic
Math
Text
Lists
Dictionaries
Colors
Variables
Procedures
Screen2
HorizontalArrangemen
TextBox2
Label2
HorizontalArrangemen
TextBox4
Label1
Rename Delete
Viewer
when Web1 .GotText
url responseCode responseType responseContent
do set Label1 . Text to look up in pairs key temp
pairs call Web1 .JsonTextDecodeWithDictionaries
jsonText get responseContent
notFound not found
set Label2 . Text to look up in pairs key humidity
pairs call Web1 .JsonTextDecodeWithDictionaries
jsonText get responseContent
notFound not found
set Label3 . Text to look up in pairs key moisture
pairs call Web1 .JsonTextDecodeWithDictionaries
jsonText get responseContent
notFound not found
0
0
Show Warnings
to https://node-red-vlsno-2022-11-14.eu-gb.mybluemi...
call Web2 .Get


4:12 PM
1.2KB/s
LOGIN PAGE
FARM SMART
USERNAME
name
PASSWORD
password
LOGIN


4:19 PM
7.2KB/s
SMART FARMER
Humidity
60
Temperature
50
moisture
55
motor
Motor on
Motor off