

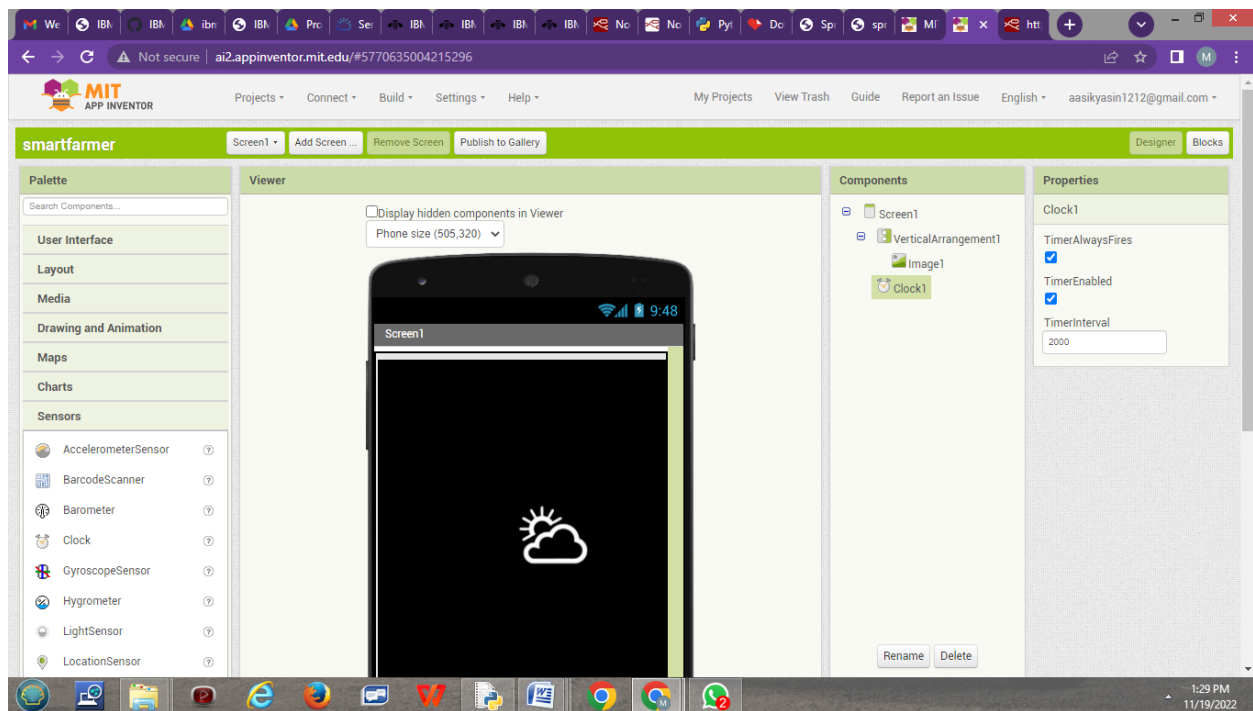
Project Development Phase

Sprint-4

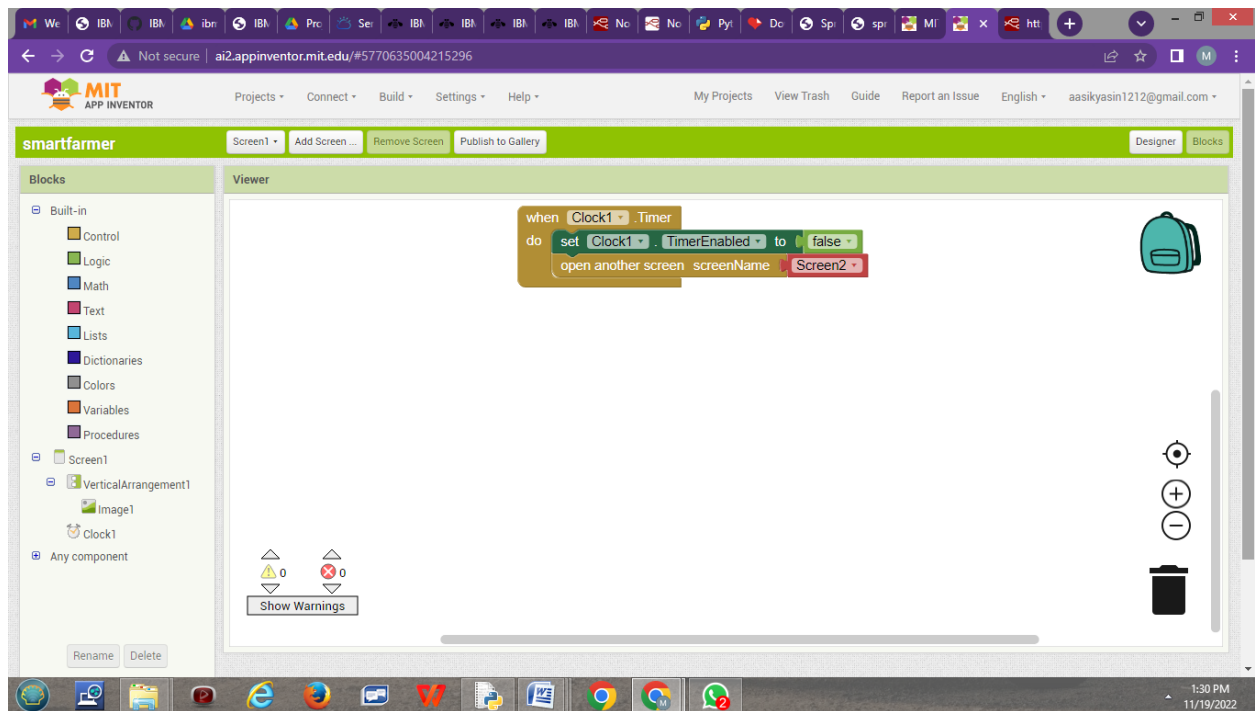
Date	19 Nov 2022
Team ID	PNT2022TMID46771
Project Name	Smart farmer-IOT Enabled smart farming application

Step-1

Screen-1 designer

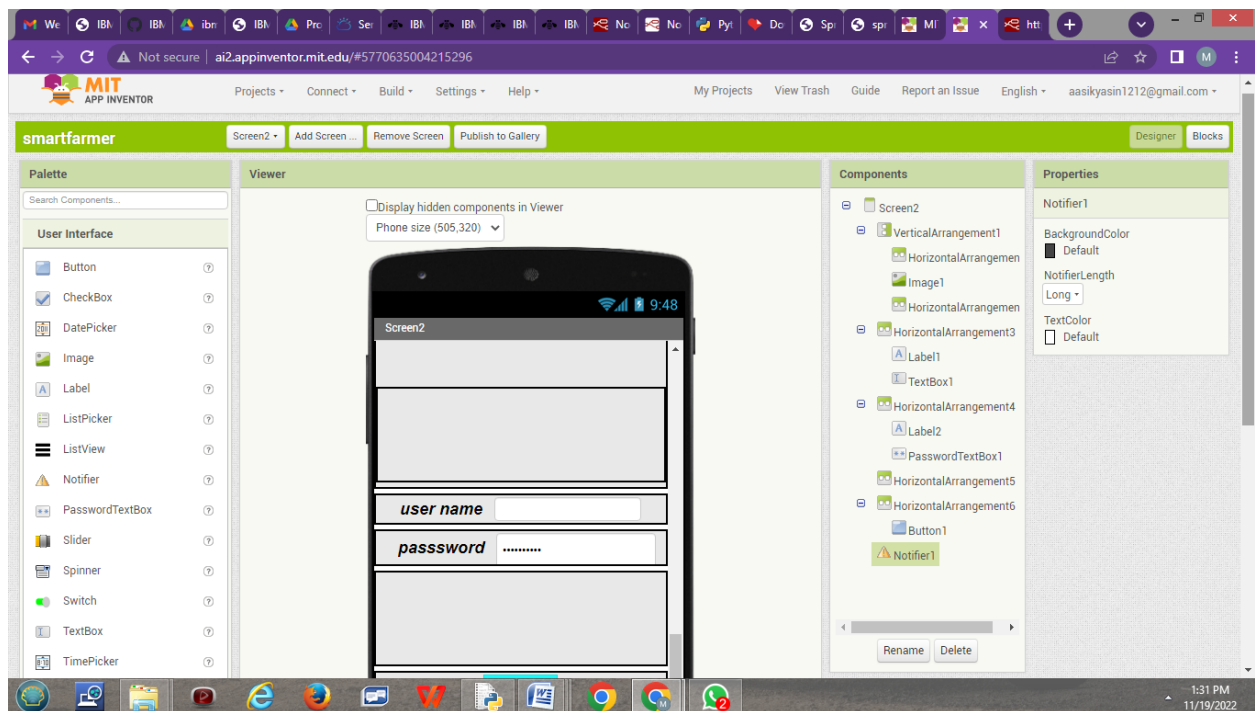


Screen-1 block

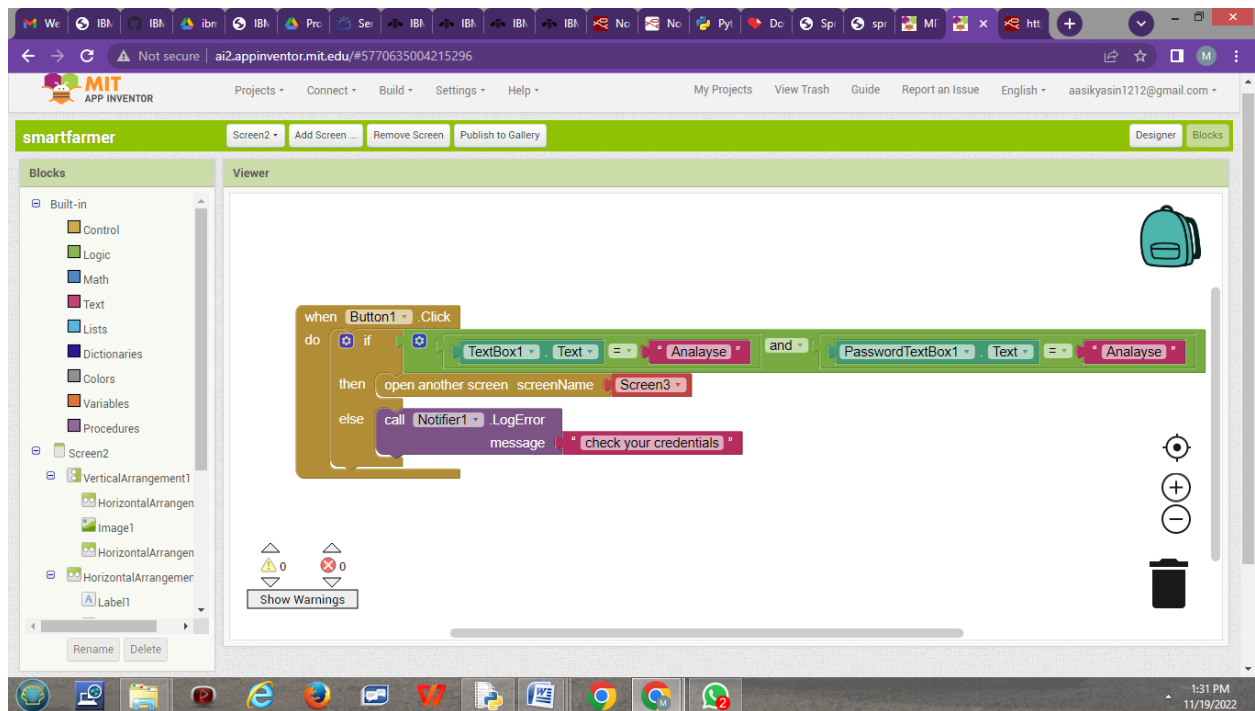


Step-2

Screen-2 designer

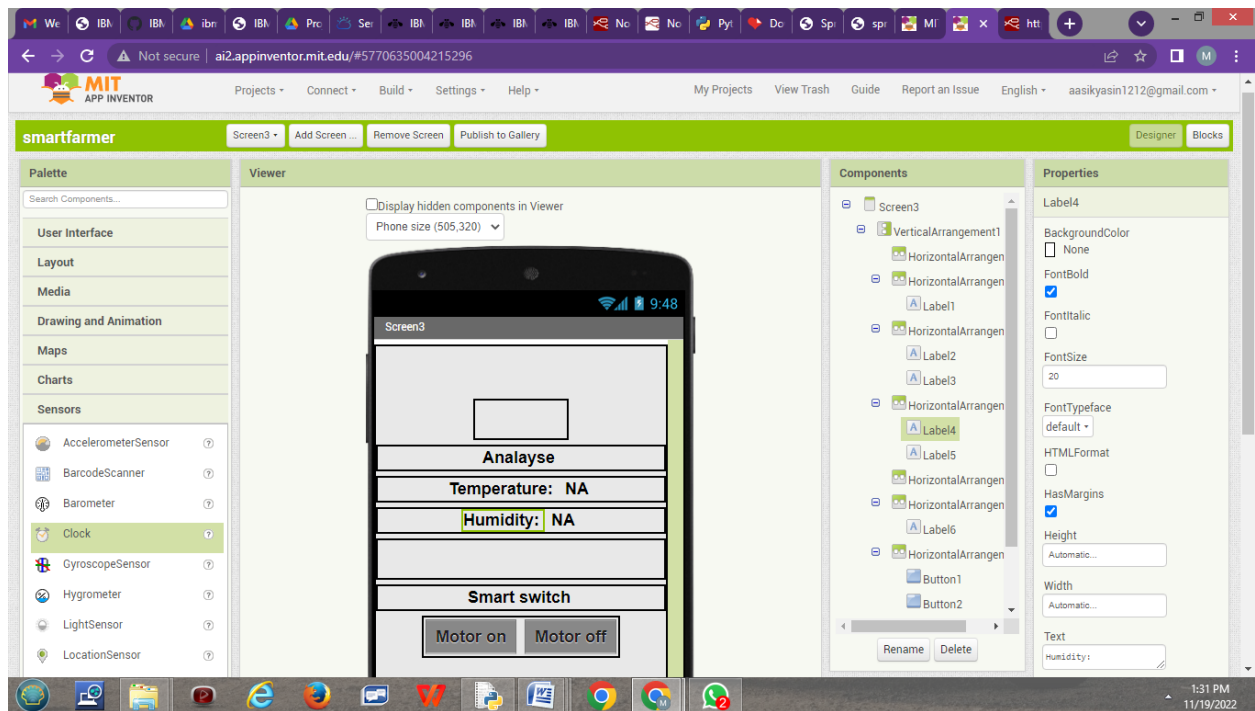


Screen-2 block

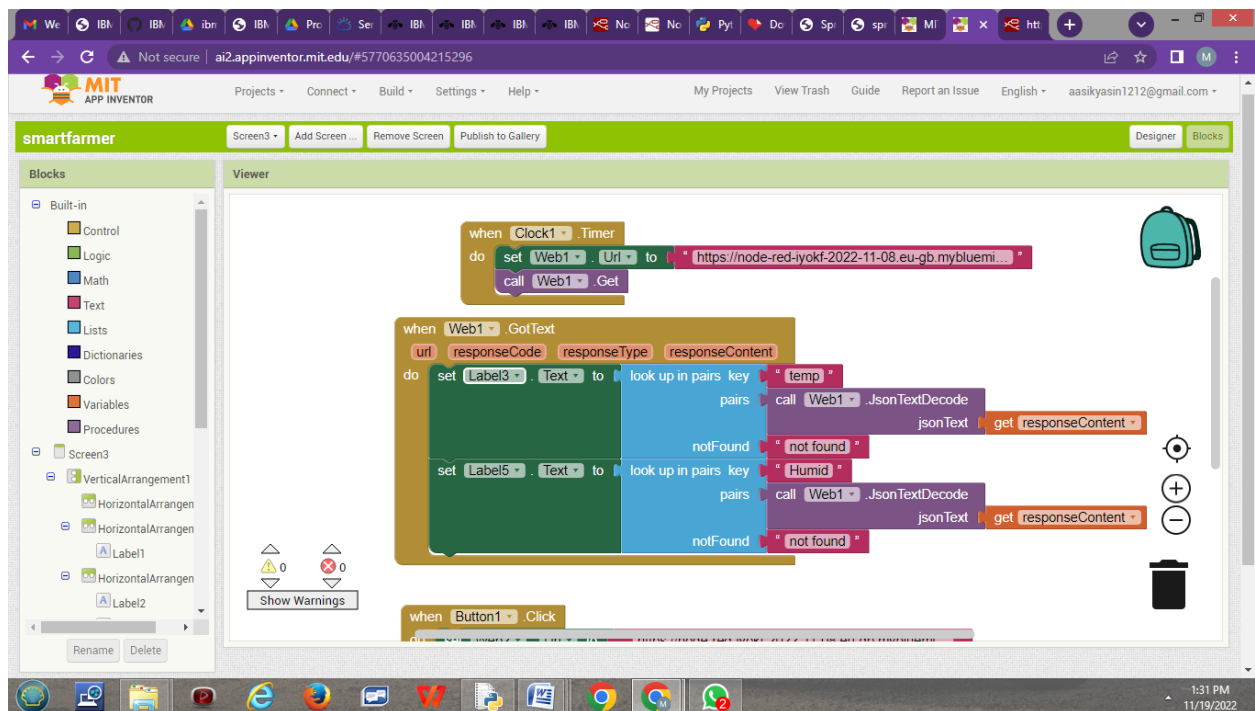


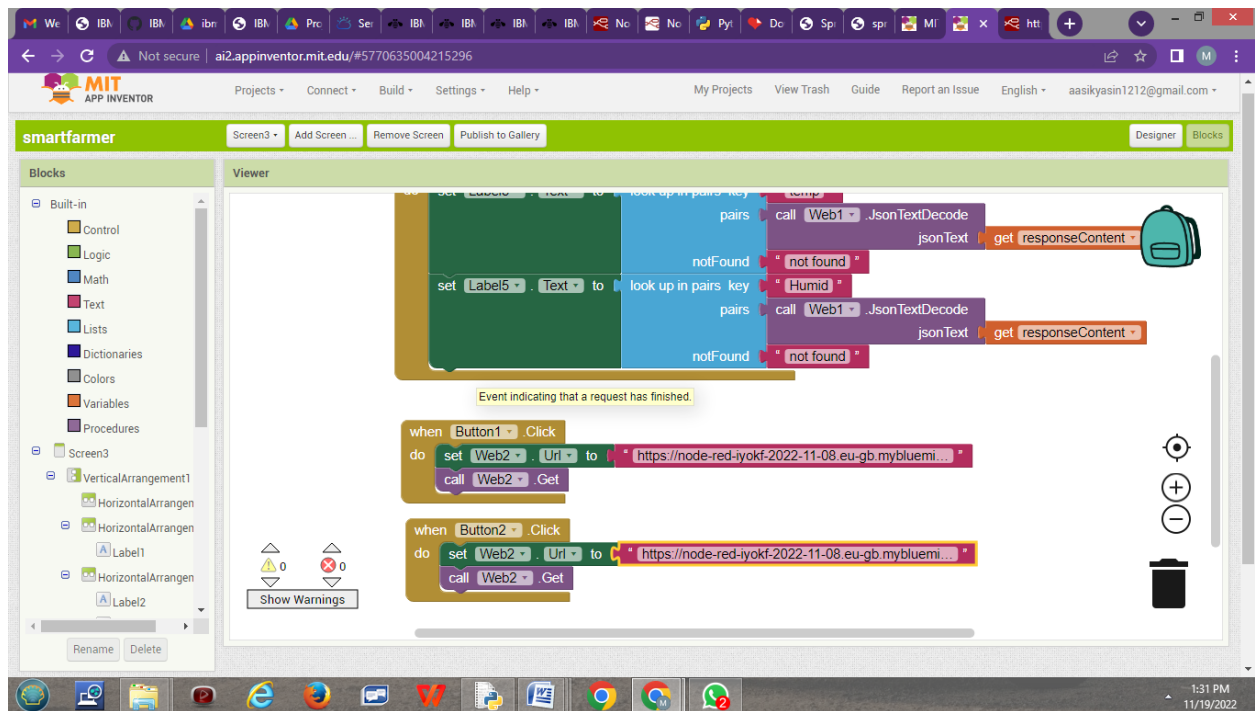
Step-3

Screen-3 designer

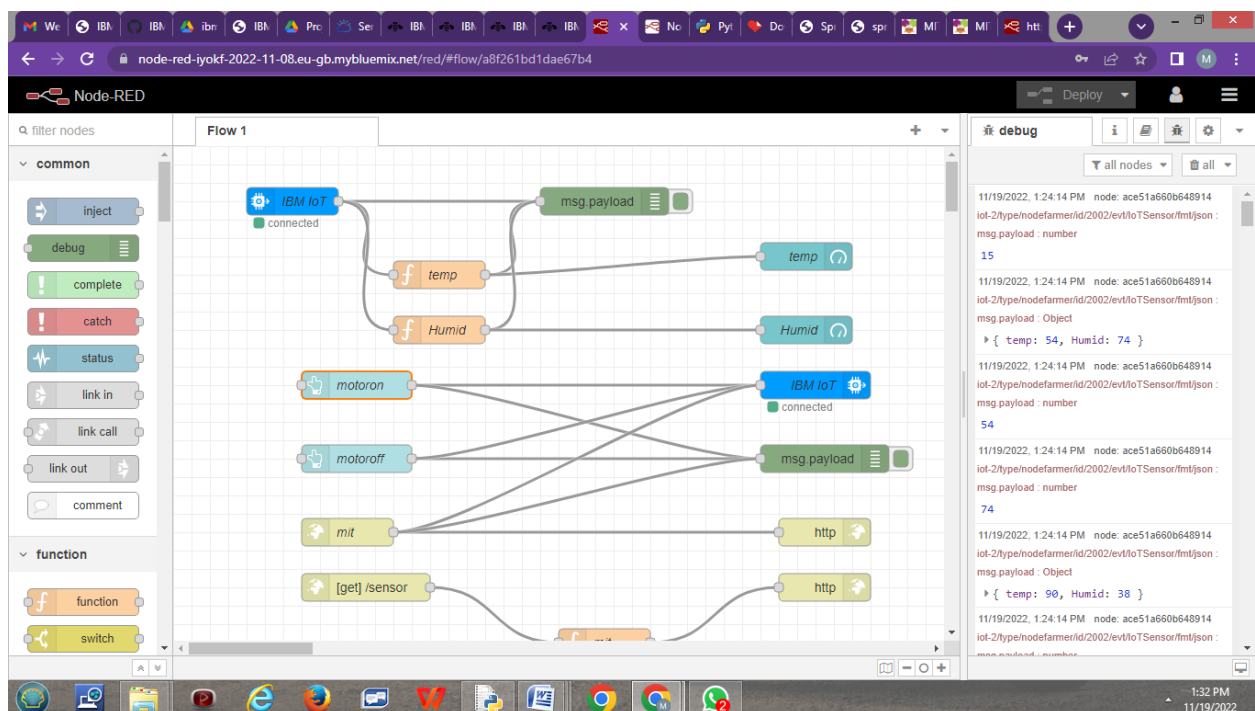


Screen-3 block





Node red output



Python code output

```
nodefarmer.py - C:\Users\Satellite\Downloads\node\nodefarmer.py (3.7.0)
File Edit Format Run Options Window Help

if status=="motoron":
    print ("motor is on")
else:
    print ("motor is off")

#print(cmd)

try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId,
    deviceCli = ibmiotf.device.Client(deviceOptions)
    #.....
except Exception as e:
    print("Caught exception connecting device: %s" % str(e))
    sys.exit()

# Connect and send a datapoint "hello" with value "world" into the cloud as an eve
deviceCli.connect()

while True:
    #Get Sensor Data from DHT11
    temp=random.randint(0,100)
    Humid=random.randint(0,100)

    data = { 'temp' : temp, 'Humid': Humid }
    #print data
    def myOnPublishCallback():
        print ("Published Temperature = %s C" % temp, "Humidity = %s %%" % Humid)

    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoT")
    time.sleep(1)

    deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()

Python 3.7.0 Shell
File Edit Shell Debug Options Window Help

Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\Satellite\Downloads\node\nodefarmer.py =====
2022-11-19 13:32:23,021 ibmiotf.device.Client INFO Connected successfully: d:kiebfw:nodefarmer:2002
Published Temperature = 83 C Humidity = 46 % to IBM Watson
Published Temperature = 97 C Humidity = 78 % to IBM Watson
Published Temperature = 85 C Humidity = 54 % to IBM Watson
Published Temperature = 42 C Humidity = 93 % to IBM Watson
Published Temperature = 99 C Humidity = 56 % to IBM Watson
Published Temperature = 41 C Humidity = 62 % to IBM Watson
Published Temperature = 70 C Humidity = 13 % to IBM Watson
Published Temperature = 26 C Humidity = 36 % to IBM Watson
Published Temperature = 71 C Humidity = 65 % to IBM Watson
Published Temperature = 51 C Humidity = 97 % to IBM Watson
Published Temperature = 98 C Humidity = 76 % to IBM Watson
Published Temperature = 69 C Humidity = 95 % to IBM Watson
Published Temperature = 85 C Humidity = 9 % to IBM Watson
Published Temperature = 91 C Humidity = 53 % to IBM Watson
Published Temperature = 77 C Humidity = 89 % to IBM Watson
Published Temperature = 12 C Humidity = 16 % to IBM Watson
Published Temperature = 74 C Humidity = 26 % to IBM Watson
Published Temperature = 13 C Humidity = 44 % to IBM Watson
Published Temperature = 1 C Humidity = 12 % to IBM Watson
Published Temperature = 83 C Humidity = 21 % to IBM Watson
Published Temperature = 15 C Humidity = 1 % to IBM Watson
Published Temperature = 74 C Humidity = 92 % to IBM Watson
Published Temperature = 25 C Humidity = 10 % to IBM Watson
Published Temperature = 98 C Humidity = 10 % to IBM Watson
Published Temperature = 32 C Humidity = 11 % to IBM Watson
Published Temperature = 50 C Humidity = 0 % to IBM Watson
Published Temperature = 14 C Humidity = 62 % to IBM Watson
Published Temperature = 0 C Humidity = 25 % to IBM Watson
Published Temperature = 23 C Humidity = 90 % to IBM Watson
```

IBM Watson IoT platform Device

IBM Watson IoT Platform

Browse Action Device Types Interfaces

Browse Devices

All Devices Diagnose

This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID

Device Simulator ☒

<input type="checkbox"/>	Device ID	Status	Device Type	Class ID	Date Added
> <input type="checkbox"/>	2002	Connected	nodefarmer	Device	Nov 7, 2022 3:20 PM

Items per page 50 | 1-1 of 1 item

1 of 1 page

1 Simulation running

821219104009@smartinternz.com
ID: kiebfw
kiebfw
ID: kiebfw
Bluemix Free

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Output

The screenshot shows the IBM Watson IoT Platform dashboard in a web browser. The dashboard displays a list of devices, with one device named '2002' selected. The 'Recent Events' tab is active, showing a table of events. The table has two columns: 'Event' and 'Value'. The events listed are:

Event	Value
IoTSensor	{"temp":90,"Humid":5}
event_1	{"randomNumber":27}
IoTSensor	{"temp":74,"Humid":77}
IoTSensor	{"temp":48,"Humid":53}
IoTSensor	{"temp":15,"Humid":96}

Overlaid on the right side of the dashboard is a terminal window titled '*Python 3.7.0 Shell*'. The terminal displays a stream of data being published to IBM Watson:

```
Published Temperature = 72 C Humidity = 80 % to IBM Watson
Published Temperature = 87 C Humidity = 26 % to IBM Watson
Published Temperature = 72 C Humidity = 71 % to IBM Watson
Published Temperature = 51 C Humidity = 17 % to IBM Watson
Published Temperature = 52 C Humidity = 17 % to IBM Watson
Published Temperature = 31 C Humidity = 32 % to IBM Watson
Published Temperature = 30 C Humidity = 26 % to IBM Watson
Published Temperature = 93 C Humidity = 16 % to IBM Watson
Published Temperature = 84 C Humidity = 29 % to IBM Watson
Published Temperature = 58 C Humidity = 84 % to IBM Watson
Published Temperature = 78 C Humidity = 25 % to IBM Watson
Published Temperature = 59 C Humidity = 16 % to IBM Watson
Published Temperature = 58 C Humidity = 72 % to IBM Watson
Published Temperature = 62 C Humidity = 10 % to IBM Watson
Published Temperature = 99 C Humidity = 68 % to IBM Watson
Published Temperature = 60 C Humidity = 78 % to IBM Watson
Published Temperature = 90 C Humidity = 8 % to IBM Watson
Published Temperature = 11 C Humidity = 81 % to IBM Watson
Published Temperature = 95 C Humidity = 100 % to IBM Watson
Published Temperature = 91 C Humidity = 46 % to IBM Watson
Published Temperature = 54 C Humidity = 75 % to IBM Watson
Published Temperature = 0 C Humidity = 61 % to IBM Watson
Published Temperature = 36 C Humidity = 2 % to IBM Watson
Published Temperature = 96 C Humidity = 22 % to IBM Watson
Published Temperature = 3 C Humidity = 54 % to IBM Watson
Published Temperature = 74 C Humidity = 21 % to IBM Watson
Published Temperature = 50 C Humidity = 71 % to IBM Watson
Published Temperature = 18 C Humidity = 79 % to IBM Watson
Published Temperature = 95 C Humidity = 24 % to IBM Watson
Published Temperature = 5 C Humidity = 33 % to IBM Watson
Published Temperature = 82 C Humidity = 51 % to IBM Watson
Published Temperature = 50 C Humidity = 31 % to IBM Watson
Published Temperature = 59 C Humidity = 8 % to IBM Watson
Published Temperature = 60 C Humidity = 0 % to IBM Watson
Published Temperature = 16 C Humidity = 7 % to IBM Watson
Published Temperature = 15 C Humidity = 96 % to IBM Watson
Published Temperature = 48 C Humidity = 53 % to IBM Watson
Published Temperature = 74 C Humidity = 77 % to IBM Watson
Published Temperature = 20 C Humidity = 5 % to IBM Watson
```

Get /command motor on

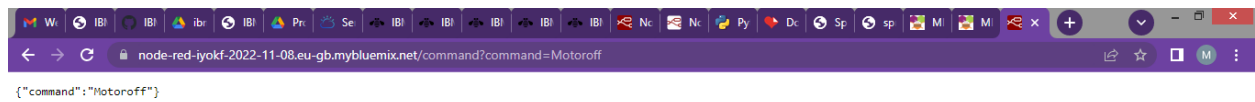
The screenshot shows a web browser displaying a REST API client interface. The URL bar shows the endpoint: `node-red-iyokf-2022-11-08.eu-gb.mybluemix.net/command?command=Motoron`. The response body is displayed as a JSON object:

```
{"command": "Motoron"}
```

http link:

<https://node-red-iyokf-2022-11-08.eu-gb.mybluemix.net/command?command=Motoron>

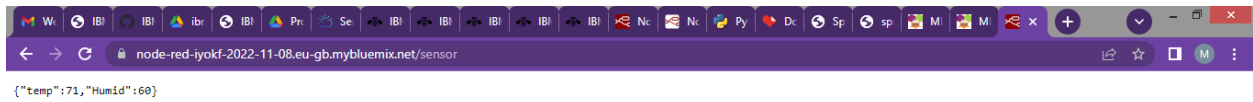
Get /command motor off



http link:

<https://node-red-iyokf-2022-11-08.eu-gb.mybluemix.net/command?command=Motoroff>

Get sensor:



http link:

<https://node-red-iyokf-2022-11-08.eu-gb.mybluemix.net/sensor>