SMART FARMER – IOT ENABLED SMART FARMING APPLICATION

**IBM NALAIYATHIRAN**

Project Development-Delivery of Sprint 2
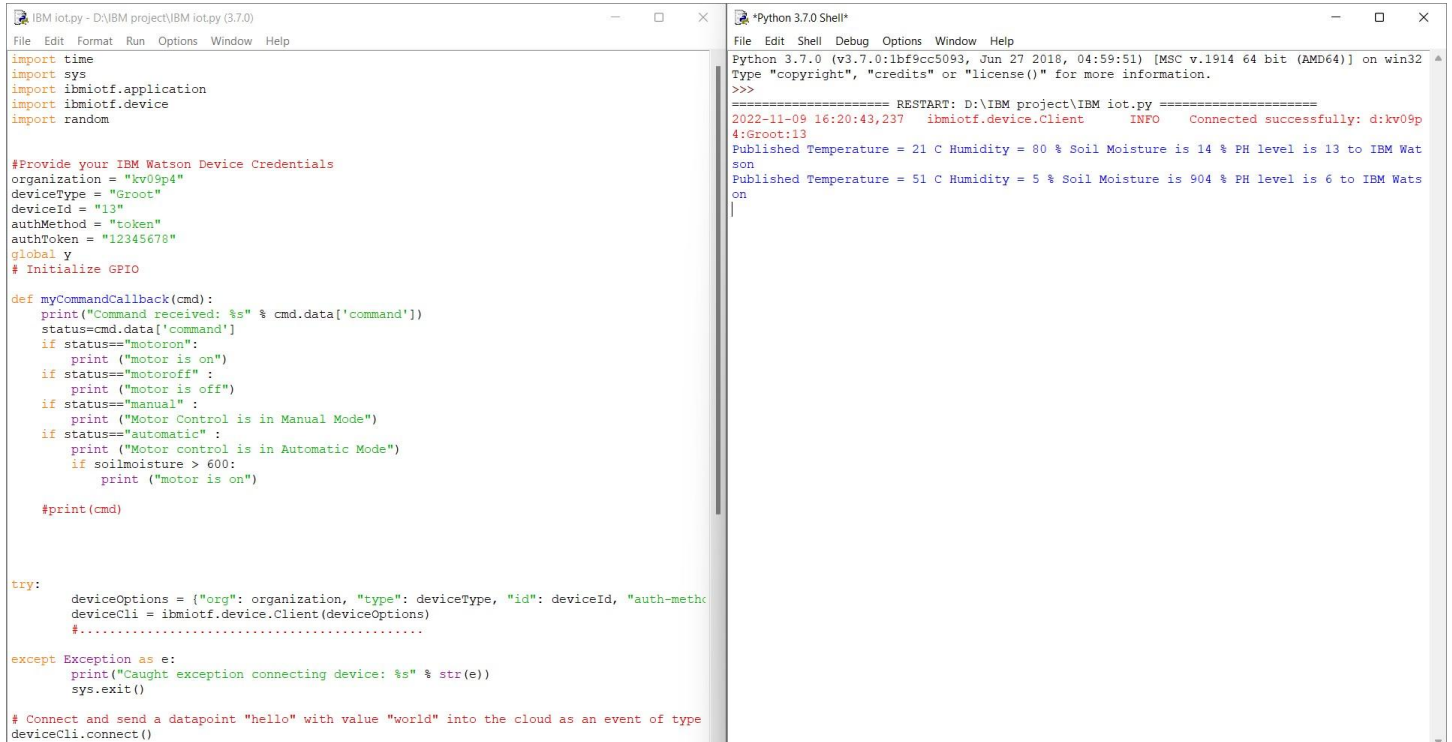
Creating Node-Red service and connect with IBM cloud and Web UI

TITLE	Smart Farmer IoT Enabled Smart Farming Application
DOMAIN NAME	INTERNET OF THINGS
TEAM ID	PNT2022TMID12689
TEAM LEADERNAME	Mahakaleeshwaran A
TEAM MEMBER NAME	Sivanesan P T Elayabharathi T Sridhar R
MENTOR NAME	RAM PRASATH S

Creating Node-Red service:
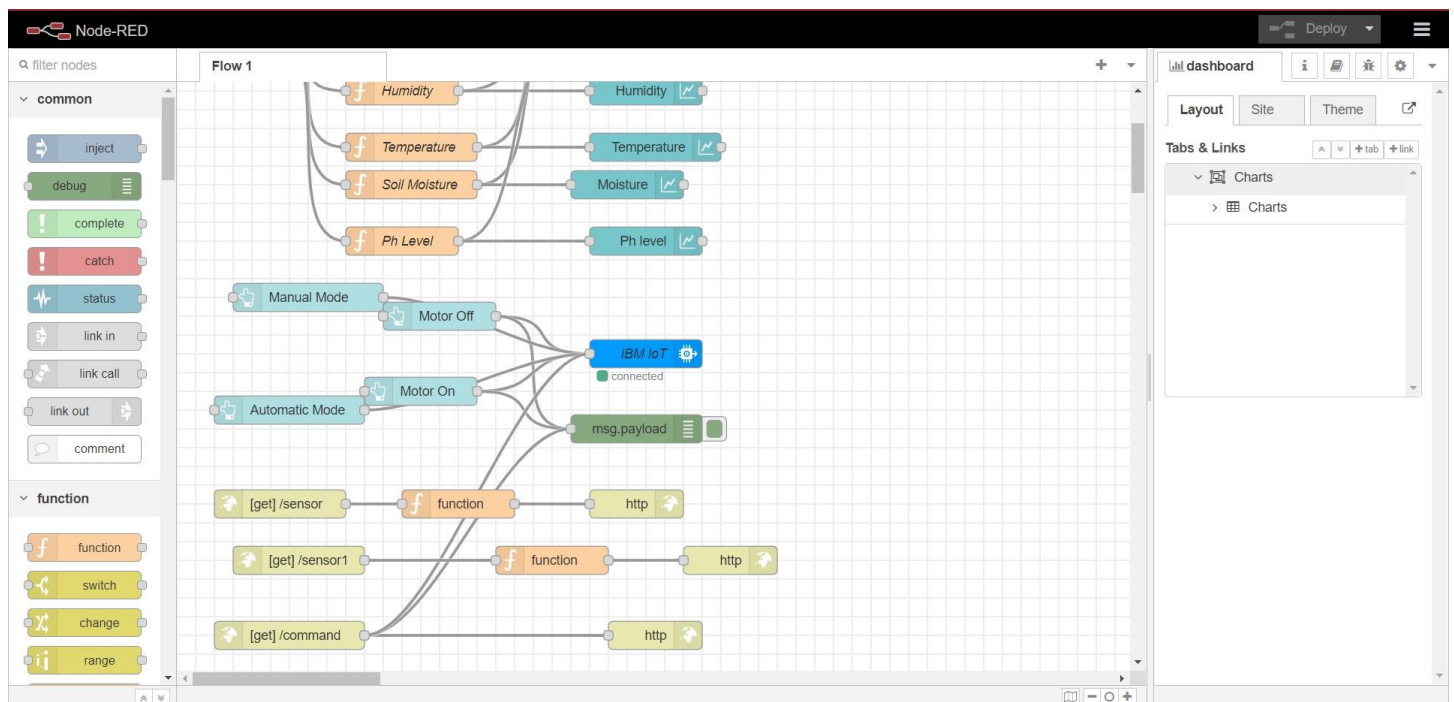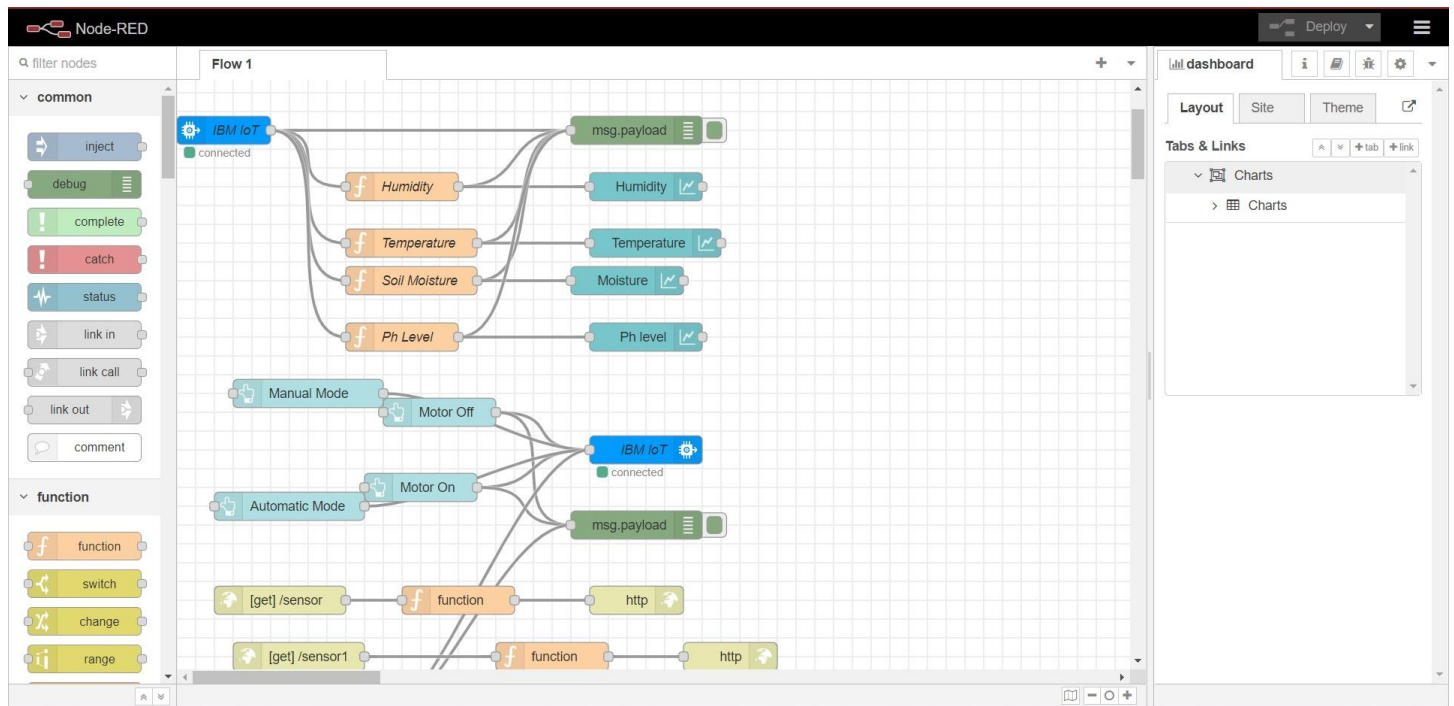
Transfering Values from Python Code:


```python
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random


#Provide your IBM Watson Device Credentials
organization = "kv09p4"
deviceType = "Groot"
deviceId = "13"
authMethod = "token"
authToken = "12345678"
global y
# Initialize GPIO

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="motoron":
      print ("motor is on")
    if status=="motoroff" :
      print ("motor is off")
    if status=="manual" :
      print ("Motor Control is in Manual Mode")
    if status=="automatic" :
      print ("Motor control is in Automatic Mode")
      if soilmoisture > 600:
          print ("motor is on")

    #print(cmd)



try:
        deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-metho
        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 event of type
deviceCli.connect()
```

```
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: D:\IBM project\IBM iot.py ====================
2022-11-09 16:20:43,237   ibmiotf.device.Client    INFO    Connected successfully: d:kv09p
4:Groot:13
Published Temperature = 21 C Humidity = 80 % Soil Moisture is 14 % PH level is 13 to IBM Wat
son
Published Temperature = 51 C Humidity = 5 % Soil Moisture is 904 % PH level is 6 to IBM Wats
on
```
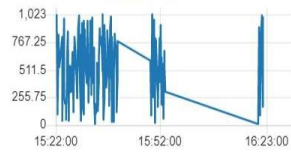
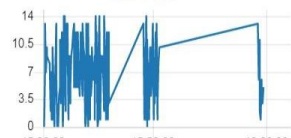## Node-Red:
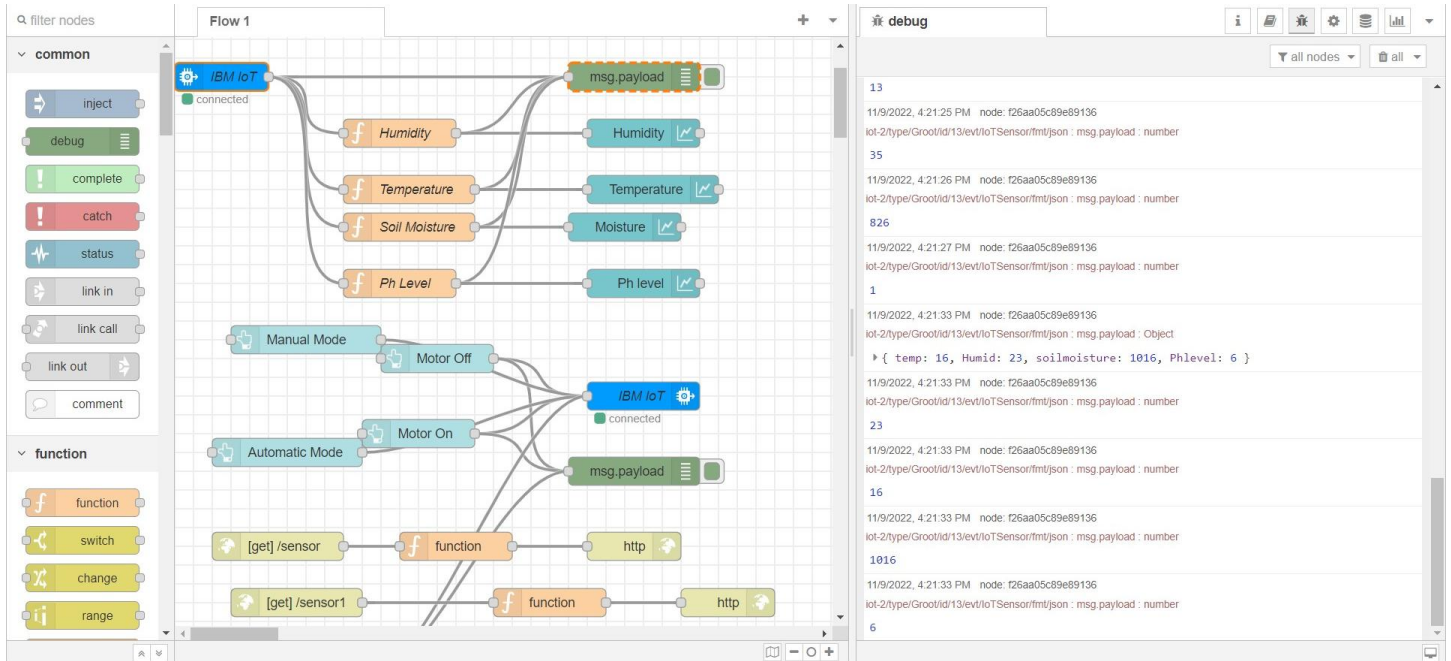
Node-Red Dashboard:

Charts

Temperature

Moisture

Ph level

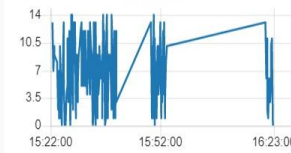### Ph level

MOTOR OFF

MOTOR ON

MANUAL MODE

AUTOMATIC MODE

Humidity