Build A Web Application Using Node-RED Service

ProjectName	Smart Farmer-IoTEnabledSmartFarming Application
TEAMID	PNT2022TMID44065

PYTHON CODE:-

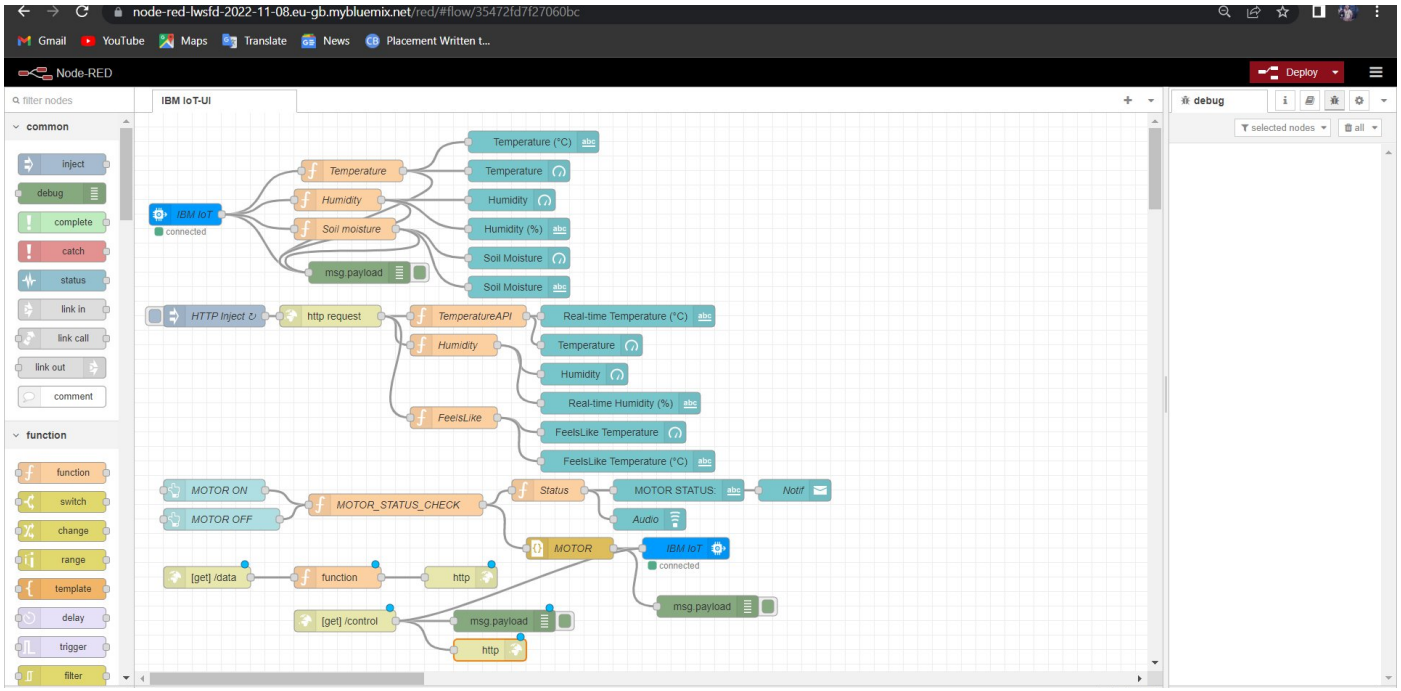
```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random


organization = "zxnybt"
deviceType = "dominators"
deviceId = "12345"
authMethod = "token"
authToken = "123456789"


def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data)
    for key in cmd.data.keys():
      if key == 'motor':
         if cmd.data['motor'] == 'ON':
            print("MOTOR is turned ON")

         elif cmd.data['motor'] == 'OFF':
            print("MOTOR is turned OFF")
try:
   deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-
method": authMethod, "auth-token": authToken}
   deviceCli = ibmiotf.device.Client(deviceOptions)


except Exception as e:
        print("Caught exception connecting device: %s" % str(e))
        sys.exit()
```

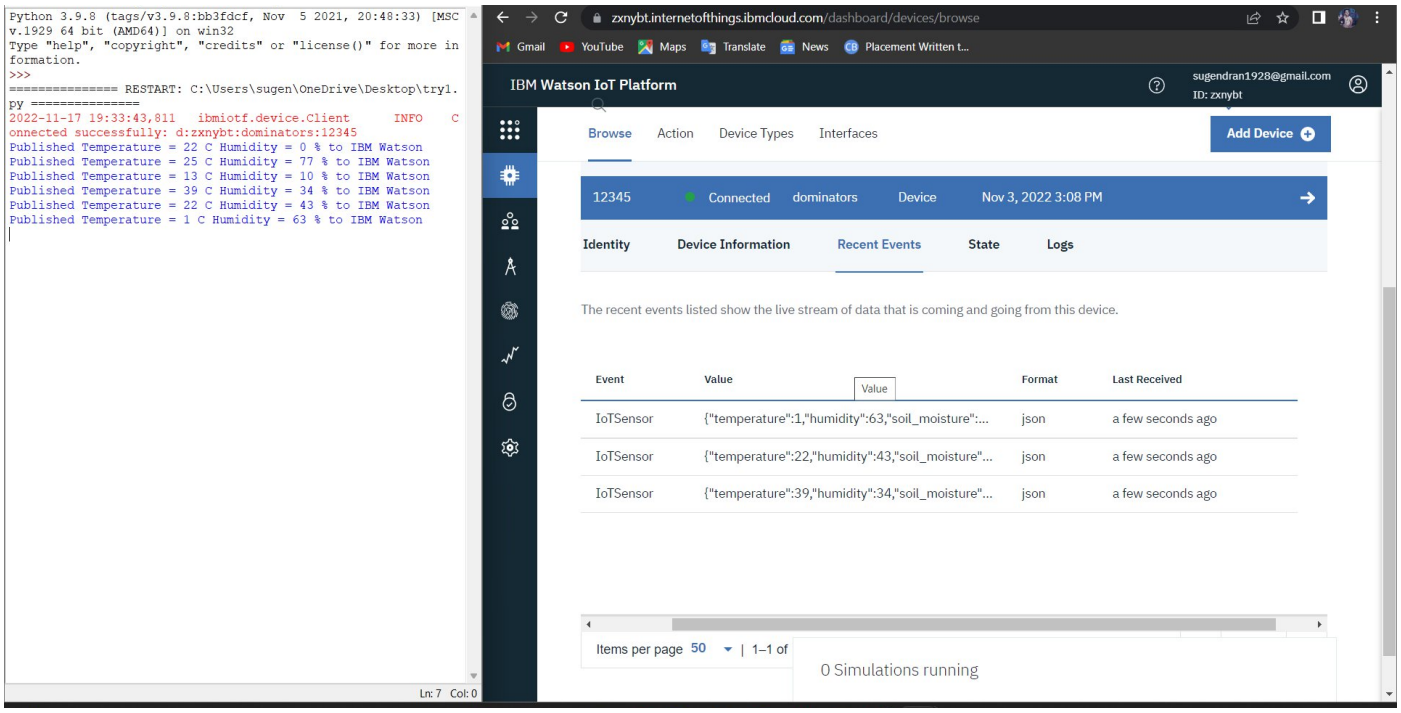
deviceCli.connect()

while True:

```
        temp=random.randint(0,40)
        Humid=random.randint(0,100)
        moist=random.randint(0,40)
        data = { 'temperature' : temp, 'humidity': Humid, 'soil_moisture':moist }

        def myOnPublishCallback():
            print ("Published Temperature = %s C" % temp, "Humidity = %s %%" %
Humid, "to IBM Watson")

        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)
        if not success:
            print("Not connected to IoTF")
        time.sleep(10)

        deviceCli.commandCallback = myCommandCallback
```

deviceCli.disconnect()




Python 3.9.8 (tags/v3.9.8:bb3fdcf, Nov 5 2021, 20:48:33) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\sugen\OneDrive\Desktop\try1.py ==========
2022-11-17 19:33:43,811 ibmiotf.device.Client INFO Connected successfully: d:zxnybt:dominators:12345
Published Temperature = 22 C Humidity = 0 % to IBM Watson
Published Temperature = 25 C Humidity = 77 % to IBM Watson
Published Temperature = 13 C Humidity = 10 % to IBM Watson
Published Temperature = 39 C Humidity = 34 % to IBM Watson
Published Temperature = 22 C Humidity = 43 % to IBM Watson
Published Temperature = 1 C Humidity = 63 % to IBM Watson
Ln: 7 Col: 0
zxnybt.internetofthings.ibmcloud.com/dashboard/devices/browse
Gmail
YouTube
Maps
Translate
News
Placement Written t...
IBM Watson IoT Platform
sugendran1928@gmail.com
ID: zxnybt
Browse
Action
Device Types
Interfaces
Add Device
12345
Connected
dominators
Device
Nov 3, 2022 3:08 PM
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Value
Format
Last Received
IoTSensor
{"temperature":1,"humidity":63,"soil_moisture":...
json
a few seconds ago
IoTSensor
{"temperature":22,"humidity":43,"soil_moisture"...
json
a few seconds ago
IoTSensor
{"temperature":39,"humidity":34,"soil_moisture"...
json
a few seconds ago
Items per page 50
| 1–1 of
0 Simulations running