Develop A Mobile Application

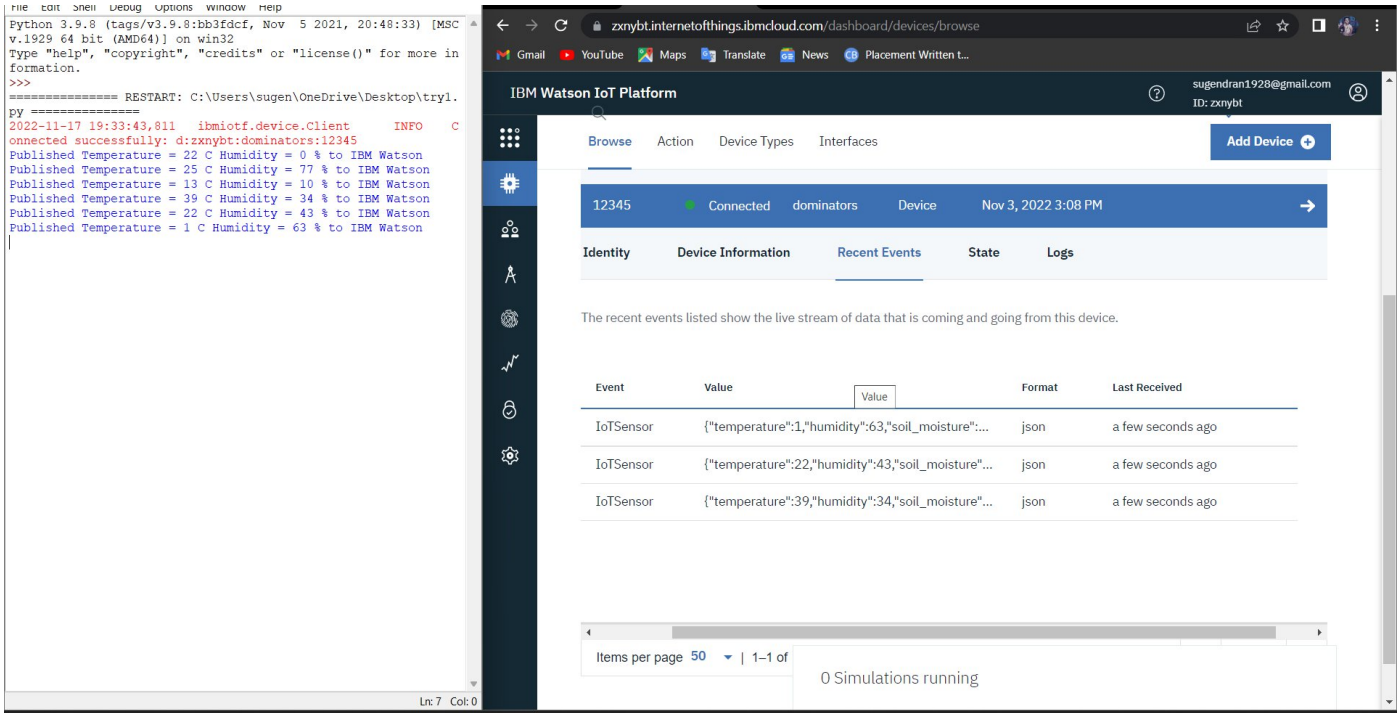
ProjectName	Smart Farmer-IoTEnabledSmartFarming Application
TEAMID	PNT2022TMID44065

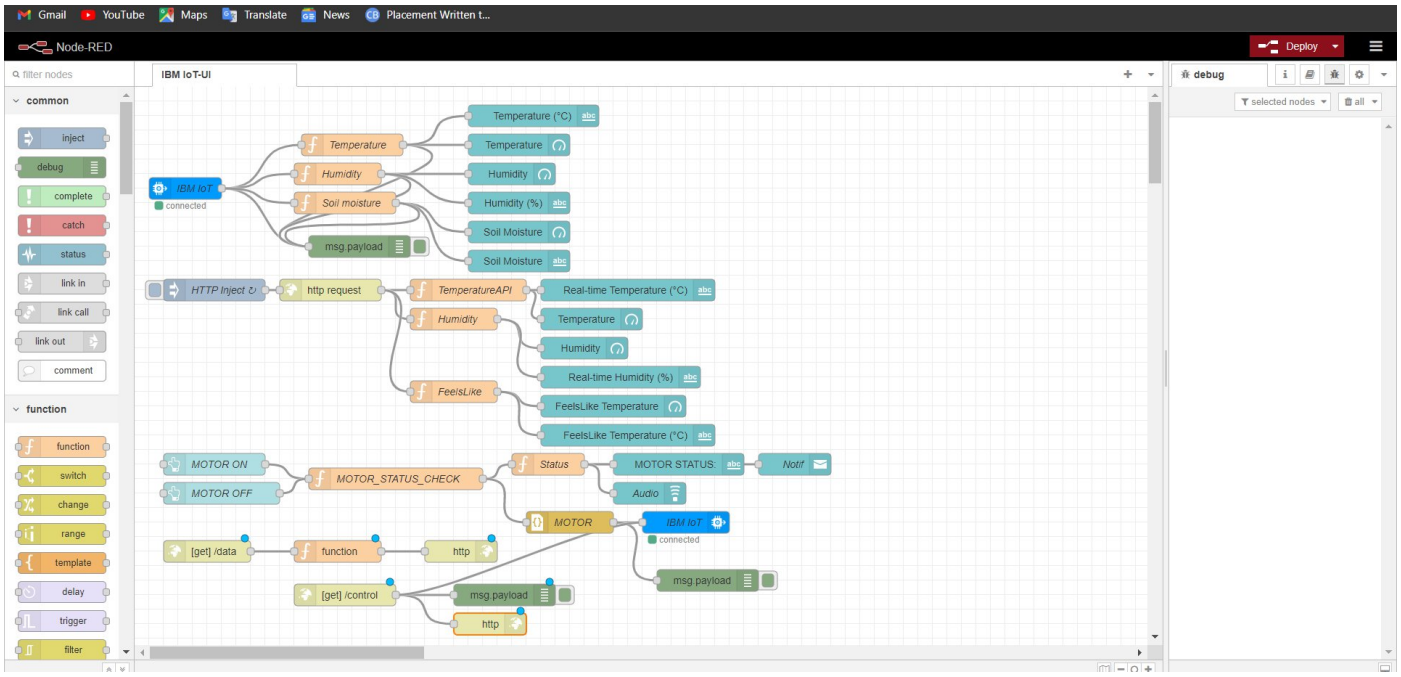
PYTHON CODE :

```
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()-

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connected
Temperature
Humidity
Soil moisture
msg.payload
HTTP Inject
http request
TemperatureAPI
Humidity
FeelsLike
Real-time Temperature (°C)
Temperature
Humidity
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FeelsLike Temperature (°C)
MOTOR ON
MOTOR OFF
MOTOR_STATUS_CHECK
Status
MOTOR STATUS:
Notif
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msg.payload
[get] /control
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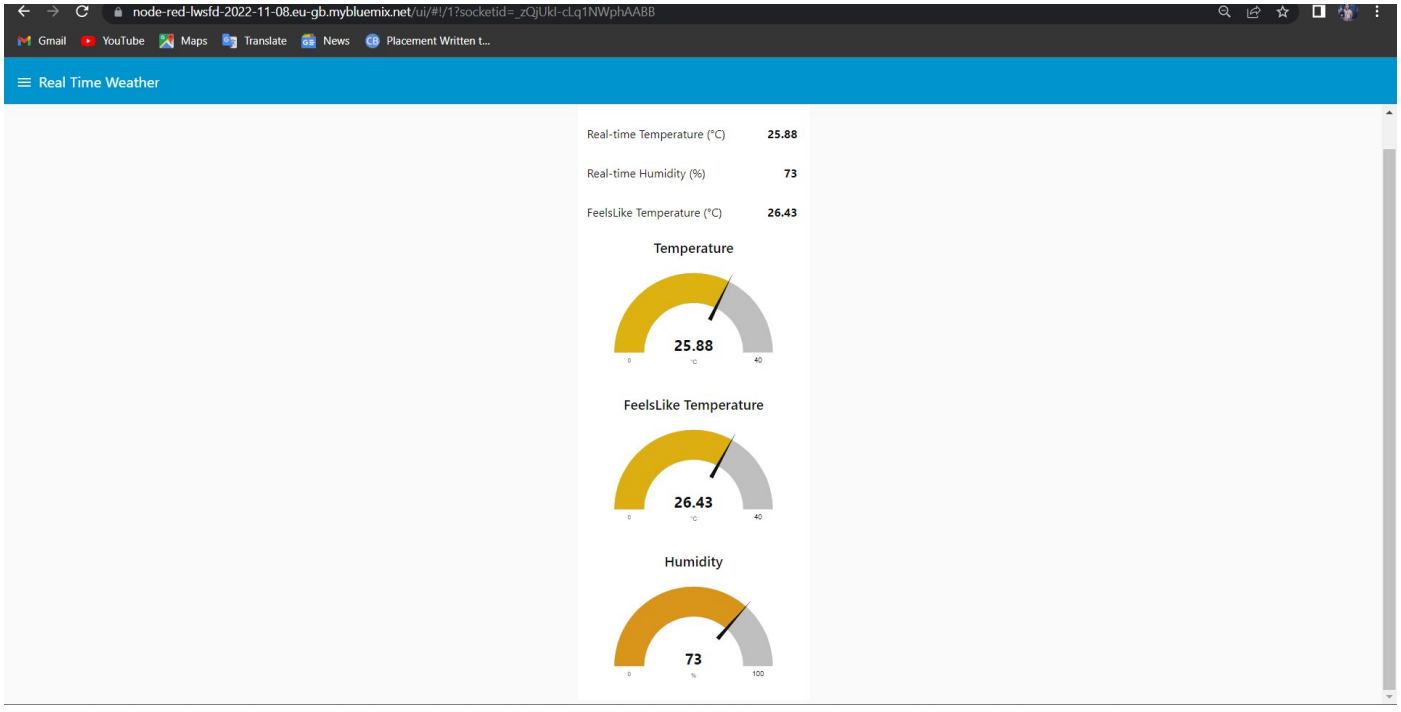
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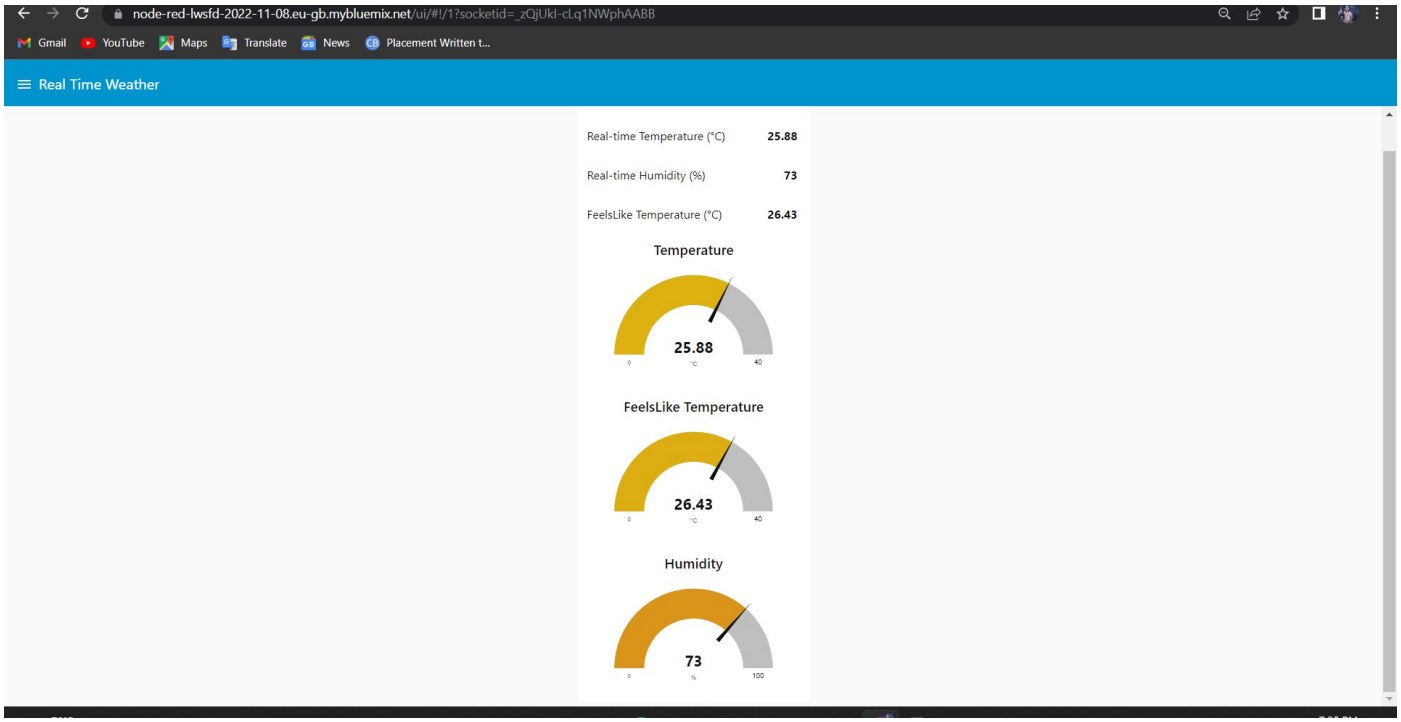
Real Time Weather
Real-time Temperature (°C) 25.88
Real-time Humidity (%) 73
FeelsLike Temperature (°C) 26.43
Temperature
25.88
FeelsLike Temperature
26.43
Humidity
73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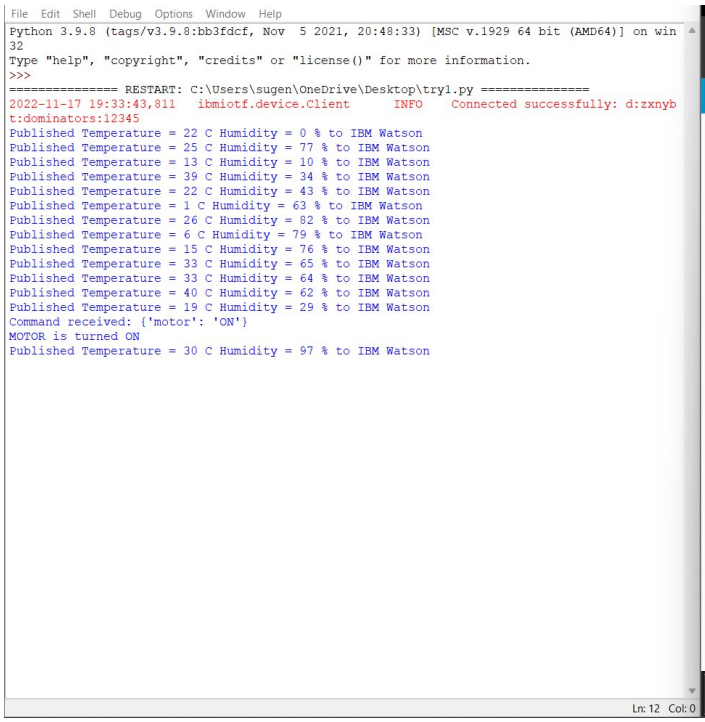
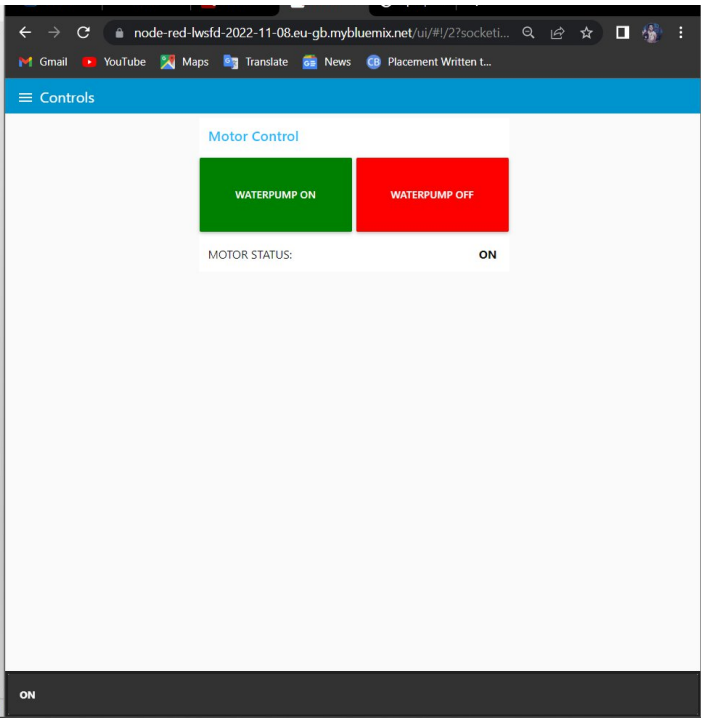

File Edit Shell Debug Options Window Help
Python 3.9.8 (tags/v3.9.8:bb3fdcf, Nov 5 2021, 20:48:33) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\sugen\OneDrive\Desktop\try1.py ==========
2022-11-17 19:33:43,811 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
Published Temperature = 26 C Humidity = 82 % to IBM Watson
Published Temperature = 6 C Humidity = 79 % to IBM Watson
Published Temperature = 15 C Humidity = 76 % to IBM Watson
Published Temperature = 33 C Humidity = 65 % to IBM Watson
Published Temperature = 33 C Humidity = 64 % to IBM Watson
Published Temperature = 40 C Humidity = 62 % to IBM Watson
Published Temperature = 19 C Humidity = 29 % to IBM Watson
Command received: {'motor': 'ON'}
MOTOR is turned ON
Published Temperature = 30 C Humidity = 97 % to IBM Watson
Ln: 12 Col: 0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Gmail
YouTube
Maps
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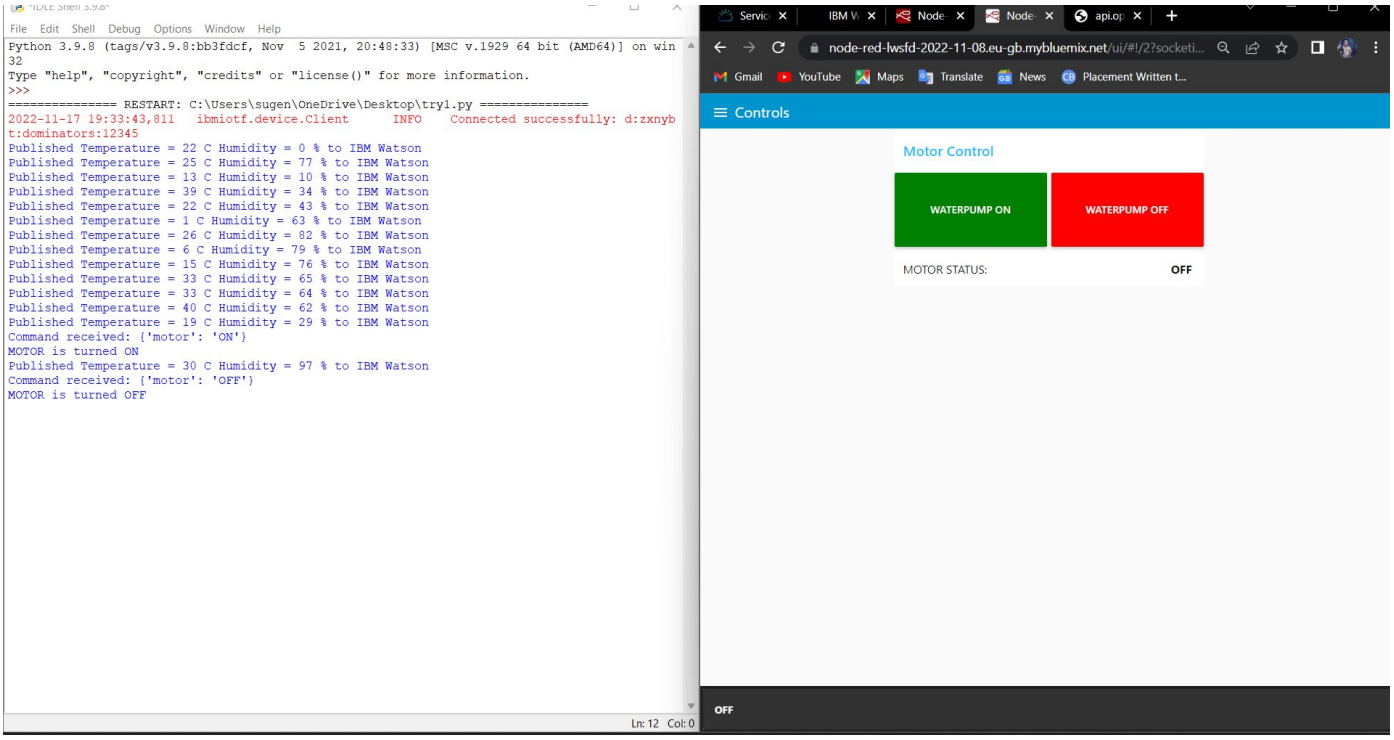
Controls
Motor Control
WATERPUMP ON
WATERPUMP OFF
MOTOR STATUS: ON
ON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