

Smart Farmer - IoT Enabled Smart Farming Application

SPRINT - 4

TEAM ID	PNT2022TMID04018
DATE	14 TH NOVEMBER 2022

To make the user to interact with software:

Receiving commands from IBM cloud using Python program:

```
import wiotp.sdk.device
```

```
import time
```

```
import os
```

```
import datetime
```

```
import random
```

```
myConfig = { "identity":{
```

```
"orgId": "04gt4e",
```

```
"typeId": "NodeMCU",
```

```
"deviceId": "12345"
```

```
},
```

```
"auth": {
```

```
"token": "123456789" }
```

```
}
```

```
client = wiotp.sdk.device.DeviceClient(config=myConfig,  
logHandlers=None)
```

```
client.connect ()

def myCommandCallback (cmd) :

    print ("Message received from IBM IoT Platform: %s" %
cmd.data['command'])

    m=cmd.data['command']

    if(m=="motoron"):

        print ("Motor is switched on")

    elif(m=="motoroff"):

        print ("Motor is switched OFF")

    print(" ")

while True:

    soil=random.randint(10,100)

    temp=random.randint(-20, 125)

    hum=random.randint(0, 100)

    myData={'soil_moisture': soil, 'temperature':temp,
'humidity':hum}

    client.publishEvent (eventId="status", msgFormat="json",
data=myData, qos=0 , onPublish=None)

    print("Published data Successfully: %s", myData)

    time.sleep(2)

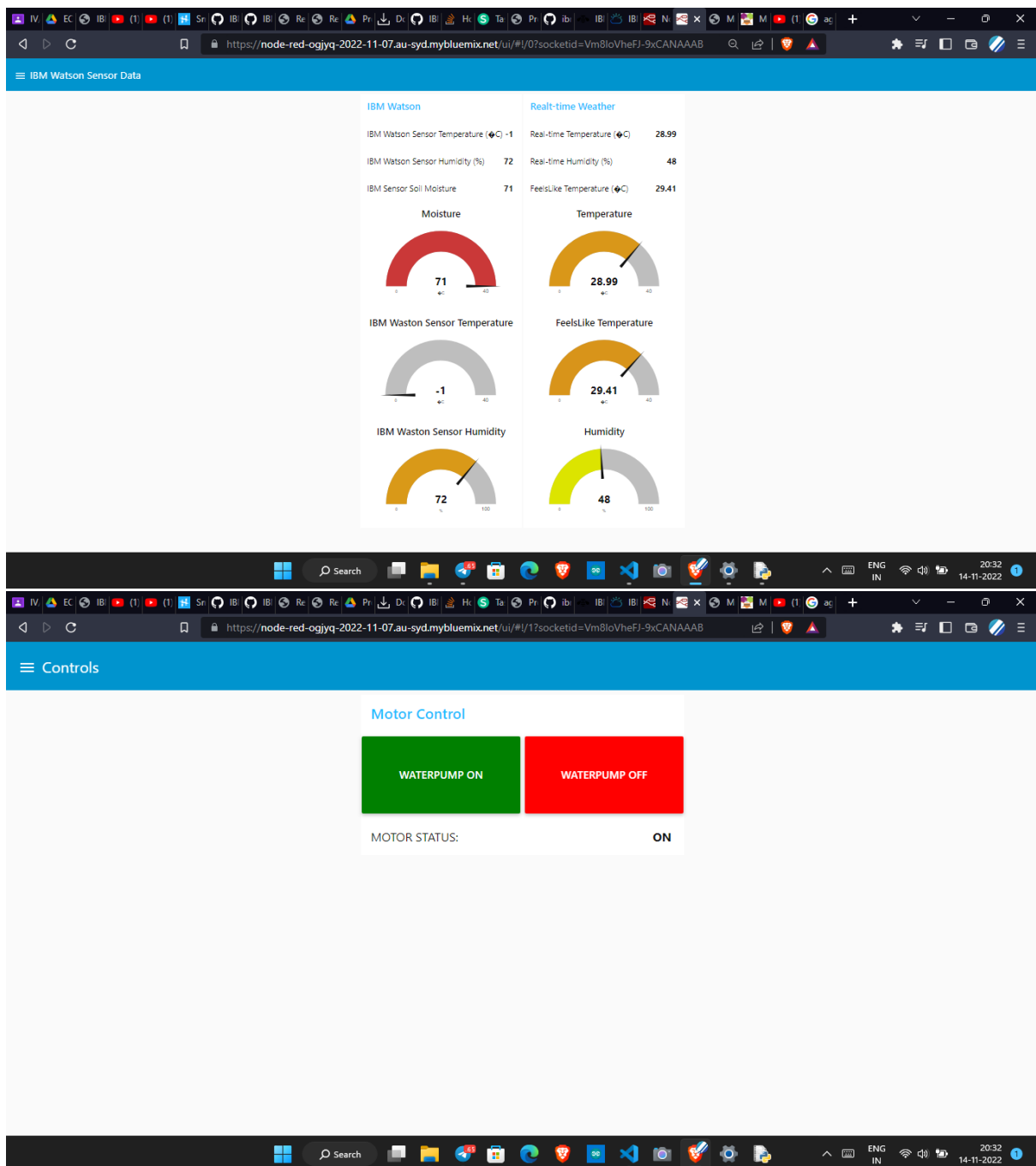
    client.commandCallback = myCommandCallback

client.disconnect()
```

USER INTERFACE – WEB APPLICATION:

FEATURES:

- Comparative real time data from the internet
- Visual graph for easier understanding
- Separate tab for motor control and voice alert on commands
- SMS notification once the value falls below the threshold limit.



8:34 PM | 5.2KB/s

4G+ 47%

IBM- NALAIYATHIRAN



Smart Agriculture

Temperature

26

Humidity

85

Moisture

49

Motor ON

Motor OFF

Advantages & Disadvantages

Advantages:

- Farms can be monitored and controlled remotely.
- Increase in convenience to farmers.
- Less labour cost.
- Better standards of living.

Disadvantages:

- Lack of internet/connectivity issues.
- Added cost of internet and internet gateway infrastructure.
- Farmers wanted to adapt the use of Mobile App.

Conclusion

Thus the objective of the project to implement an IOT system in order to help farmers to control and monitor their farms has been implemented successfully