

Sprint 4

Web UI-

to make user interact with Software

Date	9 October 2022
Team ID	PNT2022TMID41338
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application
Maximum Marks	4 Marks

Receiving commands from IBM cloud using Python program

```
import time
```

```
import sys
```

```
import ibmiotf.application
```

```
import ibmiotf.device
```

```
import random
```

```
#Provide your IBM Watson Device Credentials
```

```
organization = "1xI08d"
```

```
deviceType = "abcd"
```

```
deviceId = "12"
```

```
authMethod = "token"
```

```
authToken = "12345678"
```

```
# Initialize GPIO
```

```
def myCommandCallback(cmd):
```

```
    print("Command received: %s" % cmd.data['command'])
```

```
    status=cmd.data['command']
```

```
    if status=="lighton":
```

```
        print ("led is on")
```

```
    elif status=="lightoff":
```

```
    print ("led is off")
else:
    print("please send proper command")
```

```
#print(cmd)
```

```
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()
```

```
# Connect and send a datapoint "hello" with value "world" into the cloud as an event
of type "greeting" 10 times deviceCli.connect()
```

```
while True:
```

```
    #Get Sensor Data from DHT11

    temp=random.randint(90,110)

    Humid=random.randint(60,100)

    Mois=random.randint(20,100)

    data = { 'temp' : temp, 'Humid': Humid , 'Mois':Mois}

    #print data

    def myOnPublishCallback():

        print ("Published Temperature = %s C" % temp, "Humidity = %s %" % Humid,
", Moisture = %s deg c" % Mois, to IBM Watson")

        success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)
```

if not success:

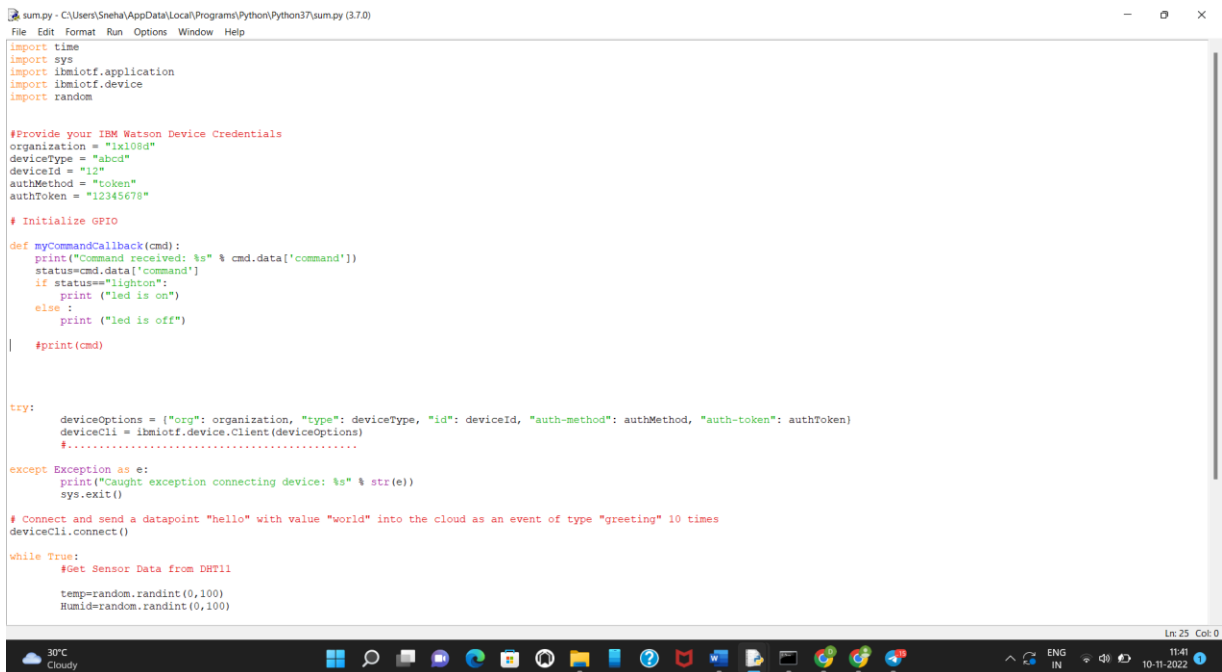
```
print("Not connected to IoTf")
```

```
time.sleep(1)
```

```
deviceCli.commandCallback = myCommandCallback
```

Disconnect the device and application from the cloud

```
deviceCli.disconnect()
```



```
sum.py - C:\Users\Sneha\AppData\Local\Programs\Python\Python37\sum.py (3.7.0)
File Edit Format Run Options Window Help

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

#Provide your IBM Watson Device Credentials
organization = "ix108d"
deviceType = "abcd"
deviceId = "12"
authMethod = "token"
authToken = "12345678"

# Initialize GPIO

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
        print ("led is on")
    else :
        print ("led is off")
    #print(cmd)

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()

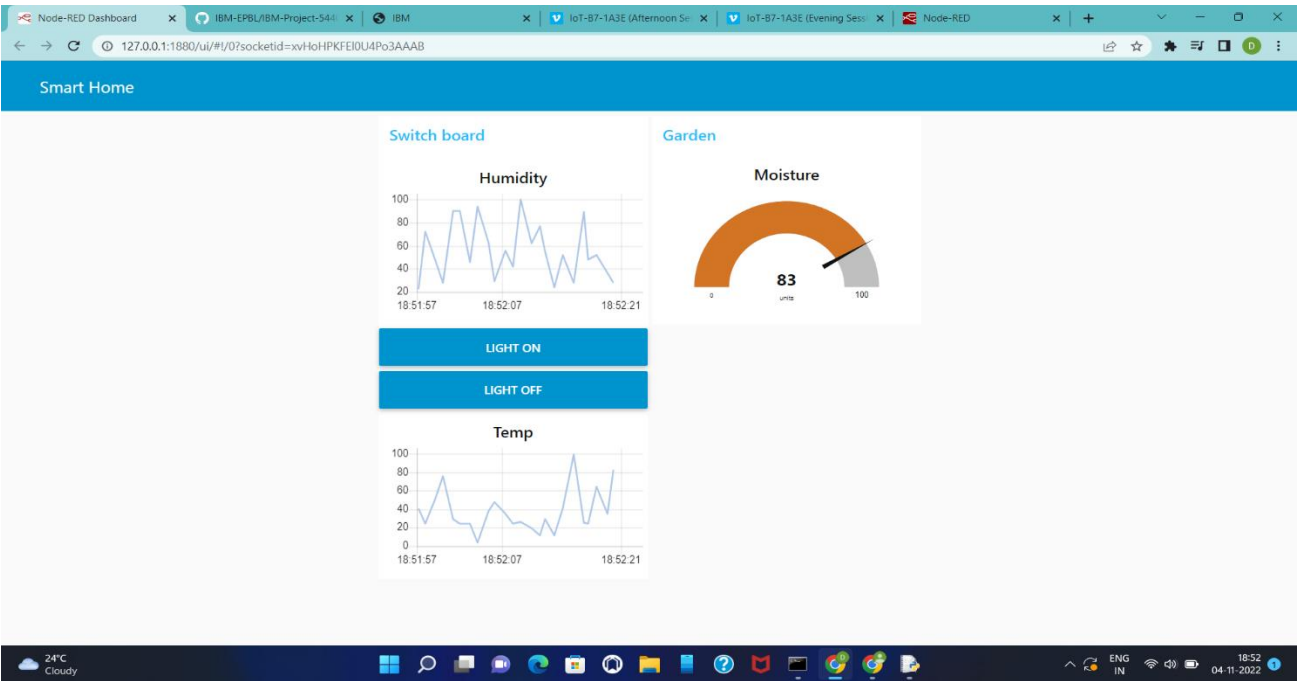
# Connect and send a datapoint "hello" with value "world" into the cloud as an event of type "greeting" 10 times
deviceCli.connect()

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

Output

```
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\Sneha\AppData\Local\Programs\Python\Python37\sum.py ===
2022-11-04 21:24:31,213 ibmiotf.device.Client INFO Connected successfully: d:1x108d:abcd:12
Published Temperature = 24 C Humidity = 6 % to IBM Watson
Published Temperature = 90 C Humidity = 77 % to IBM Watson
Published Temperature = 86 C Humidity = 6 % to IBM Watson
Published Temperature = 73 C Humidity = 88 % to IBM Watson
Published Temperature = 83 C Humidity = 57 % to IBM Watson
Published Temperature = 84 C Humidity = 62 % to IBM Watson
Published Temperature = 60 C Humidity = 98 % to IBM Watson
Published Temperature = 5 C Humidity = 71 % to IBM Watson
Published Temperature = 15 C Humidity = 3 % to IBM Watson
Published Temperature = 16 C Humidity = 36 % to IBM Watson
Published Temperature = 96 C Humidity = 53 % to IBM Watson
Published Temperature = 59 C Humidity = 46 % to IBM Watson
Command received: lighton
led is on
Published Temperature = 59 C Humidity = 88 % to IBM Watson
Published Temperature = 16 C Humidity = 81 % to IBM Watson
Published Temperature = 58 C Humidity = 1 % to IBM Watson
Published Temperature = 47 C Humidity = 19 % to IBM Watson
Published Temperature = 81 C Humidity = 25 % to IBM Watson
```

Web APP UI



Mobile APP UI:

