

PYTHON CODING

Date	19 November 2022
Team ID	PNT2022TMID29937
Project name	Project – Smart Farmer-IoT Enabled smart Farming Application

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

#Provide your IBM Watson Device Credentials

orgId = "nleaxk" deviceType =
"smartfarming" deviceId =
"TamilNadu" Token =
"q3(u4iv5-4L+OHY@wm"
authMethod = "use-token-auth"

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

    #print(cmd)

try:
    deviceOptions = {"org": orgId, "type": deviceType, "id": deviceId,
"auth-method": authMethod, "auth-token": Token}
    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(-
20,125) hum=random.randint(0,100)
    soil=random.randint(0,100)
    data = { 'temp' : temp, 'hum': hum , 'soil': soil}
```

```

    #print data def myOnPublishCallback( ):          print (f"Published temp
= {temp} C , hum = {hum} , soil = {soil} deg c to IBM Watson")
    success = deviceCli.publishEvent("IoTSensor", "json", data,
qos=0,on_publish=myOnPublishCallback)          if not success:
        print("Not connected to IoT")
time.sleep(10)
    deviceCli.commandCallback = myCommandCallback      #
Disconnect the device and application from the cloud
deviceCli.disconnect()

```

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains various icons for navigation. The main content area displays a table of devices. One device, 'TamilNadu', is listed with a status of 'Disconnected' and a device type of 'smartfarming'. Below the table, a detailed view of the selected device is shown, including its identity, device information, recent events, state, and logs. The device information section lists the following details:

Identity	Device Information
Device ID	TamilNadu
Device Type	smartfarming
Date Added	16 Nov 2022 9:40 PM
Added By	deepikams008.ece@dgct.ac.in
Connection Status	Disconnected

At the bottom of the dashboard, there is a status bar indicating '1 Simulation running'.