

SPRINT 2

Date	18 November 2022
Team ID	PNT2022TMID22393
Project Name	Smart Farmer -IOT Enabled Smart Farming Application

Program:

```
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random


#Provide your IBM Watson Device Credentials

organization = "1ykvy2"

deviceType = "smartfarming"

deviceId = "smartfarmer_avvs"

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")

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)

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

#print data

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 IoT")
```

```
time.sleep(10)
```

```
deviceCli.commandCallback = myCommandCallback
```

```
# Disconnect the device and application from the cloud
```

```
deviceCli.disconnect()
```

Device details:

The screenshot displays the IBM Watson IoT Platform interface. 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 shows details for a device named 'smartfarmer_avvs', which is currently 'Disconnected'. The device is associated with the 'smartfarming' organization. The 'Recent Events' tab is selected, showing a table of live data events. The table has four columns: 'Event', 'Value', 'Format', and 'Last Received'. The events are IoTSensor data points for temperature and humidity, received in JSON format.

Event	Value	Format	Last Received
IoTSensor	{"temp":90,"Humid":71}	json	a few seconds ago
IoTSensor	{"temp":103,"Humid":64}	json	a few seconds ago
IoTSensor	{"temp":101,"Humid":64}	json	a few seconds ago
IoTSensor	{"temp":100,"Humid":79}	json	a few seconds ago
IoTSensor	{"temp":103,"Humid":66}	json	a few seconds ago