

Date	15 November 2022
Team ID	PNT2022TMID33671
Project Name	Smart farmer - IoT Enabled Smart Farming Application

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import time import sys

import ibmiotf.application

import ibmiotf.device

import random

#Provide your IBM Watson Device Credentials

organization = "kv09p4" deviceType = "Groot"

deviceId = "13" authMethod = "token"

authToken = "12345678" global y

# Initialize GPIO


def myCommandCallback(cmd):    print("Command

received: %s" % cmd.data['command'])

status=cmd.data['command']    if status=="motoron":


print ("motor is on")    if status=="motoroff" :


print ("motor is off")

if status=="manual" :


print ("Motor Control is in Manual Mode")

if status=="automatic" :


print ("Motor control is in Automatic Mode")

if soilmoisture > 600:      print ("motor is on")

```

```
#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)

    soilmoisture=random.randint(0,1023)

    Phlevel=random.randint(0,14)      y=soilmoisture

    data = { 'temp' : temp, 'Humid': Humid,'soilmoisture' : soilmoisture , 'Phlevel' : Phlevel }
```

```
#print data      def
myOnPublishCallback():

    print ("Published Temperature = %s C" % temp, "Humidity = %s %" % Humid,"Soil Moisture is
%s %" % soilmoisture,"PH level is %s" %Phlevel , "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

# Disconnect the device and application from the cloud deviceCli.disconnect()
```