Date	5 November 2022
Team ID	PNT2022TMID22759
Project Name	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

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()
```