

Develop a python script

Date	17 September 2022
Team ID	PNT2022TMID47454
Project Name	Smartfarmer-IOT enabled smart farming

Python script for generating the random sensor values - Temperature, Flame Level and Gas Level to the IBM Watson IoT Platform.

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

#Provide your IBM Watson Device Credentials
organization = "7um9ms"
deviceType = "PNTTEAM454567"
deviceId = "DEVICE454567"
authMethod = "token"
authToken = "2bB!y?GuCED9(8THRD"

# 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": 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

    soil=random.randint(0,100)
    temp=random.randint(0,100)
    hum=random.randint(0,100)

    data = { 'soil moisture': soil, 'temperature':temp, 'humidity':hum}
    #print data
    def myOnPublishCallback():
        print ( "Published Soil Moisture = %s %%" % soil,"Temperature = %s C" % temp, "Humidity = %s %%" % hum, "to IBM Watson")

    success = deviceCli.publishEvent("IoTsensor", "json", data, qos=0, on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoT")
        time.sleep(1)

    deviceCli.commandCallback = myCommandCallback

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

```
=====  
===== RESTART: C:/Users/DELL/Desktop/adhiba_sprint3.py =====  
2022-11-18 06:38:19,263 ibmiotf.device.Client INFO Connected successfully: d:7um9ms:PNTRTEAM454567:DEVICE454567  
Published Soil Moisture = 82 % Temperature = 24 C Humidity = 89 % to IBM Watson  
Published Soil Moisture = 37 % Temperature = 17 C Humidity = 12 % to IBM Watson  
Published Soil Moisture = 67 % Temperature = 93 C Humidity = 47 % to IBM Watson  
Published Soil Moisture = 64 % Temperature = 36 C Humidity = 87 % to IBM Watson  
Published Soil Moisture = 7 % Temperature = 38 C Humidity = 63 % to IBM Watson  
Published Soil Moisture = 55 % Temperature = 90 C Humidity = 34 % to IBM Watson  
Published Soil Moisture = 1 % Temperature = 65 C Humidity = 10 % to IBM Watson  
Published Soil Moisture = 84 % Temperature = 58 C Humidity = 0 % to IBM Watson  
Published Soil Moisture = 32 % Temperature = 72 C Humidity = 94 % to IBM Watson  
Published Soil Moisture = 48 % Temperature = 3 C Humidity = 37 % to IBM Watson  
Published Soil Moisture = 39 % Temperature = 95 C Humidity = 100 % to IBM Watson  
Published Soil Moisture = 45 % Temperature = 19 C Humidity = 1 % to IBM Watson  
Published Soil Moisture = 38 % Temperature = 36 C Humidity = 1 % to IBM Watson  
Published Soil Moisture = 30 % Temperature = 90 C Humidity = 6 % to IBM Watson  
Published Soil Moisture = 92 % Temperature = 5 C Humidity = 70 % to IBM Watson  
Published Soil Moisture = 27 % Temperature = 76 C Humidity = 23 % to IBM Watson  
Published Soil Moisture = 91 % Temperature = 89 C Humidity = 87 % to IBM Watson  
Published Soil Moisture = 22 % Temperature = 19 C Humidity = 24 % to IBM Watson  
Published Soil Moisture = 88 % Temperature = 13 C Humidity = 98 % to IBM Watson  
Published Soil Moisture = 25 % Temperature = 95 C Humidity = 41 % to IBM Watson  
Published Soil Moisture = 79 % Temperature = 60 C Humidity = 22 % to IBM Watson  
Published Soil Moisture = 90 % Temperature = 92 C Humidity = 2 % to IBM Watson  
Published Soil Moisture = 26 % Temperature = 1 C Humidity = 5 % to IBM Watson  
|
```