Develop the Python Script

Program:

File Edit Format Run Options Window Help

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


#Provide your IBM Watson Device Credentials
organization = "bx1po5"
deviceType = "aaaa"
deviceId = "1111"
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")
    else :
        print ("led 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


        temp=random.randint(0,100)
        Humid=random.randint(0,100)

        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 IoTF")
        time.sleep(1)

        deviceCli.commandCallback = myCommandCallback

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

Output:

```
*Python 3.7.0 Shell*
File  Edit  Shell  Debug  Options  Window  Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:06:47) [MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
============ RESTART: C:/Users/sobi/OneDrive/Documents/ibmiot.py ============
2022-11-17 21:04:55,386   ibmiotf.device.Client      INFO    Connected successfully: d:bx1po5:aaaa:1111
Published Temperature = 27 C Humidity = 56 % to IBM Watson
Published Temperature = 67 C Humidity = 28 % to IBM Watson
Published Temperature = 96 C Humidity = 98 % to IBM Watson
Published Temperature = 80 C Humidity = 68 % to IBM Watson
Published Temperature = 37 C Humidity = 0 % to IBM Watson
Published Temperature = 12 C Humidity = 92 % to IBM Watson
Published Temperature = 10 C Humidity = 20 % to IBM Watson
Published Temperature = 36 C Humidity = 41 % to IBM Watson
Published Temperature = 84 C Humidity = 15 % to IBM Watson
Published Temperature = 23 C Humidity = 18 % to IBM Watson
Published Temperature = 36 C Humidity = 87 % to IBM Watson
Published Temperature = 61 C Humidity = 60 % to IBM Watson
Published Temperature = 51 C Humidity = 88 % to IBM Watson
Published Temperature = 60 C Humidity = 86 % to IBM Watson
Published Temperature = 38 C Humidity = 13 % to IBM Watson
Published Temperature = 75 C Humidity = 24 % to IBM Watson
Published Temperature = 45 C Humidity = 17 % to IBM Watson
Published Temperature = 40 C Humidity = 73 % to IBM Watson
Published Temperature = 94 C Humidity = 48 % to IBM Watson
Published Temperature = 54 C Humidity = 59 % to IBM Watson
Published Temperature = 14 C Humidity = 77 % to IBM Watson
Published Temperature = 38 C Humidity = 64 % to IBM Watson
Published Temperature = 51 C Humidity = 45 % to IBM Watson
Published Temperature = 50 C Humidity = 48 % to IBM Watson
Published Temperature = 53 C Humidity = 40 % to IBM Watson
Published Temperature = 63 C Humidity = 97 % to IBM Watson
```

Output in IBM Watson: