DEVELOP A PYTHON SCRIPT

Team ID	PNT2022TMID40922
Project Name	Hazardous Area Monitoring For Industrial Plant Powered by IoT

```python
import time

import sys

import ibmiotf.application

import ibmiotf.device

import random



#Provide your IBM Watson Device Credentials

organization = "awb990"

deviceType = "NodeMCU"

deviceId = "12345"

authMethod = "token"

authToken = "12345678"


# Initialize GPIO



def myCommandCallback(cmd):

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

    status=cmd.data['command']
```

```python
    if status=="lighton":
        print ("led is on")
    elif status== "lightoff":
        print ("led is off")
    else :
        print ("please send proper command")


    #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:
```

```python
#Get Sensor Data from DHT11

temp=random.randint(90,100)
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 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, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=================== RESTART: C:/Users/Jagan R/Desktop/1.py ===================
2022-11-05 10:58:08,904   ibmiotf.device.Client      INFO    Connected successfully: d:awb990:NodeMCU:12345
Published Temperature = 92 C Humidity = 94 % to IBM Watson
Published Temperature = 99 C Humidity = 70 % to IBM Watson
Published Temperature = 98 C Humidity = 66 % to IBM Watson
Published Temperature = 95 C Humidity = 74 % to IBM Watson
Published Temperature = 90 C Humidity = 92 % to IBM Watson
Published Temperature = 99 C Humidity = 64 % to IBM Watson
Published Temperature = 93 C Humidity = 61 % to IBM Watson
Published Temperature = 90 C Humidity = 64 % to IBM Watson
Published Temperature = 98 C Humidity = 98 % to IBM Watson
Published Temperature = 99 C Humidity = 66 % to IBM Watson
Published Temperature = 98 C Humidity = 61 % to IBM Watson
Published Temperature = 94 C Humidity = 81 % to IBM Watson
Published Temperature = 91 C Humidity = 74 % to IBM Watson
Published Temperature = 95 C Humidity = 97 % to IBM Watson
Published Temperature = 97 C Humidity = 98 % to IBM Watson
Published Temperature = 96 C Humidity = 89 % to IBM Watson
Published Temperature = 99 C Humidity = 60 % to IBM Watson
Published Temperature = 97 C Humidity = 77 % to IBM Watson
Published Temperature = 94 C Humidity = 61 % to IBM Watson
Published Temperature = 94 C Humidity = 70 % to IBM Watson
Published Temperature = 93 C Humidity = 90 % to IBM Watson
Published Temperature = 100 C Humidity = 96 % to IBM Watson

                                                                                               Ln: 23  Col: 0
```