PYTHON CODE

Team ID	PNT2022TMID15984
Project Name	Hazardous Area Monitoring for Industrial Plant powered by IOT
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CODE:

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

#Provide your IBM Watson Device Credentials
organization = "22h49t"
deviceType = "NodeMCU"
deviceId = "12345"
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")
    elif status == "lightoff":
        print ("led is off")
    else :
        print ("please send proper command")


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(90,110)
        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(10)


        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\admin\Desktop\ibm.py ==========
2022-11-16 10:23:19,196 ibmiotf.device.Client INFO Connected successfully: d:22h49t:NodeMCU:12345
Published Temperature = 93 C Humidity = 81 % to IBM Watson
Published Temperature = 91 C Humidity = 81 % to IBM Watson
Published Temperature = 107 C Humidity = 72 % to IBM Watson
Published Temperature = 100 C Humidity = 64 % to IBM Watson
Published Temperature = 93 C Humidity = 86 % to IBM Watson
Published Temperature = 90 C Humidity = 80 % to IBM Watson
Published Temperature = 92 C Humidity = 97 % to IBM Watson
Published Temperature = 100 C Humidity = 60 % to IBM Watson
Published Temperature = 101 C Humidity = 62 % to IBM Watson
Published Temperature = 106 C Humidity = 84 % to IBM Watson
Published Temperature = 110 C Humidity = 94 % to IBM Watson
Published Temperature = 97 C Humidity = 96 % to IBM Watson
Published Temperature = 107 C Humidity = 97 % to IBM Watson
Published Temperature = 96 C Humidity = 68 % to IBM Watson
Published Temperature = 91 C Humidity = 93 % to IBM Watson
Published Temperature = 91 C Humidity = 83 % to IBM Watson
Published Temperature = 101 C Humidity = 73 % to IBM Watson
Published Temperature = 95 C Humidity = 63 % to IBM Watson
Published Temperature = 92 C Humidity = 88 % to IBM Watson
Published Temperature = 104 C Humidity = 75 % to IBM Watson
Published Temperature = 110 C Humidity = 83 % to IBM Watson
Published Temperature = 103 C Humidity = 61 % to IBM Watson
Published Temperature = 99 C Humidity = 97 % to IBM Watson
Published Temperature = 109 C Humidity = 83 % to IBM Watson
Published Temperature = 104 C Humidity = 71 % to IBM Watson
Published Temperature = 97 C Humidity = 74 % to IBM Watson
Published Temperature = 96 C Humidity = 65 % to IBM Watson
Published Temperature = 108 C Humidity = 65 % to IBM Watson
Published Temperature = 110 C Humidity = 96 % to IBM Watson
Published Temperature = 96 C Humidity = 87 % to IBM Watson
Published Temperature = 93 C Humidity = 60 % to IBM Watson
Published Temperature = 110 C Humidity = 77 % to IBM Watson
Published Temperature = 110 C Humidity = 80 % to IBM Watson
Published Temperature = 91 C Humidity = 94 % to IBM Watson
Published Temperature = 107 C Humidity = 63 % to IBM Watson
Published Temperature = 93 C Humidity = 81 % to IBM Watson
Published Temperature = 92 C Humidity = 89 % to IBM Watson
Ln: 5 Col: 0