

# CODE FOR THE PROJECT

## SOURCE CODE:

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

#Provide your IBM Watson Device Credentials
organization = "i3869j"
deviceType = "abcd"
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")

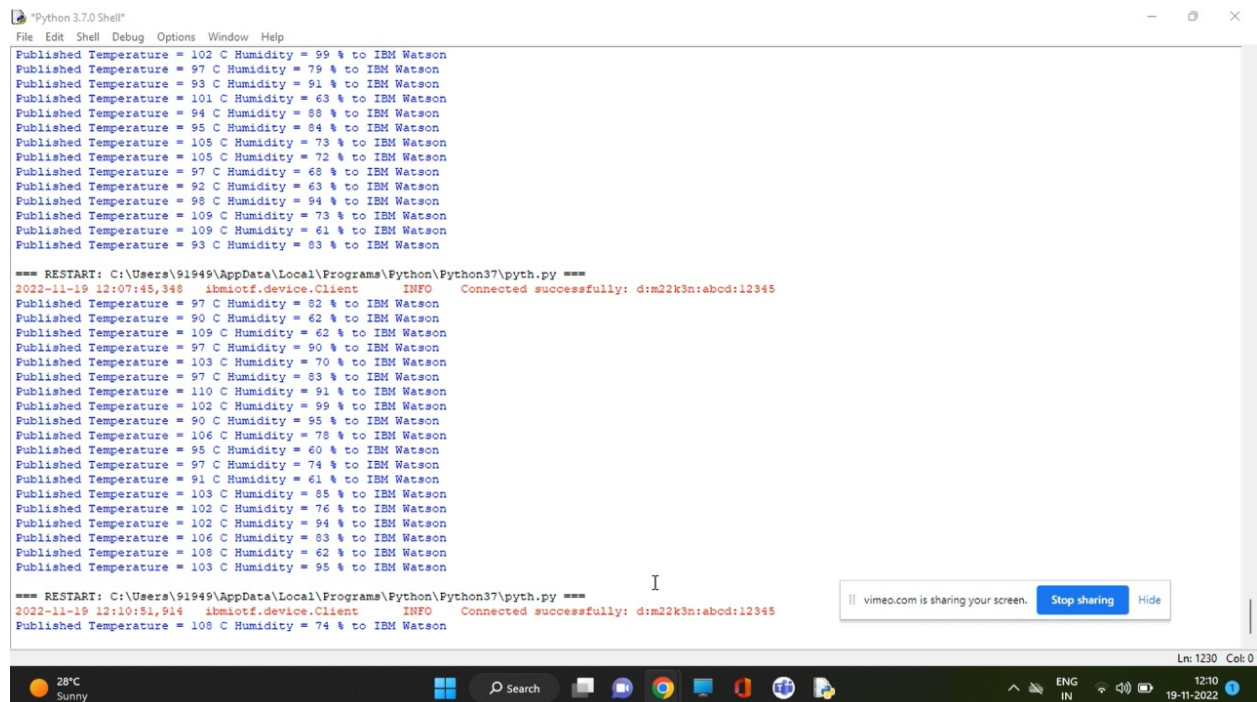
    success = deviceCli.publishEvent("IoTSensor", "json",
data, qos=0, on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoTTF")
    time.sleep(10)

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
Published Temperature = 102 C Humidity = 99 % to IBM Watson
Published Temperature = 97 C Humidity = 79 % to IBM Watson
Published Temperature = 93 C Humidity = 91 % to IBM Watson
Published Temperature = 101 C Humidity = 63 % to IBM Watson
Published Temperature = 94 C Humidity = 88 % to IBM Watson
Published Temperature = 95 C Humidity = 94 % to IBM Watson
Published Temperature = 105 C Humidity = 73 % to IBM Watson
Published Temperature = 105 C Humidity = 72 % to IBM Watson
Published Temperature = 97 C Humidity = 68 % to IBM Watson
Published Temperature = 92 C Humidity = 63 % to IBM Watson
Published Temperature = 98 C Humidity = 94 % to IBM Watson
Published Temperature = 109 C Humidity = 73 % to IBM Watson
Published Temperature = 109 C Humidity = 61 % to IBM Watson
Published Temperature = 93 C Humidity = 83 % to IBM Watson

=== RESTART: C:\Users\91949\AppData\Local\Programs\Python\Python37\python.py ===
2022-11-19 12:07:45,348 ibmiotf.device.Client INFO Connected successfully: d:m22k3n:abod:12345
Published Temperature = 97 C Humidity = 82 % to IBM Watson
Published Temperature = 90 C Humidity = 62 % to IBM Watson
Published Temperature = 109 C Humidity = 62 % to IBM Watson
Published Temperature = 97 C Humidity = 90 % to IBM Watson
Published Temperature = 103 C Humidity = 70 % to IBM Watson
Published Temperature = 97 C Humidity = 83 % to IBM Watson
Published Temperature = 110 C Humidity = 91 % to IBM Watson
Published Temperature = 102 C Humidity = 99 % to IBM Watson
Published Temperature = 90 C Humidity = 95 % to IBM Watson
Published Temperature = 106 C Humidity = 78 % to IBM Watson
Published Temperature = 95 C Humidity = 60 % to IBM Watson
Published Temperature = 97 C Humidity = 74 % to IBM Watson
Published Temperature = 91 C Humidity = 61 % to IBM Watson
Published Temperature = 103 C Humidity = 85 % to IBM Watson
Published Temperature = 102 C Humidity = 76 % to IBM Watson
Published Temperature = 102 C Humidity = 94 % to IBM Watson
Published Temperature = 106 C Humidity = 83 % to IBM Watson
Published Temperature = 108 C Humidity = 62 % to IBM Watson
Published Temperature = 103 C Humidity = 95 % to IBM Watson

=== RESTART: C:\Users\91949\AppData\Local\Programs\Python\Python37\python.py ===
2022-11-19 12:10:51,914 ibmiotf.device.Client INFO Connected successfully: d:m22k3n:abod:12345
Published Temperature = 108 C Humidity = 74 % to IBM Watson

```

IBM Watson IoT Platform

Browse Action Device Types Interfaces

12345 Connected abcd

Identity Device Information Recent Events State

The recent events listed show the live stream of data that is coming and going

Event	Value
IoTSensor	{"temp":98,"Humid":100}
IoTSensor	{"temp":105,"Humid":98}
IoTSensor	{"temp":92,"Humid":95}
IoTSensor	{"temp":95,"Humid":98}
IoTSensor	{"temp":102,"Humid":81}

Device Type: abcd

Events 1 New event type +

Event type name event\_1 Send

Schedule 20 Every Minute

Payload Specify the event payload in the editor window or by uploading a CSV file.

```
0 {
1   Temperature=random.randint(90,110)
2   Humidity=random.randint(60,100)
3 }
4
```

Upload a CSV file

vimeo.com is sharing your screen. Stop sharing Hide

ESP32

BME280 Sensor

gauge

0 10 units

{"temp":101,"Humid":71}

BUTTON