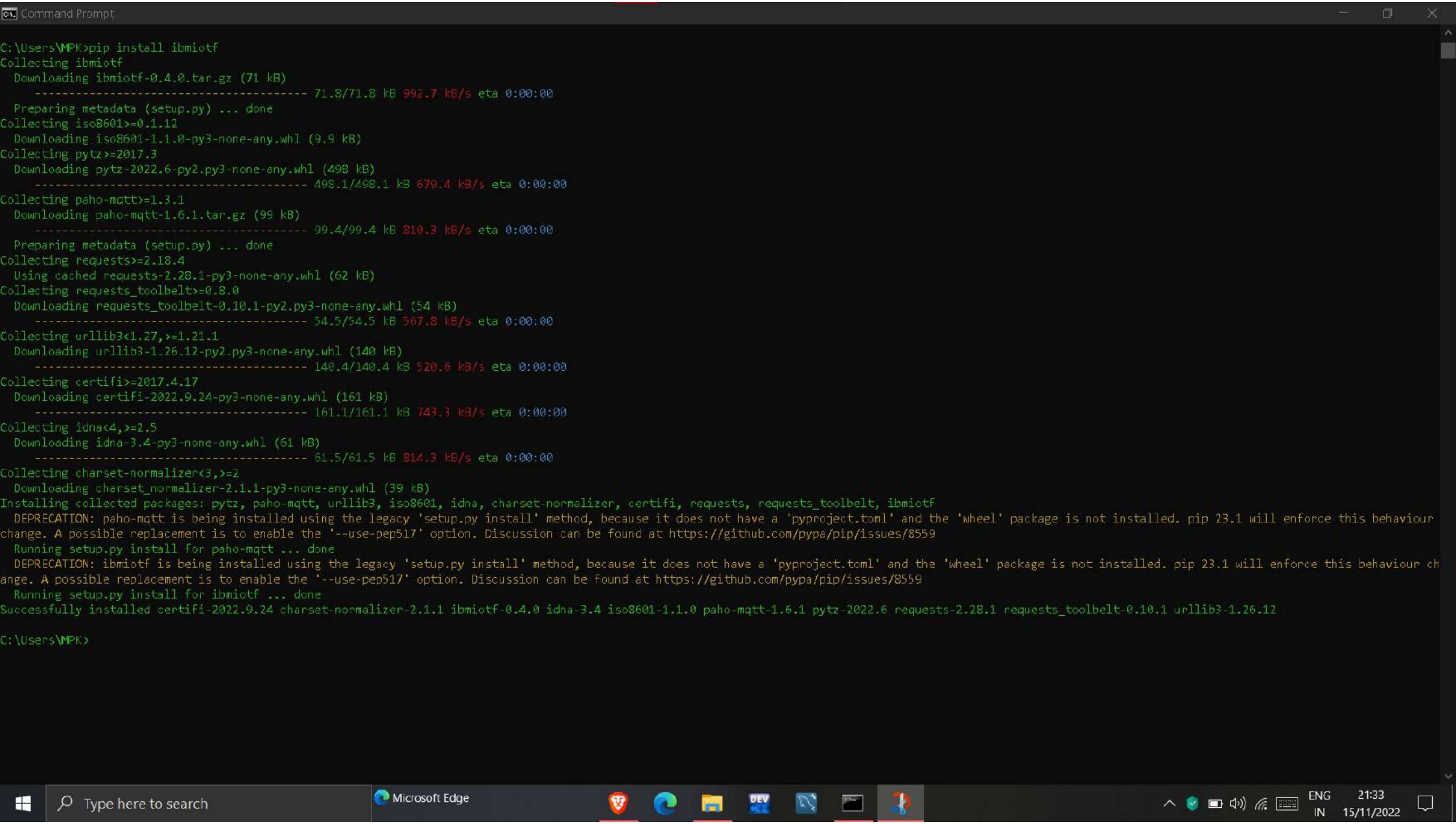
Command Prompt
C:\Users\MPK>pip install ibmiotf
Collecting ibmiotf
Downloading ibmiotf-0.4.0.tar.gz (71 kB)
71.8/71.8 kB 992.7 kB/s eta 0:00:00
Preparing metadata (setup.py) ... done
Collecting iso8601>=0.1.12
Downloading iso8601-1.1.0-py3-none-any.whl (9.9 kB)
Collecting pytz>=2017.3
Downloading pytz-2022.6-py2.py3-none-any.whl (498 kB)
498.1/498.1 kB 679.4 kB/s eta 0:00:00
Collecting paho-mqtt>=1.3.1
Downloading paho-mqtt-1.6.1.tar.gz (99 kB)
99.4/99.4 kB 810.3 kB/s eta 0:00:00
Preparing metadata (setup.py) ... done
Collecting requests>=2.18.4
Using cached requests-2.28.1-py3-none-any.whl (62 kB)
Collecting requests_toolbelt>=0.8.0
Downloading requests_toolbelt-0.10.1-py2.py3-none-any.whl (54 kB)
54.5/54.5 kB 567.8 kB/s eta 0:00:00
Collecting urllib3<1.27,>=1.21.1
Downloading urllib3-1.26.12-py2.py3-none-any.whl (140 kB)
140.4/140.4 kB 520.6 kB/s eta 0:00:00
Collecting certifi>=2017.4.17
Downloading certifi-2022.9.24-py3-none-any.whl (161 kB)
161.1/161.1 kB 743.3 kB/s eta 0:00:00
Collecting idna<4,>=2.5
Downloading idna-3.4-py3-none-any.whl (61 kB)
61.5/61.5 kB 814.3 kB/s eta 0:00:00
Collecting charset-normalizer<3,>=2
Downloading charset_normalizer-2.1.1-py3-none-any.whl (39 kB)
Installing collected packages: pytz, paho-mqtt, urllib3, iso8601, idna, charset-normalizer, certifi, requests, requests_toolbelt, ibmiotf
DEPRECATION: paho-mqtt is being installed using the legacy 'setup.py install' method, because it does not have a 'pyproject.toml' and the 'wheel' package is not installed. pip 23.1 will enforce this behaviour change. A possible replacement is to enable the '--use-pep517' option. Discussion can be found at https://github.com/pypa/pip/issues/8559
Running setup.py install for paho-mqtt ... done
DEPRECATION: ibmiotf is being installed using the legacy 'setup.py install' method, because it does not have a 'pyproject.toml' and the 'wheel' package is not installed. pip 23.1 will enforce this behaviour change. A possible replacement is to enable the '--use-pep517' option. Discussion can be found at https://github.com/pypa/pip/issues/8559
Running setup.py install for ibmiotf ... done
Successfully installed certifi-2022.9.24 charset-normalizer-2.1.1 ibmiotf-0.4.0 idna-3.4 iso8601-1.1.0 paho-mqtt-1.6.1 pytz-2022.6 requests-2.28.1 requests_toolbelt-0.10.1 urllib3-1.26.12
C:\Users\MPK>
Type here to search
Microsoft Edge
ENG
IN
21:33
15/11/2022

ibm.py - D:\LITERATURE SURVEY\ibm.py (3.7.0)

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 = "t5udfe"
deviceType = "raspberrypi"
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")
    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()
```

Ln: 33 Col: 35

Python 3.7.0 Shell

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```
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: D:\LITERATURE SURVEY\ibm.py ==========
2022-11-15 21:51:43,189   ibmiotf.device.Client      INFO    Connected successfully: d:t5udfe:raspberrypi:12345
Published Temperature = 57 C Humidity = 13 % to IBM Watson
Published Temperature = 44 C Humidity = 68 % to IBM Watson
Published Temperature = 12 C Humidity = 52 % to IBM Watson
Published Temperature = 73 C Humidity = 71 % to IBM Watson
Published Temperature = 93 C Humidity = 43 % to IBM Watson
Published Temperature = 57 C Humidity = 22 % to IBM Watson
Published Temperature = 91 C Humidity = 18 % to IBM Watson
Published Temperature = 4 C Humidity = 35 % to IBM Watson
Published Temperature = 32 C Humidity = 45 % to IBM Watson
Published Temperature = 44 C Humidity = 69 % to IBM Watson
Published Temperature = 67 C Humidity = 64 % to IBM Watson
Published Temperature = 35 C Humidity = 59 % to IBM Watson
Published Temperature = 65 C Humidity = 11 % to IBM Watson
Published Temperature = 43 C Humidity = 85 % to IBM Watson
Published Temperature = 35 C Humidity = 17 % to IBM Watson
Published Temperature = 55 C Humidity = 0 % to IBM Watson
Published Temperature = 47 C Humidity = 89 % to IBM Watson
Published Temperature = 45 C Humidity = 32 % to IBM Watson
Published Temperature = 22 C Humidity = 23 % to IBM Watson
Published Temperature = 34 C Humidity = 84 % to IBM Watson
Published Temperature = 24 C Humidity = 66 % to IBM Watson
Published Temperature = 36 C Humidity = 12 % to IBM Watson
Published Temperature = 20 C Humidity = 13 % to IBM Watson
Published Temperature = 61 C Humidity = 13 % to IBM Watson
```

Ln: 5 Col: 0