DEVELOP A PYTHON SCRIPT TO PUBLISH AND SUBSCRIBE TO IBM IOT PLATFORM
DEVELOP A PYTHON CODE

Team ID	PNT2022TMID21246
Project Name	Smart Farmer – IoT based smart farming application

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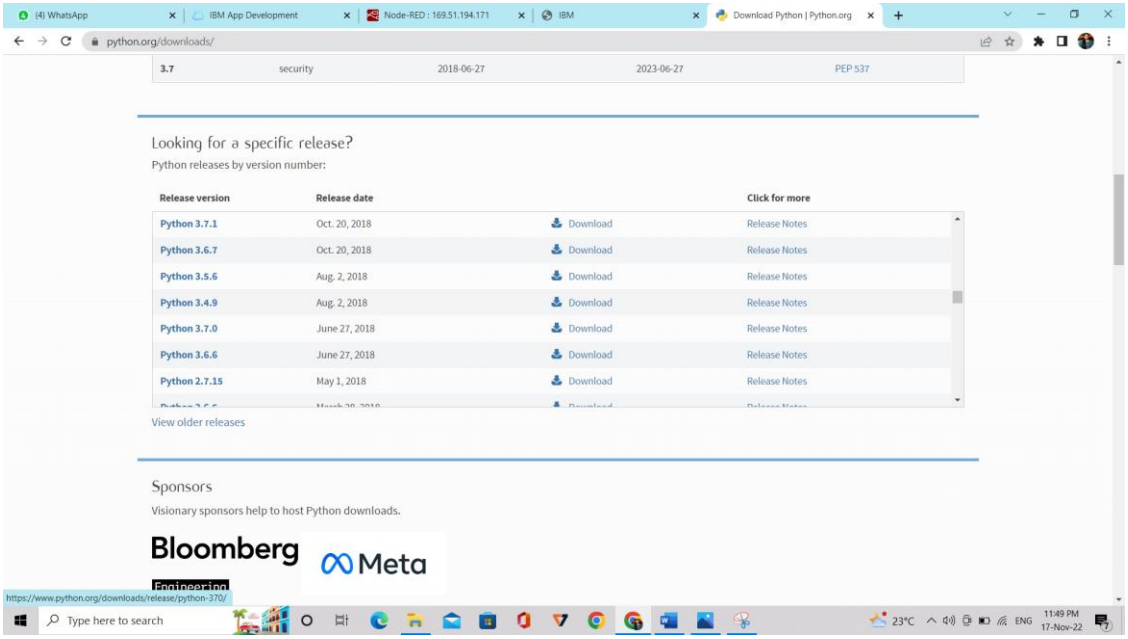
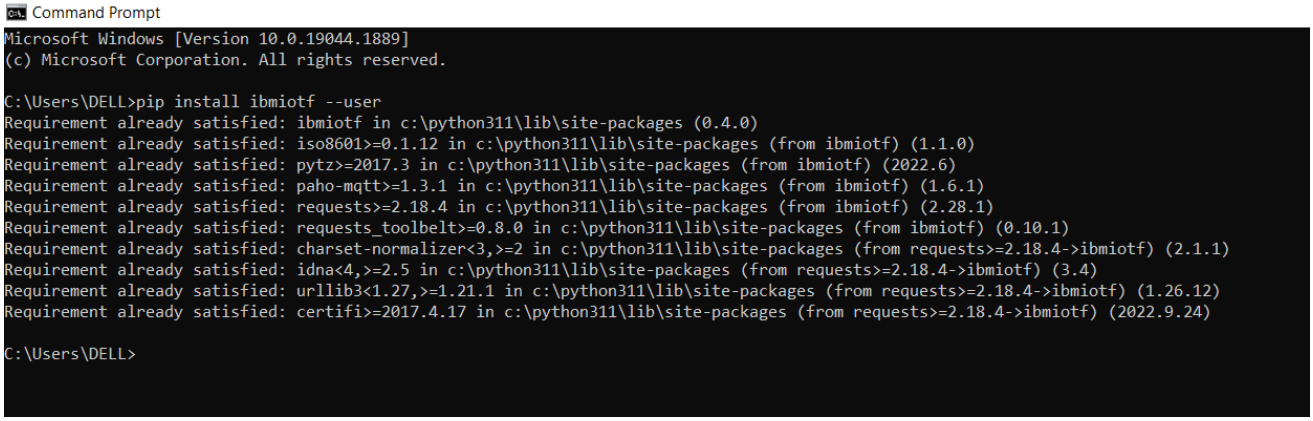
INSTALL PYTHON VERSION 3.7.0 FROM PYTHON.ORG:



INSTALL IBMIOTF IN COMMAND PROMPT:



PYTHON CODE:

PUBLISH AND SUBSCRIBE:

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

organization= "nt30c0"
deviceType= "abcd"
deviceId= "1234"
authMethod= "token"
authToken= "12345678"

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()
```

```
deviceCli.connect()


while True:
    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


deviceCli.disconnect()
```

OUTPUT OF THE PYTHON CODE IN PYTHON IDLE: