PYTHON OUTPUT

Project Title: Real Time River water quality monitoring and Control system

Team ID: PNT2022TMID06942

Team Members:

1. Vinupriya K P- Team Leader

2. Jeevitha K -Team Member

3. Anne Shifana S R- Team Member

4. Vishnupriya E – Team Member

5. Monisha R - Team Member

ibm.py - C:/Users/Toshiba/Documents/vishnu/ibm.py (3.7.4)

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


# Provide your IBM Watson Device Credentials

organization = "xfptfb"  # repalce it with organization ID
deviceType = "NodeMCU"  # replace it with device type
deviceId = "19141"  # repalce with device id
authMethod = "token"
authToken = "1914137383010209"  # repalce with token


def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status == 'lighton':
        print("LIGHT ON")

    elif status == 'lightoff':
        print("LIGHT 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:
    pH = random.randint(0,100)
    conductivity = random.randint(0,100)
```

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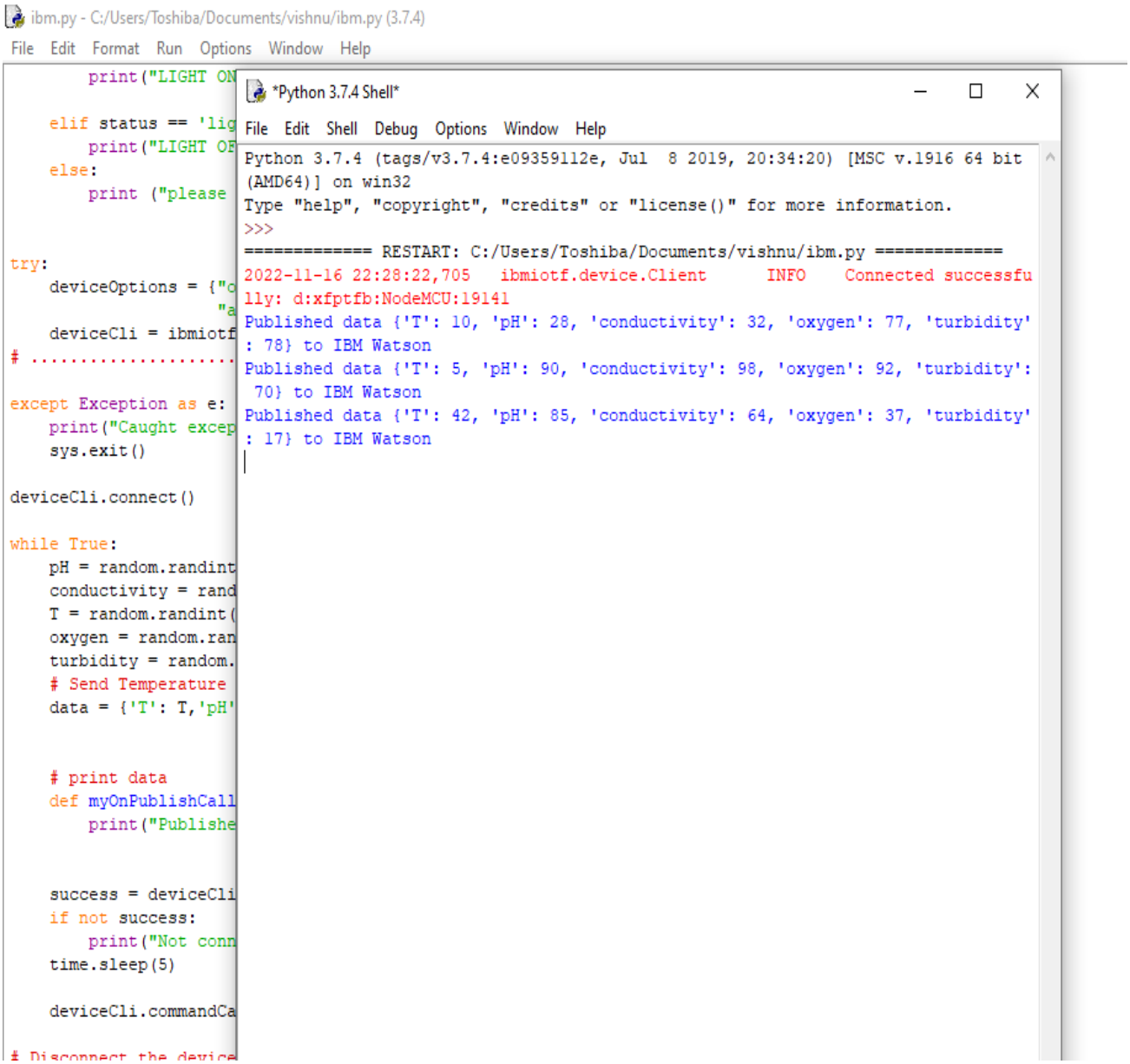
```
        print("LIGHT ON")

    elif status == 'lightoff':
        print("LIGHT 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:
    pH = random.randint(0,100)
    conductivity = random.randint(0,100)
    T = random.randint(0,100)
    oxygen = random.randint(0,100)
    turbidity = random.randint(0,100)
    # Send Temperature & Humidity to IBM Watson
    data = {'T': T,'pH':pH,'conductivity':conductivity,'oxygen':oxygen,"turbidity":turbidity}


    # print data
    def myOnPublishCallback():
        print("Published data",data, "to IBM Watson")


    success = deviceCli.publishEvent("event", "json", data, 0, myOnPublishCallback)
    if not success:
        print("Not connected to IoTF")
    time.sleep(5)

    deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
```


ibm.py - C:/Users/Toshiba/Documents/vishnu/ibm.py (3.7.4)
File Edit Format Run Options Window Help
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deviceCli.connect()
while True:
pH = random.randint
conductivity = rand
T = random.randint(
oxygen = random.ran
turbidity = random.
# Send Temperature
data = {'T': T,'pH'
# print data
def myOnPublishCall
print("Publishe
success = deviceCli
if not success:
print("Not conn
time.sleep(5)
deviceCli.commandCa
Disconnect the device
Python 3.7.4 Shell
File Edit Shell Debug Options Window Help
Python 3.7.4 (tags/v3.7.4:e09359112e, Jul 8 2019, 20:34:20) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:/Users/Toshiba/Documents/vishnu/ibm.py ==========
2022-11-16 22:28:22,705 ibmiotf.device.Client INFO Connected successfully: d:xfptfb:NodeMCU:19141
Published data {'T': 10, 'pH': 28, 'conductivity': 32, 'oxygen': 77, 'turbidity': 78} to IBM Watson
Published data {'T': 5, 'pH': 90, 'conductivity': 98, 'oxygen': 92, 'turbidity': 70} to IBM Watson
Published data {'T': 42, 'pH': 85, 'conductivity': 64, 'oxygen': 37, 'turbidity': 17} to IBM Watson