

REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

TEAM ID : PNT2022TMID06145

TEAM LEADER : Hari Raama Krishnan S

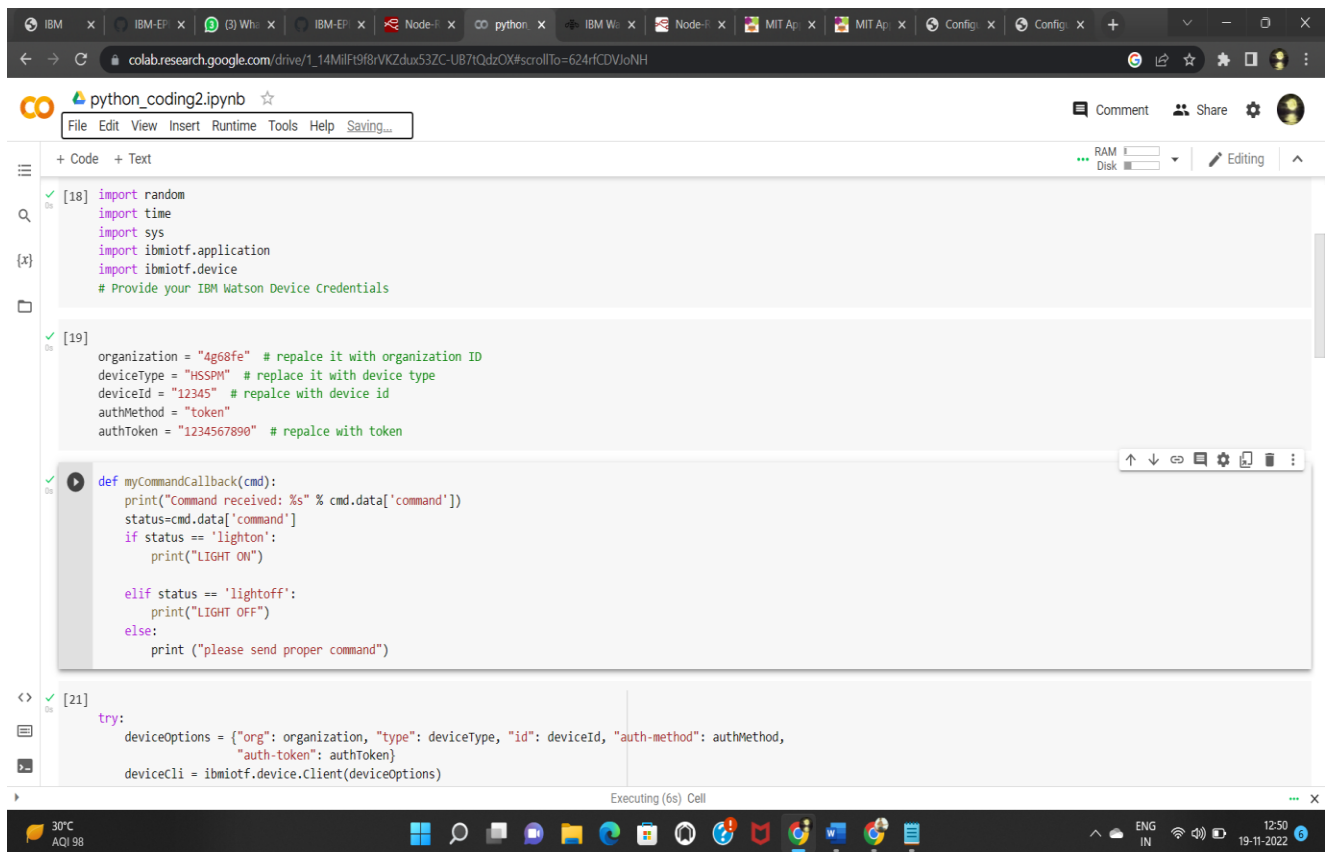
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Sasikumar M

Parthasarathi S

Mohammed Alla Pitchai M

PYTHON CODE



```
[18] import random
import time
import sys
import ibmiotf.application
import ibmiotf.device
# Provide your IBM Watson Device Credentials

[19] organization = "4g68fe" # repalce it with organization ID
deviceType = "HSSPM" # replace it with device type
deviceId = "12345" # repalce with device id
authMethod = "token"
authToken = "1234567890" # 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")

[21] try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod,
                    "auth-token": authToken}
    deviceCli = ibmiotf.device.Client(deviceOptions)
```

The screenshot shows a Google Colab notebook titled 'python_coding2.ipynb'. The code is organized into three cells. Cell [18] contains imports for random, time, sys, and the IBM Watson IoT SDK. Cell [19] defines device credentials with placeholder comments. Cell [21] defines a callback function and initializes the device client. The notebook interface includes a menu bar, a toolbar, and a status bar at the bottom showing system information and the current time (12:50 on 19-11-2022).

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python_coding2.ipynb

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```
[ ]
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()

2022-11-18 14:14:56,911 ibmiotf.device.Client INFO Connected successfully: d:oucgak:HSSPM:12345
INFO:ibmiotf.device.Client:connected successfully: d:oucgak:HSSPM:12345

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}
```

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python_coding2.ipynb ☆

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    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 IoT")
        time.sleep(5)

deviceCli.commandCallback = myCommandCallback
```

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