

REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

TEAM ID : PNT2022TMID06145

TEAM LEADER : Hari Raama Krishnan S

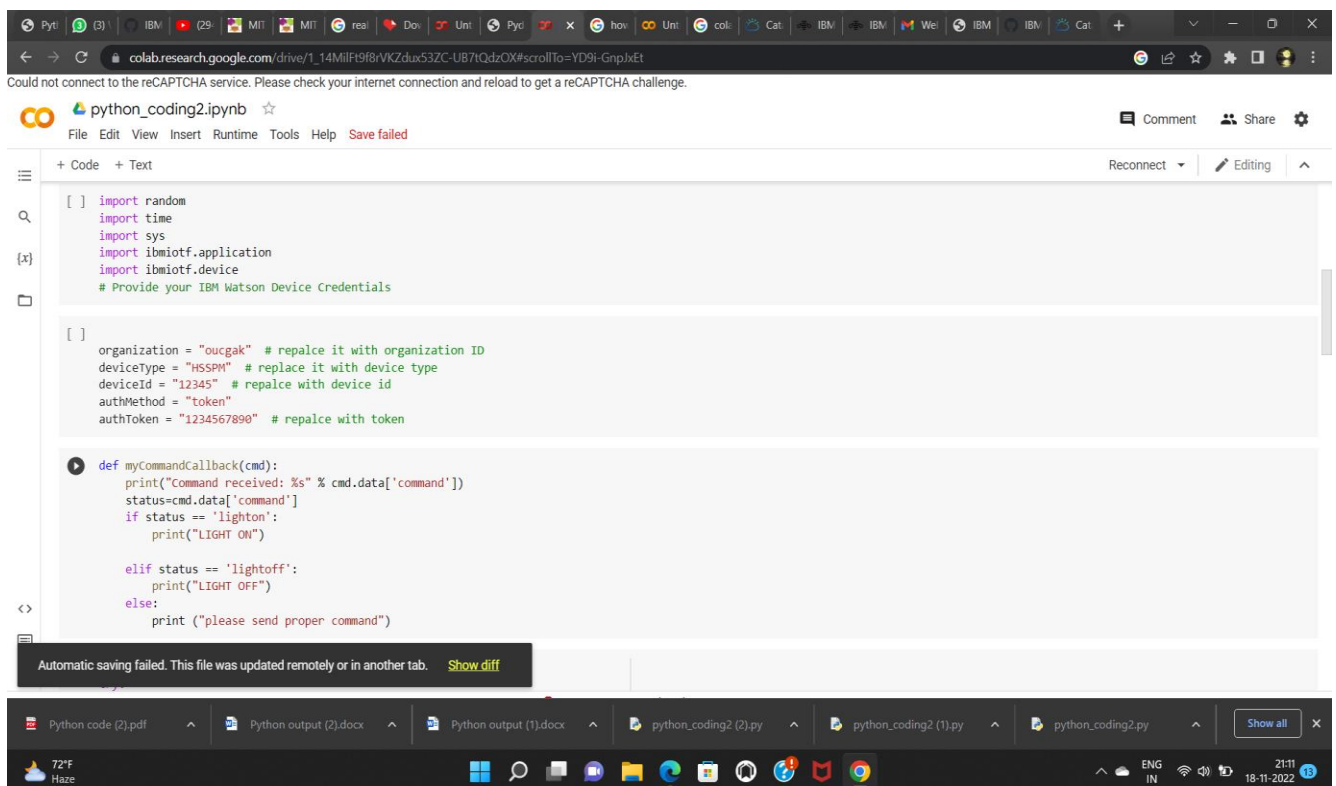
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PYTHON CODE



The screenshot displays a Google Colab notebook titled 'python_coding2.ipynb'. The code is written in Python and is designed to interact with an IBM Watson IoT device. It includes imports for random, time, sys, and the ibmiotf module. The code defines variables for organization, device type, device ID, authentication method, and token, with comments indicating where to replace these values. A function 'myCommandCallback' is defined to handle incoming commands, printing the command and its status, and responding with 'LIGHT ON', 'LIGHT OFF', or a request for a proper command. The notebook interface shows a 'Save failed' message and a taskbar at the bottom with various application icons and system status information.

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

[ ]
organization = "oucgak" # 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")
```

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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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Reconnect Editing

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    # 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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