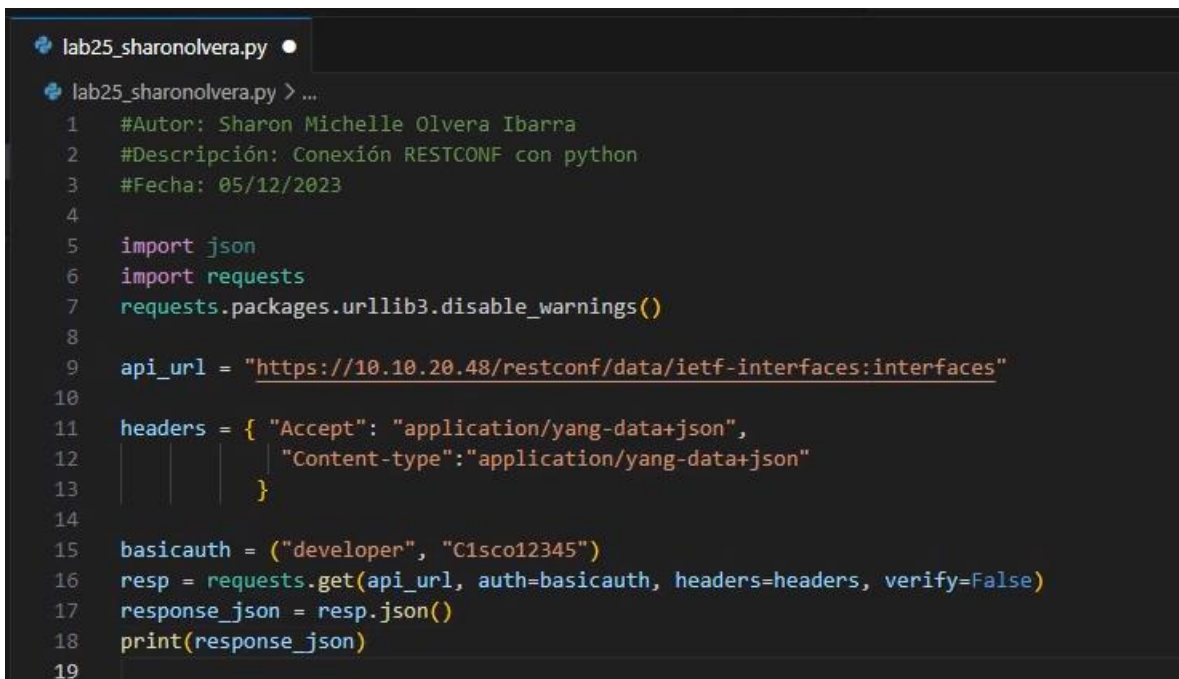
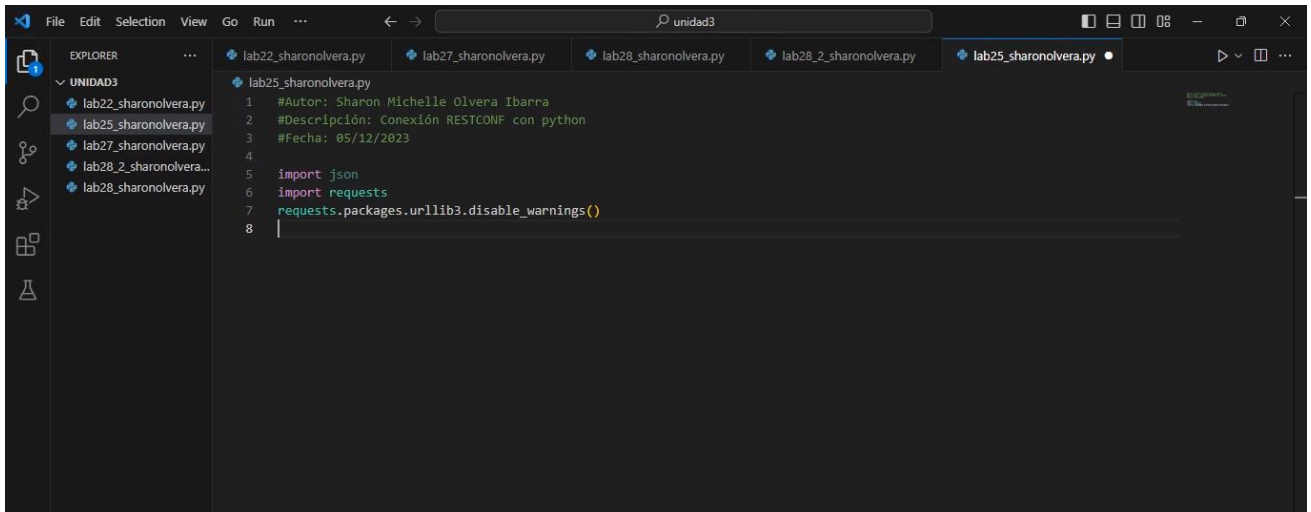


## Lab 2.5 – RESTCONF with Python



```
lab25_sharonolvera.py > ...
1  #Autor: Sharon Michelle Olvera Ibarra
2  #Descripción: Conexión RESTCONF con python
3  #Fecha: 05/12/2023
4
5  import json
6  import requests
7  requests.packages.urllib3.disable_warnings()
8
9  api_url = "https://10.10.20.48/restconf/data/ietf-interfaces:interfaces"
10
11  headers = { "Accept": "application/yang-data+json",
12             "Content-type": "application/yang-data+json"
13             }
14
15  basicauth = ("developer", "C1sco12345")
16  resp = requests.get(api_url, auth=basicauth, headers=headers, verify=False)
17  response_json = resp.json()
18  print(json.dumps(response_json, indent=4))
19
```

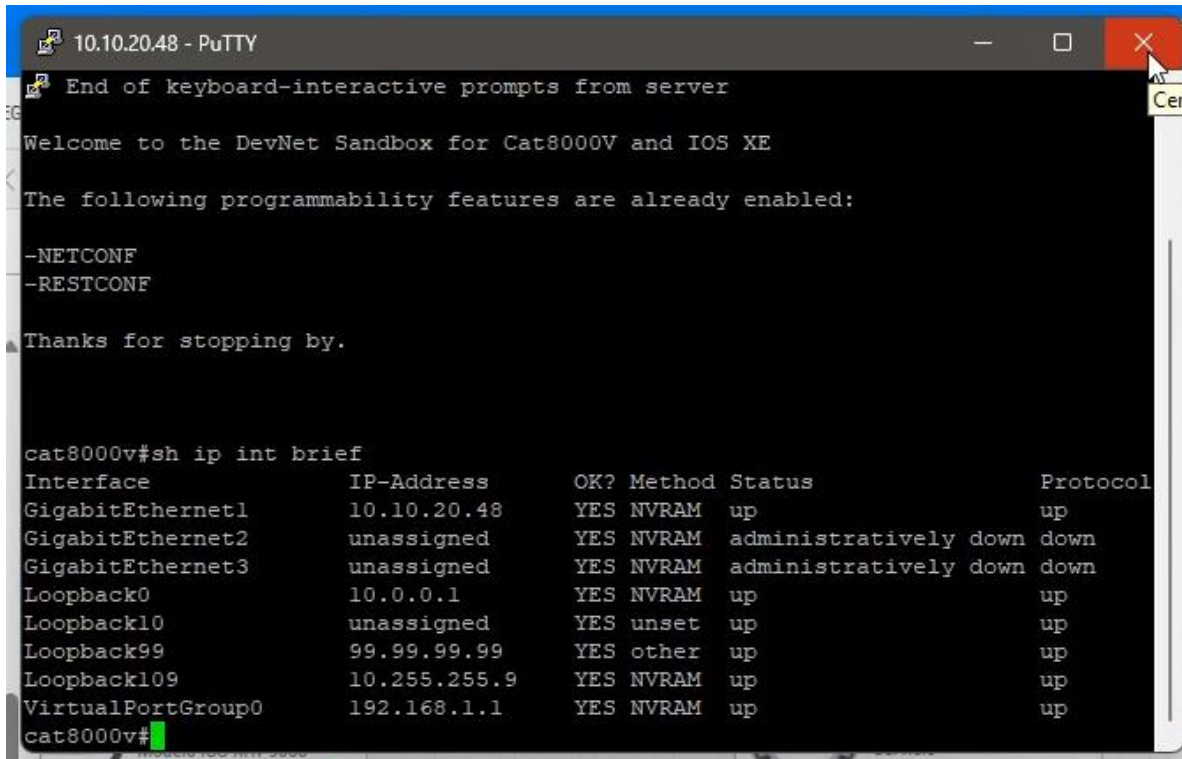
```
PS C:\Users\HP\Desktop\unidad3> & C:/Users/HP/AppData/Local/Programs/Python/Python312/python.exe c:/Users/HP/Desktop/unidad3/lab25_sharonolvera.py
• {
  "ietf-interfaces:interfaces": {
    "interface": [
      {
        "name": "GigabitEthernet1",
        "description": "MANAGEMENT INTERFACE - DON'T TOUCH ME",
        "type": "iana-if-type:ethernetCsmacd",
        "enabled": true,
        "ietf-ip:ipv4": {
          "address": [
            {
              "ip": "10.10.20.48",
              "netmask": "255.255.255.0"
            }
          ]
        },
        "ietf-ip:ipv6": {}
      },
      {
        "name": "GigabitEthernet2",
        "description": "Network Interface",
        "type": "iana-if-type:ethernetCsmacd",
        "enabled": false,
        "ietf-ip:ipv4": {},
        "ietf-ip:ipv6": {}
      },
      {
        "name": "GigabitEthernet3",
        "description": "Network Interface",
        "type": "iana-if-type:ethernetCsmacd",
        "enabled": false,
        "ietf-ip:ipv4": {},
        "ietf-ip:ipv6": {}
      },
      {
        "name": "Loopback0",
        "type": "iana-if-type:softwareLoopback",
        "enabled": true,

```

```
lab25_2_sharonolvera.py > ...
1  #Autor: Sharon Michelle Olvera Ibarra
2  #Descripción: Conexión RESTCONF con python
3  #Fecha: 05/12/2023
4
5  import json
6  import requests
7  requests.packages.urllib3.disable_warnings()
8
9  api_url = "https://10.10.20.48/restconf/data/ietf-interfaces:interfaces/interface=Loopback99"
10
11  headers = {
12      "Accept": "application/yang-data+json",
13      "Content-type": "application/yang-data+json"
14  }
15  basicauth = ("developer", "C1sco12345")
16
17  yangConfig = {
18      "ietf-interfaces:interface": {
19          "name": "Loopback99",
20          "description": "WHATEVER99",
21          "type": "iana-if-type:softwareLoopback",
22          "enabled": True,
23          "ietf-ip:ipv4": {
24              "address": [
25                  {
26                      "ip": "99.99.99.99",
27                      "netmask": "255.255.255.0"
28                  }
29              ]
30          },
31          "ietf-ip:ipv6": {}
32      }
33  }
34
```

```
35  resp = requests.put(api_url, data=json.dumps(yangConfig), auth=basicauth, headers=headers, verify=False)
36  if(resp.status_code >= 200 and resp.status_code <= 299):
37      print("STATUS OK: {}".format(resp.status_code))
38  else:
39      print("Error code {}, reply: {}".format(resp.status_code, resp.json()))
40
```

```
37  print("STATUS OK: {}".format(resp.status_code))
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python + - [ ] [ ] ...
PS C:\Users\HP\Desktop\unidad3> & C:/Users/HP/AppData/Local/Programs/Python/Python312/python.exe c:/Users/HP/Desktop/unidad3/lab25_2_sharonolvera.py
● STATUS OK: 204
○ PS C:\Users\HP\Desktop\unidad3>
```



```
10.10.20.48 - PuTTY
End of keyboard-interactive prompts from server

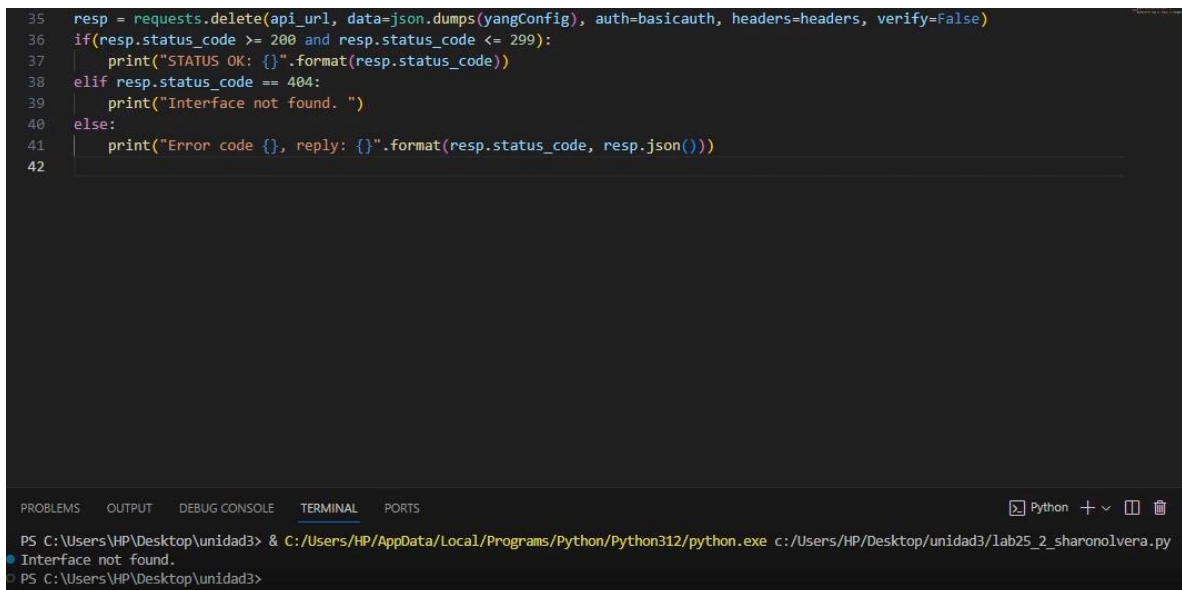
Welcome to the DevNet Sandbox for Cat8000V and IOS XE

The following programmability features are already enabled:

-NETCONF
-RESTCONF

Thanks for stopping by.

cat8000v#sh ip int brief
Interface                IP-Address      OK? Method Status        Protocol
GigabitEthernet1         10.10.20.48     YES NVRAM  up            up
GigabitEthernet2         unassigned      YES NVRAM  administrativ down    down
GigabitEthernet3         unassigned      YES NVRAM  administrativ down    down
Loopback0                10.0.0.1        YES NVRAM  up            up
Loopback10               unassigned      YES unset  up            up
Loopback99               99.99.99.99     YES other  up            up
Loopback109              10.255.255.9    YES NVRAM  up            up
VirtualPortGroup0        192.168.1.1     YES NVRAM  up            up
cat8000v#
```



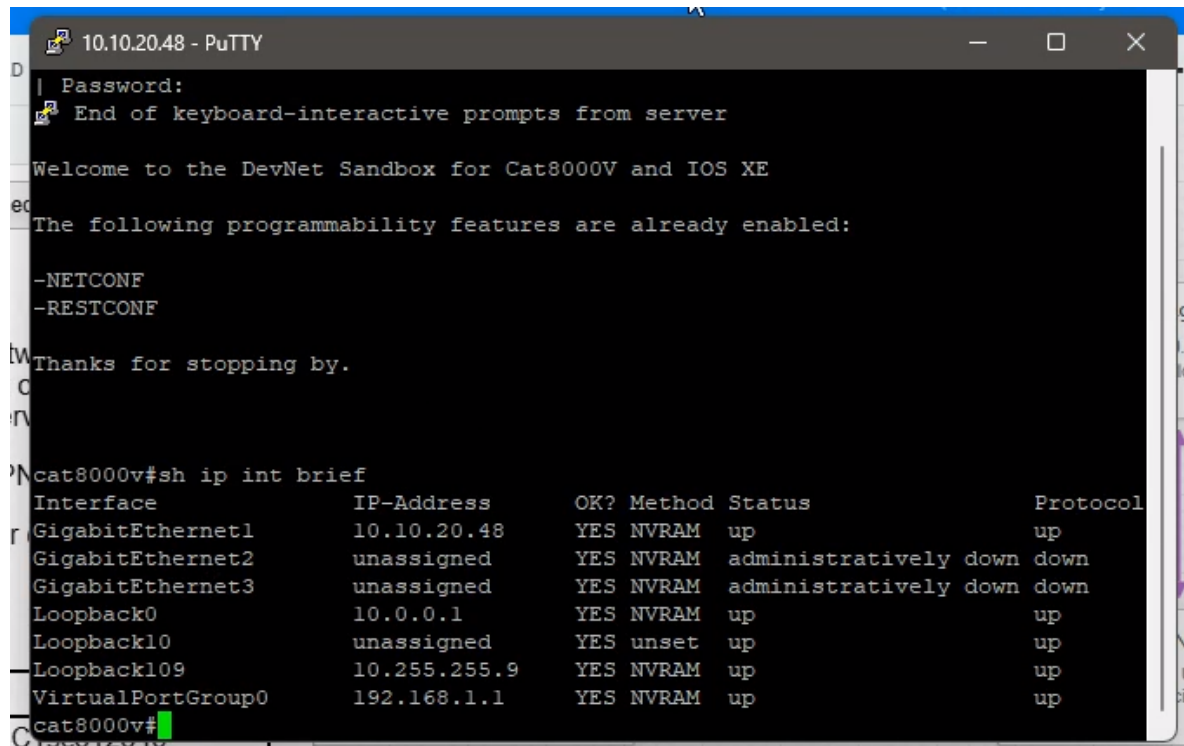
```
35 resp = requests.delete(api_url, data=json.dumps(yangConfig), auth=basicauth, headers=headers, verify=False)
36 if(resp.status_code >= 200 and resp.status_code <= 299):
37     print("STATUS OK: {}".format(resp.status_code))
38 elif resp.status_code == 404:
39     print("Interface not found. ")
40 else:
41     print("Error code {}, reply: {}".format(resp.status_code, resp.json()))
42
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Python + -

PS C:\Users\HP\Desktop\unidad3> & C:/Users/HP/AppData/Local/Programs/Python/Python312/python.exe c:/Users/HP/Desktop/unidad3/lab25\_2\_sharonolvera.py

Interface not found.

PS C:\Users\HP\Desktop\unidad3>



```
10.10.20.48 - PuTTY
| Password:
End of keyboard-interactive prompts from server

Welcome to the DevNet Sandbox for Cat8000V and IOS XE

The following programmability features are already enabled:

-NETCONF
-RESTCONF

Thanks for stopping by.

cat8000v#sh ip int brief
Interface                IP-Address      OK? Method Status      Protocol
GigabitEthernet1         10.10.20.48     YES NVRAM    up          up
GigabitEthernet2         unassigned      YES NVRAM    administratively down down
GigabitEthernet3         unassigned      YES NVRAM    administratively down down
Loopback0                 10.0.0.1        YES NVRAM    up          up
Loopback10               unassigned      YES unset   up          up
Loopback109              10.255.255.9    YES NVRAM    up          up
VirtualPortGroup0        192.168.1.1     YES NVRAM    up          up
cat8000v#
```

y. What changes were applied to the code to delete the interface Loopback99? Modifique el resp = requests le cambie el put por un delete, y agregue una respuesta que si decía error 404 mandara un mensaje de interface no encontrada.