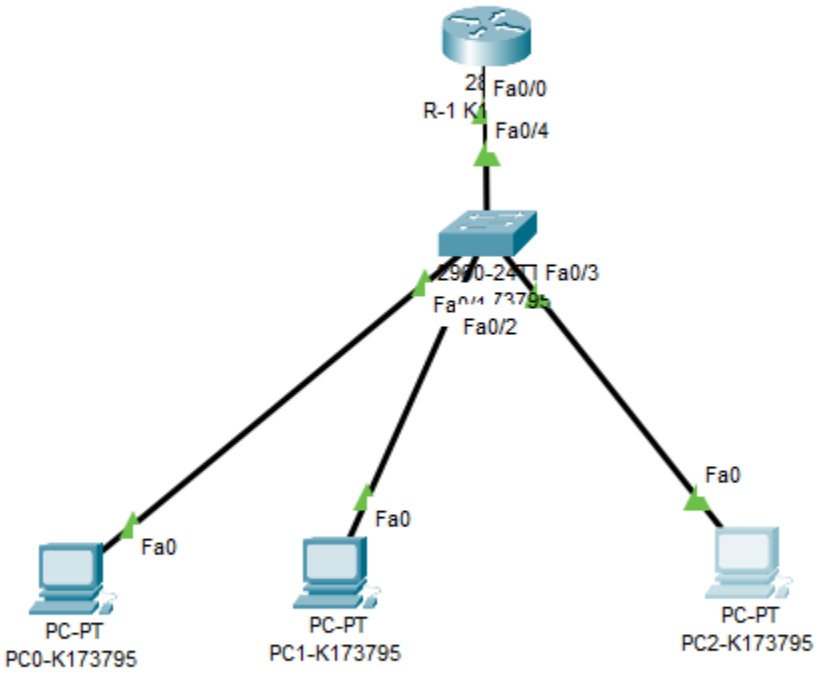
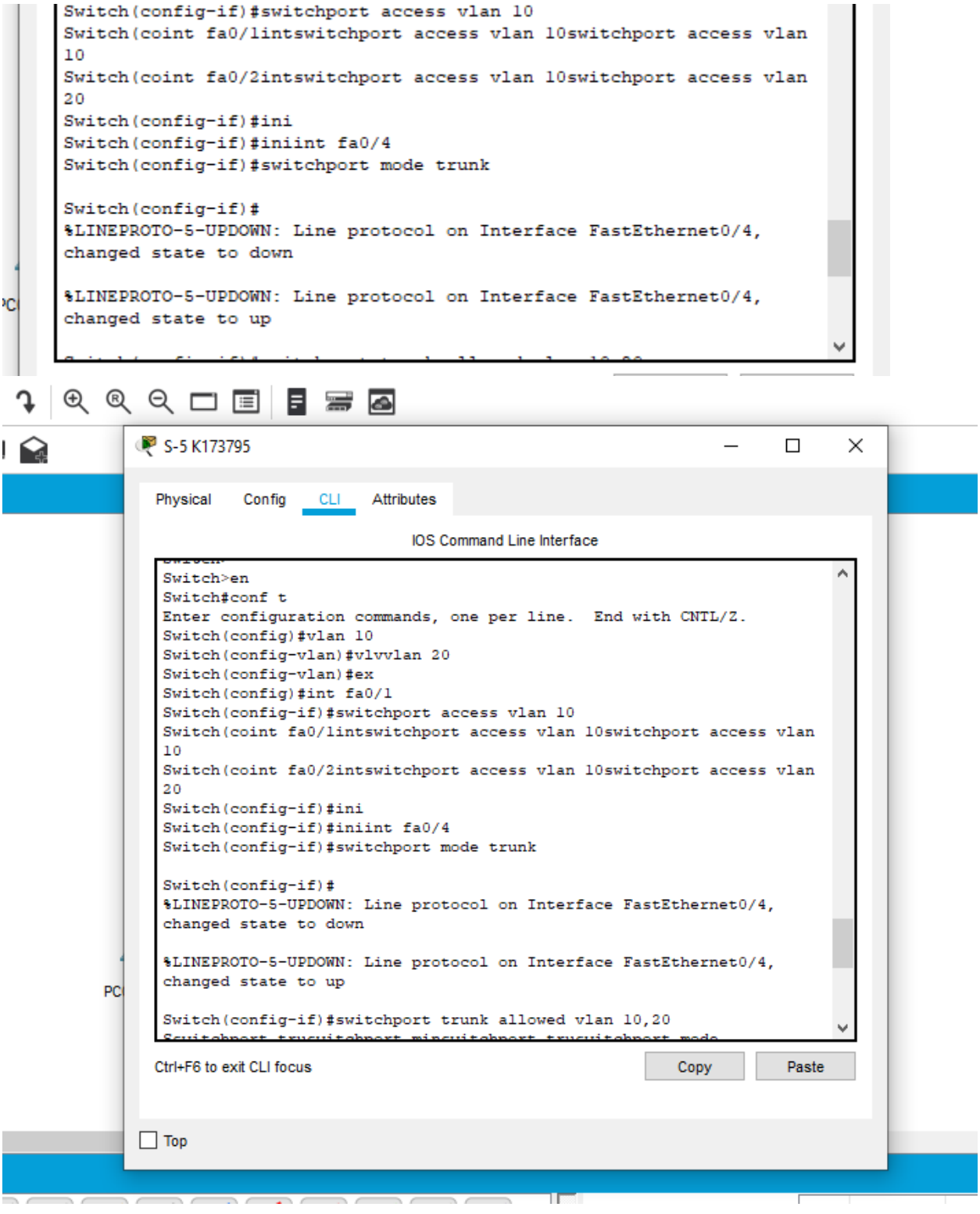
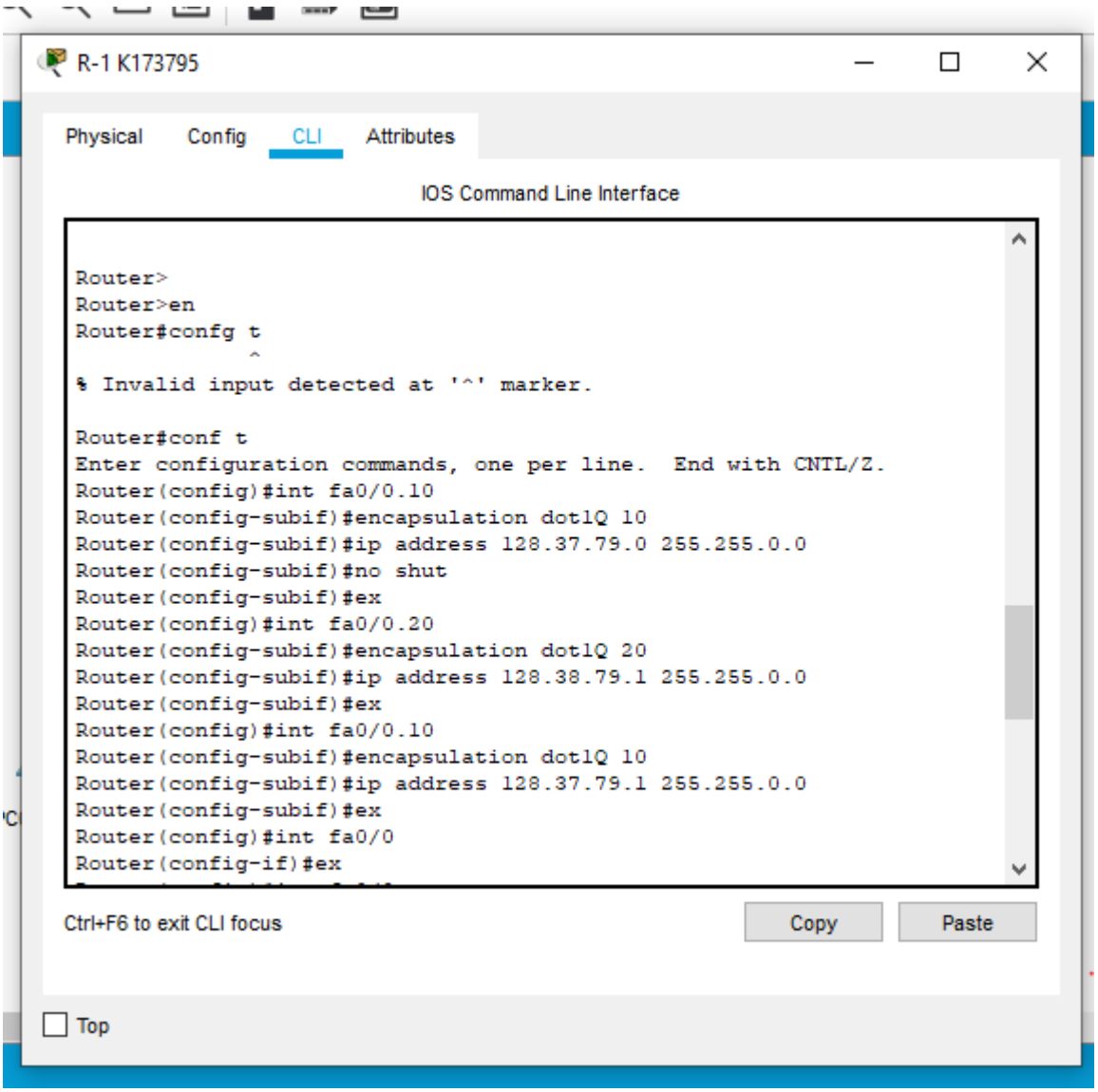
Question no 1:



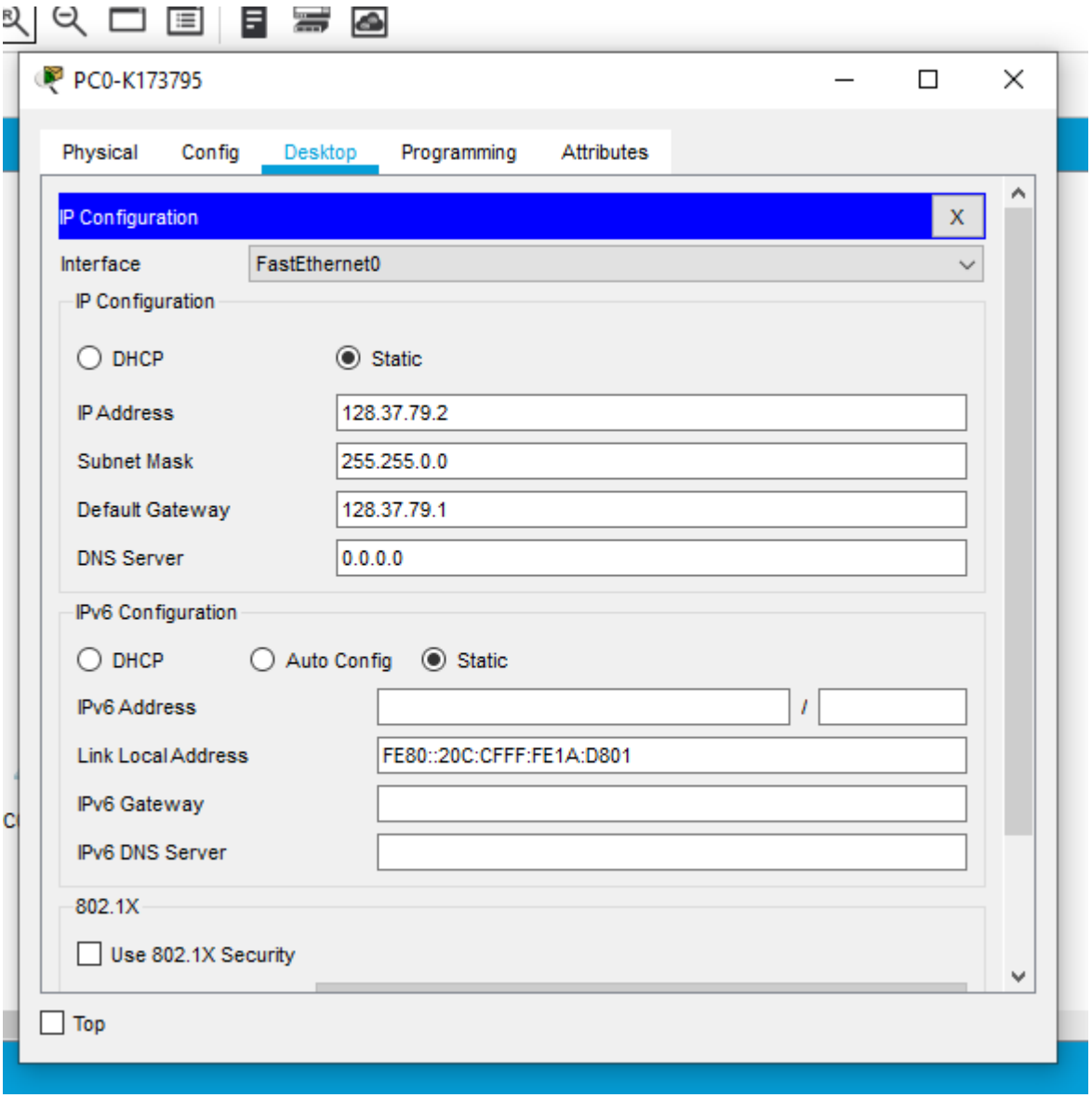
Topology

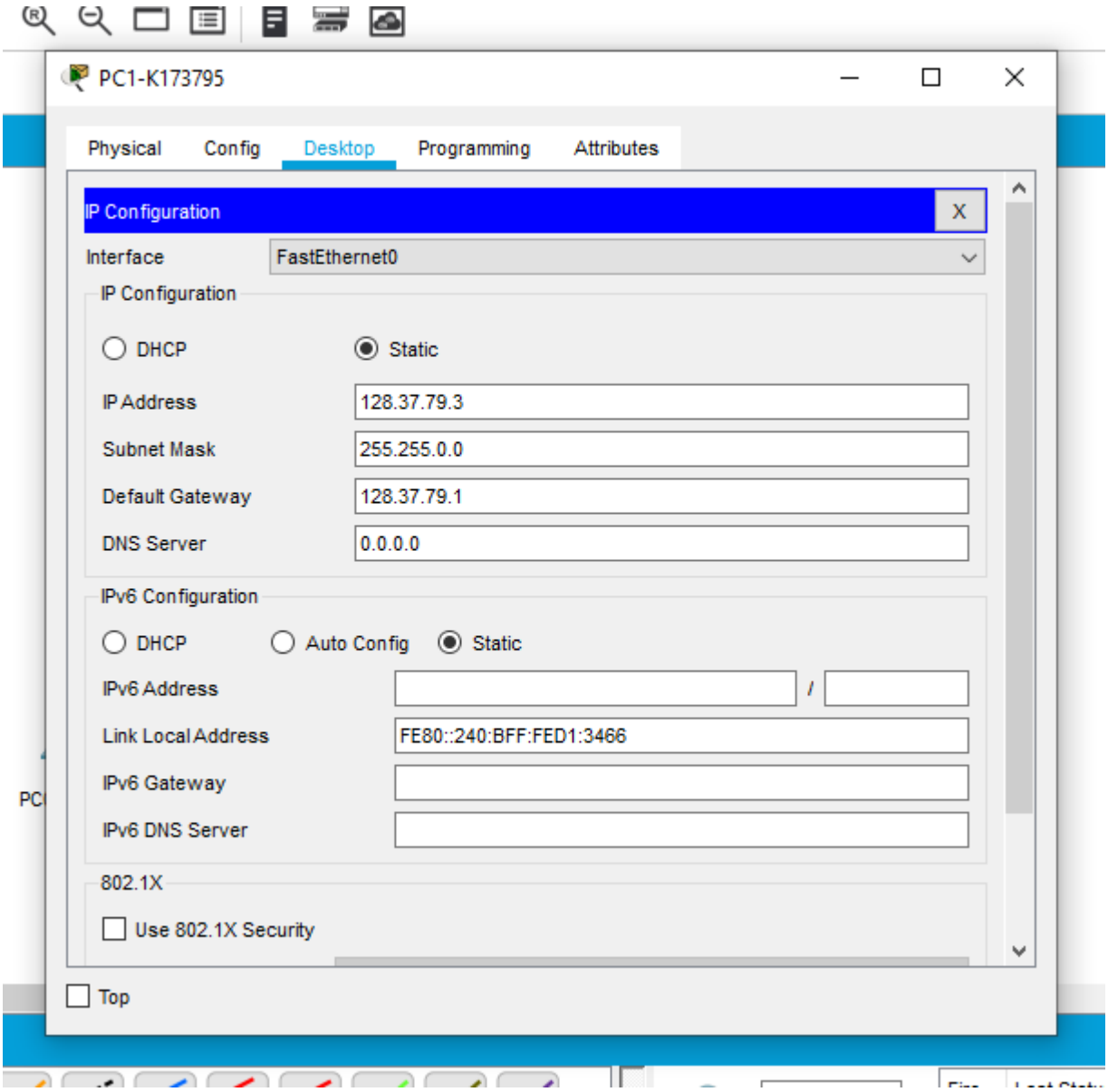


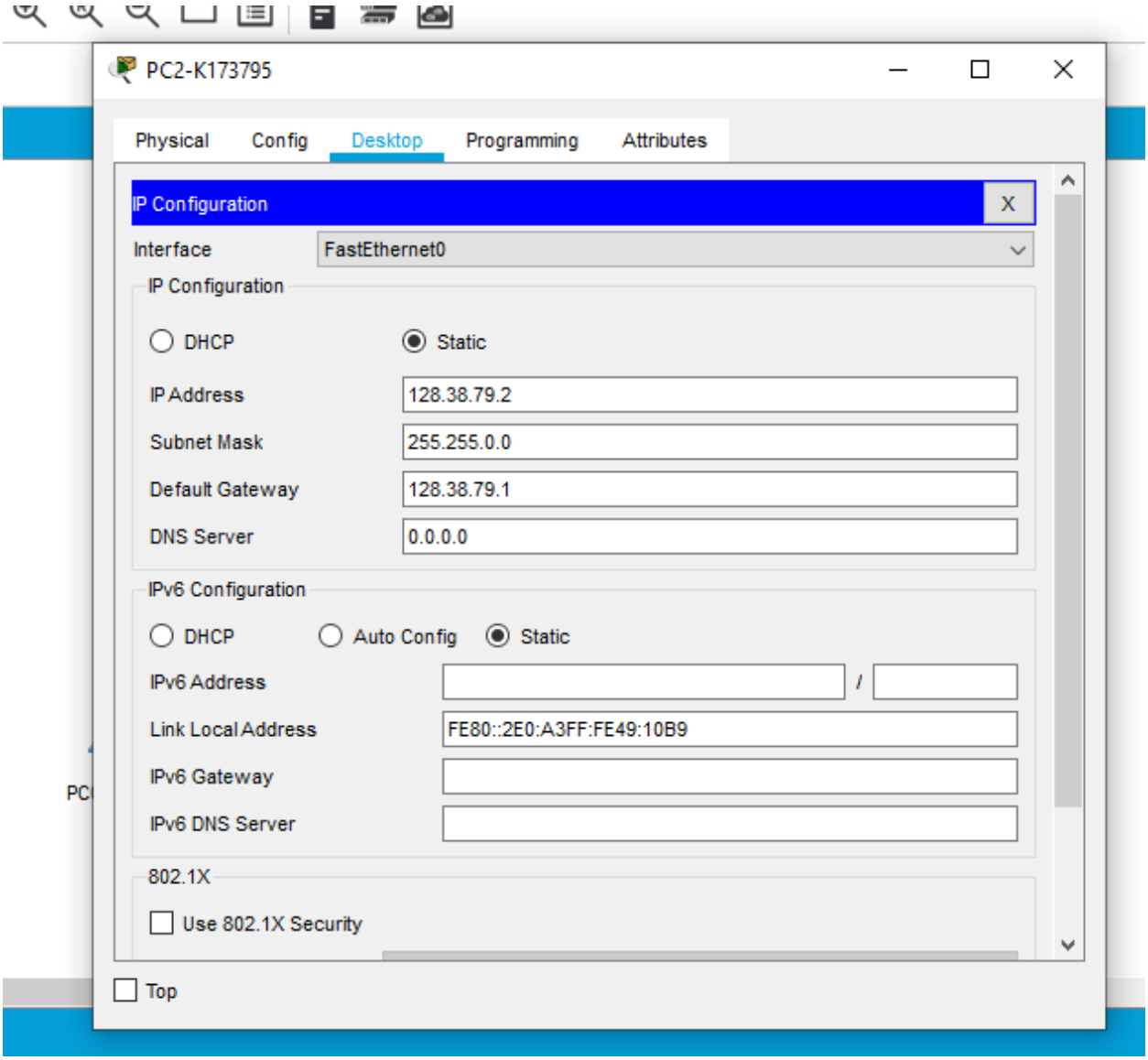
Switch Configuration



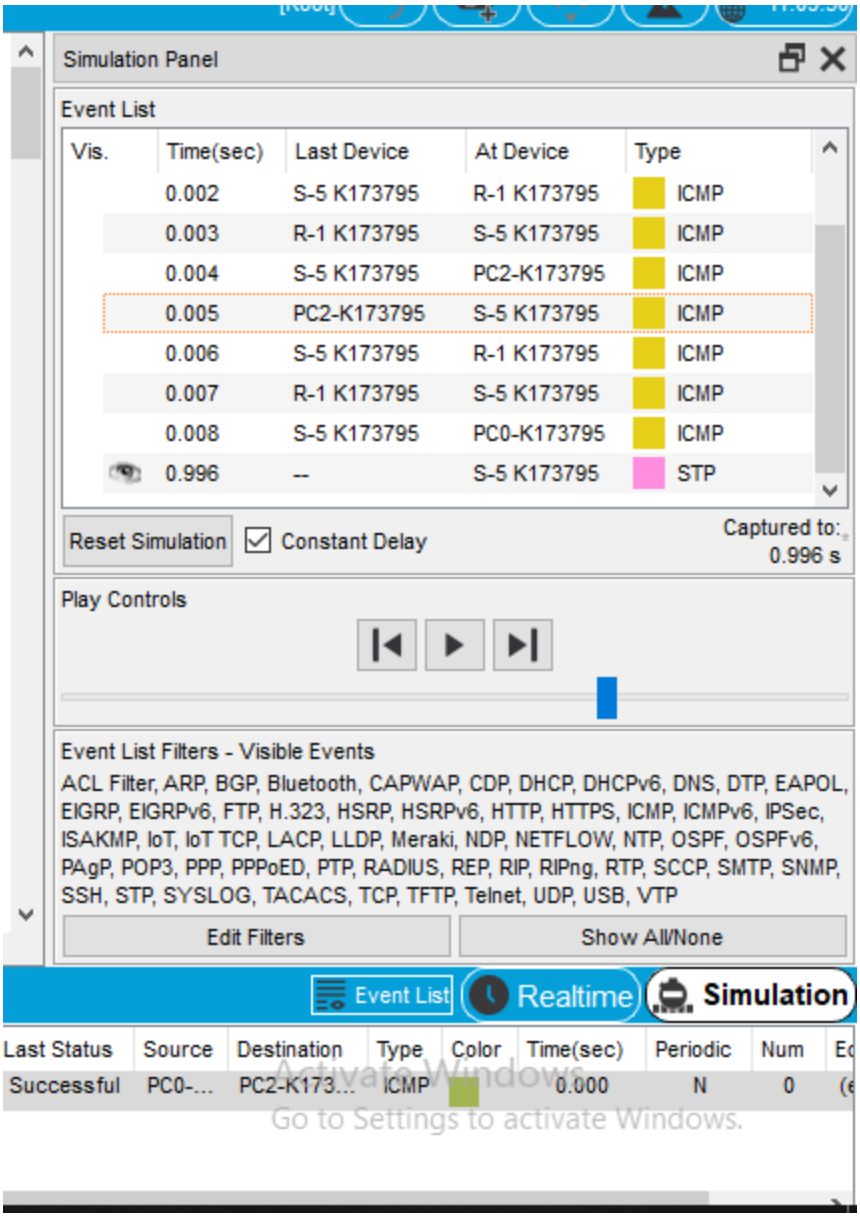
Router Configuration


PC0-K173795
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IP Address
128.37.79.2
Subnet Mask
255.255.0.0
Default Gateway
128.37.79.1
DNS Server
0.0.0.0
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
/
Link Local Address
FE80::20C:CFFF:FE1A:D801
IPv6 Gateway
IPv6 DNS Server
802.1X
Use 802.1X Security
Top


PC1-K173795
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IP Address
128.37.79.3
Subnet Mask
255.255.0.0
Default Gateway
128.37.79.1
DNS Server
0.0.0.0
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
/
Link Local Address
FE80::240:BFF:FED1:3466
IPv6 Gateway
IPv6 DNS Server
802.1X
Use 802.1X Security
Top



PC config with IP

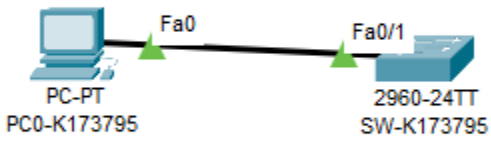


Success Message

Question no 2:

Only theory

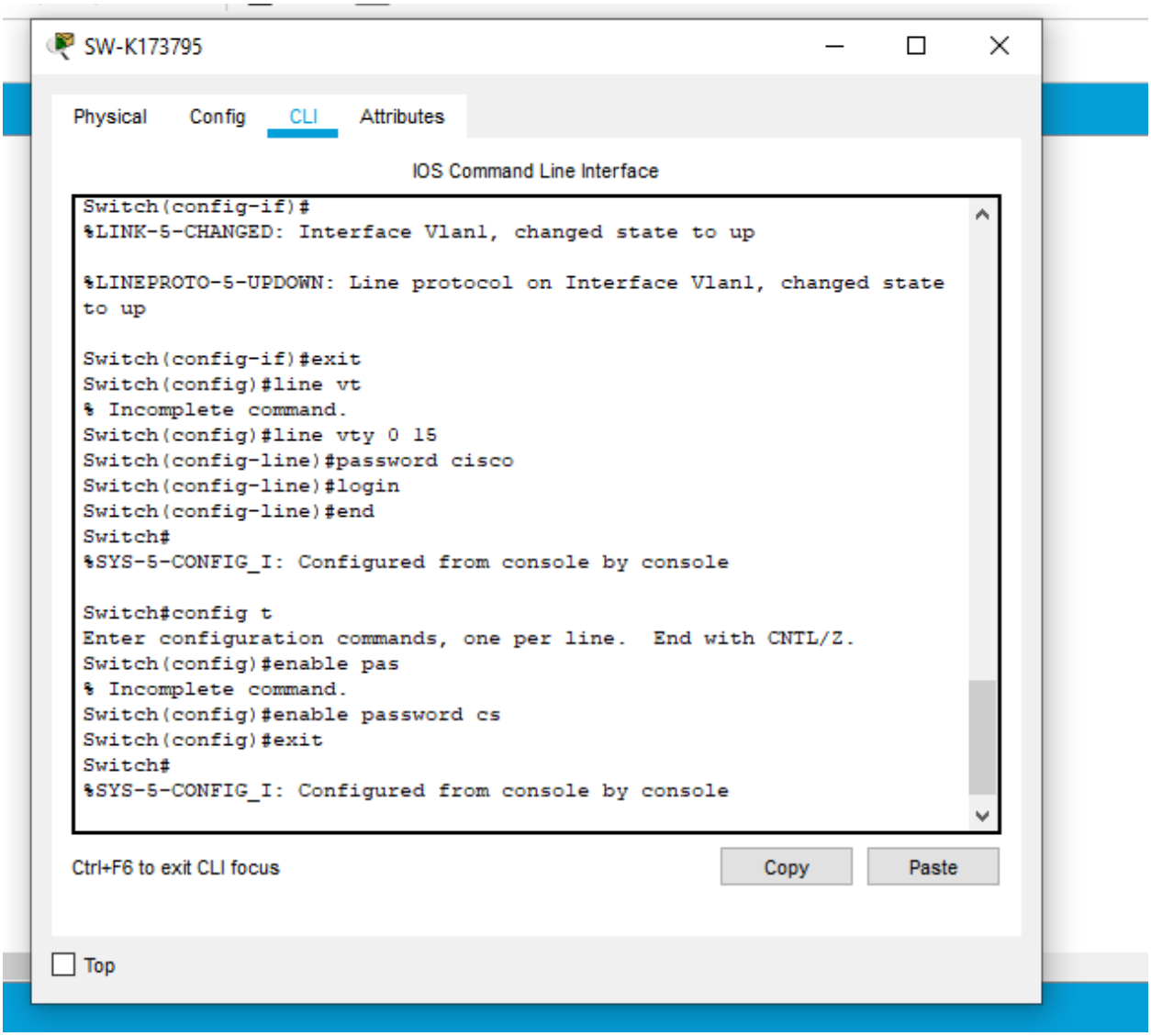
Question no 3:



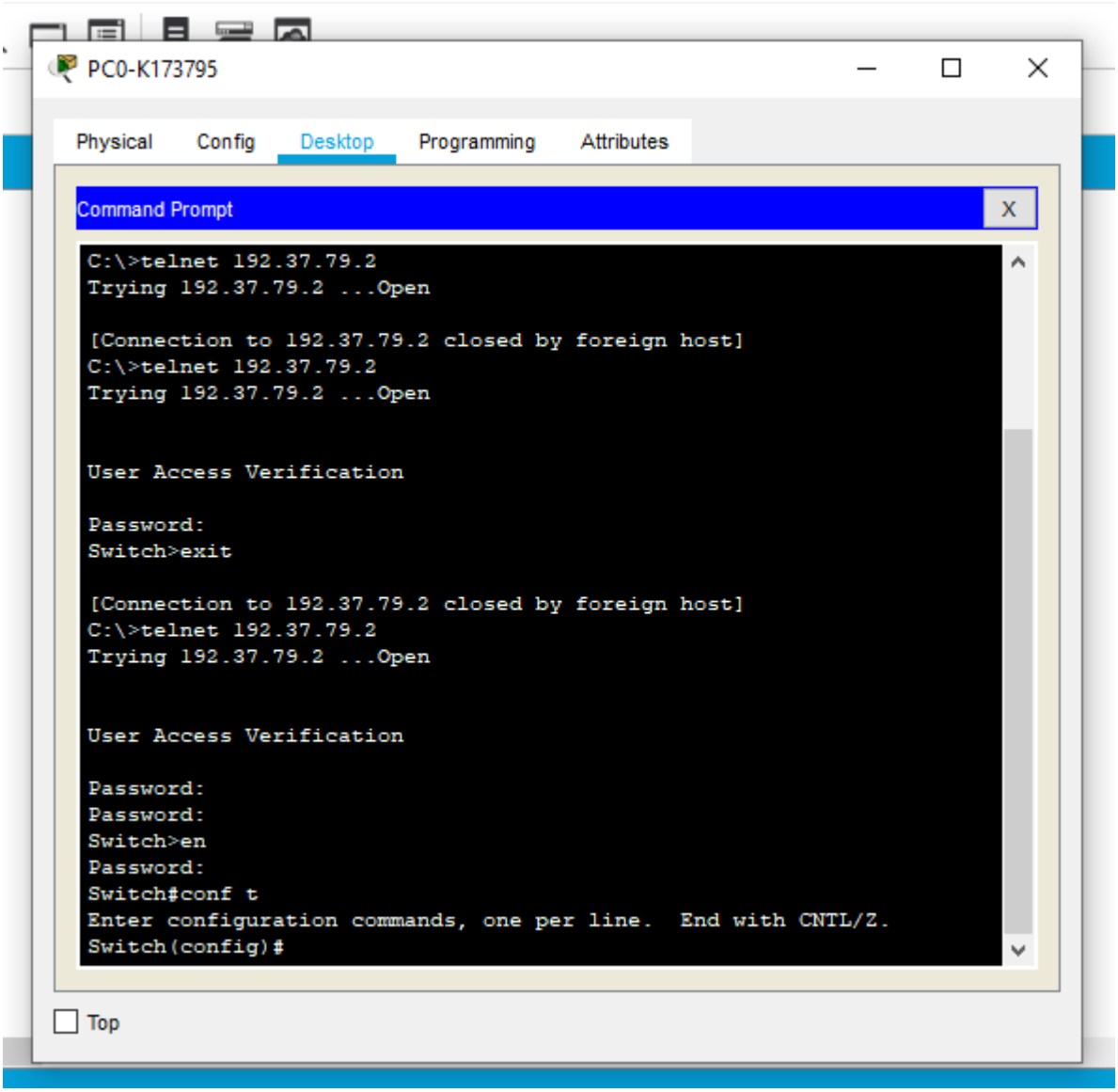
Topology

```
Press RETURN to get started!


%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up


Switch>en
Switch#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface vlan 1
Switch(config-if)#ip address 192.37.79.2 255.255.255.0
Switch(config-if)#no shut

Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state
to up

Switch(config-if)#exit
Switch(config)#line vt
```

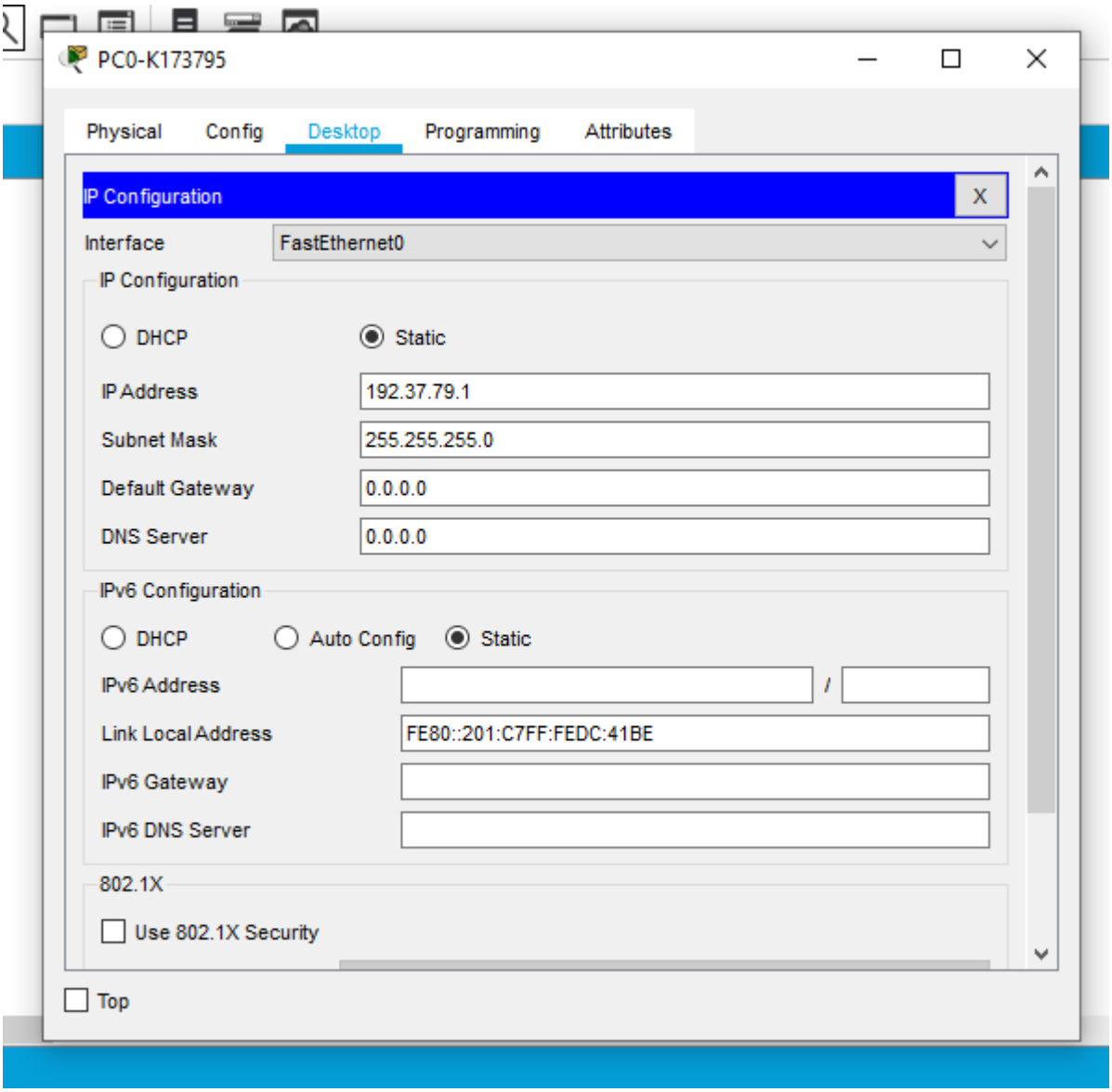
Ctrl+F6 to exit CLI focus Copy Paste



Switch Configuration


PC0-K173795
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
C:\>telnet 192.37.79.2
Trying 192.37.79.2 ...Open
[Connection to 192.37.79.2 closed by foreign host]
C:\>telnet 192.37.79.2
Trying 192.37.79.2 ...Open
User Access Verification
Password:
Switch>exit
[Connection to 192.37.79.2 closed by foreign host]
C:\>telnet 192.37.79.2
Trying 192.37.79.2 ...Open
User Access Verification
Password:
Password:
Switch>en
Password:
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#
Top

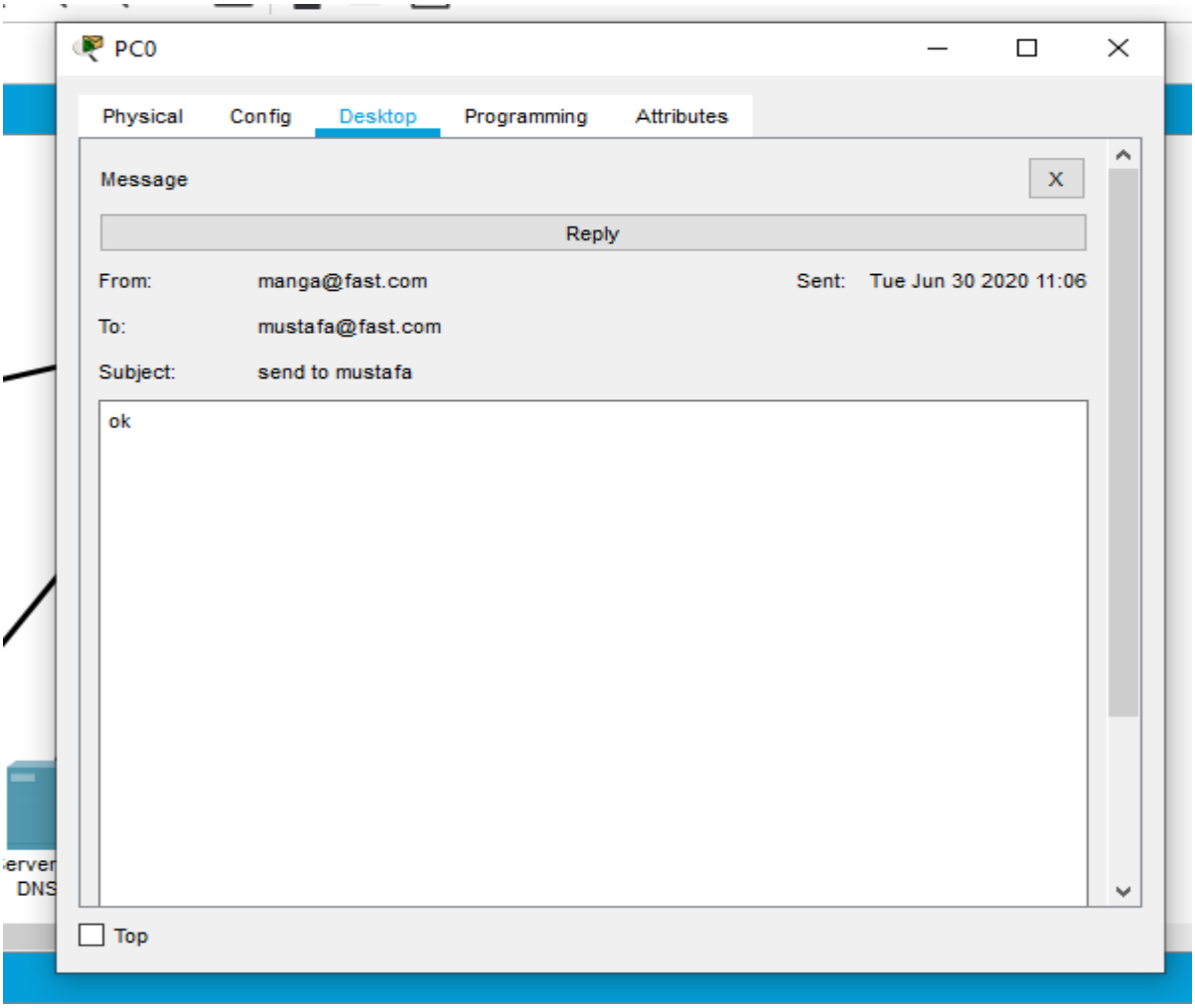
PC telnet



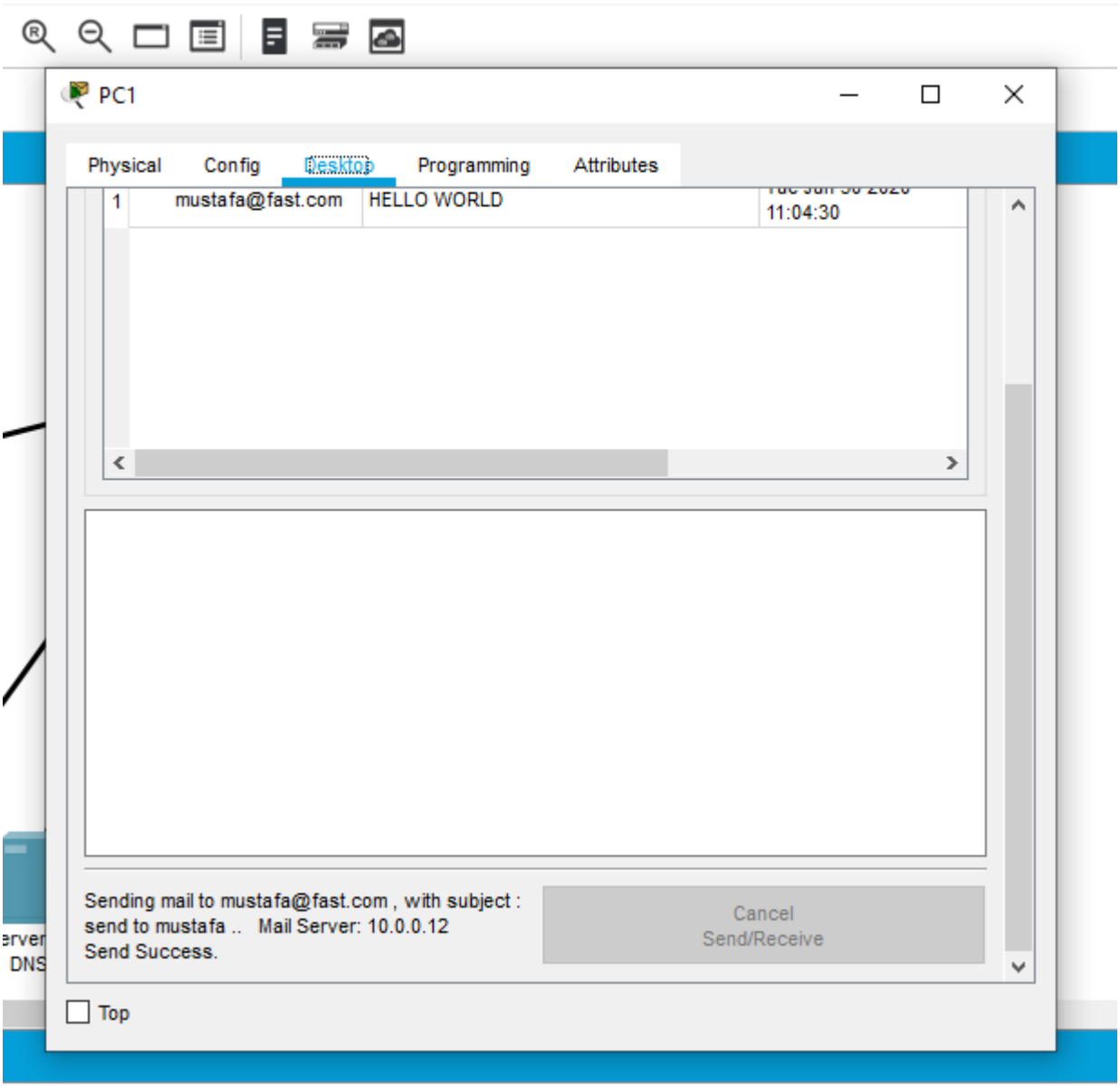
Assign IP to PC

Question no 4:

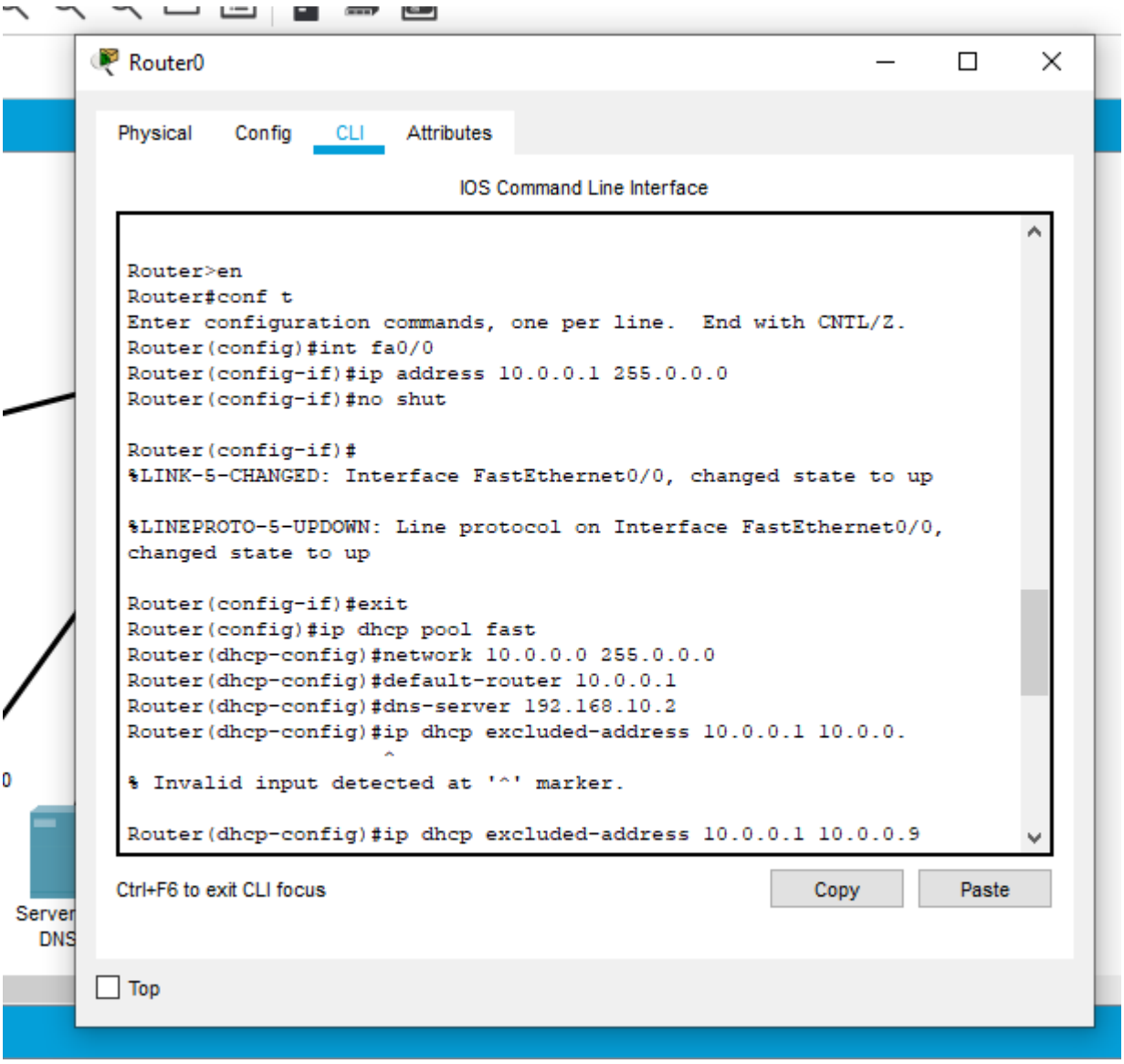
SMTP:



Emai Rcv.

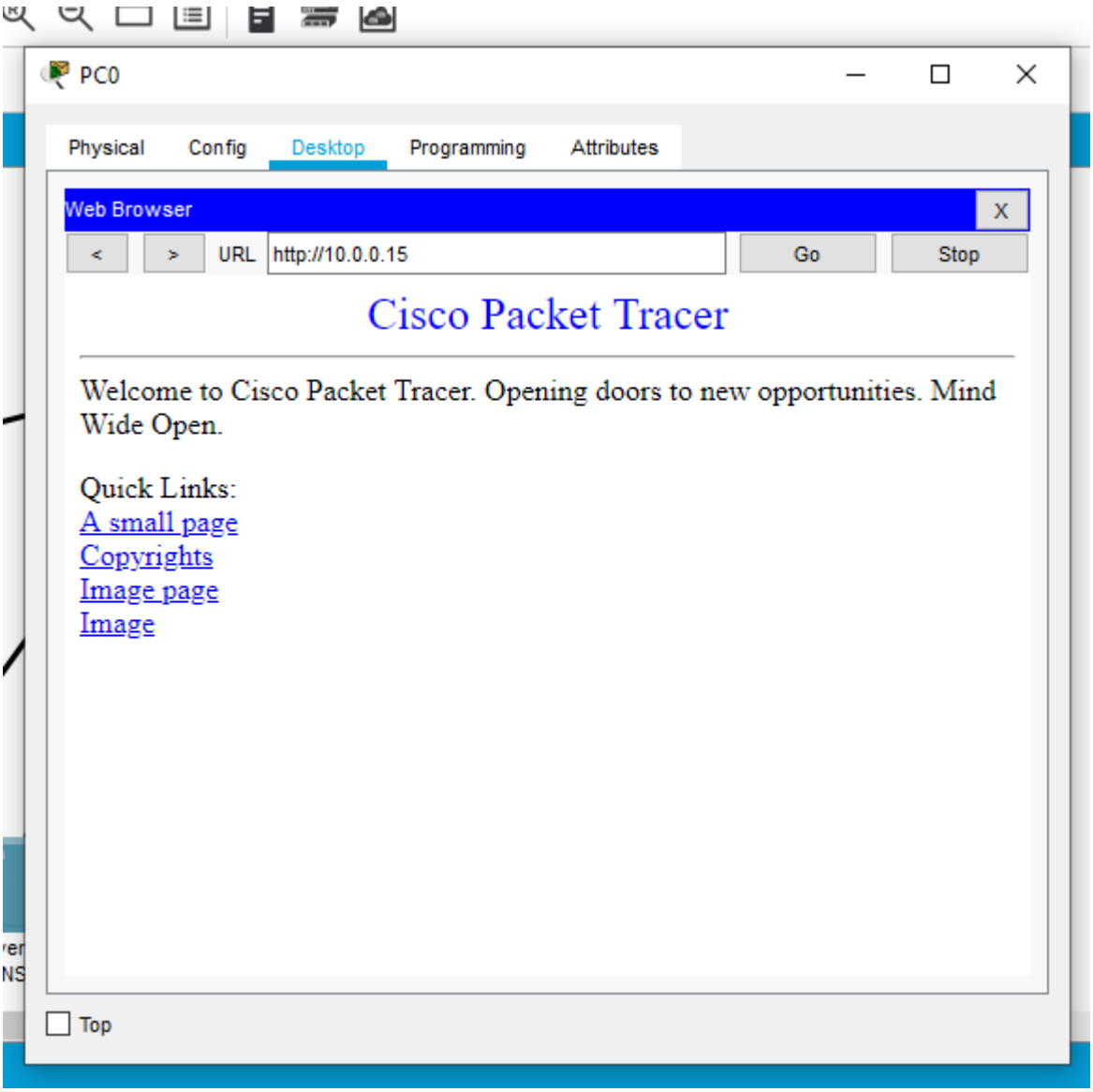

PC1
Physical
Config
Desktop
Programming
Attributes
1
mustafa@fast.com
HELLO WORLD
11:04:30
Sending mail to mustafa@fast.com , with subject :
send to mustafa .. Mail Server: 10.0.0.12
Send Success.
Cancel
Send/Receive
Top

Email Snd.

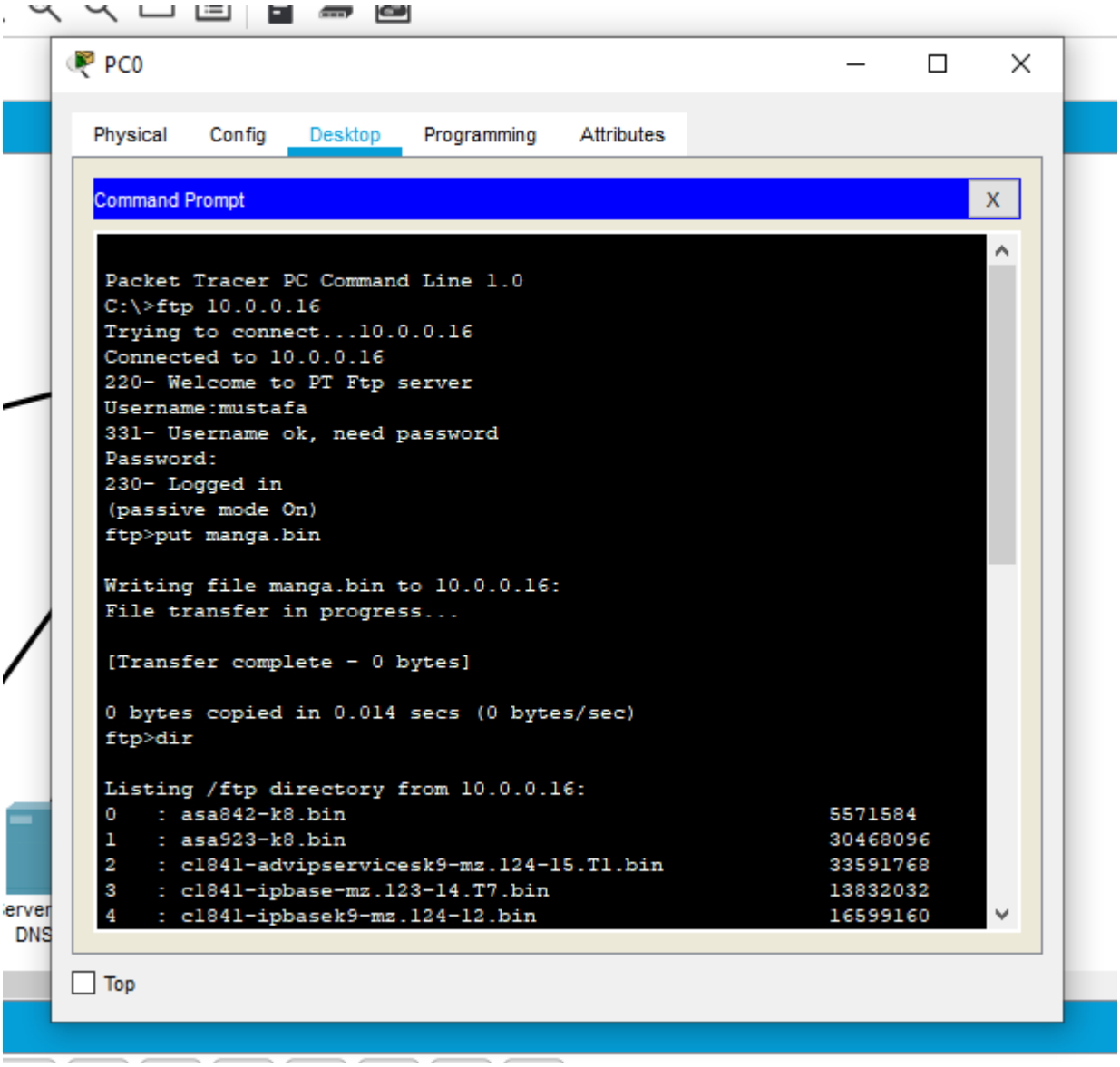


Route dhcp config

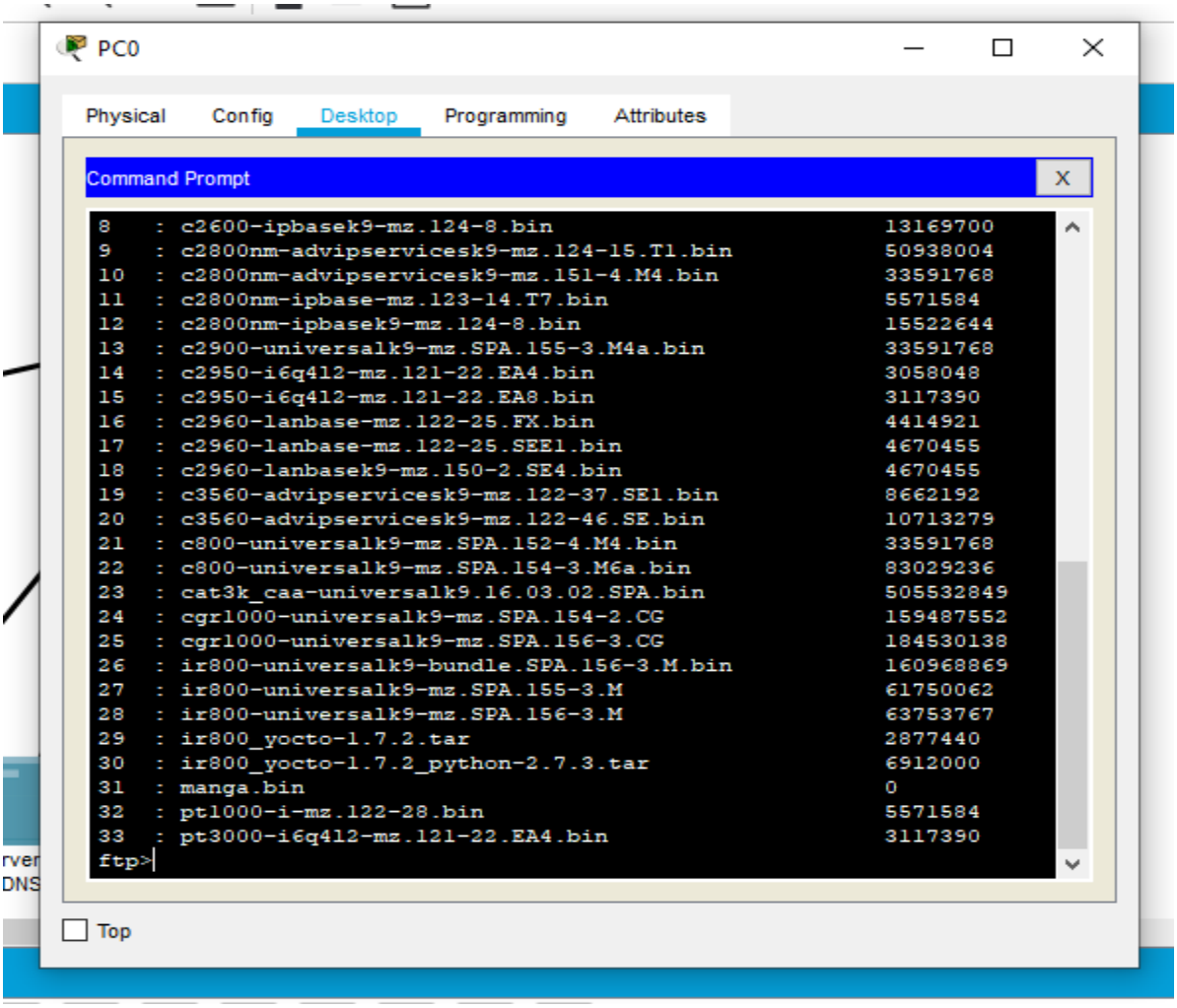
HTTP:


PC0
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://10.0.0.15
Go
Stop
Cisco Packet Tracer
Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
Quick Links:
A small page
Copyrights
Image page
Image
Top

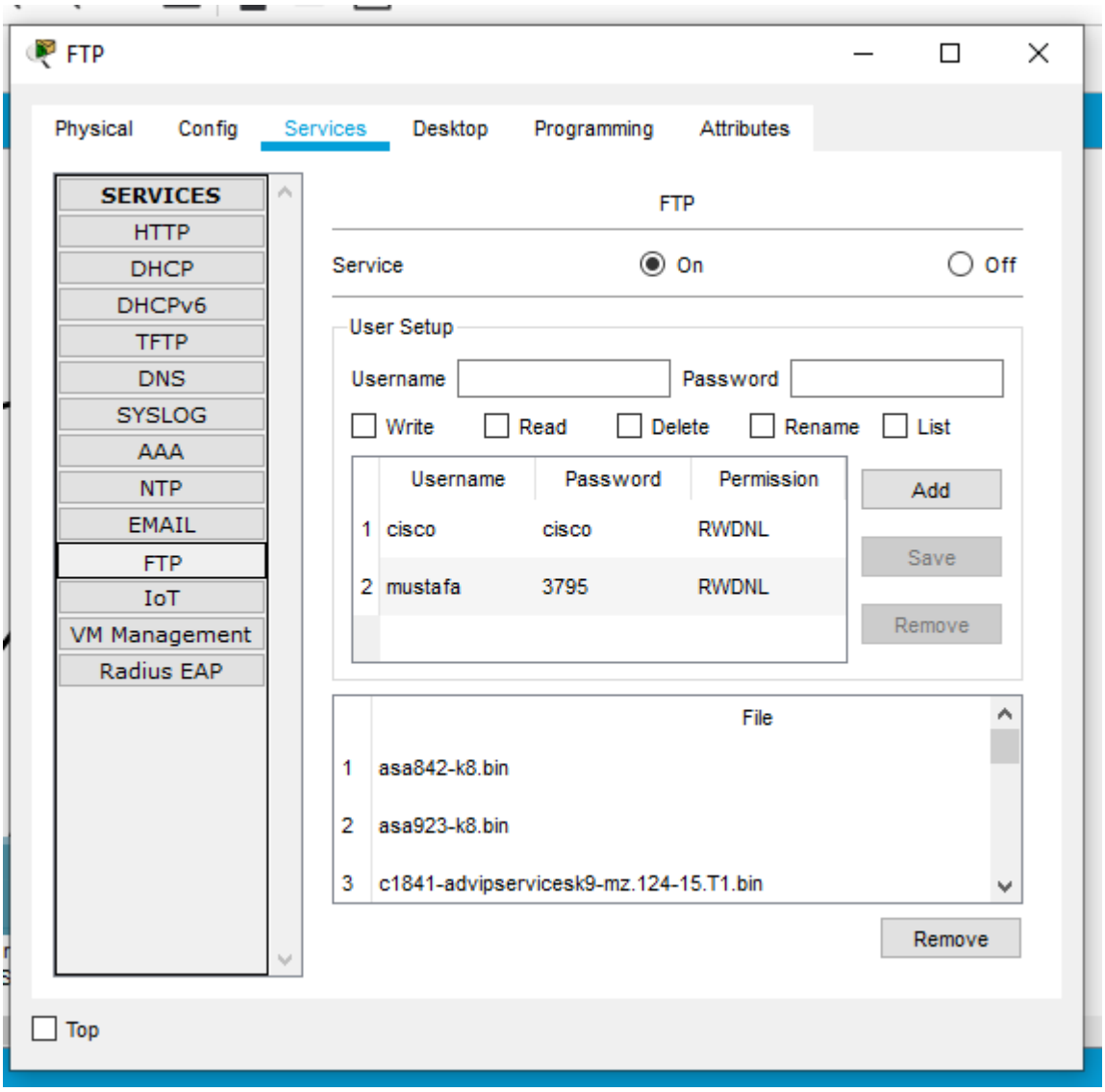
FTTP:



Put file

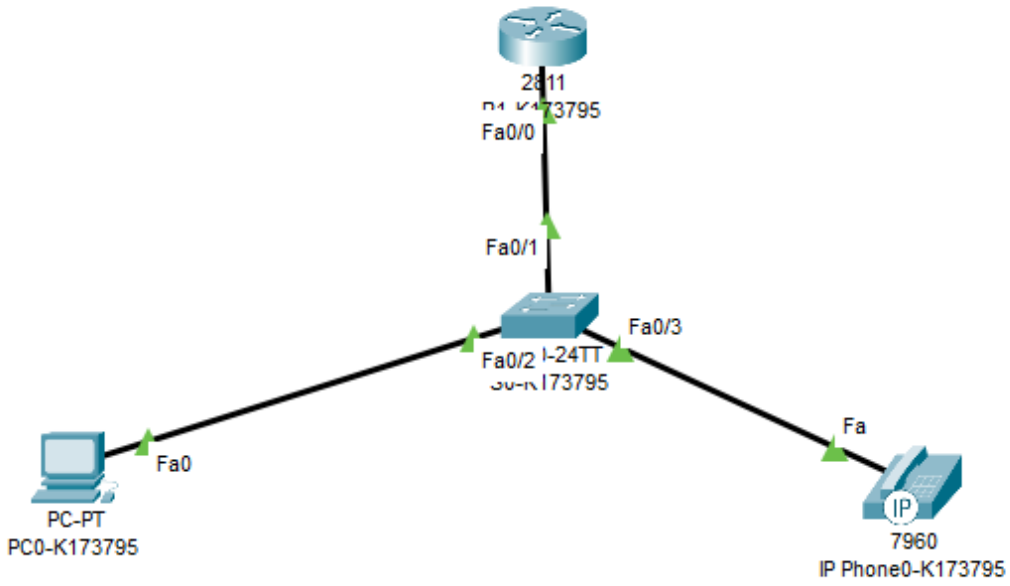


Check File in dir

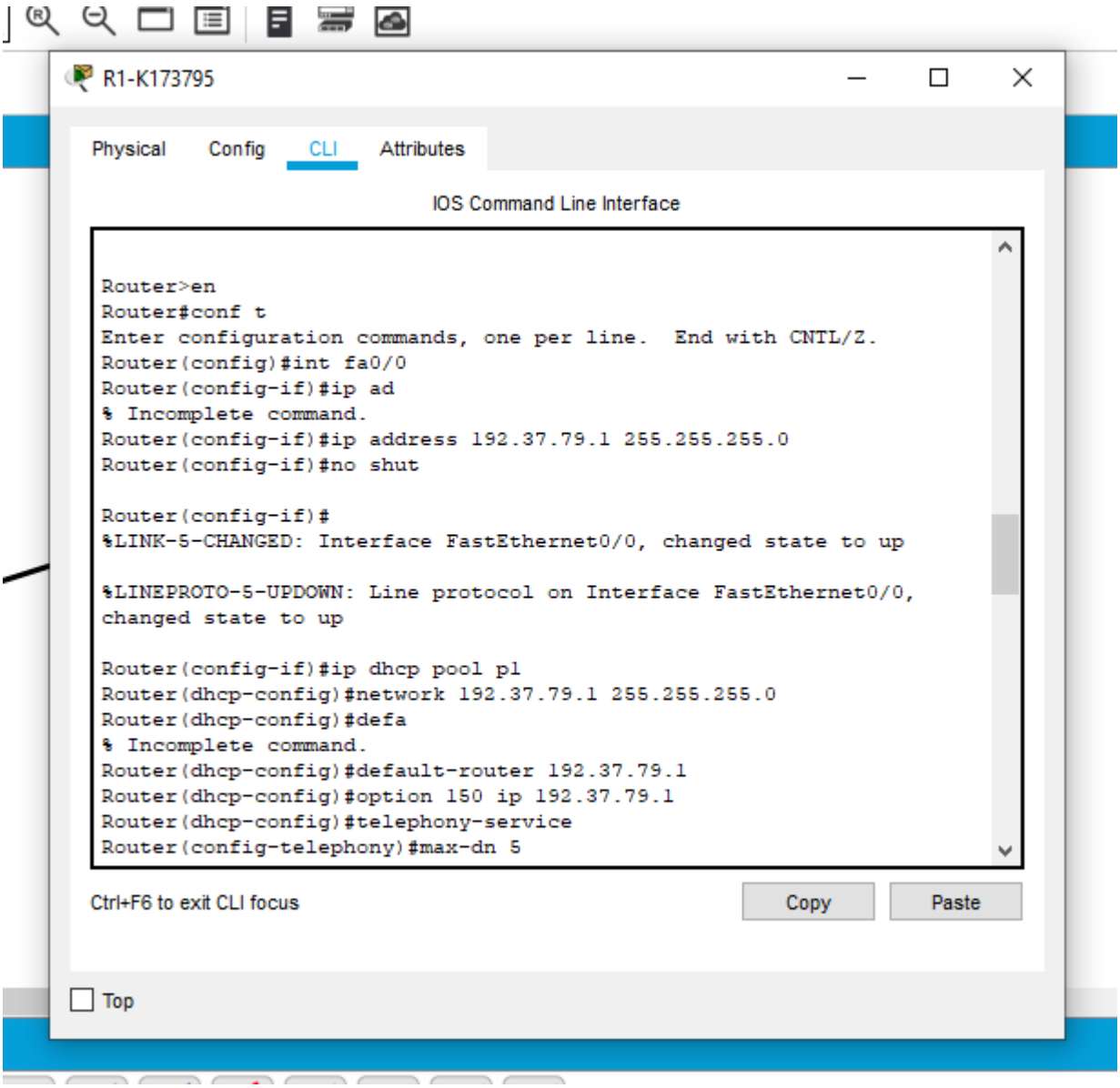


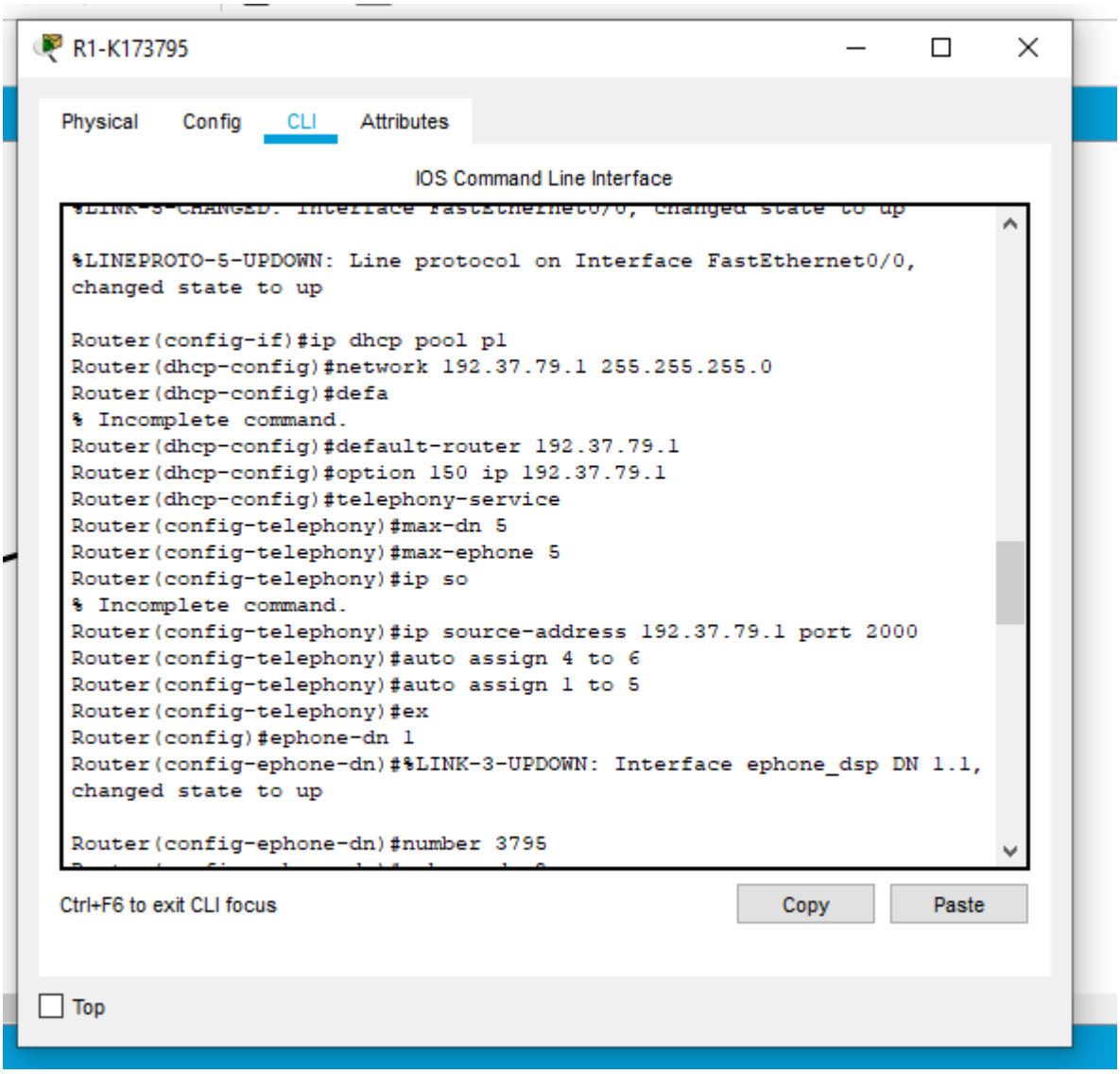
Setup Server

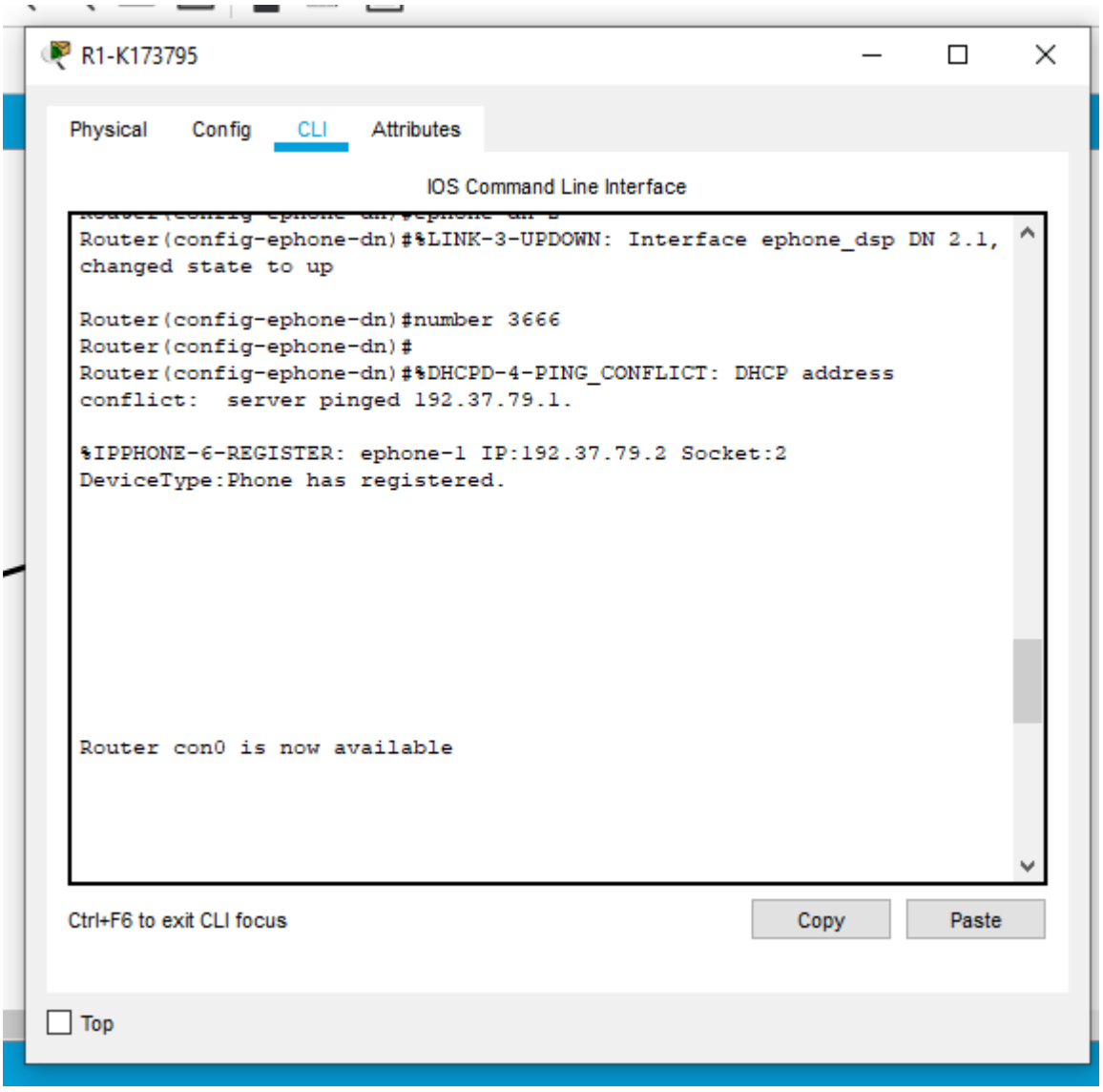
Question no 5:



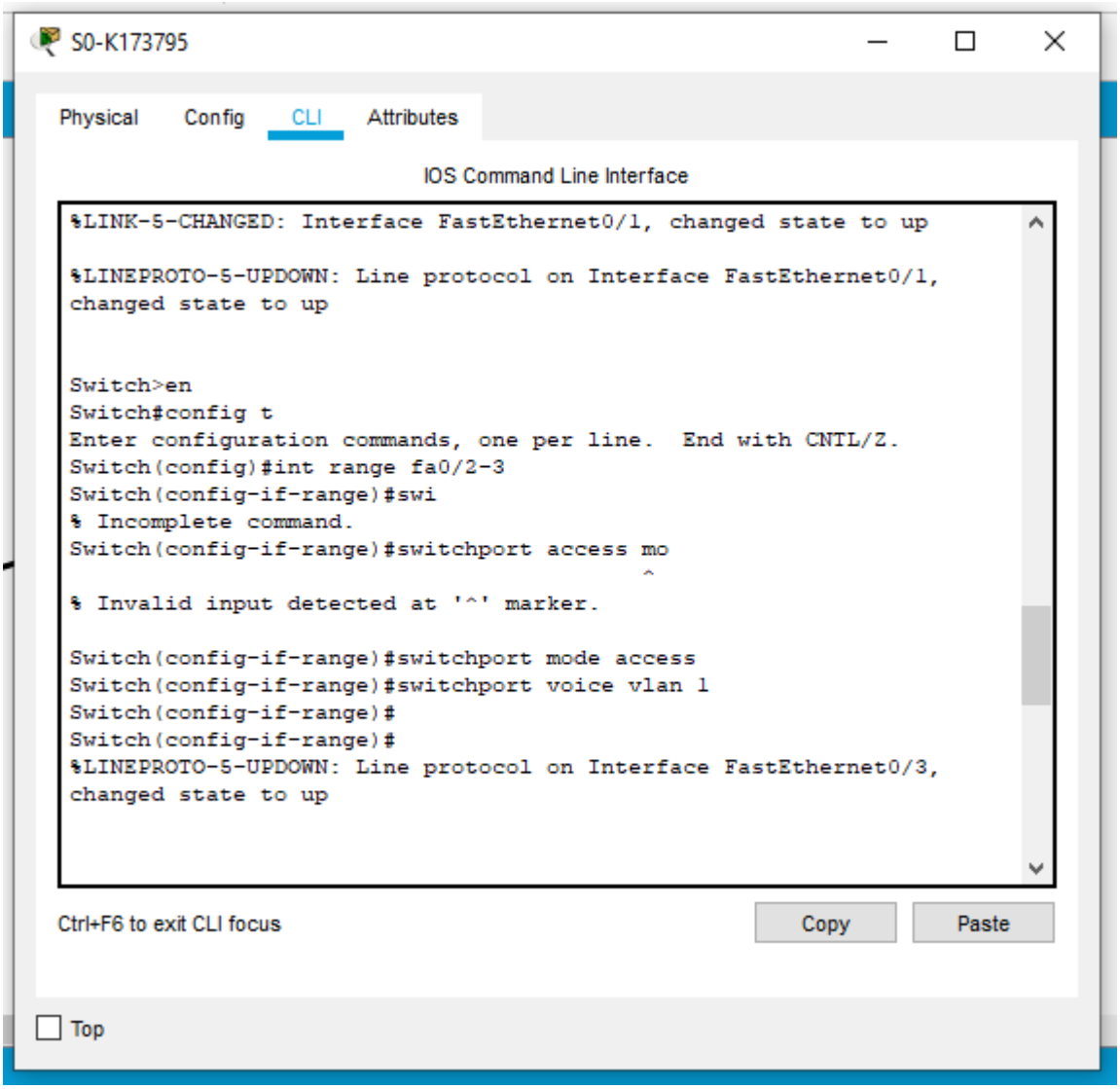
Topology


R1-K173795
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#ip ad
% Incomplete command.
Router(config-if)#ip address 192.37.79.1 255.255.255.0
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
Router(config-if)#ip dhcp pool p1
Router(dhcp-config)#network 192.37.79.1 255.255.255.0
Router(dhcp-config)#defa
% Incomplete command.
Router(dhcp-config)#default-router 192.37.79.1
Router(dhcp-config)#option 150 ip 192.37.79.1
Router(dhcp-config)#telephony-service
Router(config-telephony)#max-dn 5
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

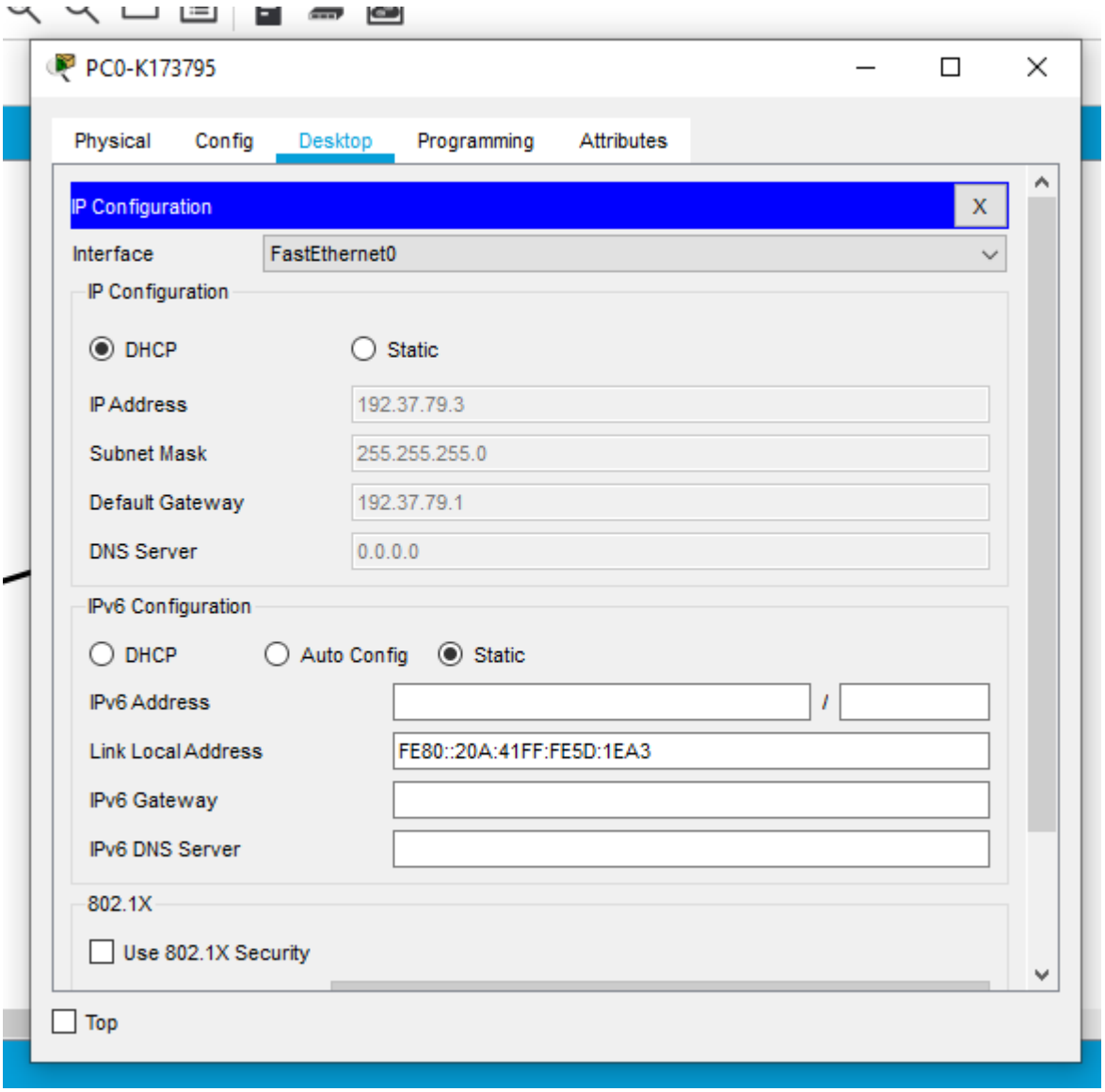

R1-K173795
Physical
Config
CLI
Attributes
IOS Command Line Interface
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
Router(config-if)#ip dhcp pool p1
Router(dhcp-config)#network 192.37.79.1 255.255.255.0
Router(dhcp-config)#defa
% Incomplete command.
Router(dhcp-config)#default-router 192.37.79.1
Router(dhcp-config)#option 150 ip 192.37.79.1
Router(dhcp-config)#telephony-service
Router(config-telephony)#max-dn 5
Router(config-telephony)#max-ephone 5
Router(config-telephony)#ip so
% Incomplete command.
Router(config-telephony)#ip source-address 192.37.79.1 port 2000
Router(config-telephony)#auto assign 4 to 6
Router(config-telephony)#auto assign 1 to 5
Router(config-telephony)#ex
Router(config)#ephone-dn 1
Router(config-ephone-dn)#%LINK-3-UPDOWN: Interface ephone_dsp DN 1.1,
changed state to up
Router(config-ephone-dn)#number 3795
Ctrl+F6 to exit CLI focus
Copy
Paste
Top



Router Config



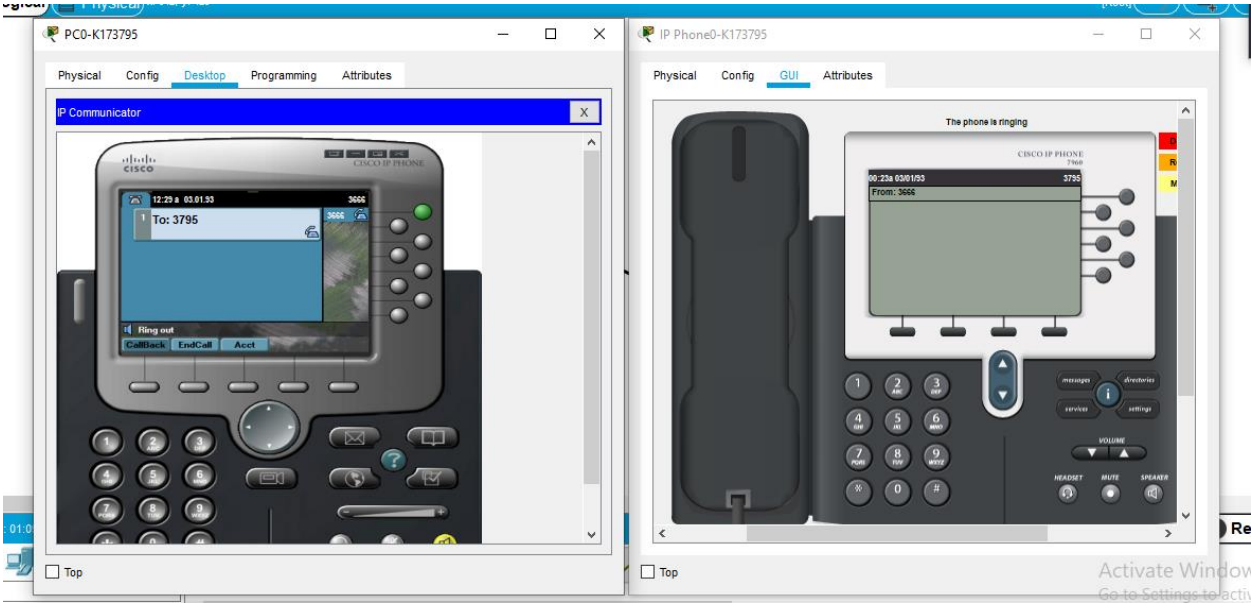
Switch Config



PC DHCP

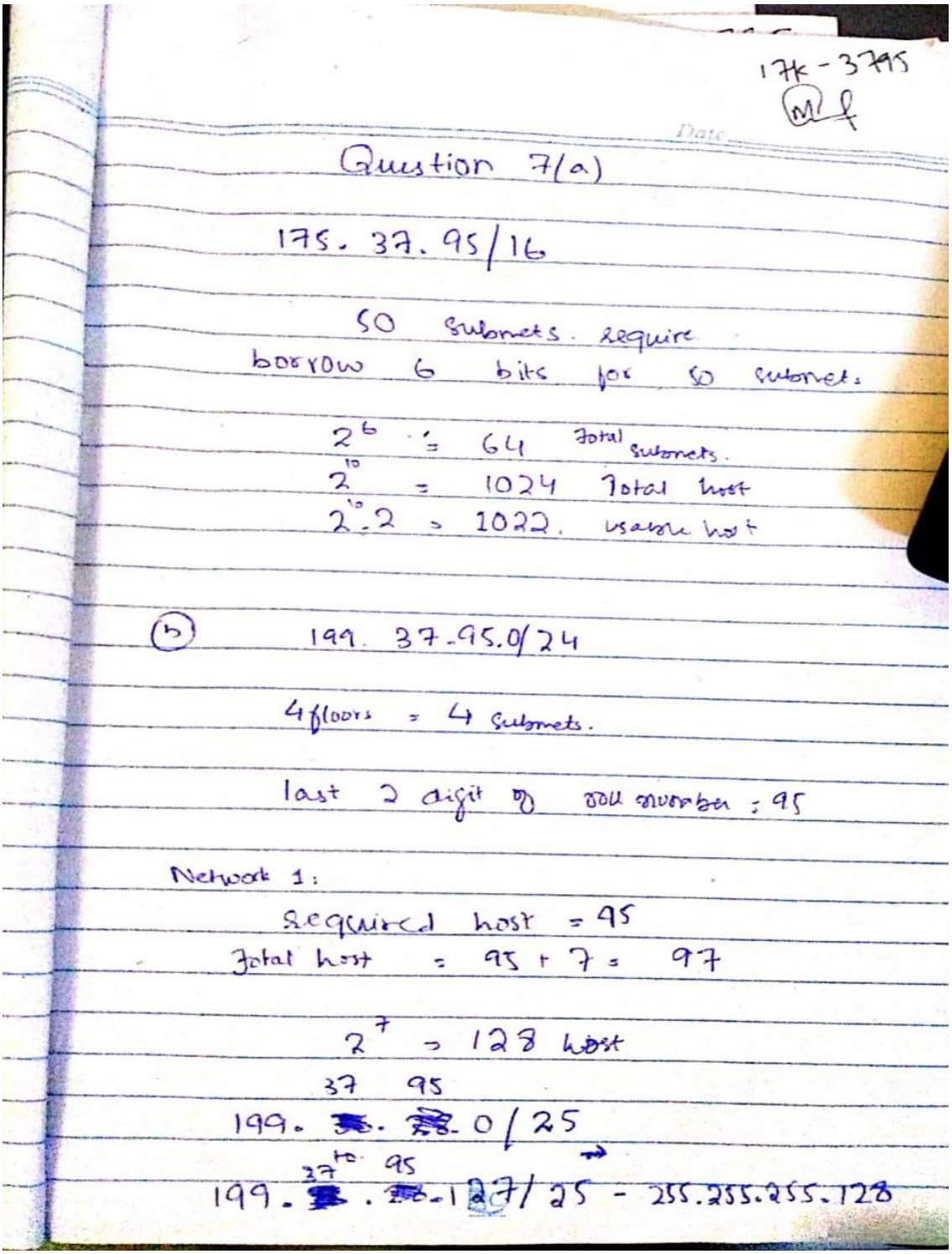
Phone call

Phone call


PC0-K173795
Physical
Config
Desktop
Programming
Attributes
IP Communicator
X
To: 3795
Ring out
CallBack
EndCall
Acct
Top
IP Phone0-K173795
Physical
Config
GUI
Attributes
The phone is ringing
From: 3666
Top

Phone Call

Question no 7:



17k-3795

Date

Question 7(a)

175. 37. 95/16

50 subnets. require
borrow 6 bits for 50 subnets.

2^6 = 64 Total subnets.
2^{10} = 1024 Total host
$2^{10}-2$ = 1022. usable host

(b) 199. 37.95.0/24

4 floors = 4 subnets.

last 2 digit of roll number : 95

Network 1:

required host = 95
Total host = 95 + 7 = 97

2^7 = 128 host

37 95
199. [redacted]. 0/25

27 to 95
199. [redacted]. 127/25 - 255.255.255.128

Date

Network 2:

199. 37. 95. 128 /25

to

199. 37. 95. 255 /25 → 255. 255. 255. 128

Network 3:

199. 37. 96. ~~128~~ 0 /25

to

199. 37. 96. 127 /25 → 255. 255. 255. 128

Network 4:

199. 37. 96. 128 /25

to

199. 37. 96. 255 /25 → 255. 255. 255. 128

Theory of Question 1 2 3 5

17k-3795
M.f

Date

Question 1:

Two different network is connected with switch so we have to connect with router to assign IP. and perform Virtual network. VLAN reduce the incidence of Collosion.

Question 2:

OSPF is used because the the network is expected to extend and OSPF doest not broadcast like rip V1 & Rip V2 after every 30 sec. It broadcast only when there is ~~any~~ any change in network.

Question 3:

We use telnet because encrypted and secure. telnet is layer 2. protocol. (transport).

Question 5.

- Because VoIP enable people to use internet as the transmission medium for calls.
- Data link layer