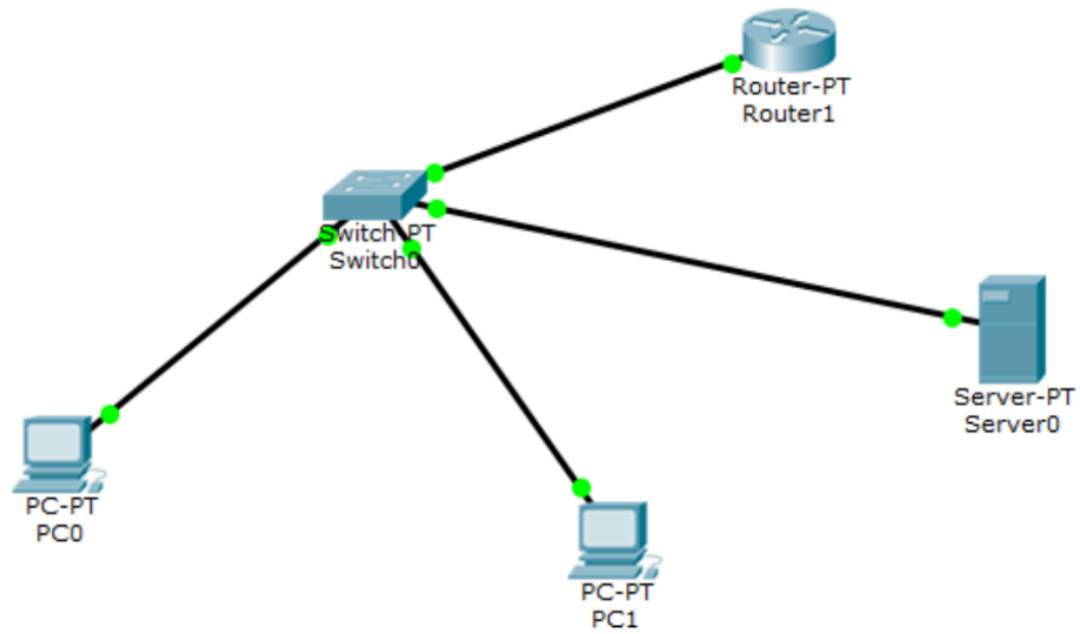


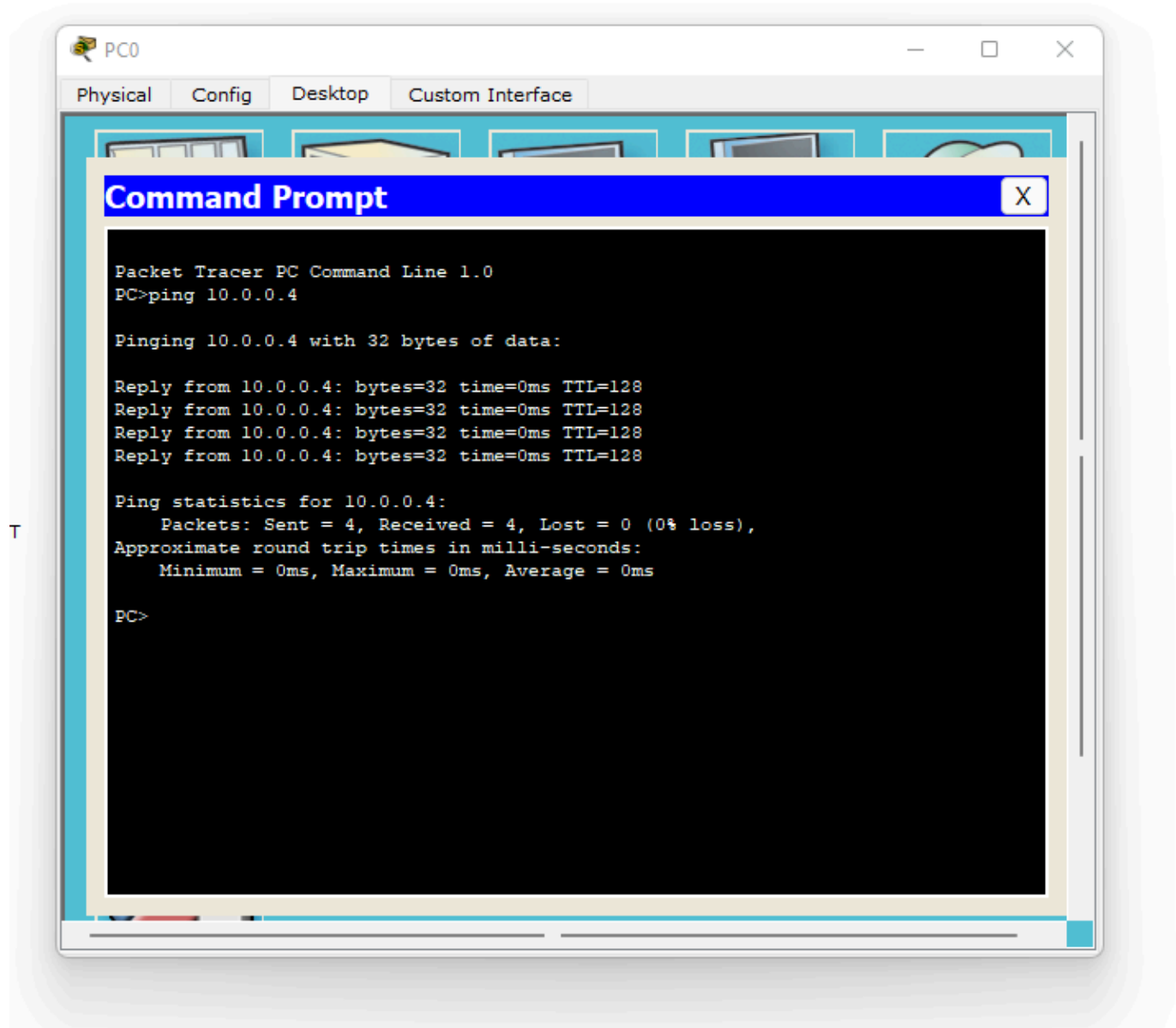
Experiment - 6

Aim: a) To configure IP address of the host using DHCP server present within the LAN

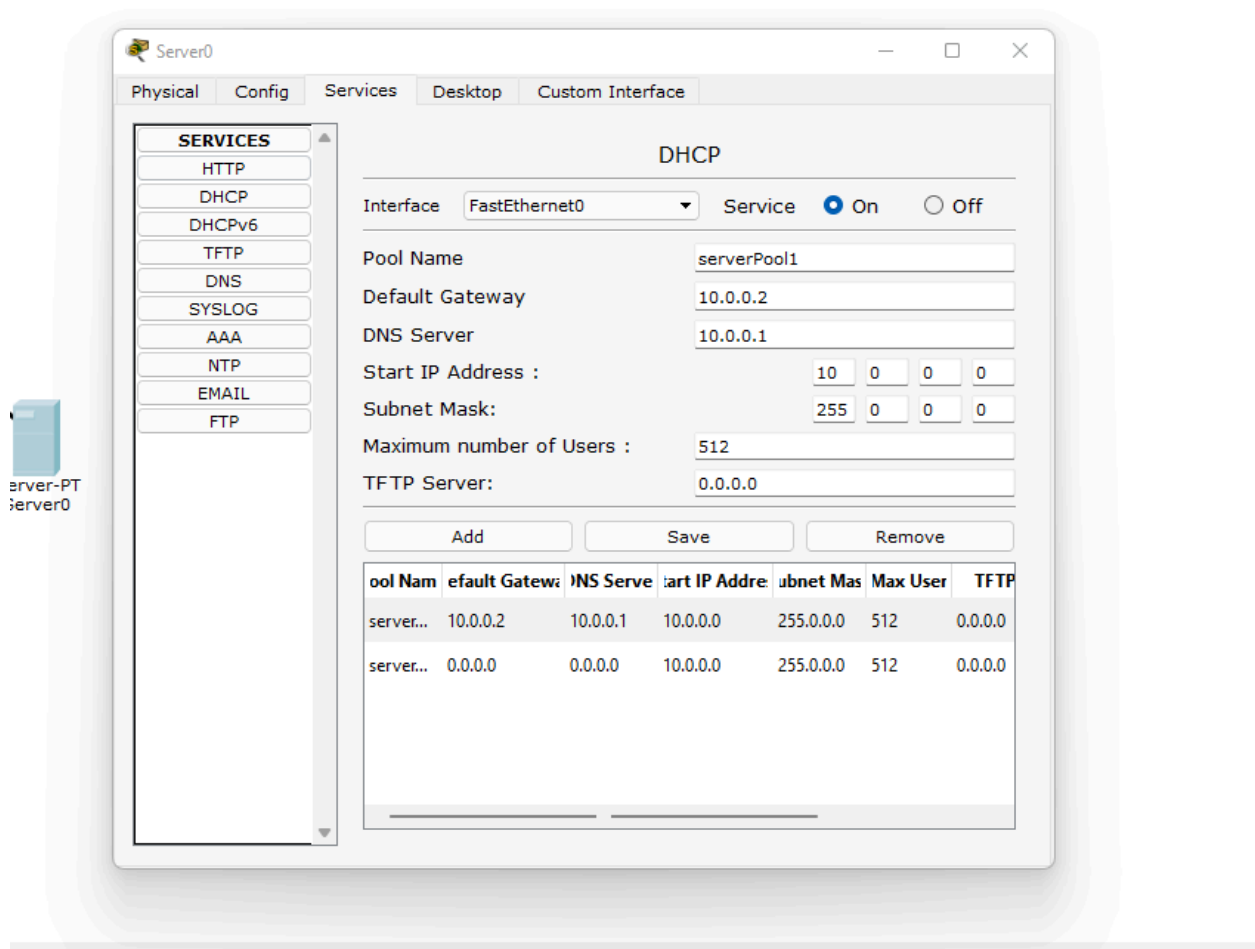
Topology:



Output:



DHCP Service :



Observation:

Date _____
Page _____

12/11/24

Experiment-6

Aim: (a) to configure IP address of the host using DHCP server present within the LAN
(b) to configure IP address of the host using DHCP server present in different LAN

(a) TOPOLOGY:

Configuration:

- (i) Assign IP address to the server PT by configuring it manually as 10.0.0.1.
- (ii) Carry out server configuration by CLI and assign the IP address as 10.0.0.2
- (iii) assign the gateway for the server which is the router interface address (10.0.0.2)

(iv) To configure DHCP protocol:

under the server open the

In the server under services select DHCP and turn the service on

change the pool name to serverpool1 and assign the default gateway as 10.0.0.2 and the DNS server as 10.0.0.1.

(v) configure the IP address of the end devices.
under config select fastethernet0 and select D
The IP address and subnetmask will be auto-
matically assigned with the same network IP.

(vi) carry out ping command.

OUTPUT/OBSERVATION:

PC> Ping 10.0.0.4

Pinging 10.0.0.4 with 32 byte of data.

Reply from 10.0.0.4 : bytes = 32 time = 0ms TTL =

Reply from 10.0.0.4 : bytes = 32 time = 0ms TTL =

Reply from 10.0.0.4 : bytes = 32 time = 0ms TTL =

Reply from 10.0.0.4 : bytes = 32 time = 0ms TTL =

Ping statistics for 10.0.0.4:

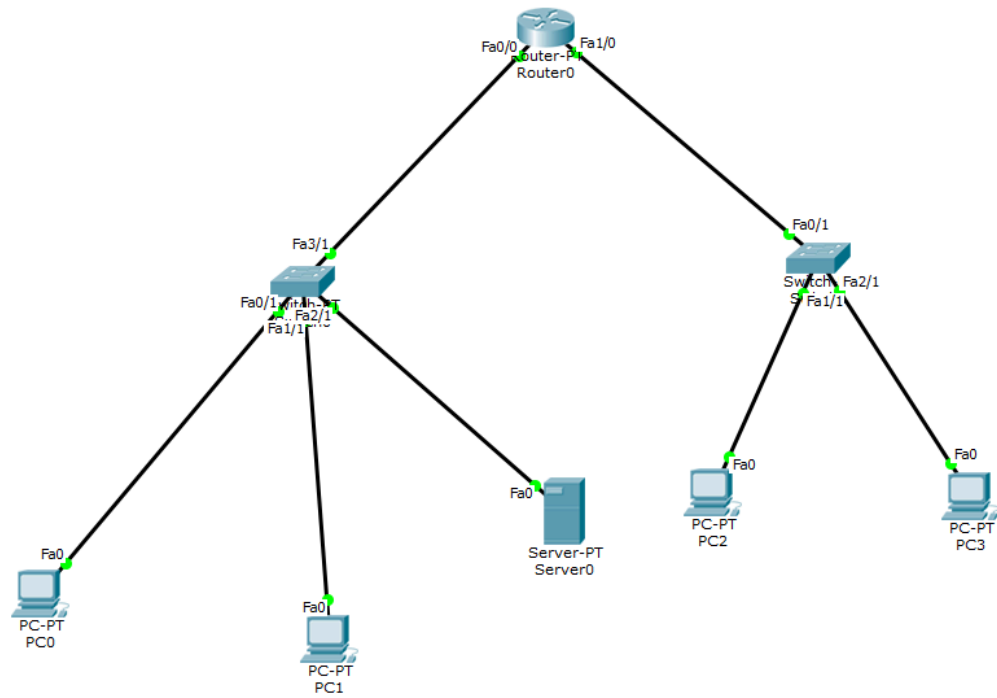
Packets : sent = 4, Received = 4, lost = 0 (0% loss)

Approximate round trip times in milliseconds:

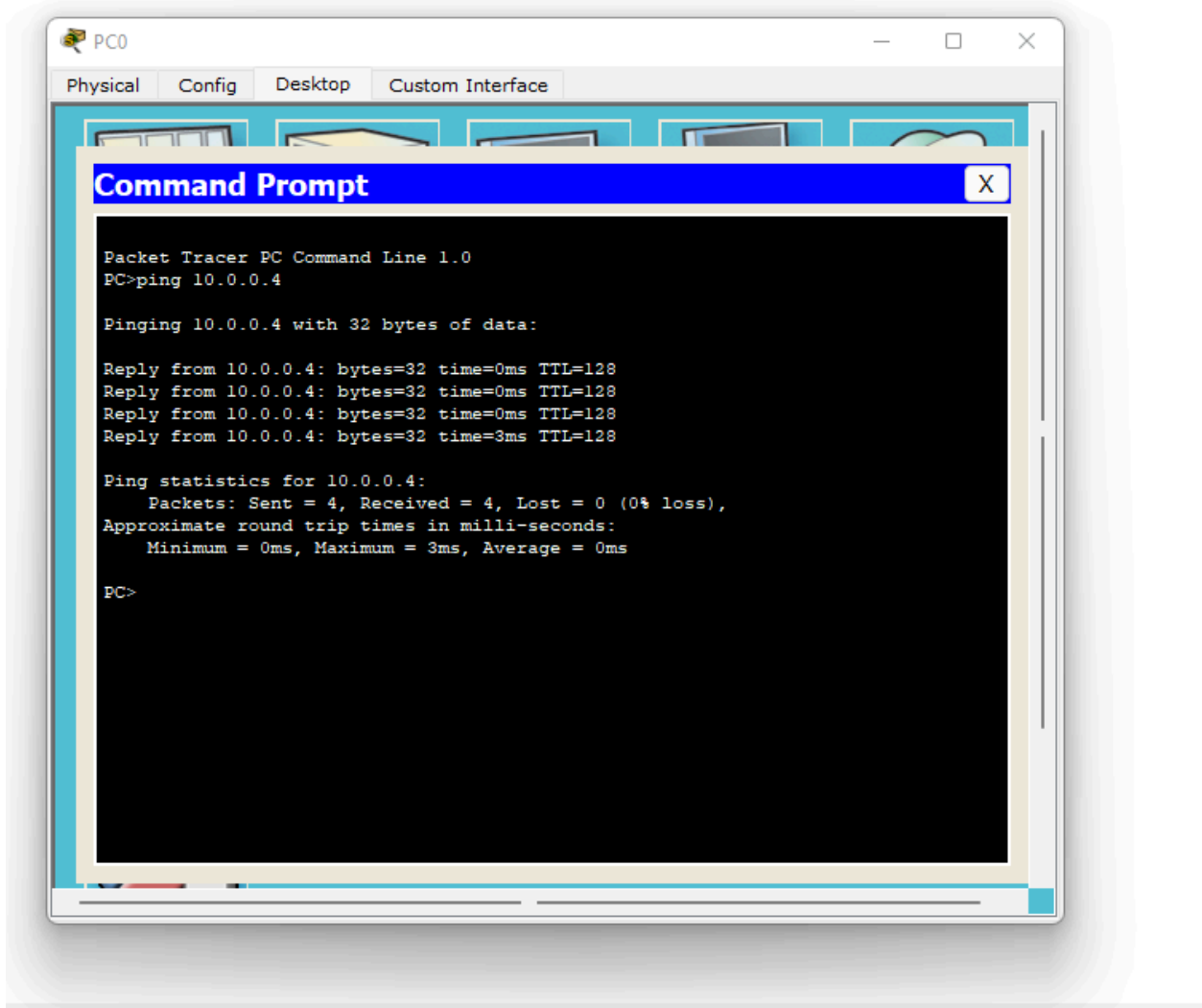
minimum = 0ms, maximum = 3ms, Average = 0ms

b) To configure IP address of host using DHCP server present in different LAN

Topology:



Output:
Router0



DHCP service:

PT
0

Server0

PhysicalConfigServicesDesktopCustom Interface

SERVICES

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

DHCP

InterfaceFastEthernet0ServiceOnOff

Pool Name

serverPool2

Default Gateway

20.0.0.1

DNS Server

10.0.0.1

Start IP Address :

200000

Subnet Mask:

2550000

Maximum number of Users :

512

TFTP Server:

0.0.0.0

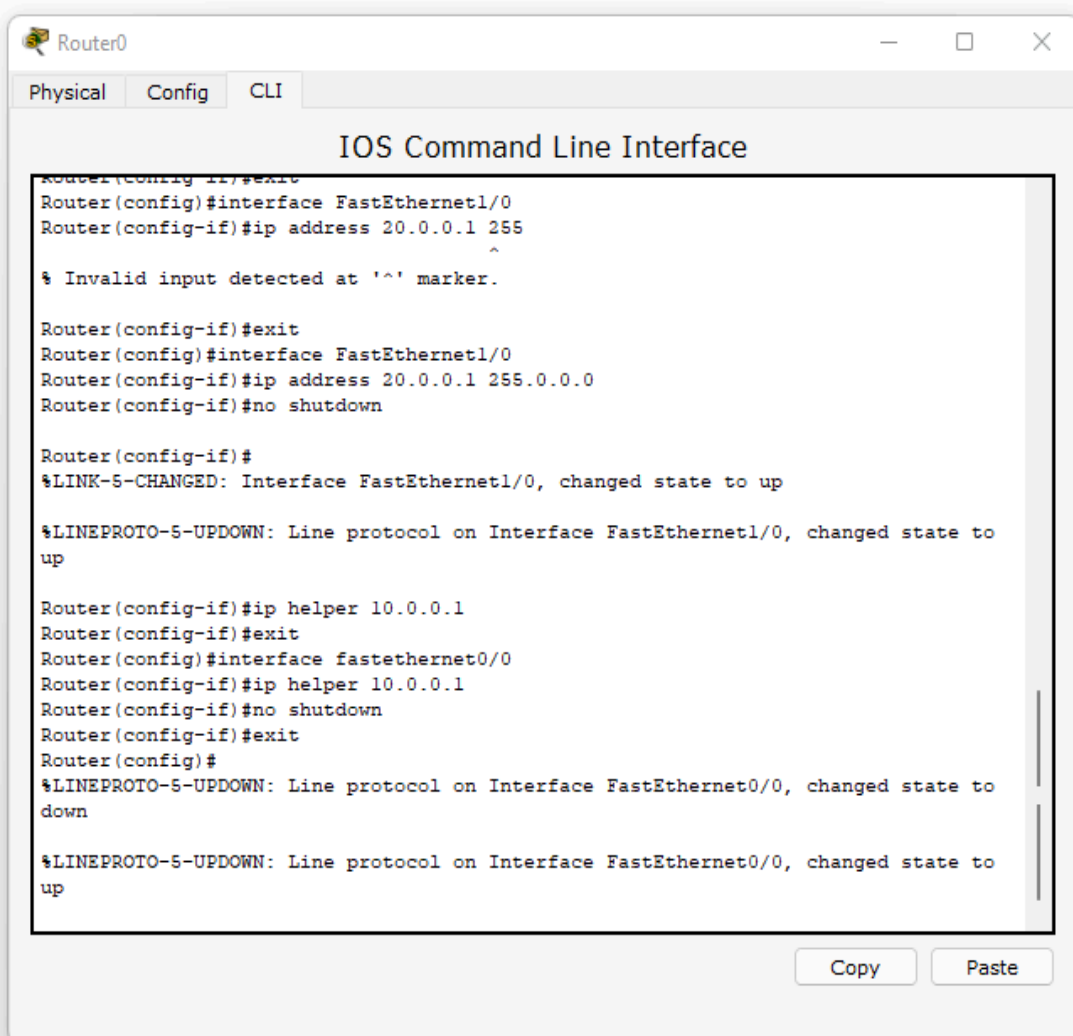
Add

Save

Remove

Pool Nam	efault Gatewa	DNS Serve	Start IP Addre	ubnet Mas	Max User	TFTP
server...	20.0.0.1	10.0.0.1	20.0.0.0	255.0.0.0	512	0.0.0.0
server...	10.0.0.2	10.0.0.1	10.0.0.0	255.0.0.0	512	0.0.0.0
server...	0.0.0.0	0.0.0.0	10.0.0.0	255.0.0.0	512	0.0.0.0

IP helper:



The screenshot shows a Cisco Router CLI window titled "Router0" with tabs for "Physical", "Config", and "CLI". The main title is "IOS Command Line Interface". The terminal output shows the following commands and responses:

```
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 20.0.0.1 255
^
% Invalid input detected at '^' marker.

Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

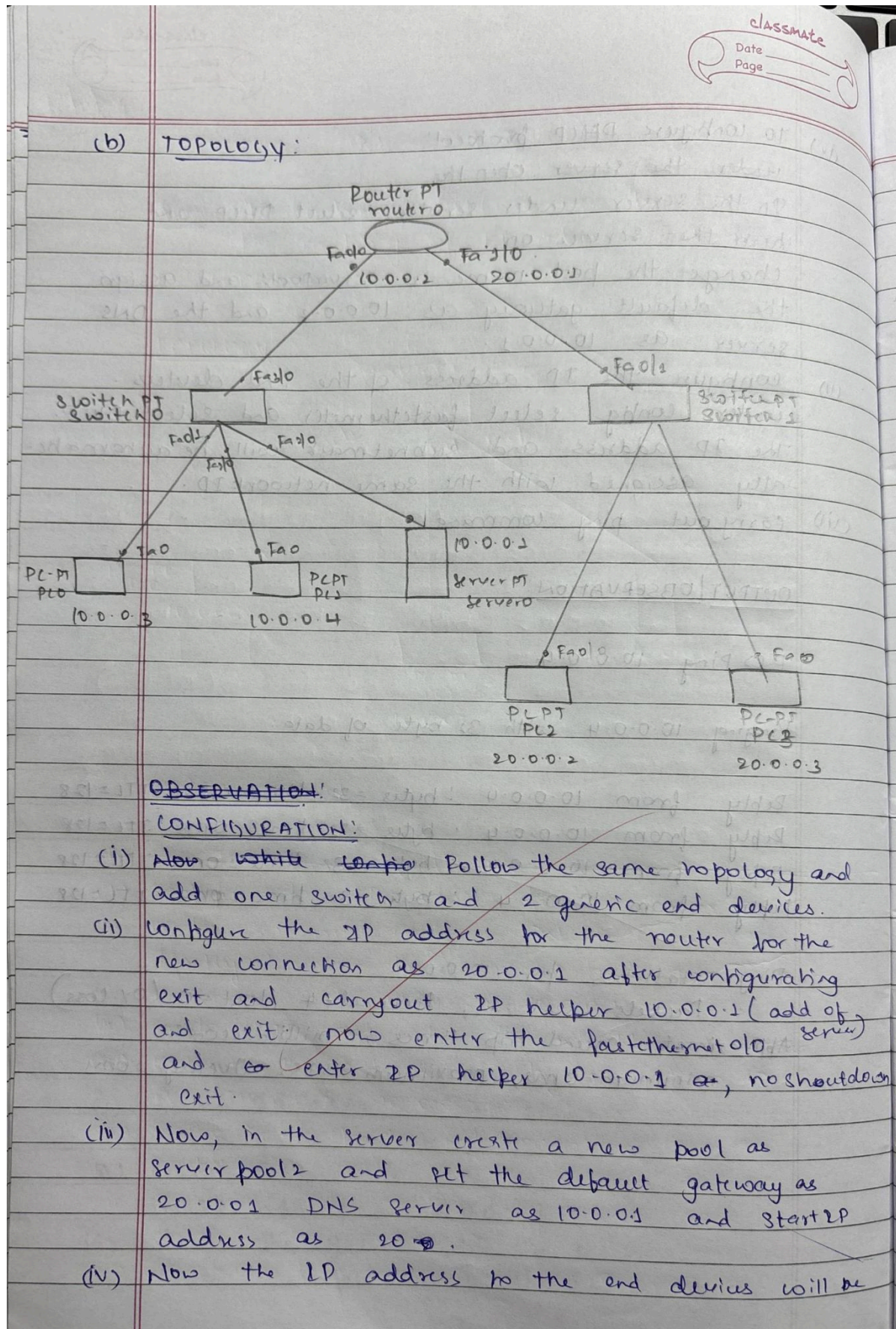
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

Router(config-if)#ip helper 10.0.0.1
Router(config-if)#exit
Router(config)#interface fastethernet0/0
Router(config-if)#ip helper 10.0.0.1
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
```

At the bottom right of the window, there are "Copy" and "Paste" buttons.

Observation:



dynamically allocated under DHCP.

(V) Carryout the ping command.

OBSERVATION:

PC > ping 10.0.0.4

Pinging 10.0.0.4 bytes = 32 time = 0ms TTL = 128
 reply from 10.0.0.4 : bytes time = 0ms TTL = 128
 reply from 10.0.0.4 : bytes time = 0ms TTL = 128
 reply from 10.0.0.4 : bytes time = 0ms TTL = 128
 reply from 10.0.0.4 : bytes time = 0.2ms TTL = 128

Ping statistics for 10.0.0.4

Packets sent = 4 Received = 4, lost = 0 (0% loss)

Approximate round trip time in milliseconds
 minimum = 0ms, maximum = 2ms