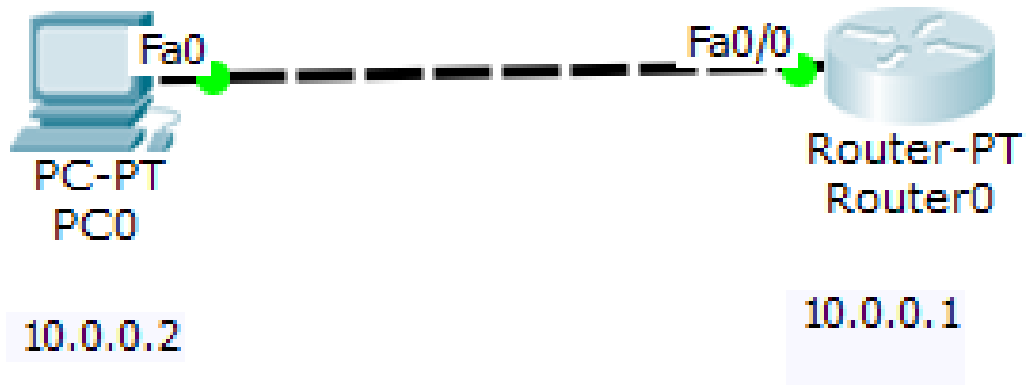


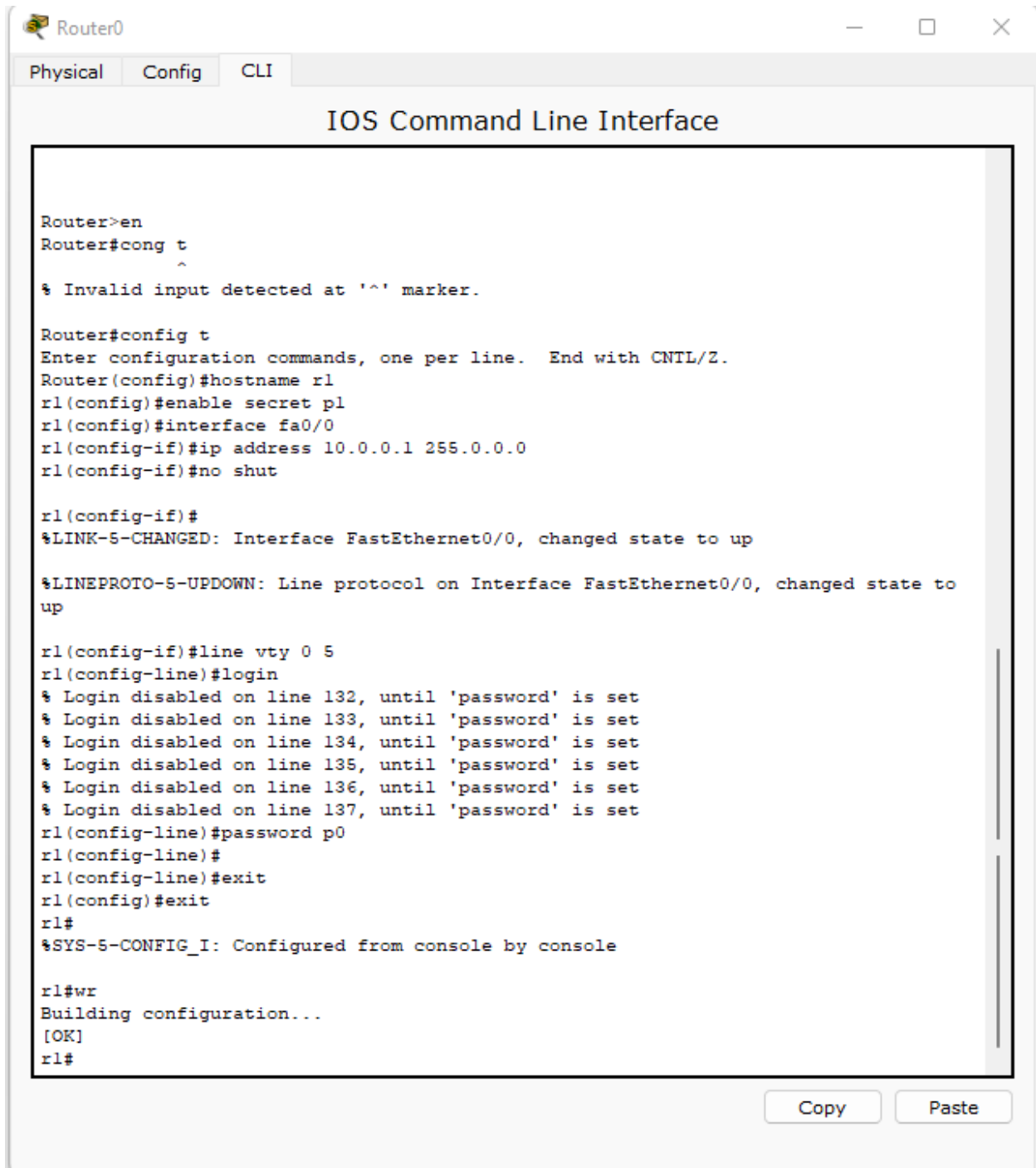
LAB 12:

Aim : To understand the operation of TELNET by accessing the router in server room from a PC in IT office.

Topology:



Configuration: Router 0 CLI:



The screenshot shows a window titled "Router0" with three tabs: "Physical", "Config", and "CLI". The "CLI" tab is active, displaying the "IOS Command Line Interface". The interface shows a series of commands entered at the "Router#" prompt, followed by their outputs. The commands include enabling configuration mode, setting the hostname to "r1", enabling secret passwords, configuring interface "fa0/0" with IP address "10.0.0.1" and subnet mask "255.0.0.0", and setting the interface state to "no shut". The output shows the interface state changing to "up" and the line protocol state changing to "up". The configuration is then saved to the startup configuration.

```
Router>en
Router#cong t
      ^
% Invalid input detected at '^' marker.

Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname r1
r1(config)#enable secret pl
r1(config)#interface fa0/0
r1(config-if)#ip address 10.0.0.1 255.0.0.0
r1(config-if)#no shut

r1(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

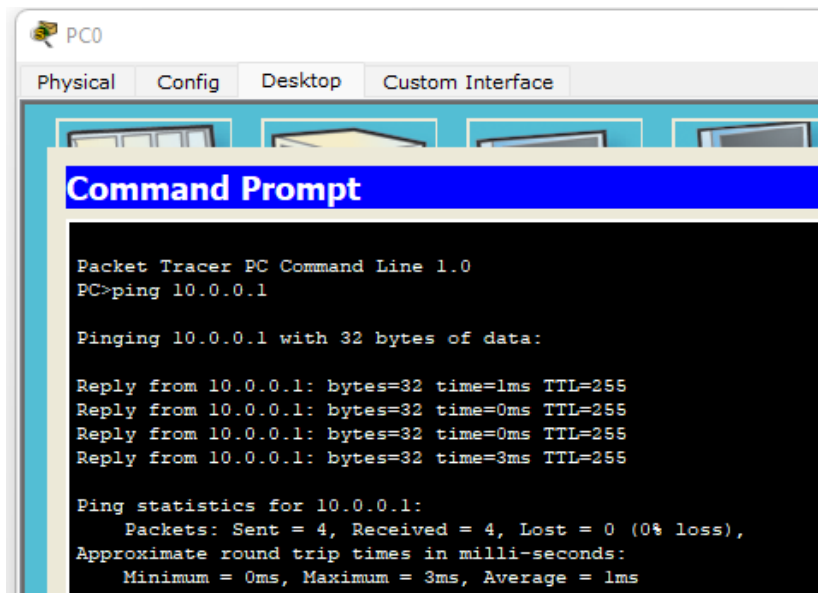
r1(config-if)#line vty 0 5
r1(config-line)#login
% Login disabled on line 132, until 'password' is set
% Login disabled on line 133, until 'password' is set
% Login disabled on line 134, until 'password' is set
% Login disabled on line 135, until 'password' is set
% Login disabled on line 136, until 'password' is set
% Login disabled on line 137, until 'password' is set
r1(config-line)#password p0
r1(config-line)#
r1(config-line)#exit
r1(config)#exit
r1#
%SYS-5-CONFIG_I: Configured from console by console

r1#wr
Building configuration...
[OK]
r1#
```

Copy Paste

Command Prompt:

PC0 to Router:



The screenshot shows a Packet Tracer window for PC0. The 'Config' tab is selected. A 'Command Prompt' window is open, displaying the results of a ping command to 10.0.0.1. The output shows four successful replies with 32 bytes of data, times of 1ms, 0ms, 0ms, and 3ms, and a TTL of 255. The ping statistics show 4 packets sent, 4 received, and 0% loss.

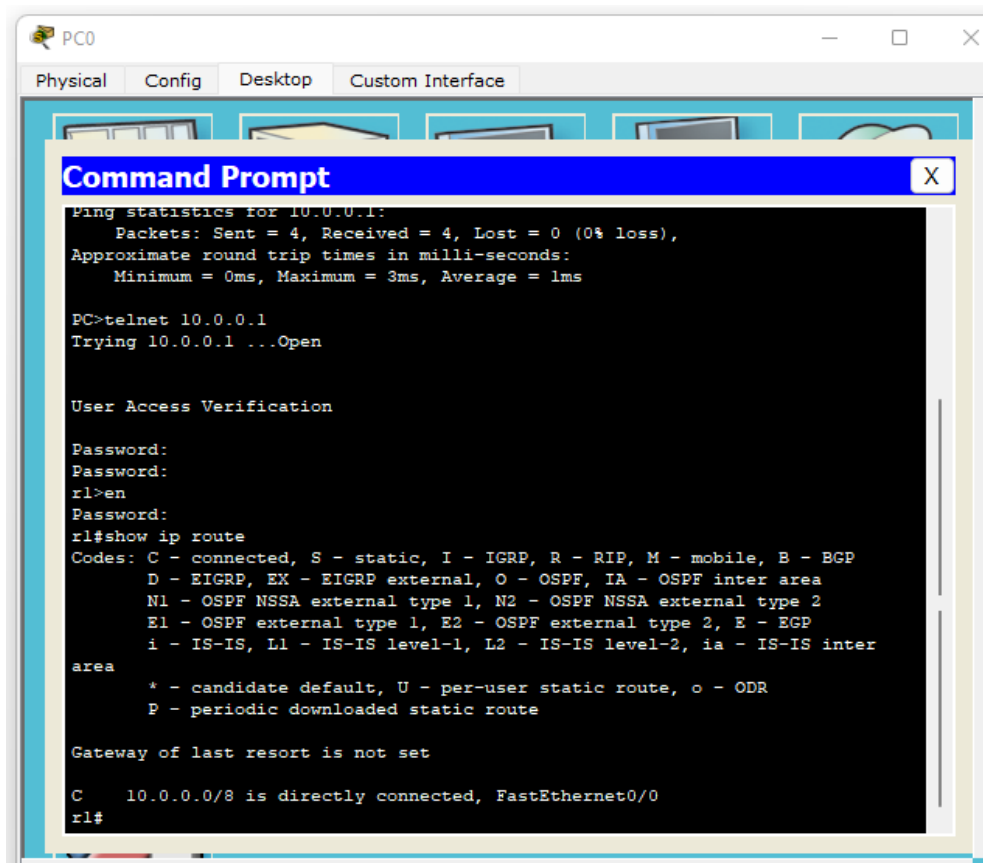
```
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.1

Pinging 10.0.0.1 with 32 bytes of data:

Reply from 10.0.0.1: bytes=32 time=1ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Reply from 10.0.0.1: bytes=32 time=3ms TTL=255

Ping statistics for 10.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms
```

Accessing the router in server room from a PC in IT office.



The screenshot shows a Packet Tracer window for PC0. The 'Config' tab is selected. A 'Command Prompt' window is open, displaying the results of a telnet command to 10.0.0.1. The output shows the telnet session opening, user access verification, and the router's IP routing table. The routing table shows a directly connected route for 10.0.0.0/8 on FastEthernet0/0.

```
Packet Tracer PC Command Line 1.0
PC>telnet 10.0.0.1
Trying 10.0.0.1 ...Open

User Access Verification

Password:
Password:
rl>en
Password:
rl#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter
       area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

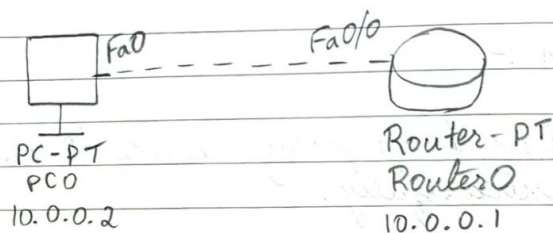
Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
rl#
```

Lab 12

Aim: To understand the operation of TELNET by accessing the router in server room from a PC in IT office.

Topology :-



Procedure:-

1) Create the topology as shown above.
Wire used - Copper cross over.

2) Configure the PC
IP address = 10.0.0.2
Gateway = 10.0.0.1

3) In Router 0 CLI

```

Router > en
Router # config t
Router (config) # hostname R1
R1 (config) # enable secret p1
R1 (config) # int fa0/0
R1 (config-if) # ip address 10.0.0.1 255.0.0.0
  
```

```
r1(config-if)#no shut
r1(config-if)#line vty 0 5 -- for 6 users
r1(config-line)#login
r1(config-line)#password po
r1(config-line)#exit
r1(config)#exit
```

r1# wr

Building Configuration...

Ping Output and Command prompt of PC0

We can successfully Ping 10.0.0.1 from PC0.

In PC0 command prompt :-

PC> telnet 10.0.0.1

Trying 10.0.0.1 ... Open

User Access Verification

Password: po → won't be visible on screen

r1> en

Password: pl

r1# show ip route

C 10.0.0.0/8 is directly connected, FastEthernet0/0

Observation :-

- We can observe that the admin in PC is able to run commands as run in router CLI and see the result from the PC.
- Thus, with help of TELNET, we access the router in server room from a PC.

ND
16/8/2023