Program 2

To demonstrate configuration of IP addresses to the Routers and explore ping command.
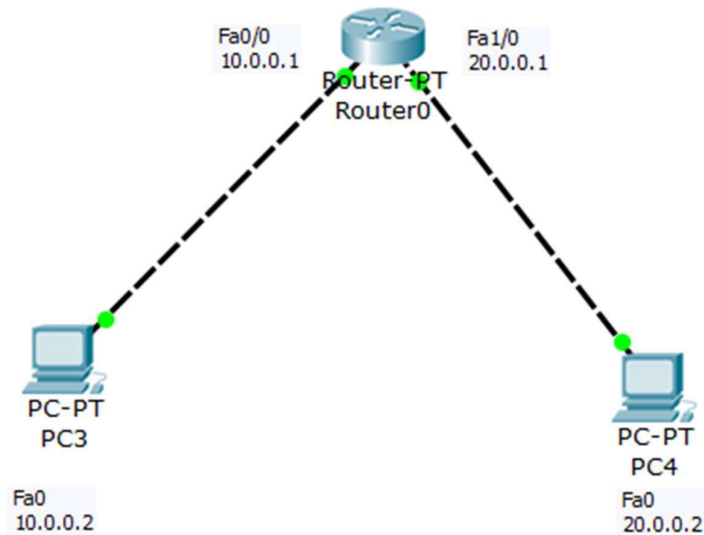

Figure 7: Topology
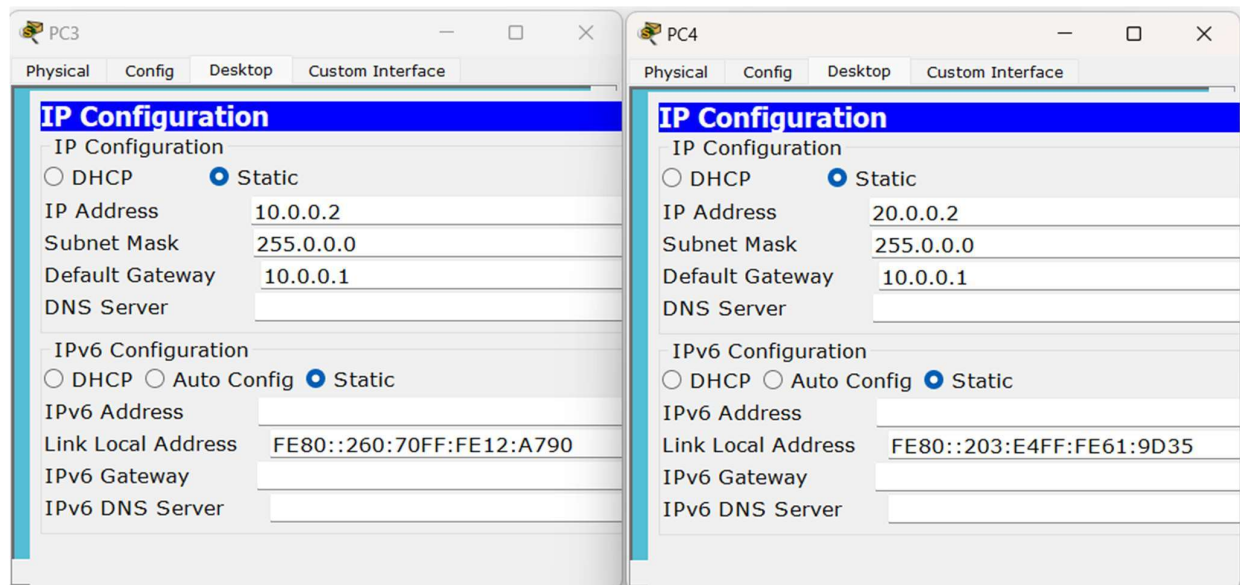

Figure 8: IP addresses
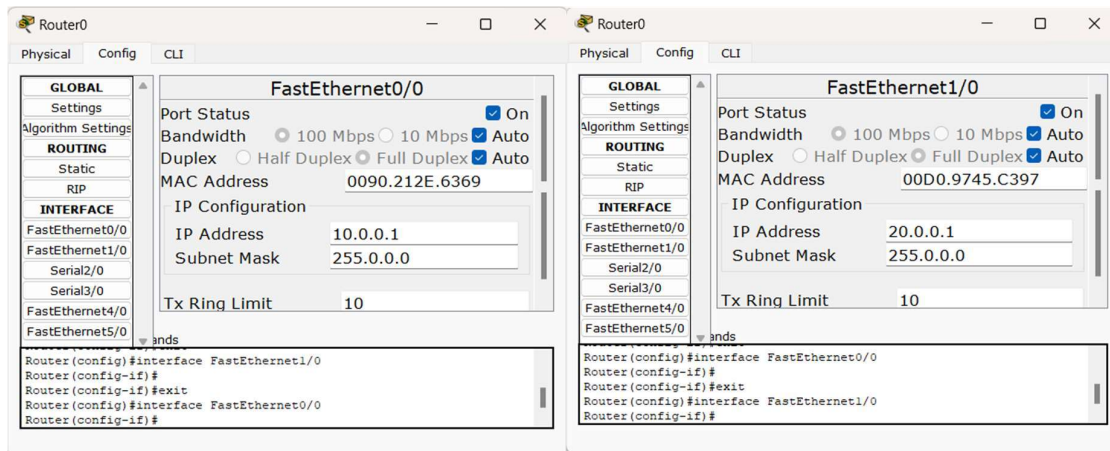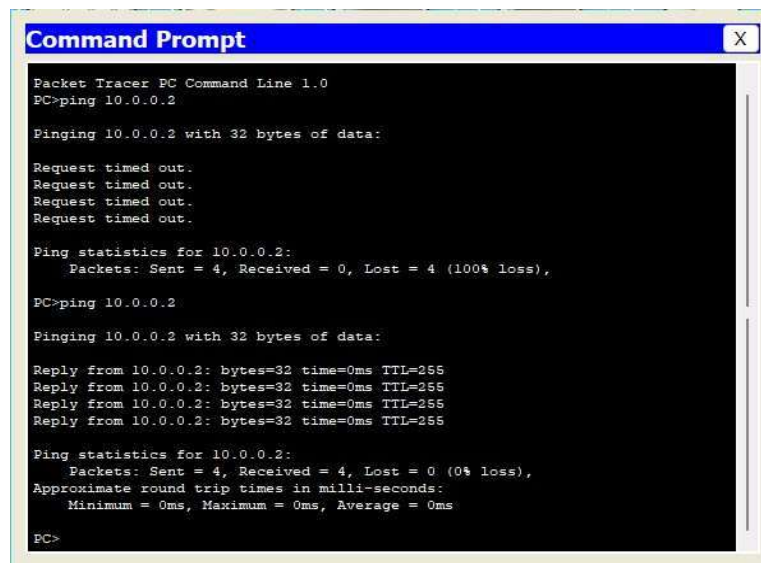
Figure 9: Router Fa0/0

Figure 10: Router Fa1/0

Figure 11: ping command output

Experiment 2

1. PC to routers:

10.0.0.1 ⊗ 20.0.0.2
Route PT
Router10

PC-PT   PC-PT
PC4   PC5
10.0.0.10   20.0.0.20

Aim: To create simple network consisting of 2 PCs connected to the router, facilitating communication between the two PCs through router.

Topology: 2 PCs are connected to the router using Copper Cross-Over

Procedure:

1. Connect the 2 PCs to the router using Copper Cross Over.

2. Open Config in the PC and configure the IP address and the gateway.

3. Do the same for the other PC.

4. Open CLI in the router and configure the fast.Ethernet connection by following the commands.

> enable
> config terminal
> interface fastEthernet 0/0

Figure 12: Observation book 1

> ip address 10.0.0.1   255.0.0.0
       gateway   subnet mask

> no shutdown

    exit

Repeat the steps for other PC connection.

Observation:

Routers can be used to manage communication and data transfer between two different network. While doing ping test, we can observe that ~~one~~ chances of losing one packet are high because the routers will be busy in establishing the connection.

Output:

Router > show ip route

Gateway of last resort is not set

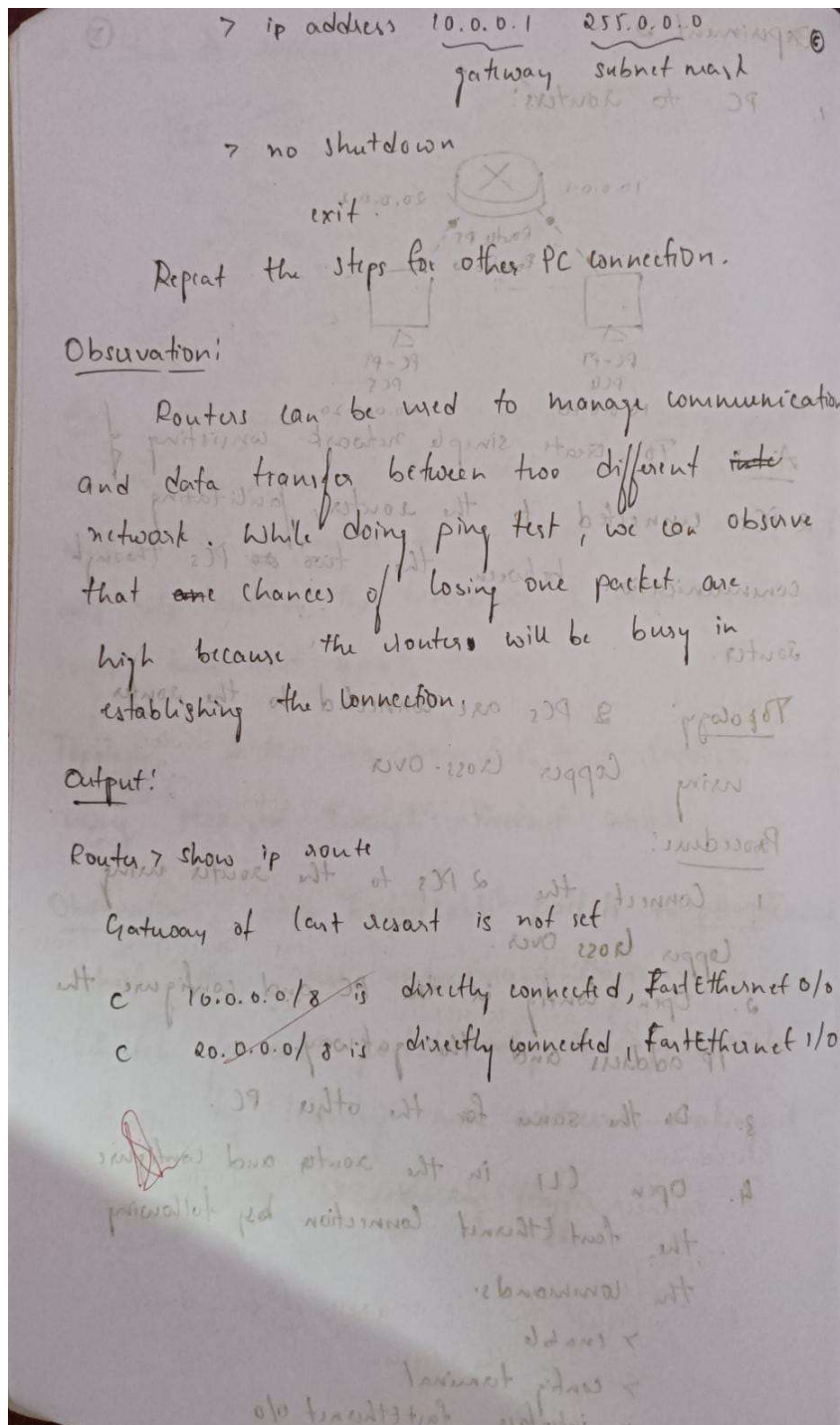C   10.0.0.0/8 is directly connected, FastEthernet 0/0
C   20.0.0.0/8 is directly connected, FastEthernet 1/0.

Figure 13: Observation Book 2