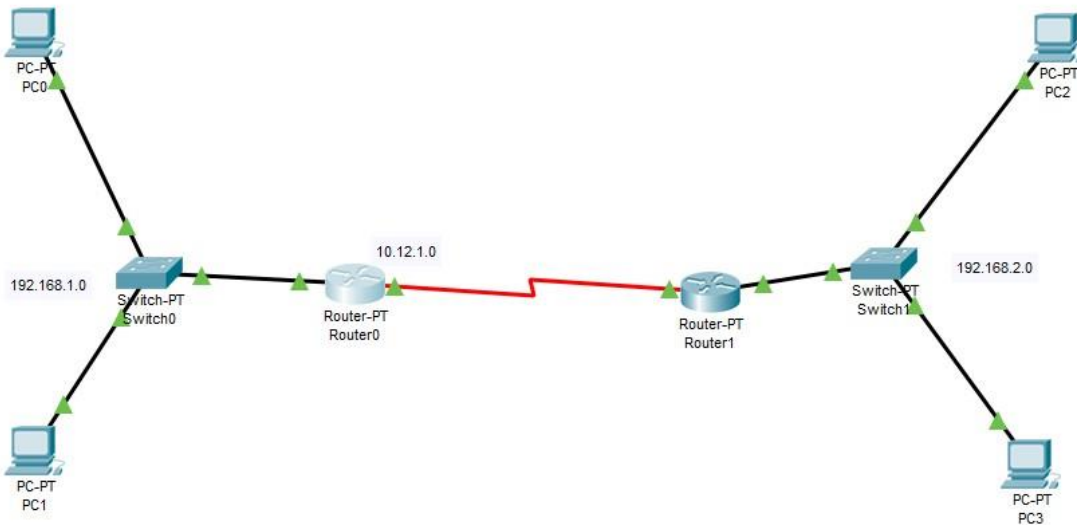


Experiment No 02

B.1: Procedure of performed experiment

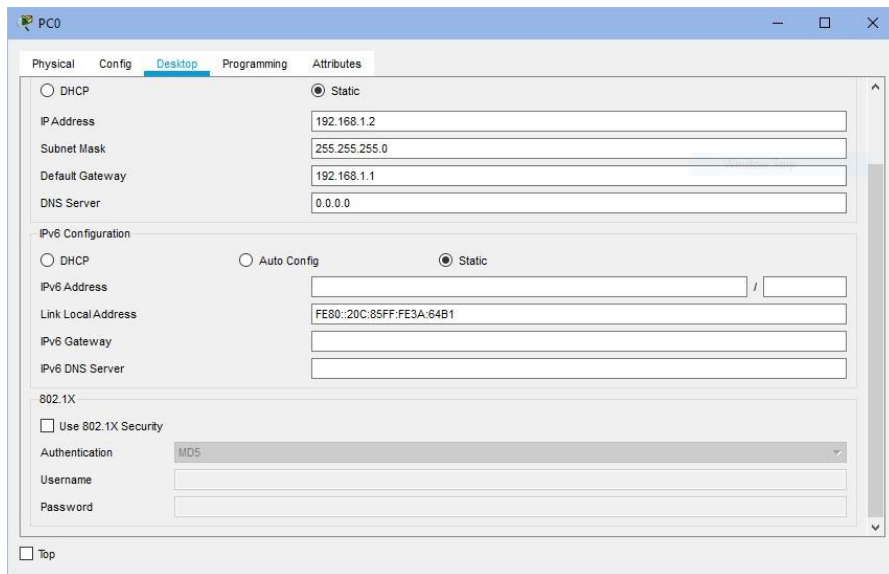
Network made:



The network was made as shown above. Each LAN had two PCs, one Switch and one Router. The PCs were connected to the Switch, which in turn was connected to the Router. The Routers were then connected to each other. The left network was assigned the IP address 192.168.1.0 and the components connected to it were assigned IP addresses corresponding to it. The right network was assigned the IP address 192.168.2.0 and the components connected to it were assigned IP addresses corresponding to it. The network connecting the Routers was assigned the IP address 10.12.1.0. No configurations had to be made on the switch as it works on the data link layer.

Configurations of one LAN:

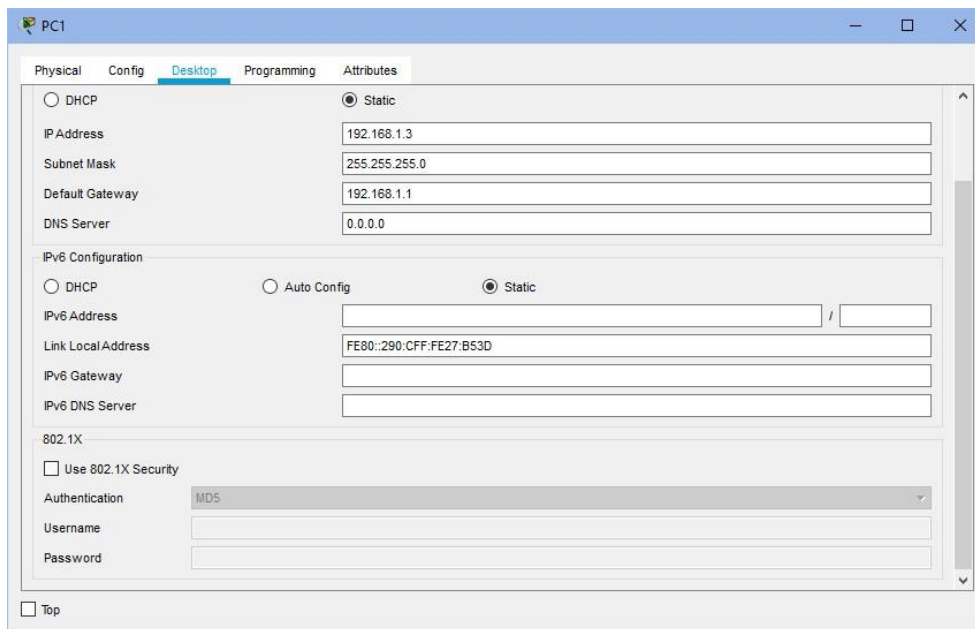
PC0:



For the PC, the IP configuration section under Desktop was filled as follows:

- The IP address assigned to it in the LAN it is connected to was entered (192.168.1.2)
- The default gateway, i.e., the address of router connected to its network, was entered (192.168.1.1)

PC1:



For the PC, the IP configuration section under Desktop was filled as follows:

- The IP address assigned to it in the LAN it is connected to was entered (192.168.1.3)
- The default gateway, i.e., the address of router connected to its network, was entered (192.168.1.1)

Router:

The screenshot shows the configuration window for Router0. The 'Config' tab is active, and the 'FastEthernet0/0' interface is selected in the left sidebar. The main configuration area shows the following settings:

- Port Status:** ☒ On
- Bandwidth:** ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex:** ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address:** 000C.85ED.8702
- IP Configuration:**
 - IP Address:** 192.168.1.1
 - Subnet Mask:** 255.255.255.0
- Tx Ring Limit:** 10

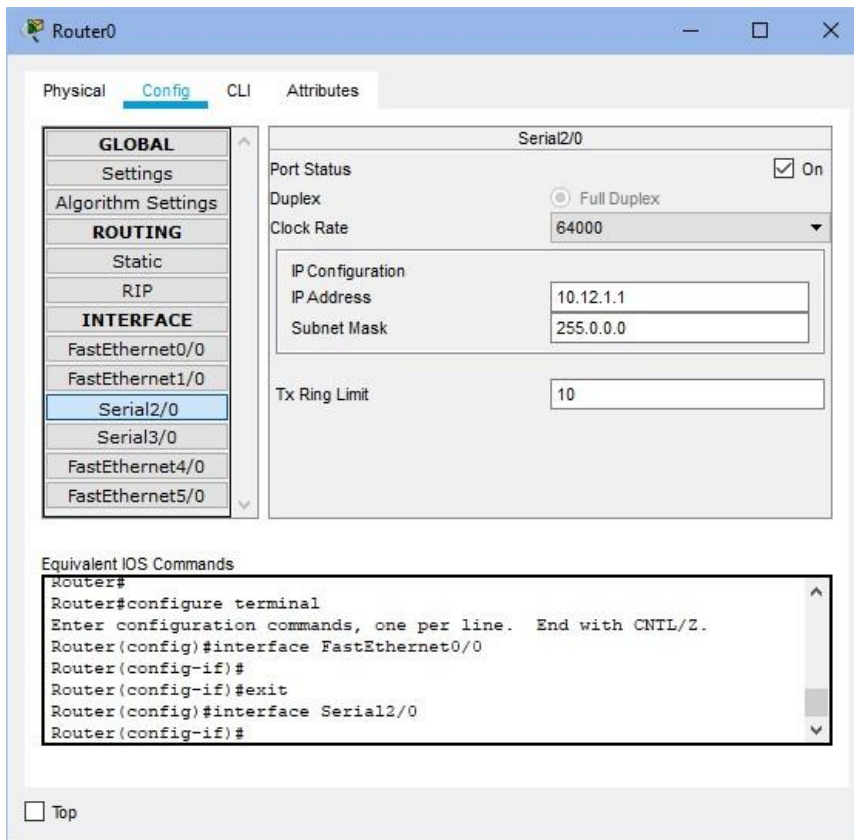
Below the configuration area, the 'Equivalent IOS Commands' section shows the following commands:

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

At the bottom left, there is a checkbox labeled 'Top'.

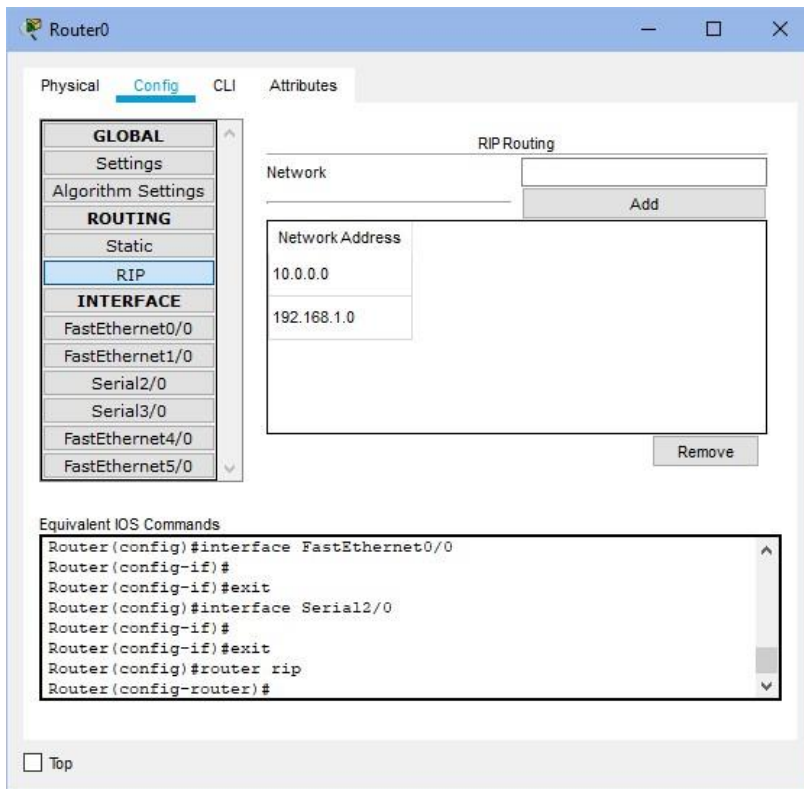
For the router, the FastEthernet0/0 section under Config was filled as follows:

- The IP address assigned to that router in the LAN it is connected to was entered (192.168.1.1)
- The port status was set as ON.



The Serial2/0 section under Config tab was filled as follows:

- The IP address assigned to it in the network between the two routers was entered. (10.12.1.1)
- The clock rate for this router was set as 64000 while for the other router was set as 'Not Set'.
- The port status was set as 'ON'.

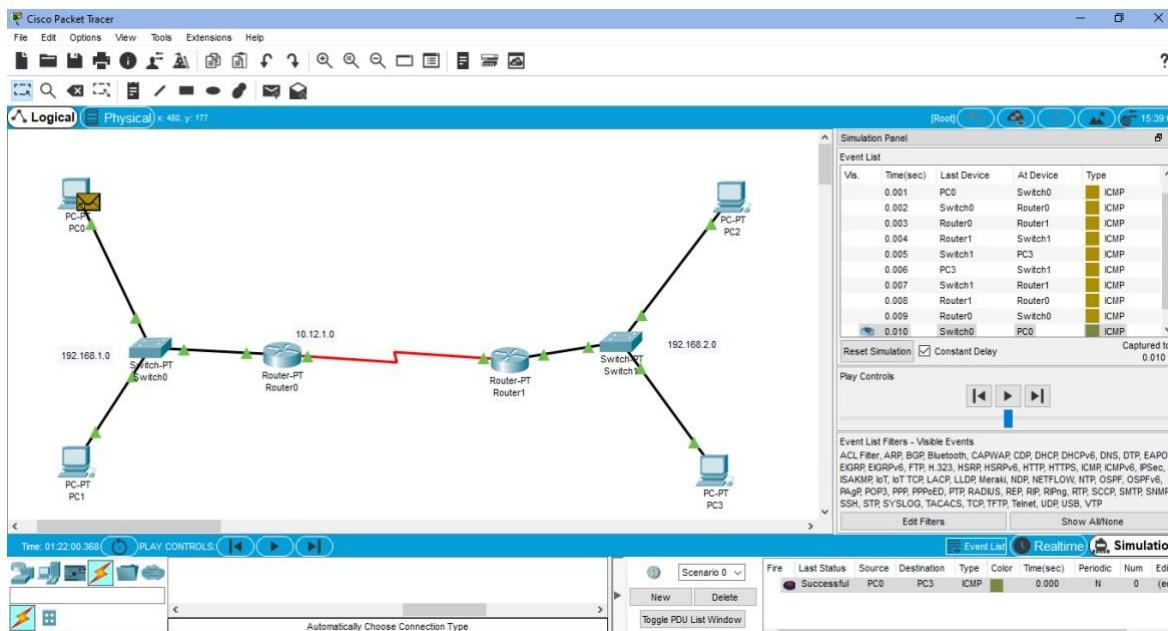


The RIP section under Config tab was filled as follows:

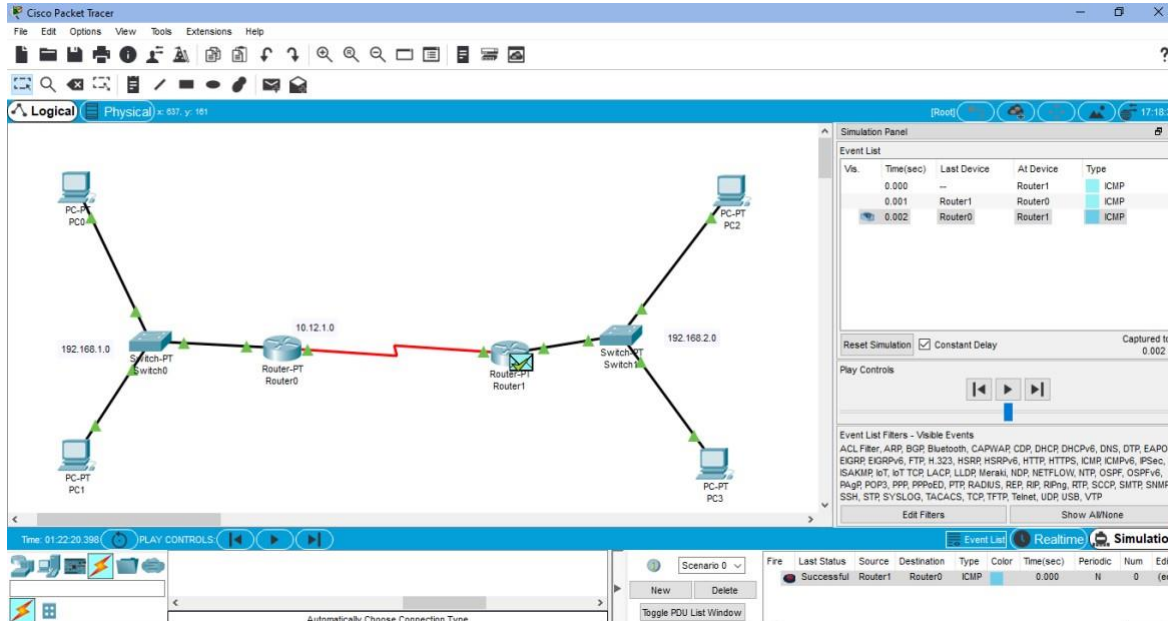
- The addresses of the networks connected to it were entered ○ 10.12.1.0 (corresponding to network between the two routers) ○ 192.168.1.0 (corresponding to the LAN it is connected to)

Packet Transmission:

Cross Network PC-to-PC transmission: (from PC0 to PC3)



Router-to-Router transmission: (Router1 to Router0)



B.2: Observations and Learning's:

Cisco Packet Tracer helps create network topologies using connecting devices, end devices, connections, etc. and simulate the transmission of packets through the network. It gives information about how the packet travels from the source and the destination as well as the components and path used. Changing the IP information of the devices and creating a functional LAN is also possible.

B.3: Conclusion:

I have learnt how to use Packet Tracer and create a network as well as see a packet travel in a network from one device to another.