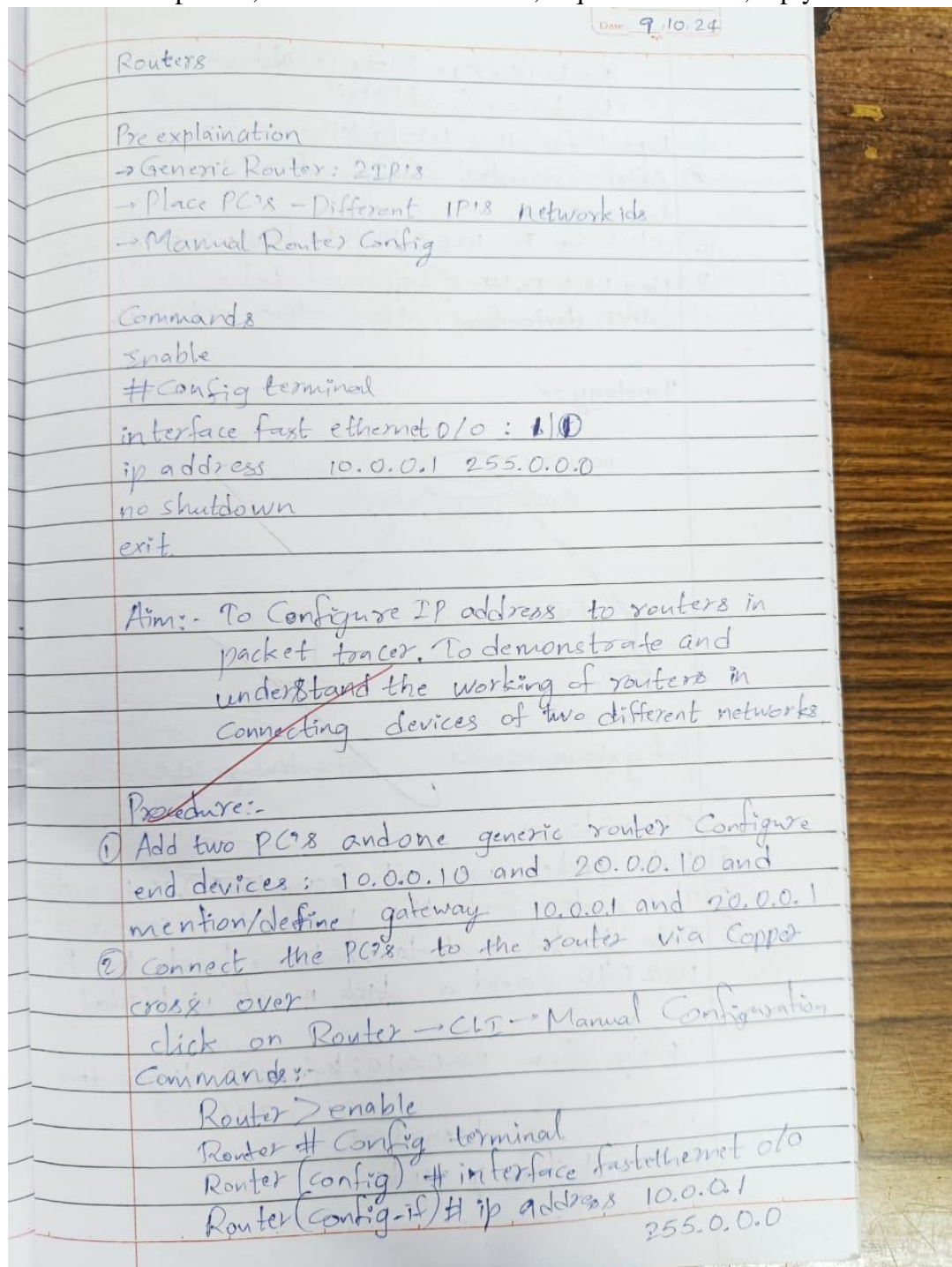


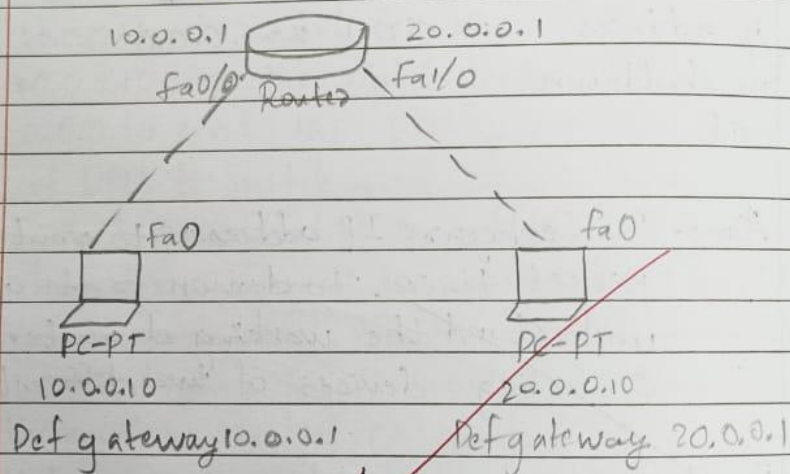
## LABORATORY PROGRAM – 2

Configure IP address to routers in packet tracer. Explore the following messages: ping responses, destination unreachable, request timed out, reply.



- Router(config-if)#no shutdown  
 Router(config-if)#exit  
 Repeat for other PC: fastethernet 1/0
- ⑤ After Successful Configuration, the connection turns green.
  - ⑥ click on PC 10.0.0.10 → Desktop → Command prompt
  - ⑦ ping 20.0.0.10 → To Send data packet to other device from the other networks.

Topology :-



Observations:-

- ① Data packet was Sent from 10.0.0.10 to router
- ② The router Sent the packet to PC 20.0.0.10
- ③ Data packet back to router → back to PC 10.0.0.10 and a tick mark is blinked

Reply from 20.0.0.10: bytes=32 time=4ms  
 TTL=127

IP route was observed as:  
 Router # show ip route

Ping Statistics for 20.0.0.10 :

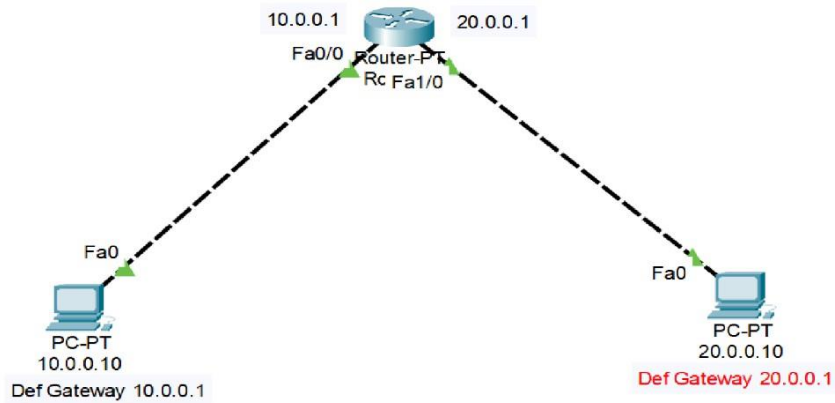
Packets: Sent: 4, Received = 4, Lost = 0 (0% loss)

Approx round trip times in milliseconds:

Minimum = 4ms, Maximum = 4ms, Average = 4ms.

~~C 10.0.0.0/8 is directly connected, fastethernet 0/0~~  
~~C 20.0.0.0/8 is directly connected, fastethernet 1/0~~

Screenshots:



```
Router0
Physical Config CLI Attributes
IOS Command Line Interface
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---
Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>enable
Router#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface fastethernet0/0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#no shutdown

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)#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)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#
```



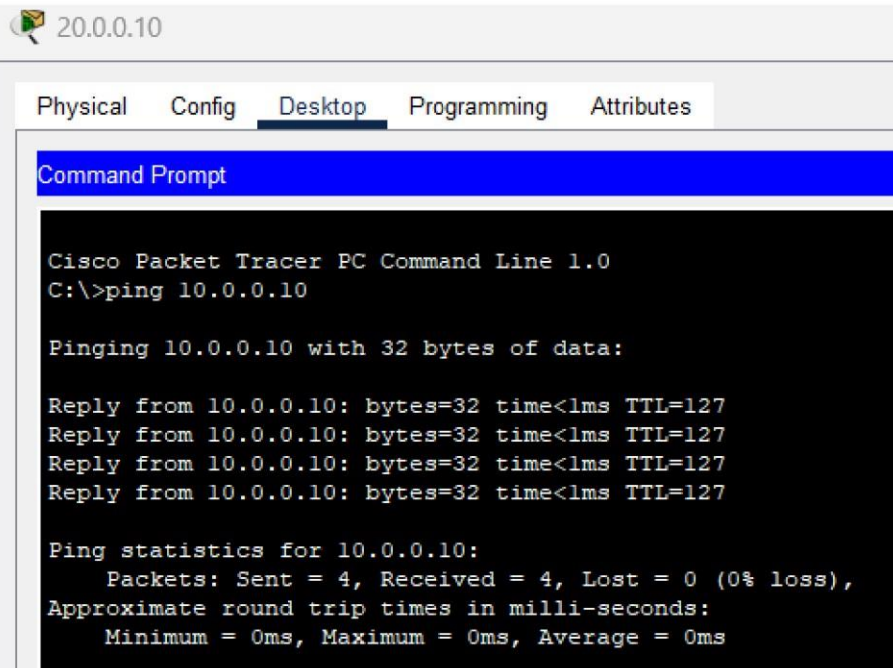
```
C:\>ping 20.0.0.10

Pinging 20.0.0.10 with 32 bytes of data:

Reply from 20.0.0.10: bytes=32 time<1ms TTL=127
Reply from 20.0.0.10: bytes=32 time<1ms TTL=127
Reply from 20.0.0.10: bytes=32 time<1ms TTL=127
Reply from 20.0.0.10: bytes=32 time<1ms TTL=127

Ping statistics for 20.0.0.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

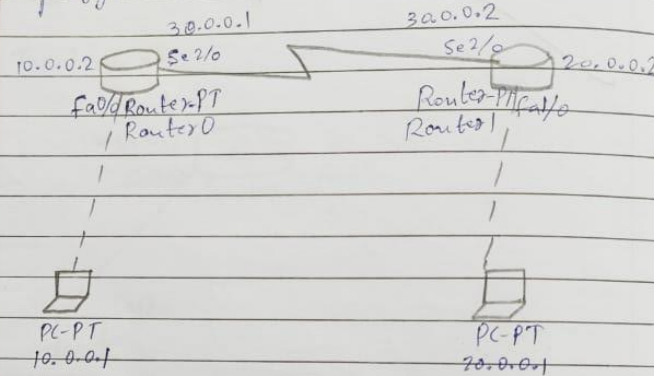


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## Lab No-3 (Experiment 2) 2 Routers

Aim: To configure IP address to routers in packet tracer. Explore following messages: ping responses, destination unreachable, request timed out, reply.

### Topology:



Def gateway 10.0.0.2

Def gateway 20.0.0.2

### Procedure:-

- 1 Add two PCs and two given Routers.
- 2 Configure end devices 10.0.0.10 & 20.0.0.10 and define gateways
- 3 Connect PC to Router Using copper cross over connect the routers to each other using Serial DCE
- 4 Configure the routers:  
Click on Router → CLI  
→ Configure to end devices similar to last experiment.

→ Connecting the routers:

Commands:

Router>enable

Router # Config terminal

Router(config) # interface Serial 2/0

Router(config-if) # ip address 30.0.0.1

Router(config-if) # no shut

- ⑤ Give appropriate naming
- ⑥ Ping the device 20.0.0.1 from 10.0.0.1

OBSERVATIONS:-

- ① The connections were done properly and green lights were displayed.
- ② But when the device 10.0.0.1 pinged 20.0.0.1 the output showed that the host was unreachable.
- ③ Since the networks are not direct neighbours directly connected, the data sent was failed.
- ④ Pinging the same networks was successful since they are directly connected, pinging 30.0.0.1 from 10.0.0.1 was a success.

