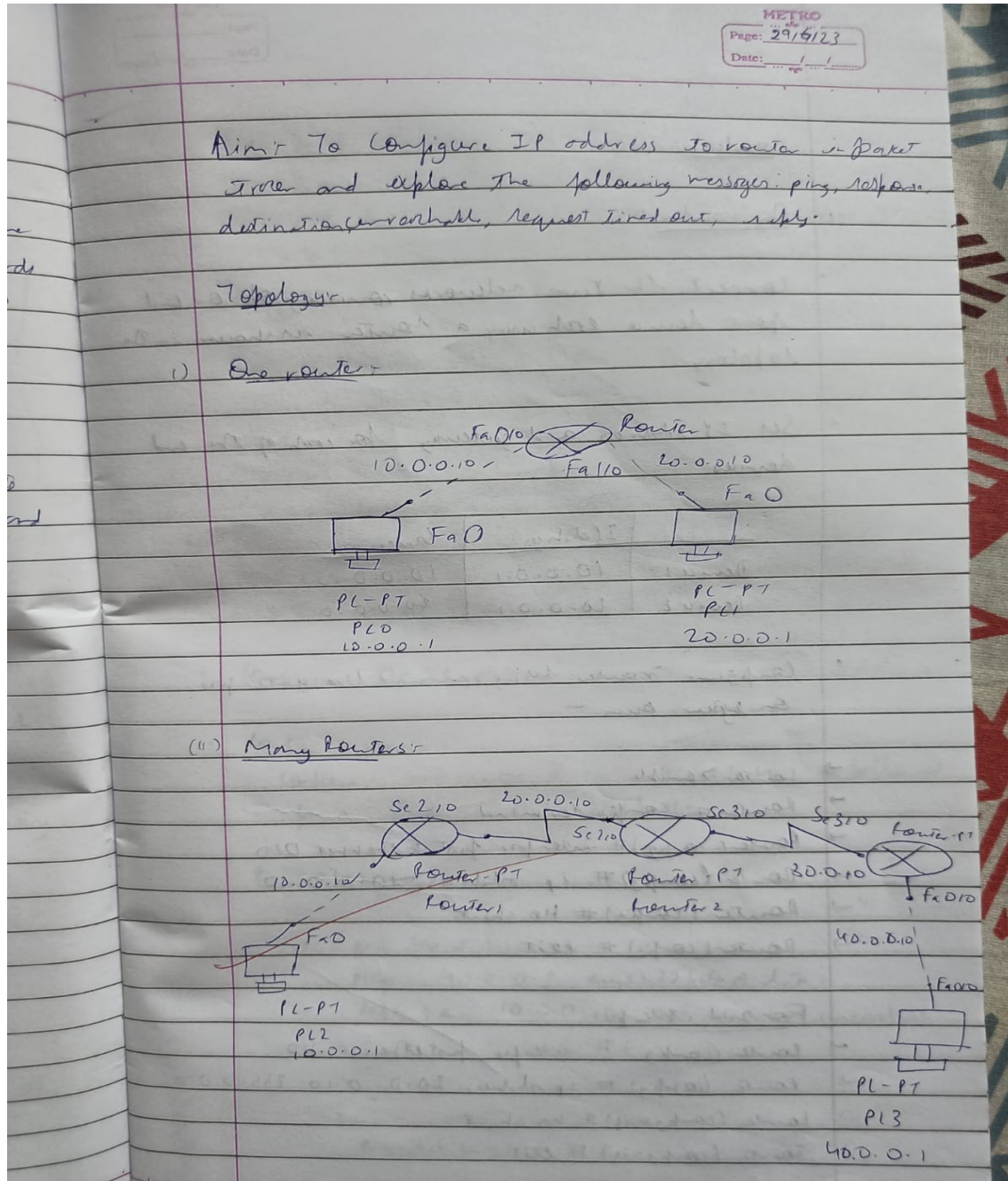


WEEK 2

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

OBSERVATION:



Procedure:-

(i) One router:-

- Connect the two networks consisting of one end point device each using a router as shown in the topology.
- Set IP address and gateway for each of the end devices.

	<u>IP address</u>	<u>Gateway</u>
Device 1	10.0.0.1	10.0.0.10
Device 2	20.0.0.1	20.0.0.10

- Configure router using command line interface, on your own.

- Router > enable
- Router # config terminal
- Router (config) # interface fast Ethernet 0/0
- Router (config) # ip address 10.0.0.10
- Router (config) # no shut
- Router (config) # exit

For 2nd interface

- Router (config) # interface fast Ethernet 1/0
- Router (config) # ip address 20.0.0.10 255.0.0.0
- Router (config) # no shut

o/r ping 20.0.0.1

pinging 20.0.0.1 with 32 bytes of data

Reply from 20.0.0.1: bytes = 32 Time = 0ms TTL = 127

"

"

"

ping stats for 20.0.0.1:

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

(ii) Multiple Routers

- Connect and configure of 1st network (10.0.0.0) to an end device of 2nd network (20.0.0.0) via 3 routers as shown in topology.
- Configure the IP address and gateway of the end devices.
- Configure routers
 - Configure each router to each of interfaces, as followed for a single router in step 3 of.

Ping o/r

PC> ping 40.0.0.1

pinging 40.0.0.2 with 32 bytes of data

Reply from 10.0.0.10: destination host unreachable

"

"

"

Ping stats for 40.0.0.1:

Routing packets:-

Router 1:-

Router 1:-

Router (config) # ip route 30.0.0.0 255.0.0.0
20.0.0.0

Router (config) # ip route 40.0.0.0 255.0.0.0
20.0.0.0

Router 2:-

Router (config) # ip route 10.0.0.0 255.0.0.0 20.0.0.0

Router (config) # ip route 40.0.0.0 255.0.0.0
30.0.0.0

Router 3:-

Router (config) # ip route 10.0.0.0 255.0.0.0
30.0.0.0

Router (config) # ip route 20.0.0.0 255.0.0.0
30.0.0.0

CLI:-

P17 Ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Reply from 40.0.0.1: bytes=32 time=18ms TTL=125

Time=2ms TTL=125

Time=2ms TTL=125

Time=2ms TTL=125

Ping statistics

Ping statistics for 40.0.0.1:

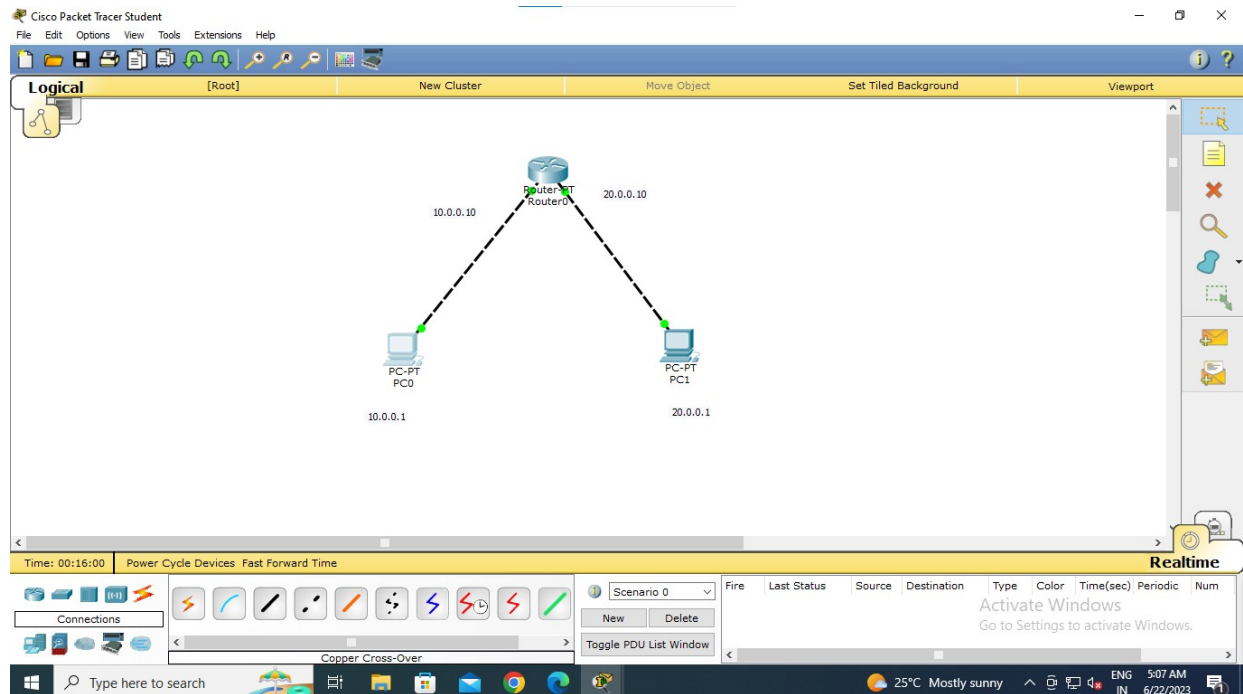
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)

Observations

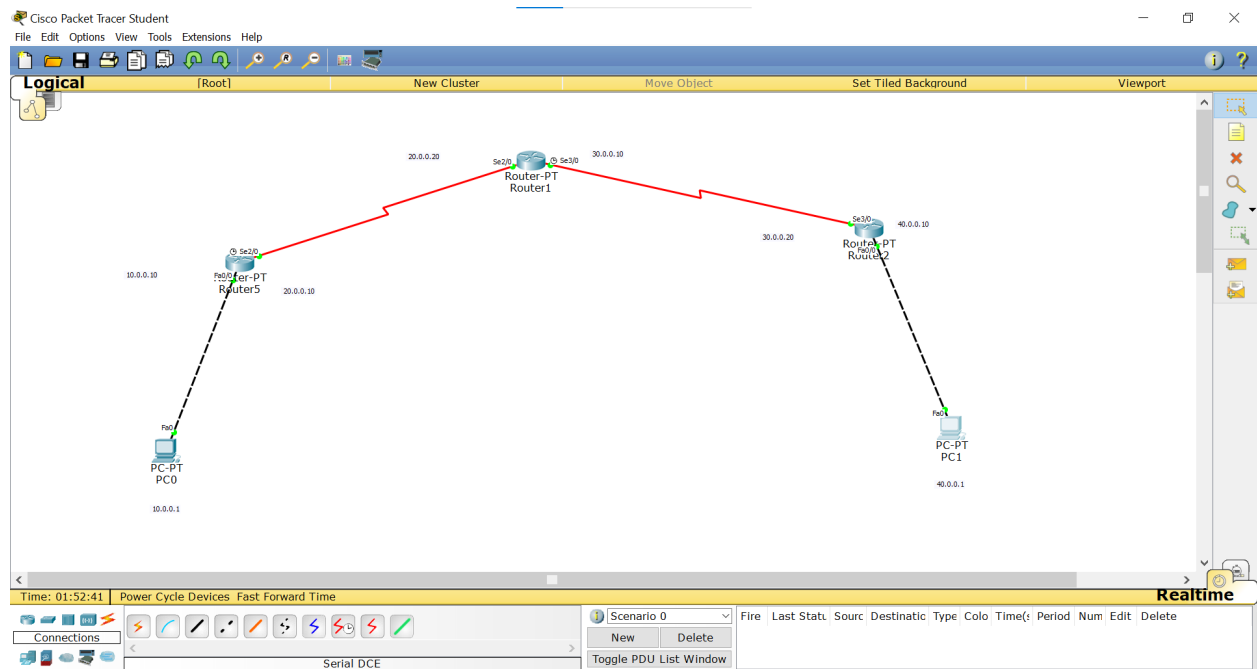
Observed different cases for ping responses such as destn unreachable (when routing was not done), request timed out and reply.

TOPOLOGY:

PROGRAM 2.1



PROGRAM 2.2



OUTPUT:

PROGRAM 2.1

The screenshot displays the Cisco Packet Tracer Student interface. A Command Prompt window is open, showing the results of a ping command from PC0 to 20.0.0.1. The output indicates a 25% loss of packets.

```
Packet Tracer PC Command Line 1.0
PC>ping 20.0.0.1

Pinging 20.0.0.1 with 32 bytes of data:

Request timed out.
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=10ms TTL=127

Ping statistics for 20.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 10ms, Average = 3ms

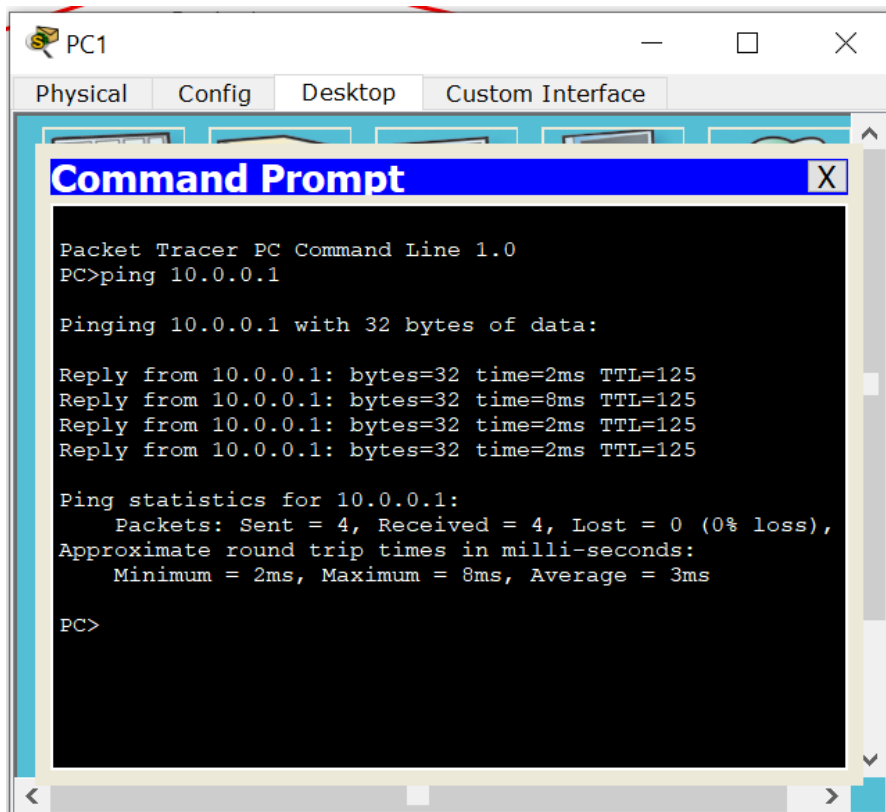
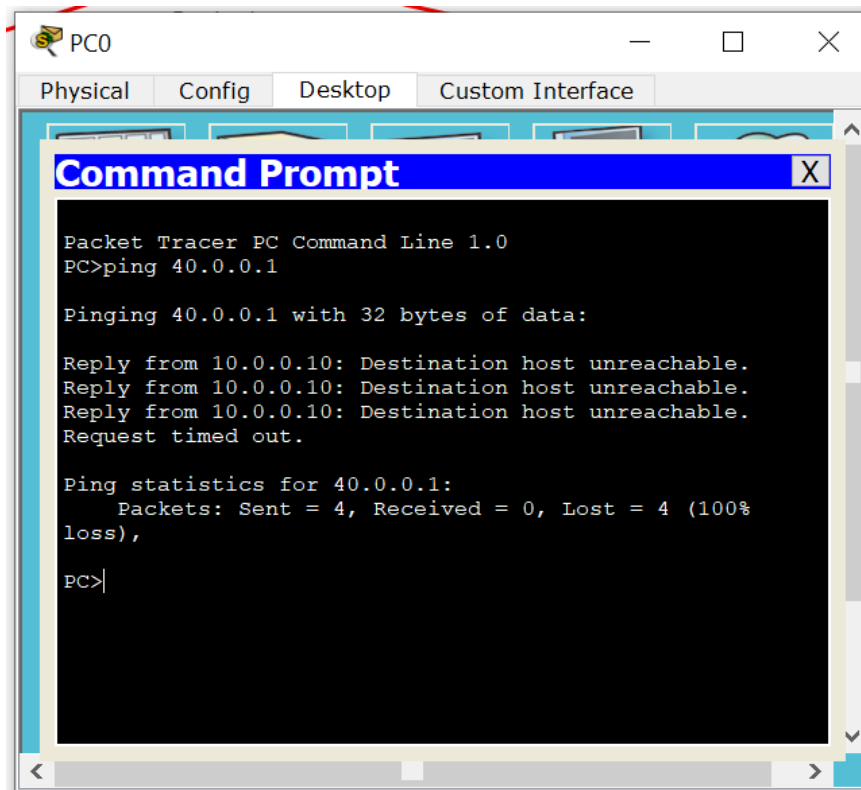
PC>
```

The main Packet Tracer interface shows a network topology with a central Router0 connected to two PCs: PC0 (10.0.0.1) and PC1 (20.0.0.1). The Event List window is open, showing a table of captured events.

Vis.	Time(sec)	Last Device	At Device	Type	Info
	465.354	Router0	PC1	CDP	
	525.353	--	Router0	CDP	
	525.353	--	Router0	CDP	
	525.354	Router0	PC0	CDP	
	525.354	Router0	PC1	CDP	
	585.355	--	Router0	CDP	
	585.355	--	Router0	CDP	
	585.356	Router0	PC0	CDP	
	585.356	Router0	PC1	CDP	

The bottom status bar shows the time as 00:27:16.137 and the simulation status as 'Successful'.

PROGRAM 2.2



Cisco Packet Tracer Student

File Edit Options View Tools Extensions Help

Logical [Root] New Cluster Move Object Set Tiled Background Viewport

Simulation Panel

Event List

Vis.	Time(sec)	Last De	At Dev	Type	Info
	28.315	--	Rout...	CDP	
	28.316		Router5	PC0	CDP
	28.316		Router5	Router...	CDP
	45.862	--	Rout...	CDP	
	45.862	--	Rout...	CDP	

Reset Simulation ☒ Constant Delay Captured to: 45.862 s

Play Controls

Back Auto Capture / Play Capture / Forward

Event List Filters - Visible Events

ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, LACP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgg, POP3, RADIUS, RIP, RIPng, RTSP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TFTP, Telnet, UDP, VTP

Edit Filters Show All/None

Time: 01:54:00.015 Power Cycle Devices PLAY CONTROLS: Back Auto Capture / Play Capture / Forward

Connections

Serial DCE

Scenario 0

New Delete

Toggle PDU List Window

Fire Last Stat: Sours Destinatic Type Colo Time(- Period Num Edit Delete

Successful PC0 PC1 IC... 0.000 N 0 (ed... (delete)

Event List Simulation