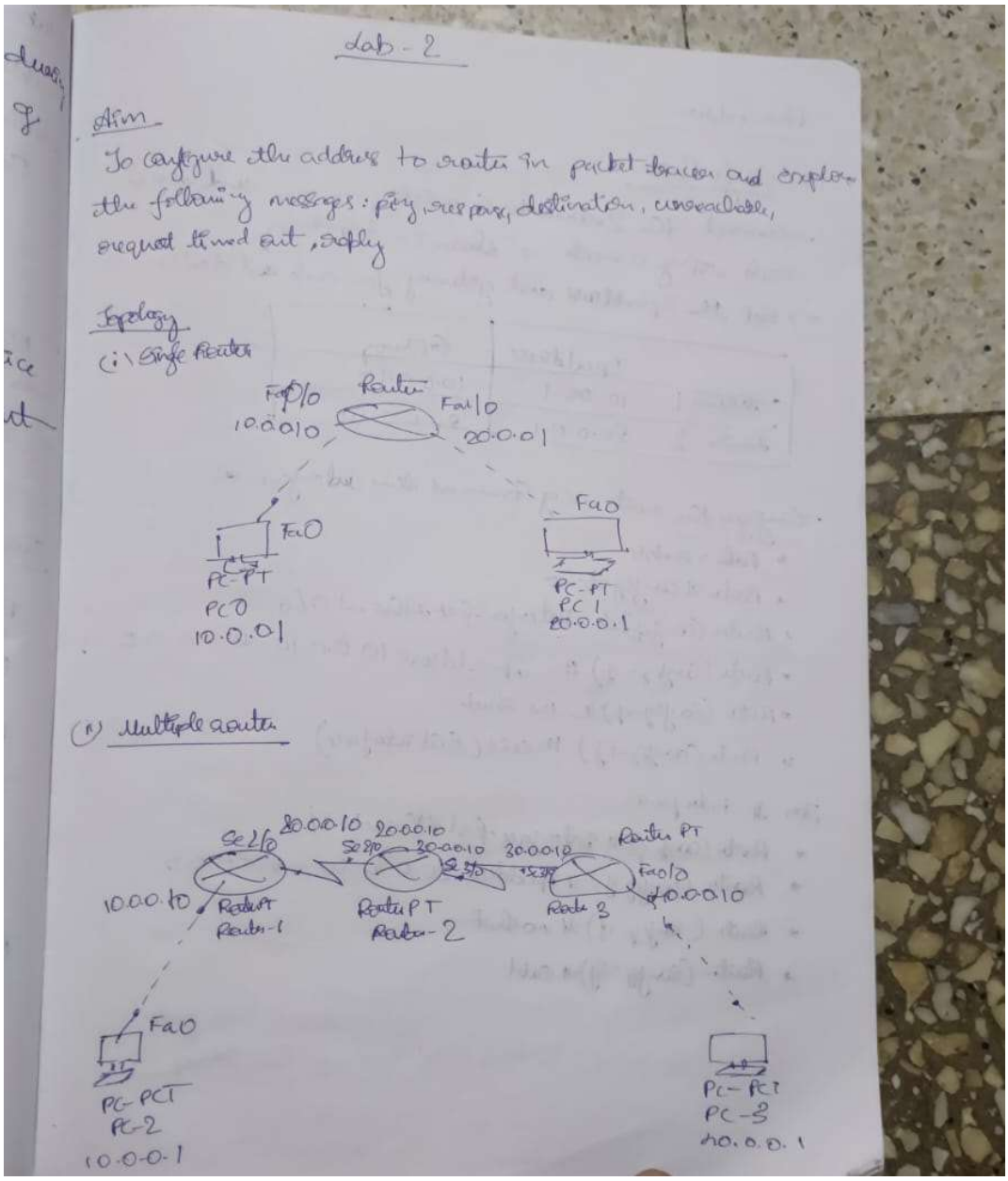
WEEK 2

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

(1) Single Router

-> Connect the 2 networks consisting of one end devices each using a router as shown in topology

-> Set the Ipaddress and gateway for each end device

	Ipaddress	Gateway
Device 1	10.00.1	10.0.0.10
Device 2	20.0.0.1	20.0.0.10

-> Configure the router using Command line Interface as

* Router > enable
* Router # config t
* Router (config) # interface fast ethernet 0/0
* Router (config-if) # ip address 10.0.0.10 255.0.00
* Router (config-if) # no shut
* Router (config-if) # exit (Exit interface)

For II interface

* Router (config) # interface fast Ethernet 1/0
* Router (config if) # ipaddress 20.0.0.10 - 255.0.00
* Router (config if) # no shut
* Router (config-if) # exit

O/P:

PC> Ping 20.0.0.1

Ping 20.0.0.1 with 32 bytes of data

Reply from 20.0.0.1 bytes=32 time=2ms TTL=127

" " " "

" " " "

Ping statistics for 20.0.0.1:

Packets sent = 4, Received = 4, lost = 0

Approx Round trip times in ms Min = 0 max = 2ms Avg = 0ms

(ii) Multiple Routers

-> Connect an end-to-end device of network 10.0.0.1 to II network 20.0.0.0 via 3 routers shown in topology

-> Configure the IP address gateway of II end device

-> Configure the Routers: Each router for each interface as followed for a single router in steps of the procedure

Ping O/P:

PC> Ping 20.0.0.1

Pinging 20.0.0.1 with 32 bytes of data

Reply from 10.0.0.2: Destination host unreachable.

" " " " " " "

" " " " " " "

Ping state for 20.0.0.1

Packets sent = 4, Received = 0, lost = 4

Routing the packets

Router 1:

Router (config)# ip route 30.0.0.0 255.0.0.0 20.0.0.2

Router (config)# ip route 40.0.0.0 255.0.0.0 20.0.0.2

Router 2

Router (config)# ip route 10.0.0.0 255.0.0.0 20.0.0.1

Router (config)# ip route 40.0.0.0 255.0.0.0 30.0.0.1

Router 3

Router (config)# ip route 10.0.0.0 255.0.0.0 30.0.0.2

Router (config)# ip route 20.0.0.0 255.0.0.0 30.0.0.2

OR

PC$ Ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data

Request timed out

Reply from 40.0.0.1 bytes = 32 time = 7ms TTL = 125

time = 11ms

time = 5ms

Ping statistics for 40.0.0.1:

Packets Sent = 4, Received = 3 Lost = 1

Approx round trip time in milli seconds: Minimum = 1ms, Avg = 7ms

PC$ 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 = 8ms TTL = 125

time = 2ms TTL = 125

time = 8ms TTL = 125

Ping state for 10.0.0.1 :

Packet sent = 5, received = 5, lost = 0

Approx round trip time :-

Min = 2ms, Max = 8ms, Avg = 4ms

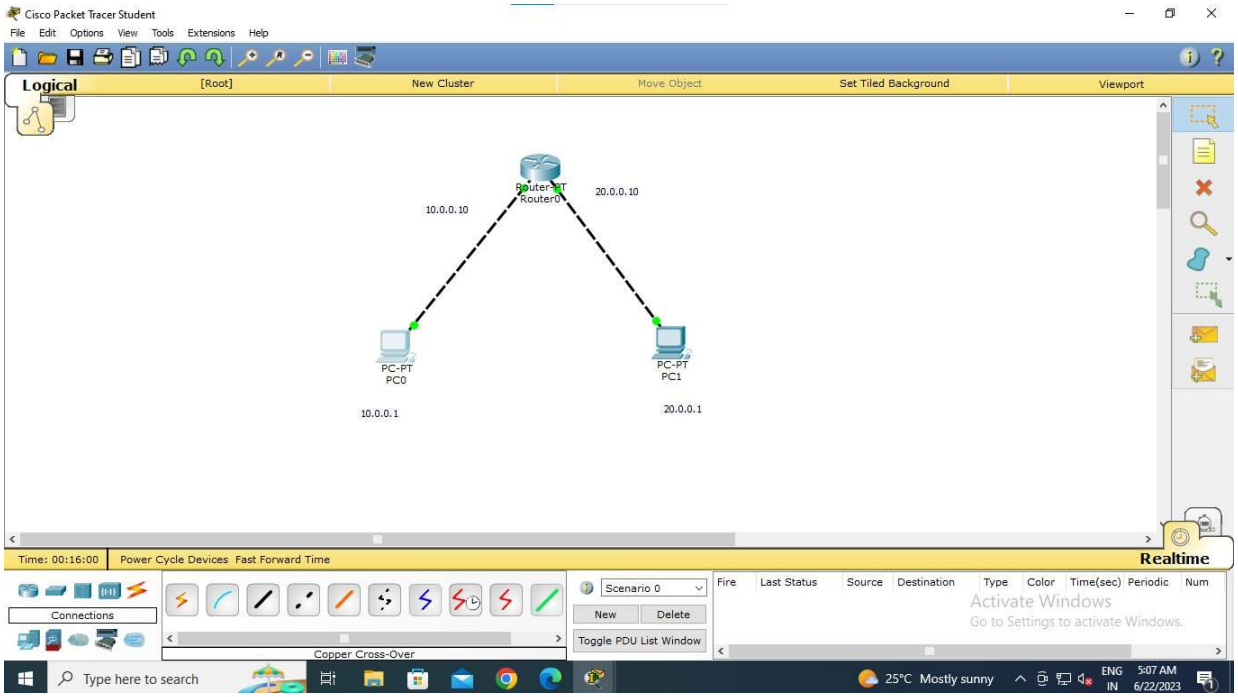
Conclusion :

observed different cases for Ping response such as destination unreachable, request timed out & reply

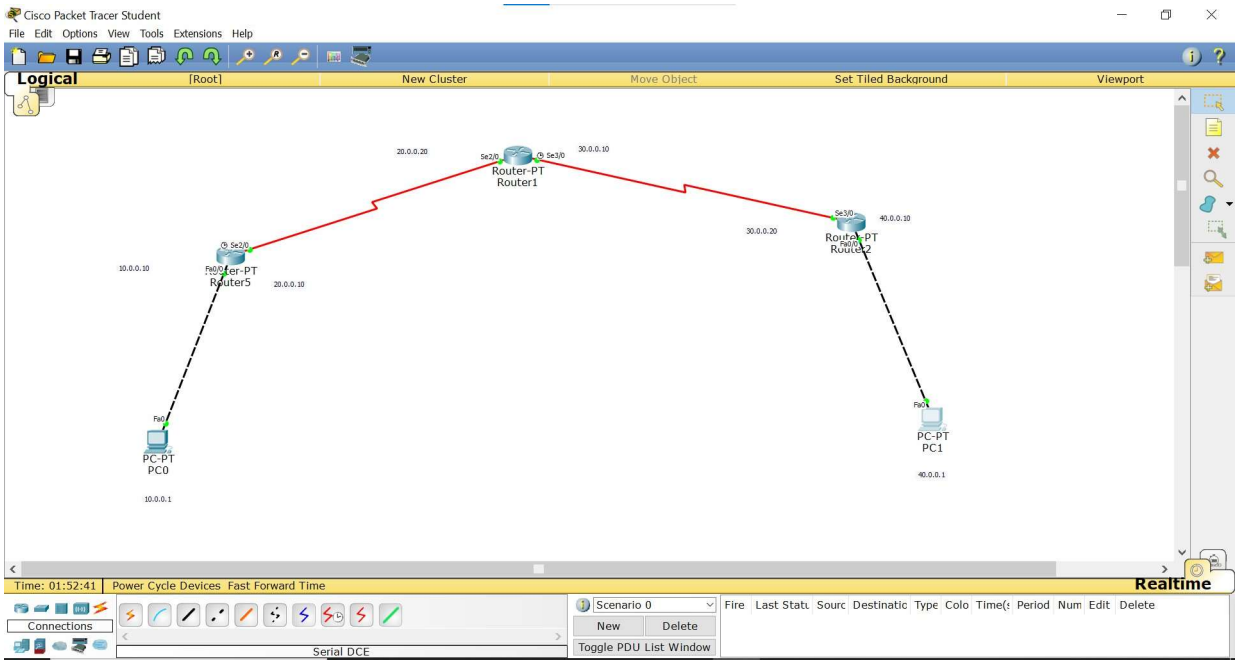
13/4/2023

TOPOLOGY:

PROGRAM 2.1

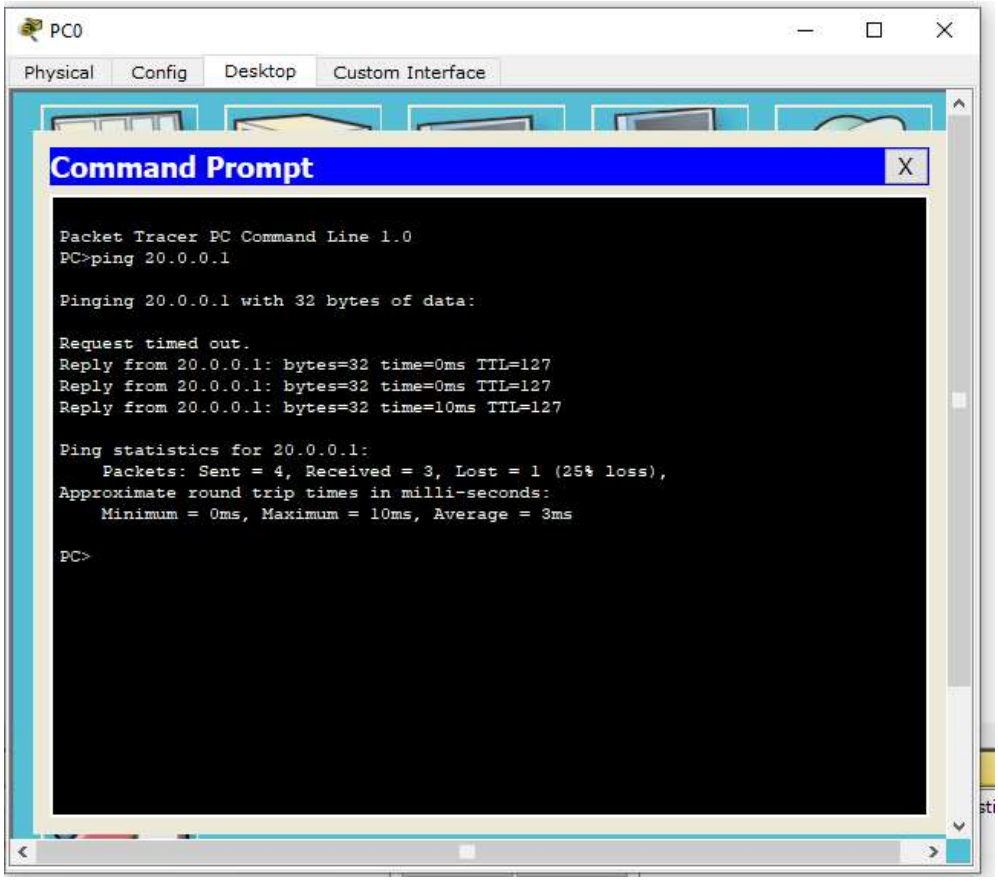


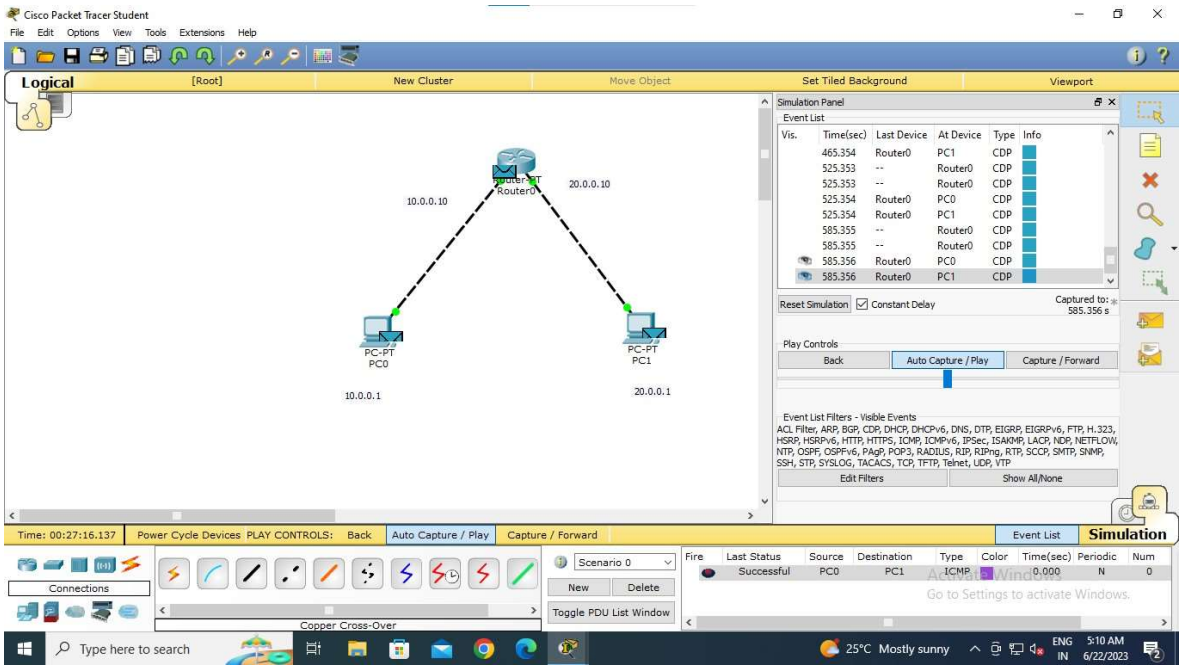
PROGRAM 2.2



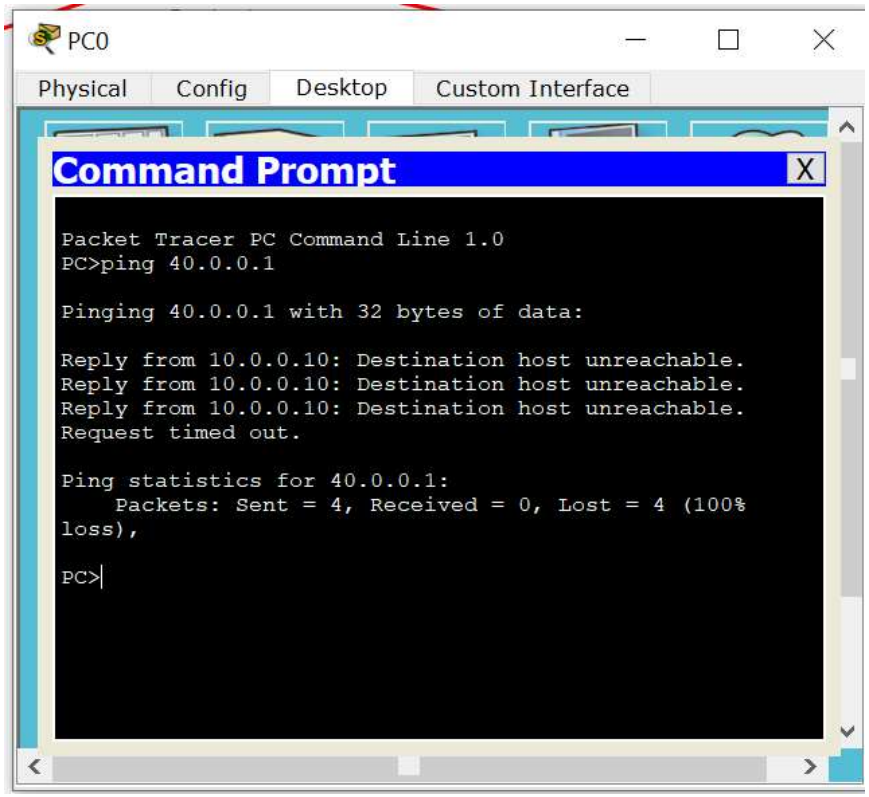
OUTPUT:

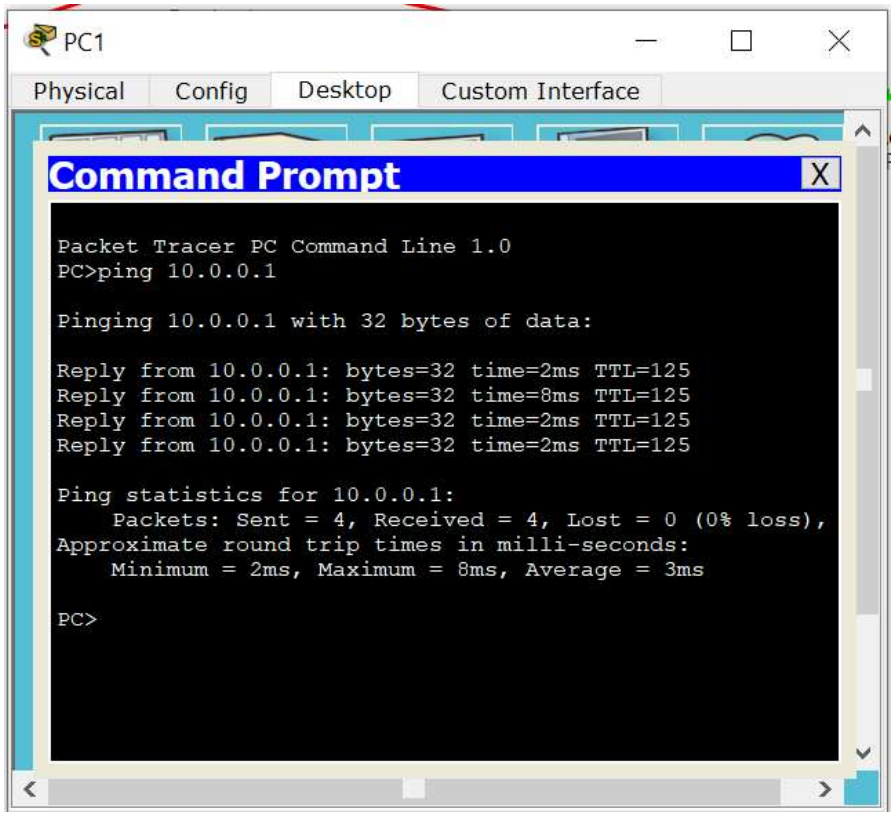
PROGRAM 2.1

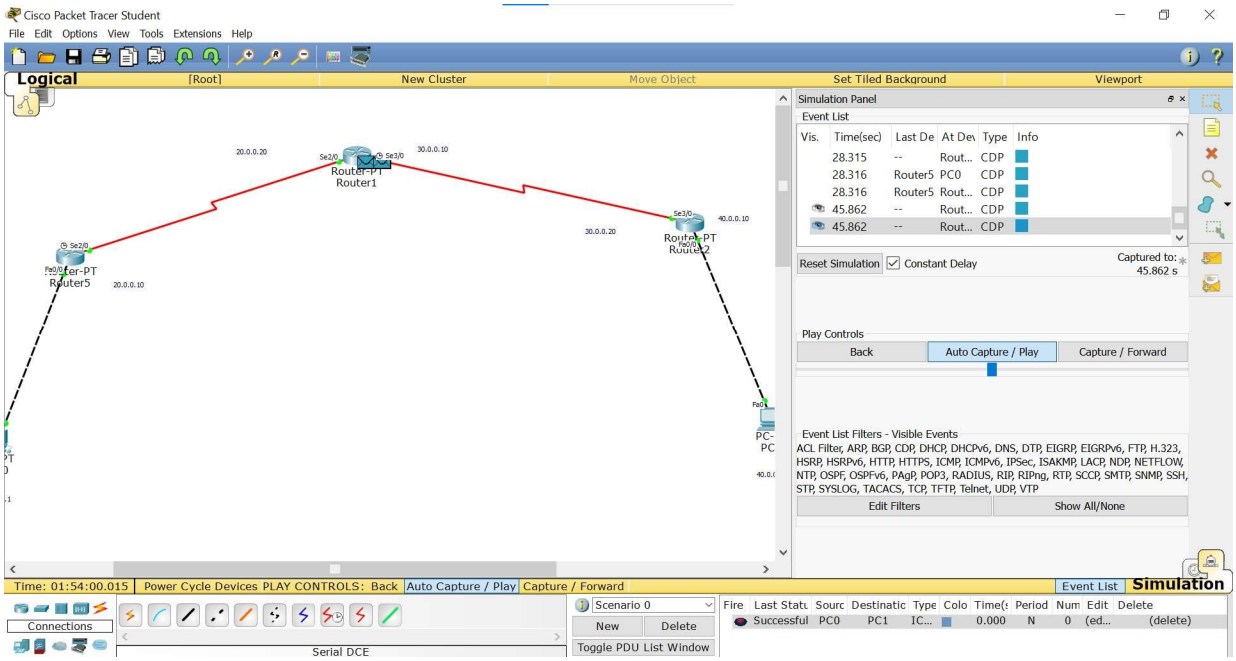




PROGRAM 2.2


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 40.0.0.1
Pinging 40.0.0.1 with 32 bytes of data:
Reply from 10.0.0.10: Destination host unreachable.
Reply from 10.0.0.10: Destination host unreachable.
Reply from 10.0.0.10: Destination host unreachable.
Request timed out.
Ping statistics for 40.0.0.1:
Packets: Sent = 4, Received = 0, Lost = 4 (100%
loss),
PC>


PC1
Physical
Config
Desktop
Custom Interface
Command Prompt
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=2ms TTL=125
Reply from 10.0.0.1: bytes=32 time=8ms TTL=125
Reply from 10.0.0.1: bytes=32 time=2ms TTL=125
Reply from 10.0.0.1: bytes=32 time=2ms TTL=125
Ping statistics for 10.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 2ms, Maximum = 8ms, Average = 3ms
PC>


Cisco Packet Tracer Student
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router1
Router5
Router2
PC-PC
20.0.0.20
30.0.0.10
30.0.0.20
40.0.0.10
20.0.0.10
Simulation Panel
Event List
Vis. Time(sec) Last De At De Type Info
28.315 -- Rout... CDP
28.316 Router5 PC0 CDP
28.316 Router5 Rout... 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, PAgP, POP3, RADIUS, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, 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
Event List
Simulation
Connections
Serial DCE
Scenario 0
New
Delete
Toggle PDU List Window
Fire Last Statu Sourc Destinatic Type Colo Time(s Period Num Edit Delete
Successful PC0 PC1 IC... 0.000 N 0 (ed... (delete)