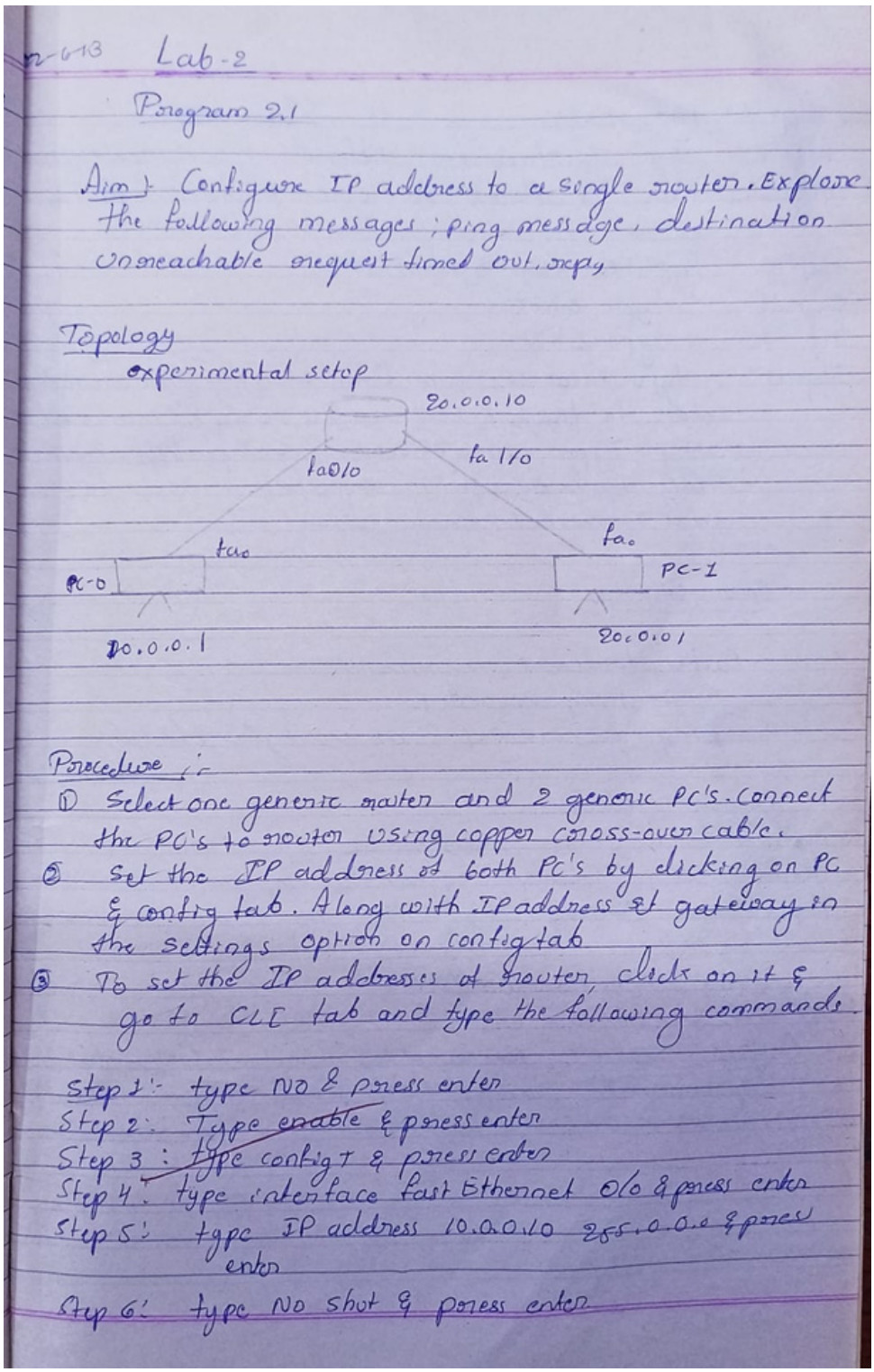
WEEK 2

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

OBSERVATION:



6-13 Lab-2

Program 2.1

Aim:- Configure IP address to a single router. Explore the following messages; ping message, destination unreachable request timed out, reply

Topology

experimental setup

Procedure :-

1. Select one generic router and 2 generic PC's. Connect the PC's to router using copper cross-over cable.
2. Set the IP address of both PC's by clicking on PC & config tab. Along with IP address & gateway in the settings option on config tab
3. To set the IP addresses of router click on it & go to CLI tab and type the following commands.

Step 1:- type no & press enter
Step 2:- Type enable & press enter
Step 3:- type config t & press enter
Step 4:- type interface fast Ethernet 0/0 & press enter
Step 5:- type IP address 10.0.0.10 255.0.0.0 & press enter
Step 6:- type No shut & press enter

Step 7: type EXIT
Step 8: type interface fast Ethernet 1/0 & press enter
Step 9: type IP address 20.0.0.10 25.0.0.0 & press enter
step 10: type NO shut & press enter
Step 11: type EXIT
Step 12: type Exit
Step 13: type show IP route [for using the connection sta
close the tab 1 & Click on PC to go to command prompt. Type ping 20.0.0.1 to send packets acros
Atlast send packets in simulation mode to get a successful transmission

PING output

Packet traces 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=12
Reply from 20.0.0.1 : bytes=32 time=0ms TTL=12
Reply from 20.0.0.1 : bytes=32 time=10ms TTL=12

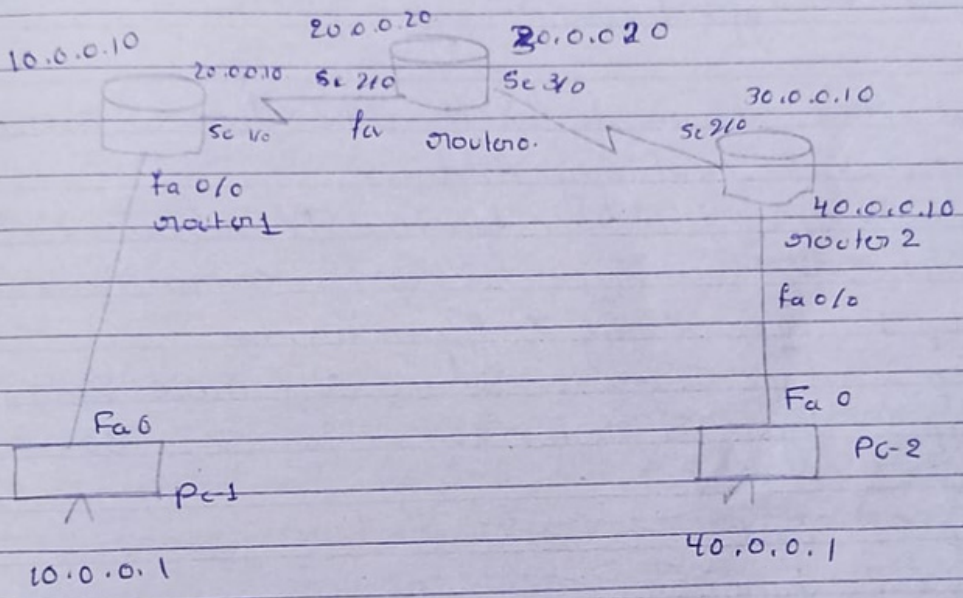
Ping statistics for 20.0.0.1

Packets : Sent=4, Recieved=3, Lost=1 (25% Loss)
Approximate round trip times in milliseconds
minimum=0ms, maximum=10ms, Average=3

Program 2.2

Aim:- Configure IP address to three router in packet tracer. Explore the following messages, ping response, destination unreachable, request timed out, reply

Topology



Procedure:-

① Connect 2 PC's & 3 routers using copper cross over cable for PC to router & serial DCE cable to connect to routers to routers

② Set the IP address of both PC's and gateway numbers

③ Now for setting IP address & gateway number to routers select one router & perform following commands

Step 1 - type no & press enter

Step 2 - type Enable & press enter

Step 3 - type config T & press enter.

Step 4: type interface fast ethernet 0/0 & press enter

Step 5: type IP address 10.0.0.10 255.0.0.0 & press enter

Step 6: type No shut & press enter

Step 7: type Exit
Step 8: type interface 8 c 2/0 & press enter
Step 9: type IP address 20.0.0.1c 255.0.0.0 & press enter
Step 10: type no shut & press enter
Step 11: type Exit
Step 12: type Exit

+ Repeat these commands for the other two routers with respective IP/gateway address.
* Now to introduce the other two IP address to the first router we type following commands.
Step 1: type config T & press enter
Step 2: type IP route 30.0.0 255.0.0.0 20.0.0.20
Step 3: type IP route 40.0.0 255.0.0 20.0.0.20
Step 4: Exit
Step 5: Exit
Step 6: type Show IP route.
* Repeat these steps for other 2 routers with appropriate addresses
* Go to command prompt by clicking on PC & config tab. Type Ping message to send packets to the destination addr

PINGS OUTPUT

output-1

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.

Request timed out
Ping statistics for 40.0.0.1
Packets: sent = 4, Received = 0, los 4 (100% loss)

Output 2

Packet trace 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

Ping statistics for 10.0.0.1:
Packet: Sent = 4, Received = 4 lost = 0 (0% loss)
Approximate round trip times in milliseconds
minimum = 2ms, Maximum = 8ms Average = 3ms

Observation

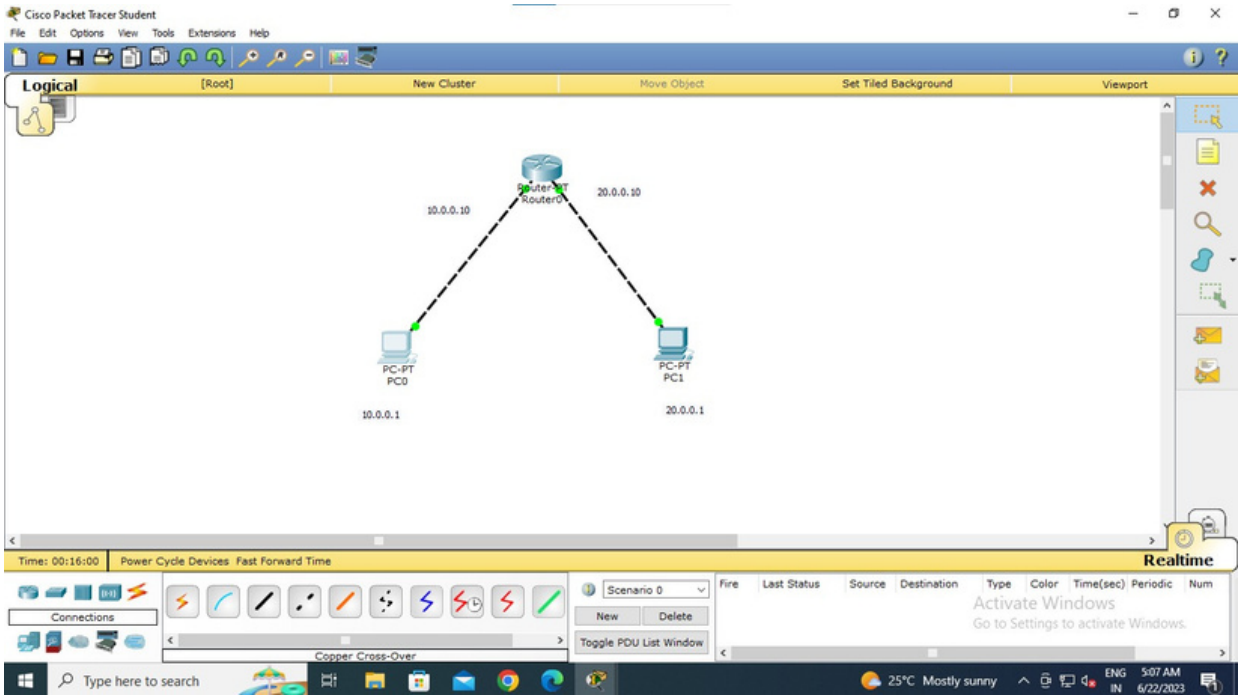
* In program 2.1 when we ping destination address we get allocated with 32 bytes. In this first 8 bytes are used to trace about the routes & their addresses. Rest bytes are used for sending packets to destination address: Then again if we ping all bytes are used for message sending and these will be no timed out message.

* In program 2.2 when the routes doesn't know about the remaining address, and we ping a message. we get host unreachable message. Once the routers have access / knowledge about other addressed message will be sent successfully.

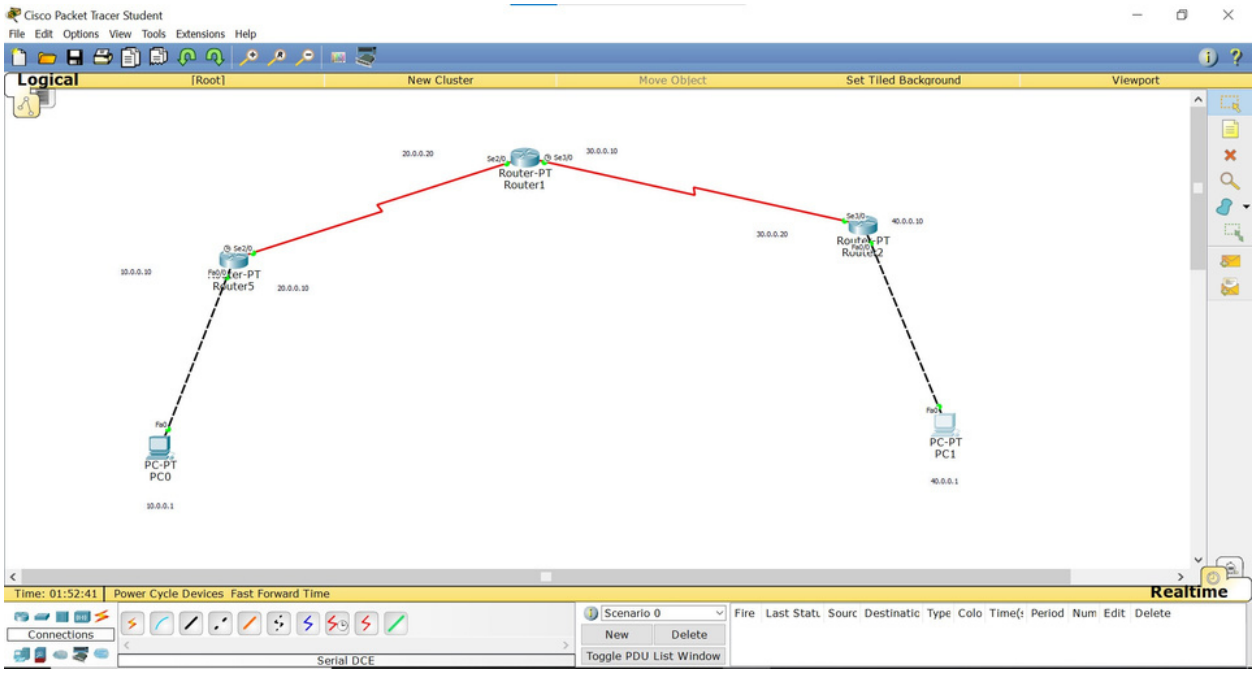
13/4/2023

TOPOLOGY:

PROGRAM 2.1

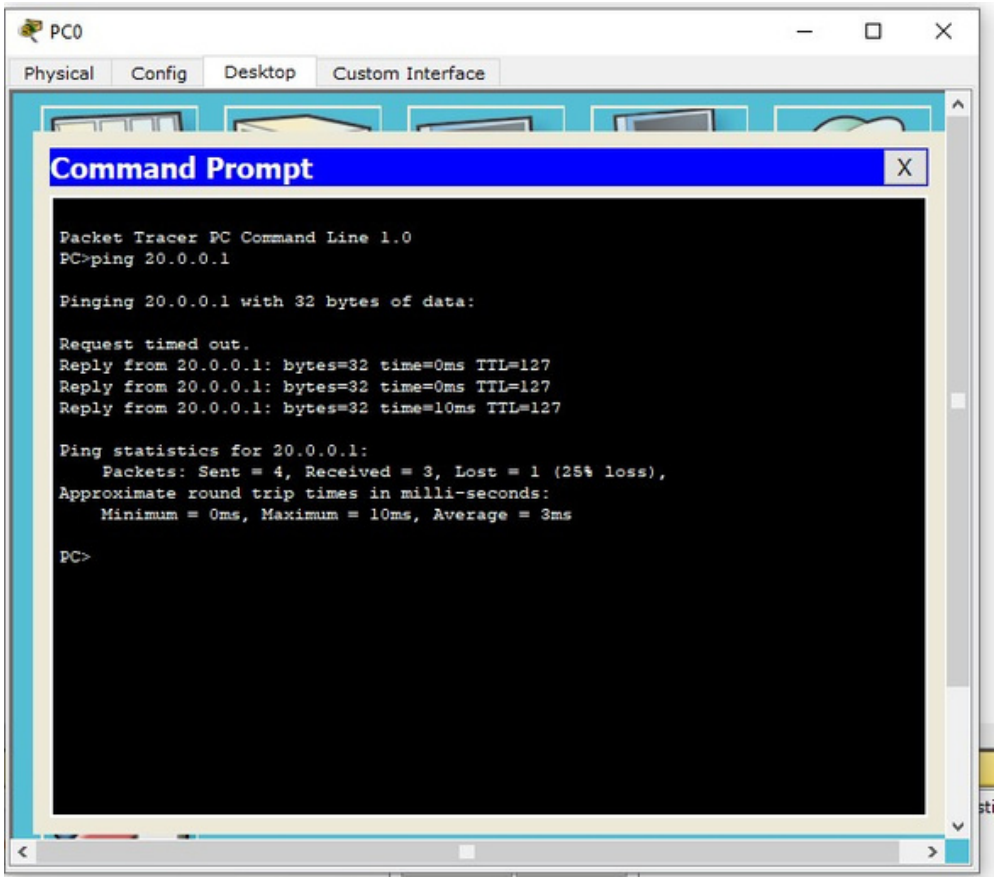


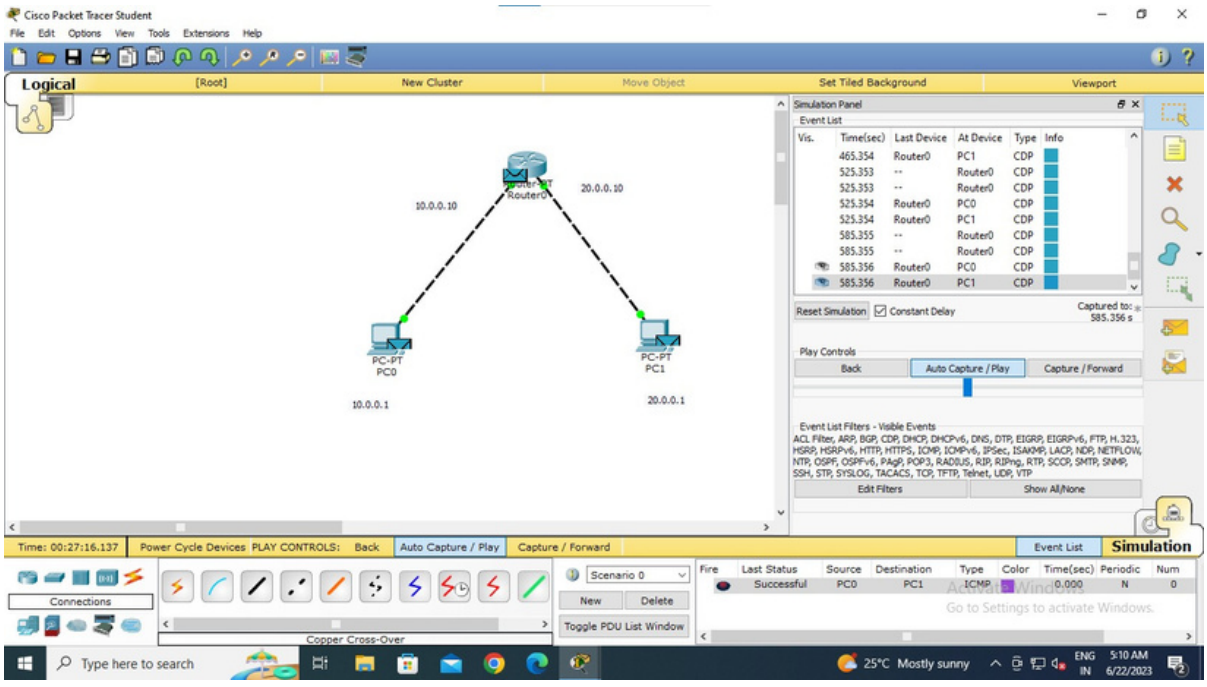
PROGRAM 2.2



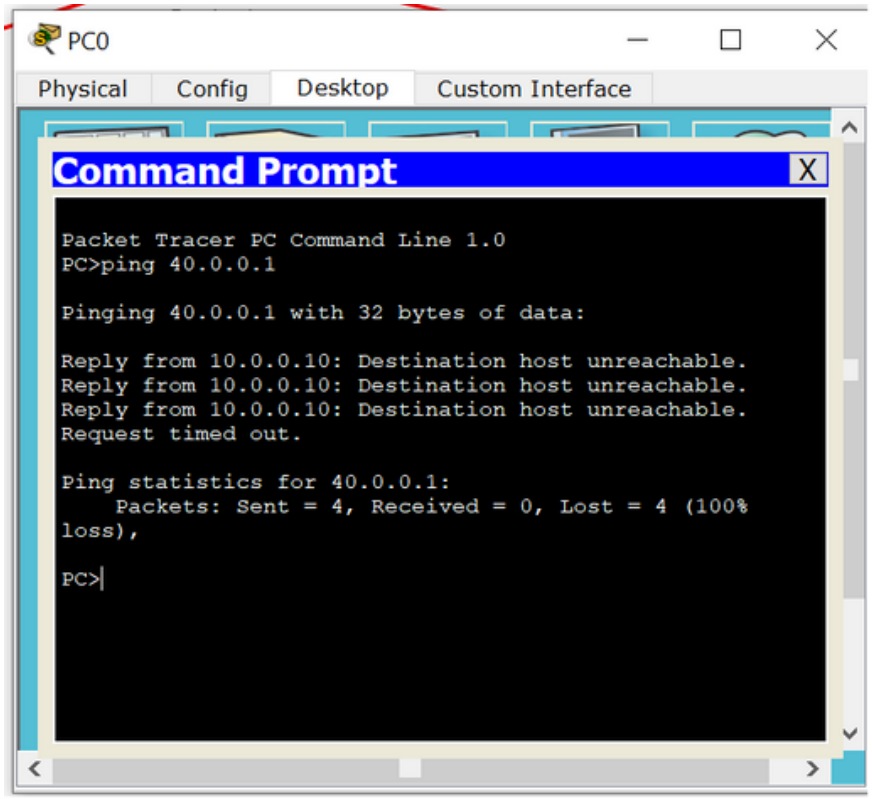
OUTPUT:

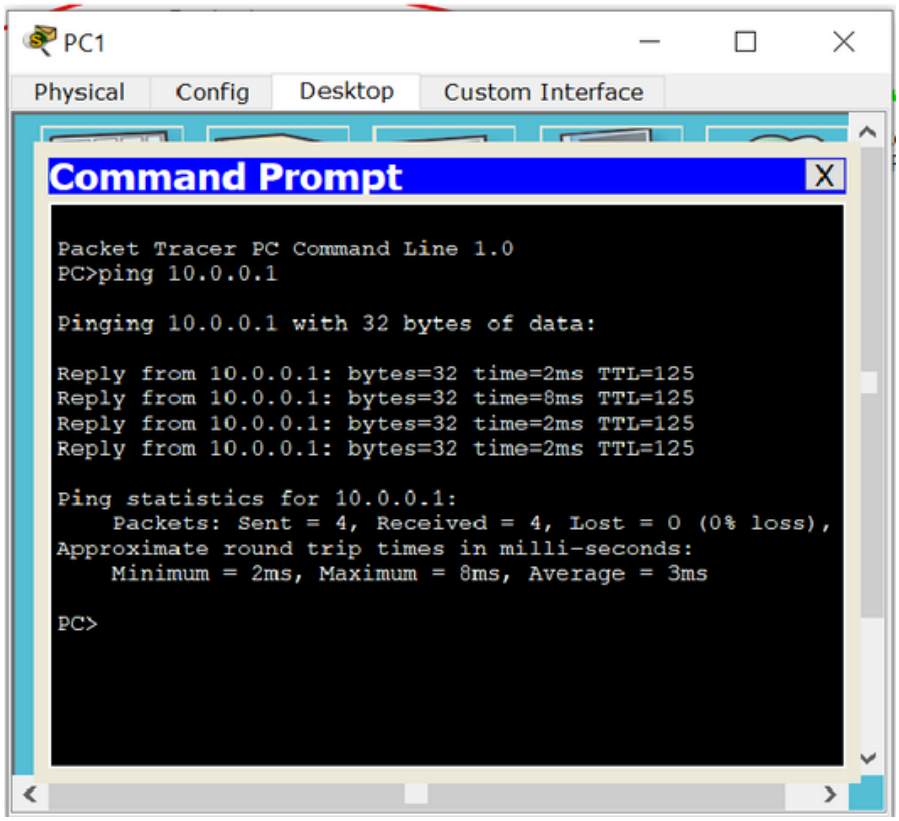
PROGRAM 2.1

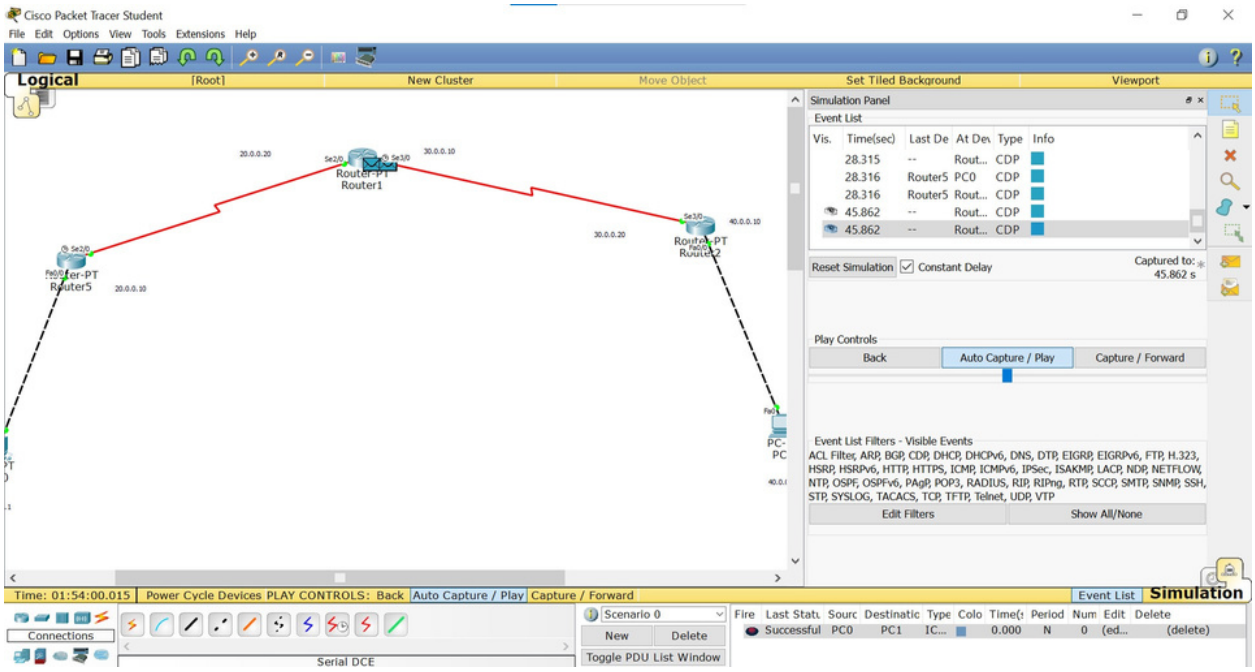




PROGRAM 2.2


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
Router-PT
Router1
Router-PT
Router5
Router-PT
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)