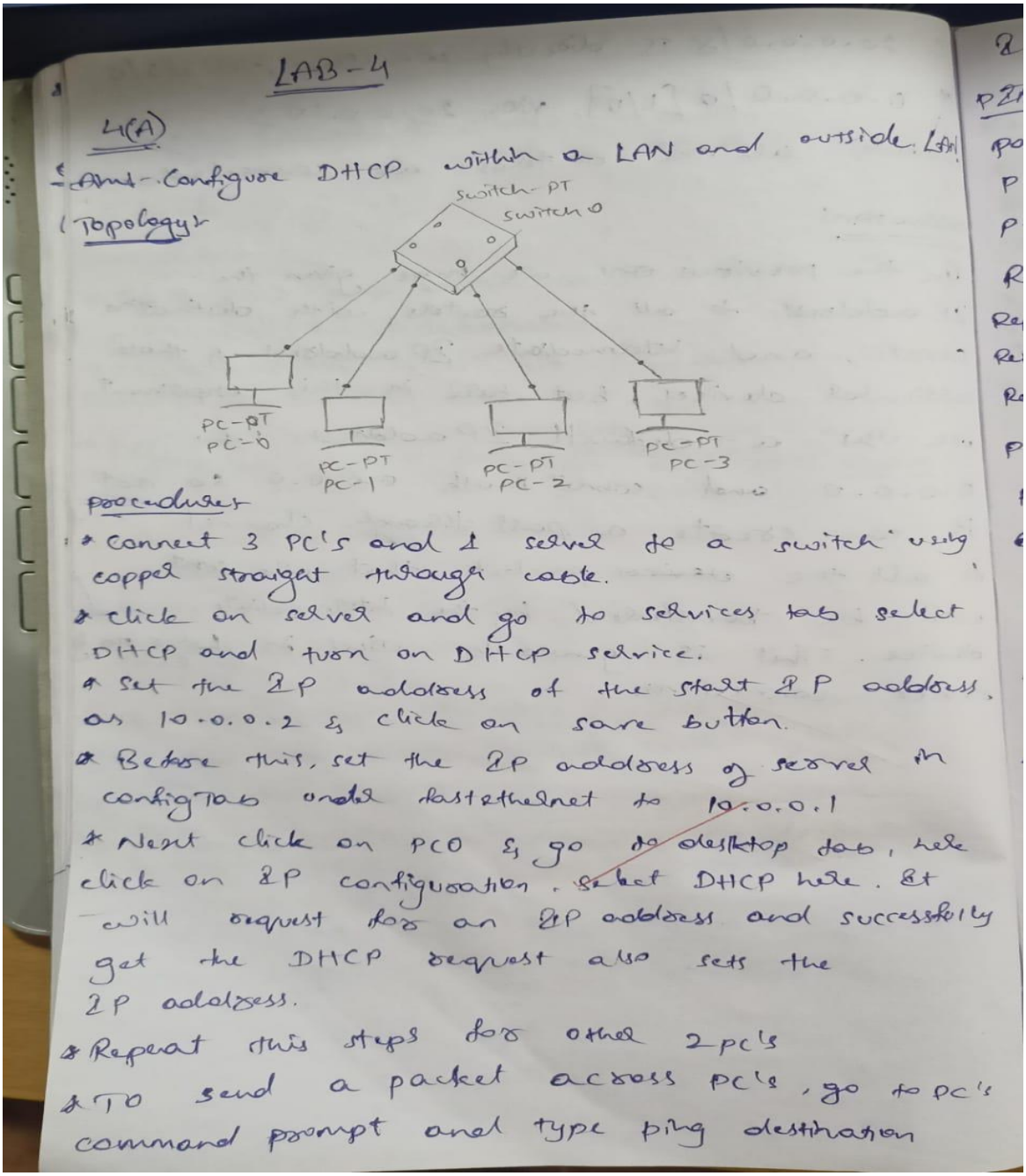
LAB 4

Configure DHCP within a LAN and outside LAN.

OBSERVATION:



IP address.

PING Output:

Aim: packet tracer PC command Line 10:

PC> ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data.

Reply from 10.0.0.3: bytes=32 time=0ms TTL=128
Reply from 10.0.0.3: bytes=32 time=0ms TTL=128
Reply from 10.0.0.3: bytes=32 time=1ms TTL=128
Reply from 10.0.0.3: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.3

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

Approximate round trip times in ms.

Minimum=0ms, Maximum=1ms, Average=0ms

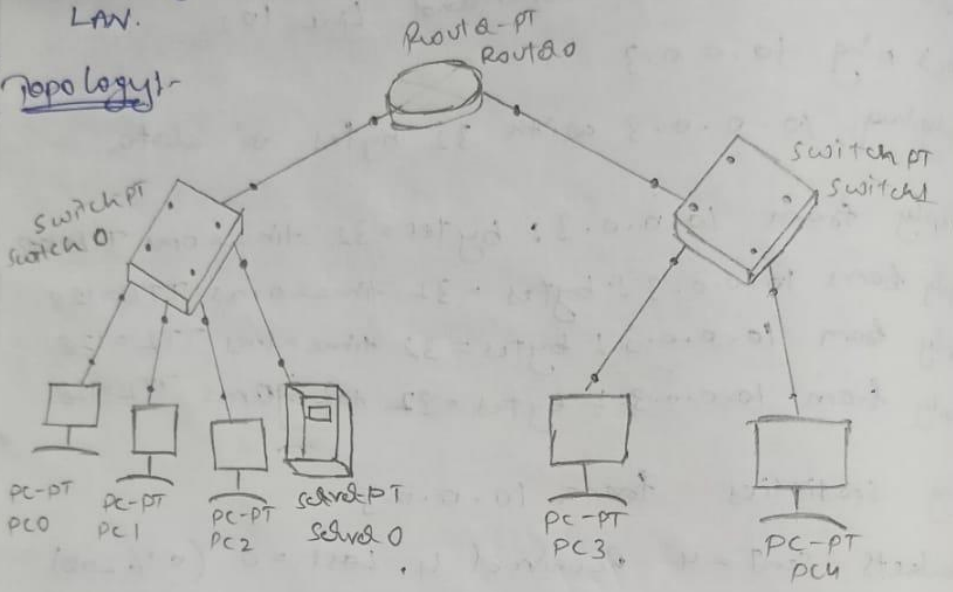
Observation:-

* DHCP is used to dynamically assigns an IP address to any device or node.
* It is a client-server protocol in which servers manage a pool of unique IP address & also about client configuration parameters.
* DHCP enabled clients sends a request to DHCP server when they want to connect to a network.
* The DHCP server responds to the client request by providing IP configuration information from address pools, previously specified by a network administrator.

4[B]

Aim:- Configure DHCP switch a LAN and outside LAN.

Topology:-



Procedure:-

- Add a router, a switch and 2 PC's to 4.1A) program. Network & connect the router to both switches.
- Set the server IP address of server & with the help of server set the first 3 PC's IP address through DHCP
- → Click on server
- → go to desktop → IP configuration
- → Add IP address, subnet mask and gateway.

IP address 10.0.0.1

Subnet Mask 255.0.0.0

Gateway 10.0.0.20

Step 3:- Configure the router

→ Click on router go to CLI

enable

Router# config t

Router(config)# fastethernet 0/0

Router(config)# ip address 20.0.0.20 255.0.0.0

Router(config-if)# no shut

Router(config-if)# exit.

Router(config)# interface fastethernet 1/0

Router(config-if)# ip address 20.0.0.20 255.0.0.0

Router(config-if)# no shut

Router(config-if)# exit

exit

Routing table

Router→ show ip route

C 10.0.0.0/1 is directly connected, fastethernet 0/

Step 4:- Go to server[DHCP server configuration]

→ select services then go to DHCP

→ Set service on

→ Set start IP address from (ex.-20.0.0.0) then save.

Step 5:- Then configure the PC's

→ Select a PC then desktop - go to IP configure select DHCP.

→ Repeat the same procedure for all other PC's.

Observation:-

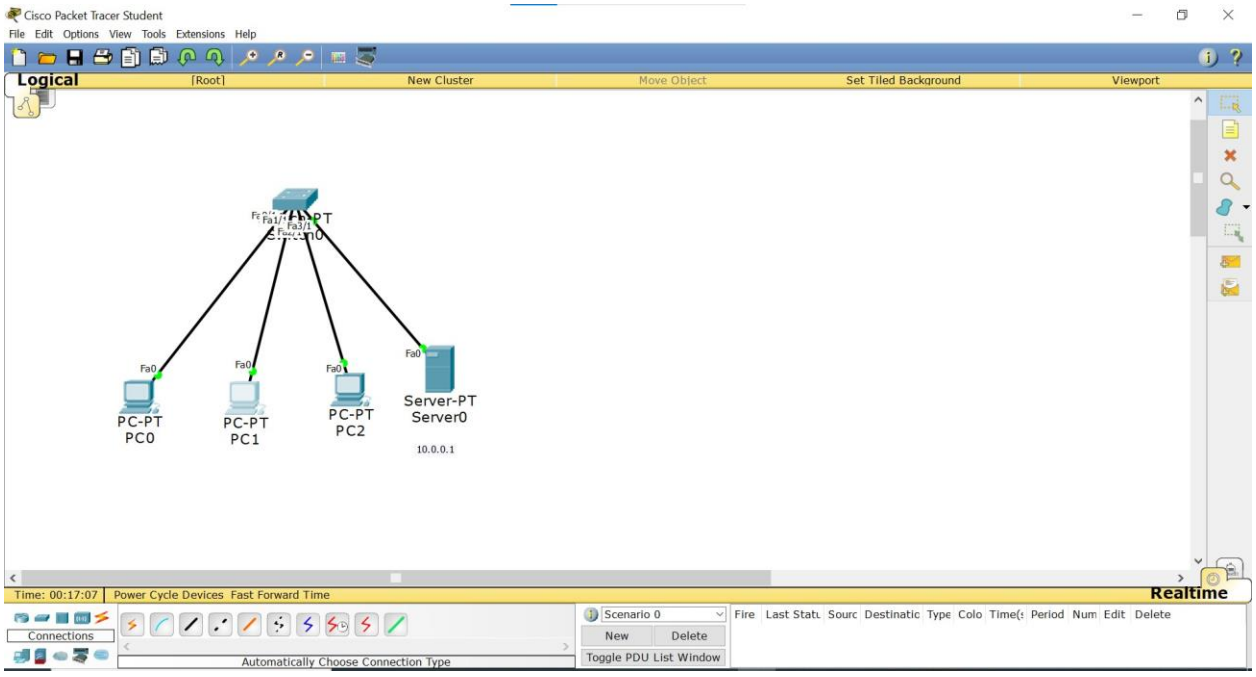
→ DHCP is used to design IP address Dynamically to different devices.

→ To assign continuous IP address we create a server pool where we assign the starting IP address and a default gateway number. For pc's under different switches we create a different server pool again & start.

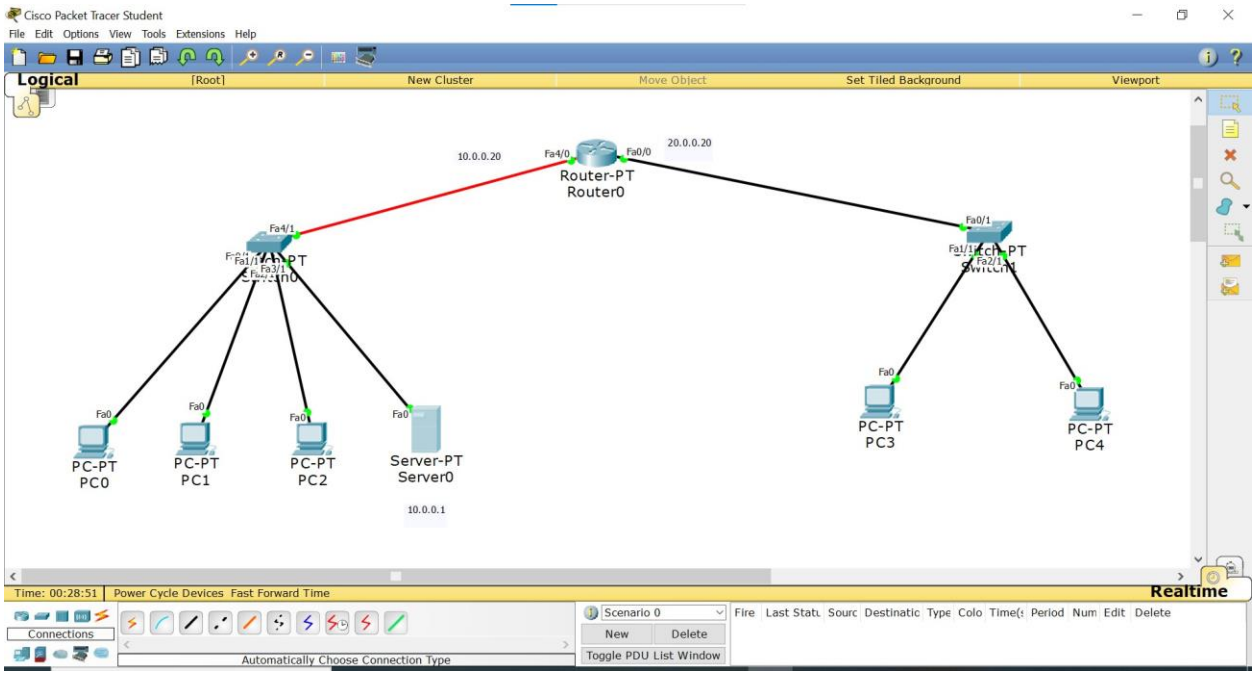
lee
19/7/23

TOPOLOGY:

PROGRAM 4.1:

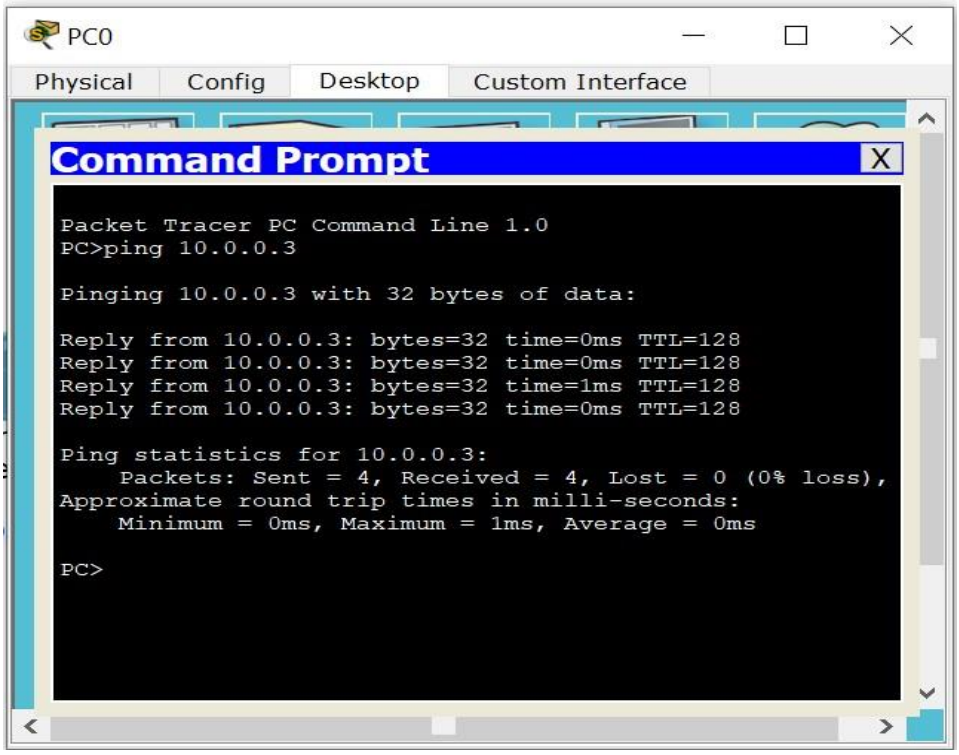


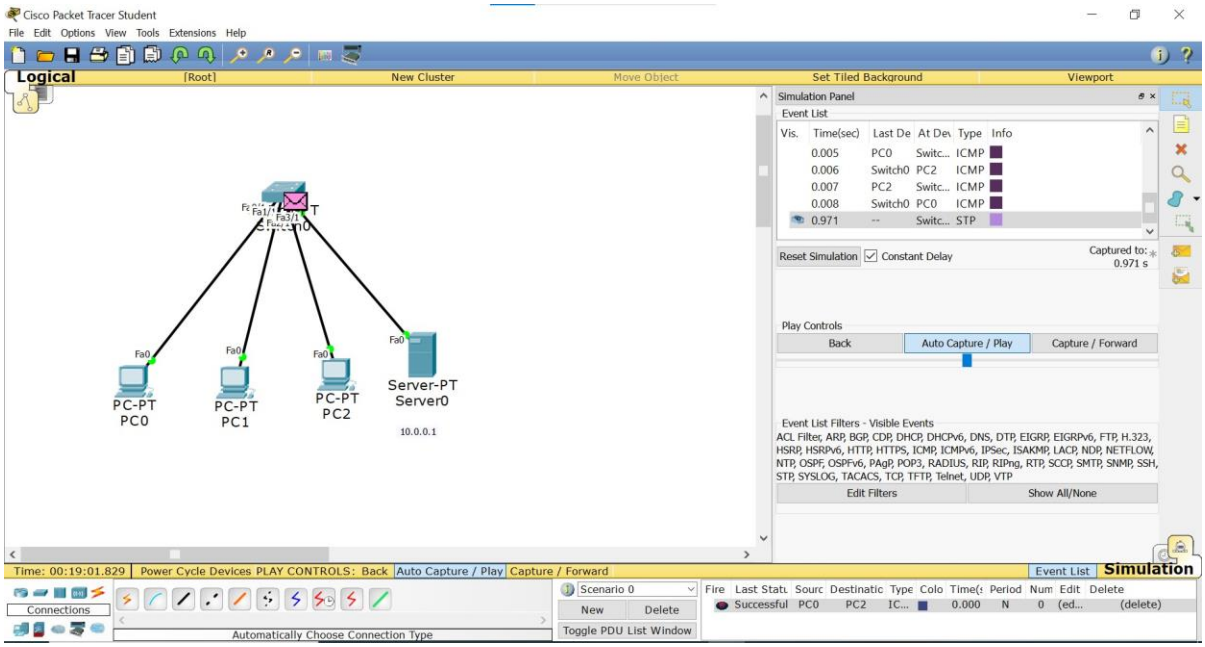
PROGRAM 4.2:



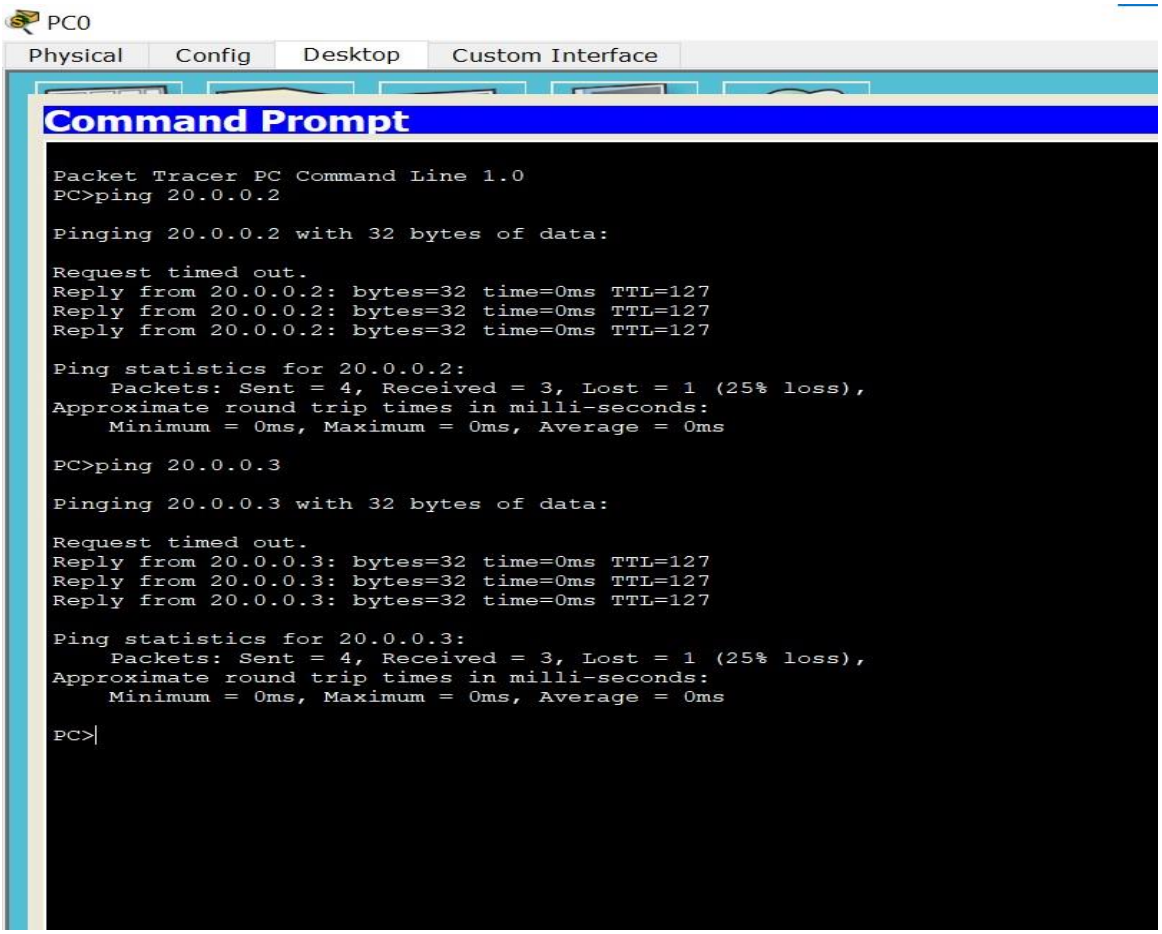
OUTPUT:

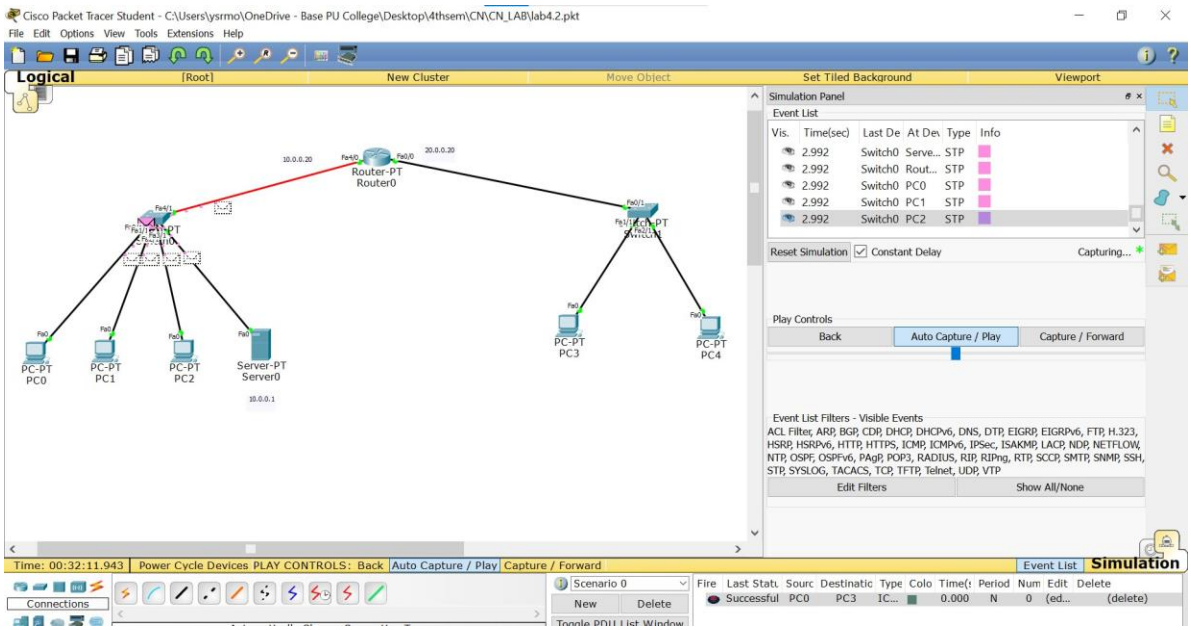
PROGRAM 4.1:





PROGRAM 4.2:


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 20.0.0.2
Pinging 20.0.0.2 with 32 bytes of data:
Request timed out.
Reply from 20.0.0.2: bytes=32 time=0ms TTL=127
Reply from 20.0.0.2: bytes=32 time=0ms TTL=127
Reply from 20.0.0.2: bytes=32 time=0ms TTL=127
Ping statistics for 20.0.0.2:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>ping 20.0.0.3
Pinging 20.0.0.3 with 32 bytes of data:
Request timed out.
Reply from 20.0.0.3: bytes=32 time=0ms TTL=127
Reply from 20.0.0.3: bytes=32 time=0ms TTL=127
Reply from 20.0.0.3: bytes=32 time=0ms TTL=127
Ping statistics for 20.0.0.3:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>


Logical
Router-PT
Router0
PC-PT
PC0
PC-PT
PC1
PC-PT
PC2
Server-PT
Server0
PC-PT
PC3
PC-PT
PC4
Simulation Panel
Event List
Reset Simulation
Constant Delay
Play Controls
Back
Auto Capture / Play
Capture / Forward
Edit Filters
Show All/None
Simulation