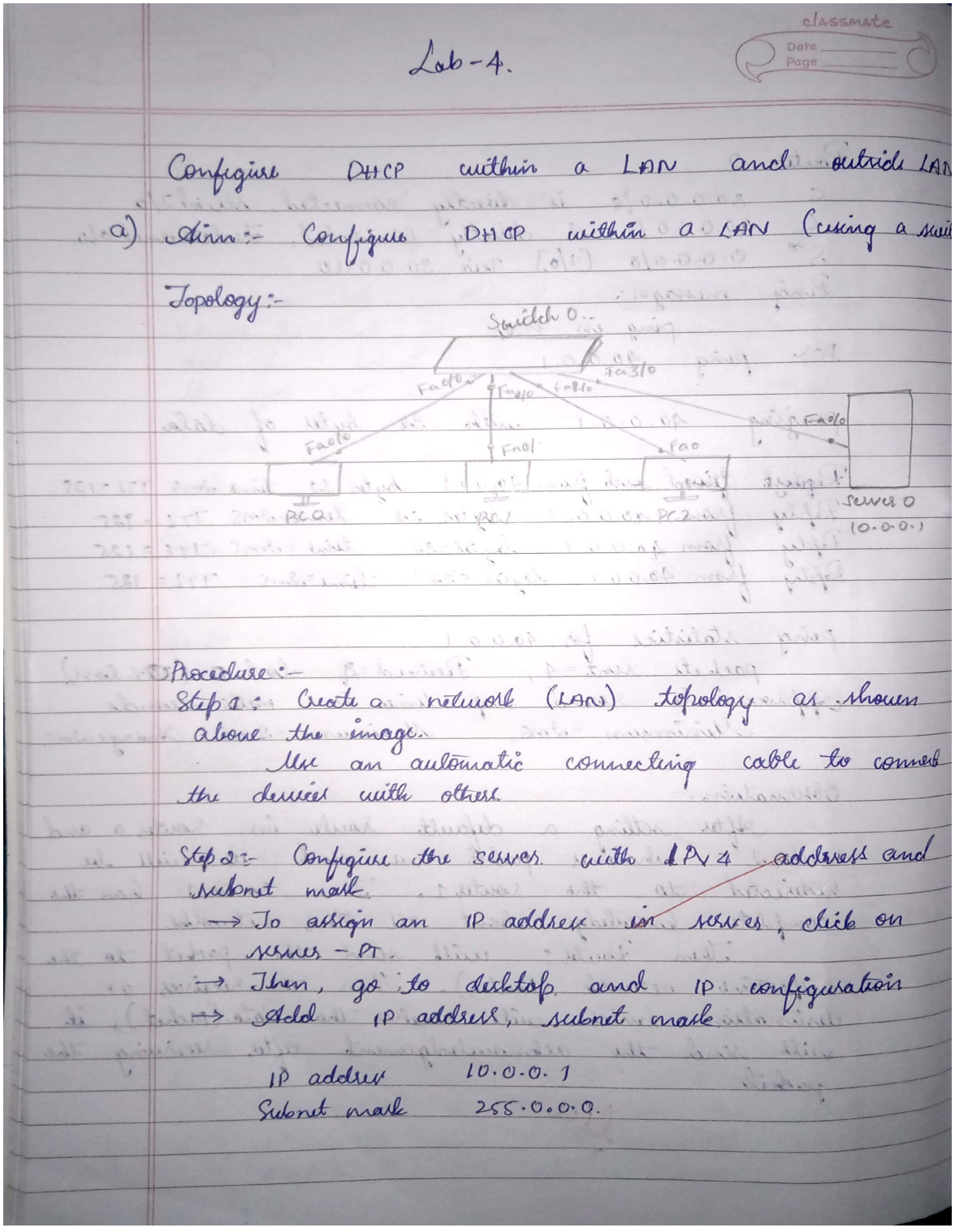
WEEK 4

Configure DHCP within a LAN and outside LAN.

OBSERVATION:



Lab-4.

Configure DHCP within a LAN and outside LAN

a) Aim:- Configure DHCP within a LAN (using a switch

Topology:-

Procedure:-

Step 1:- Create a network (LAN) topology as shown above the image.

Use an automatic connecting cable to connect the devices with others.

Step 2:- Configure the servers with IPv4 address and subnet mask.

→ To assign an IP address in server, click on server - PT.

→ Then, go to desktop and IP configuration

→ Add IP address, subnet mask

IP address 10.0.0.1

Subnet mask 255.0.0.0

Step3 :- Configuring DHCP server

To configure the DHCP server first.

→ click on server PT then, go to services

→ select DHCP and set the service on

→ Then set start IP address then save

Step4 :- Configure the PC's and changing the IP configuration.

→ To assign an IP address in PC0, click on PC0

→ Then, go to desktop and IP configuration and there in IP configuration (Not IPV6). change its state from static to DHCP.

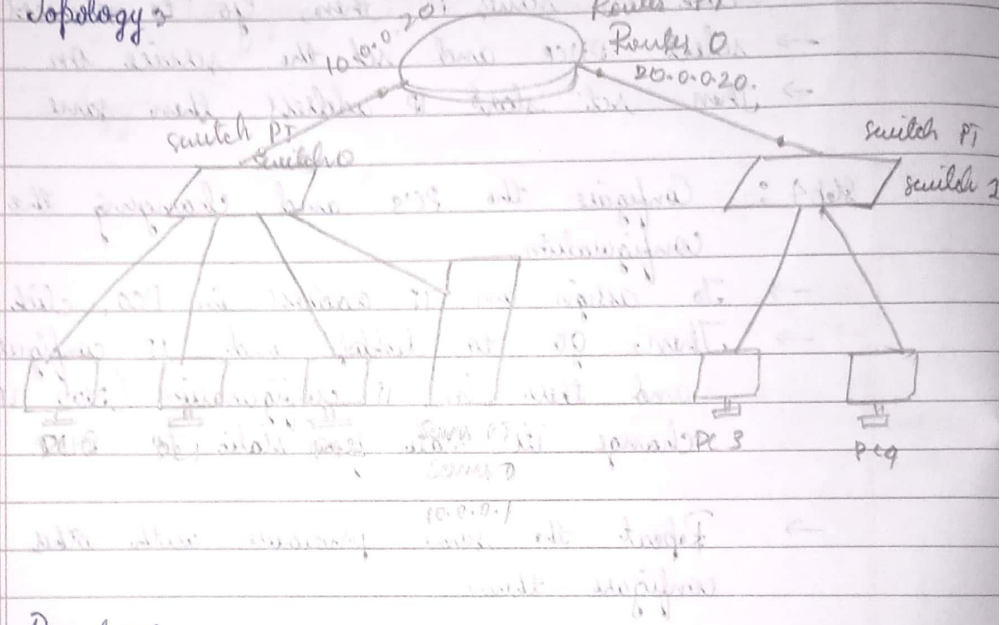
→ Repeat the same procedure with other PCs to configure them.

Observation :-

When we select a PDU and ~~start PC and~~ source PC and destination PC. The packet will be sent to the destination PC. The DHCP server will allocate a IP address for all the PC's. That is why even without saving or configuring the IP address of PC's the LAN will work properly.

b) Aim :- Configure DHCP outside LAN

Topology :-



Procedure :-

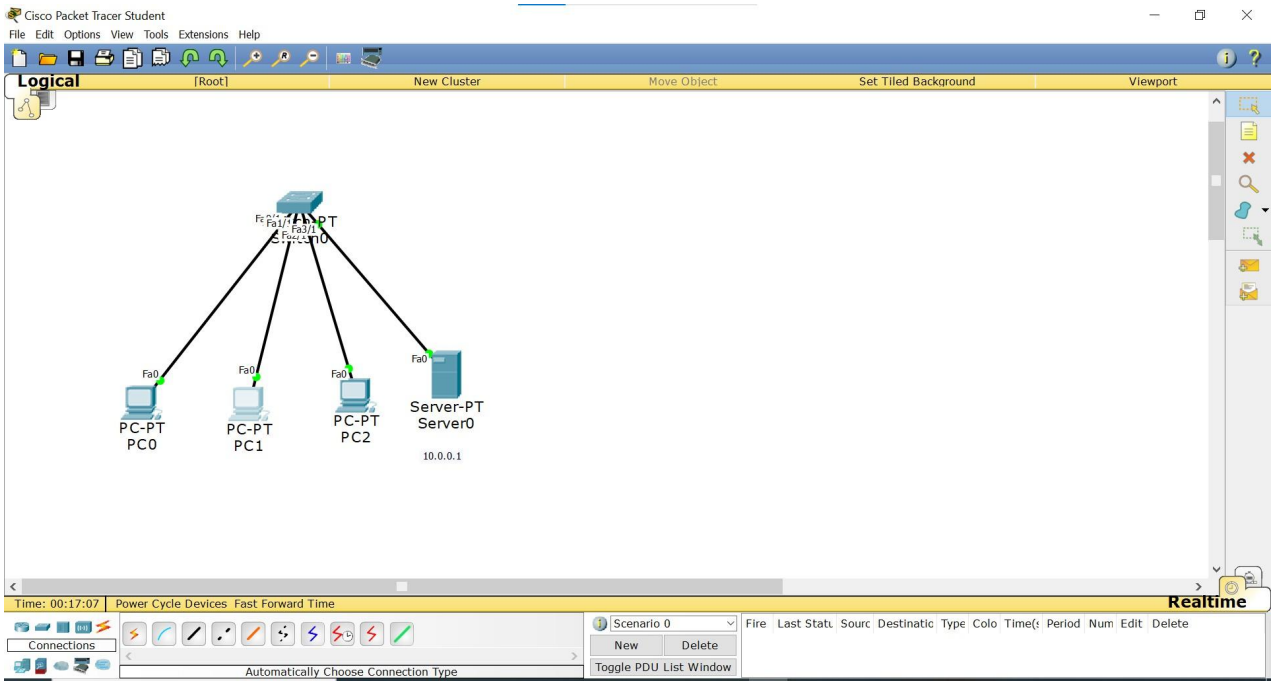
Step 1 :-
Create a above network topology.
Use an automatic cable to connect the devices with other.

Step 2 :- Configure the server with IPv4 address and subnet mask and gateway [basically repeating the steps of a)].
→ click on server
→ go to desktop → IP configuration
→ Add IP address, subnet mask and gateway

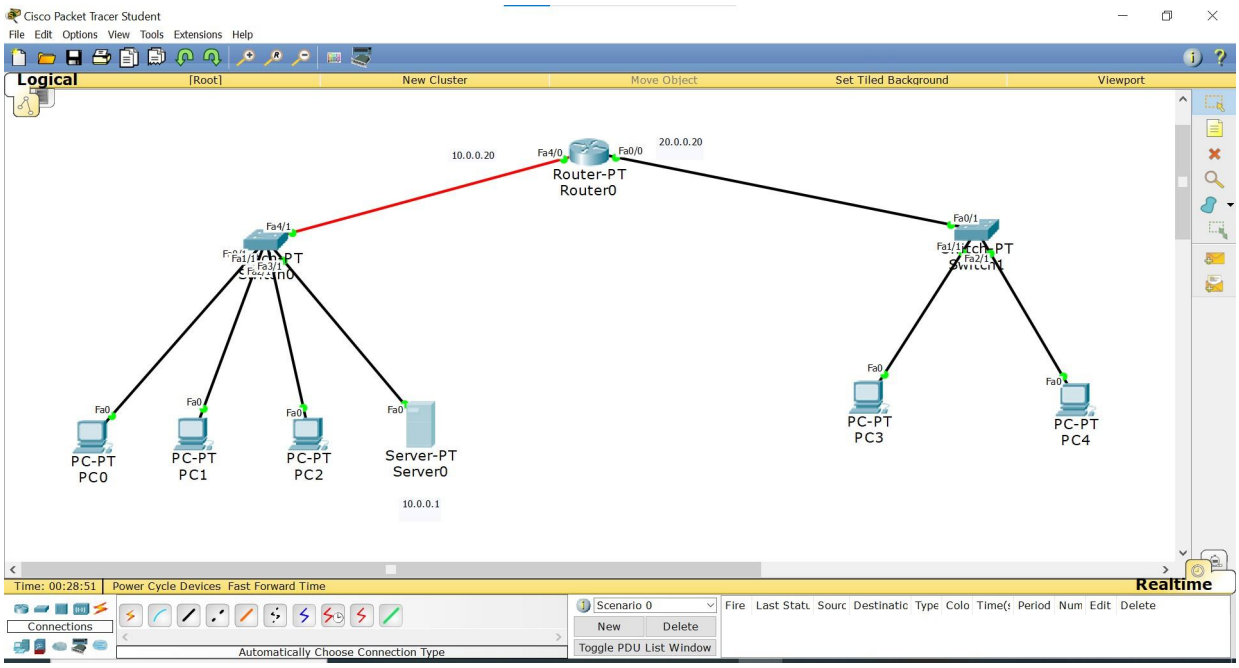
IP address	10.0.0.1
Subnet mask	255.0.0.0
Gateway	10.0.0.20

TOPOLOGY:

PROGRAM 4.1:

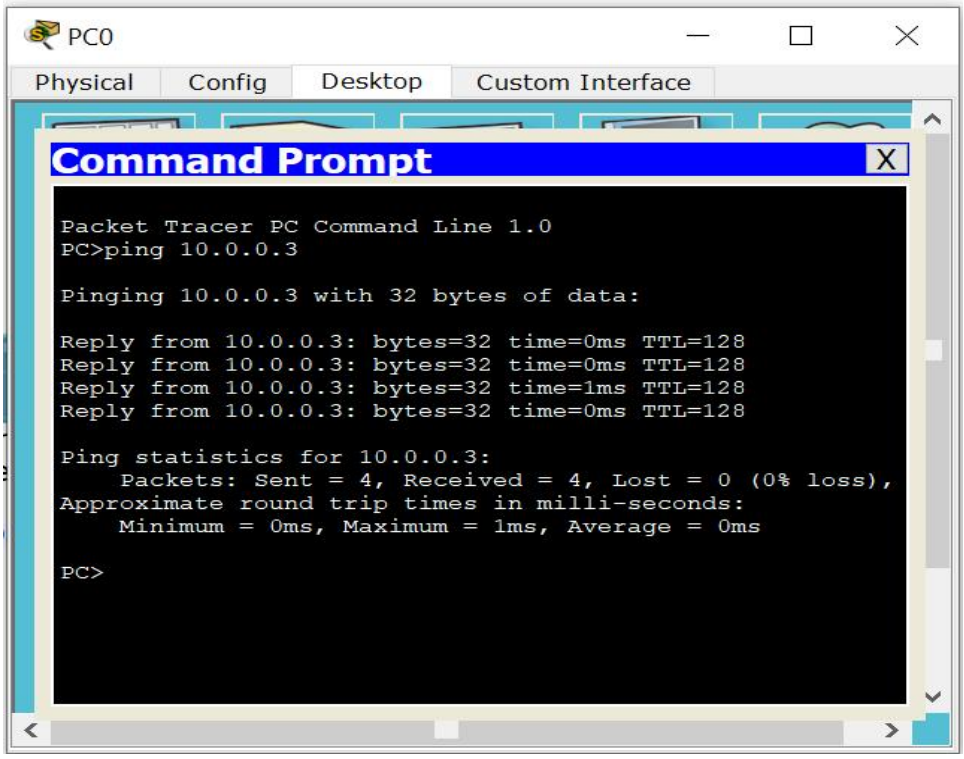


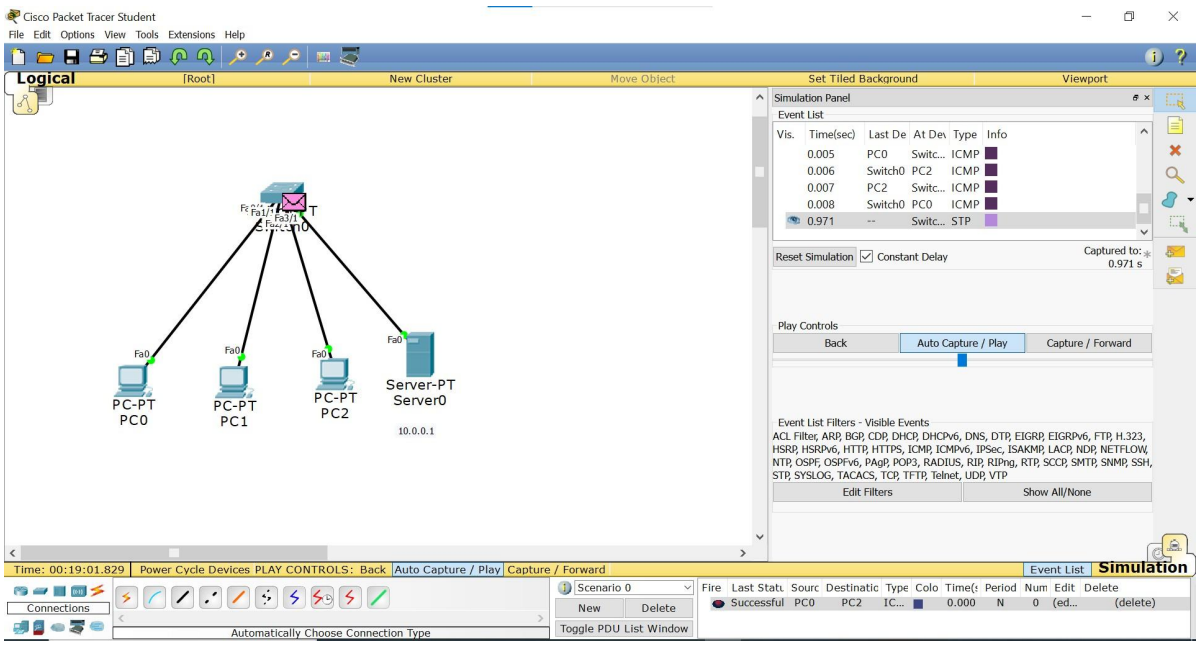
PROGRAM 4.2:



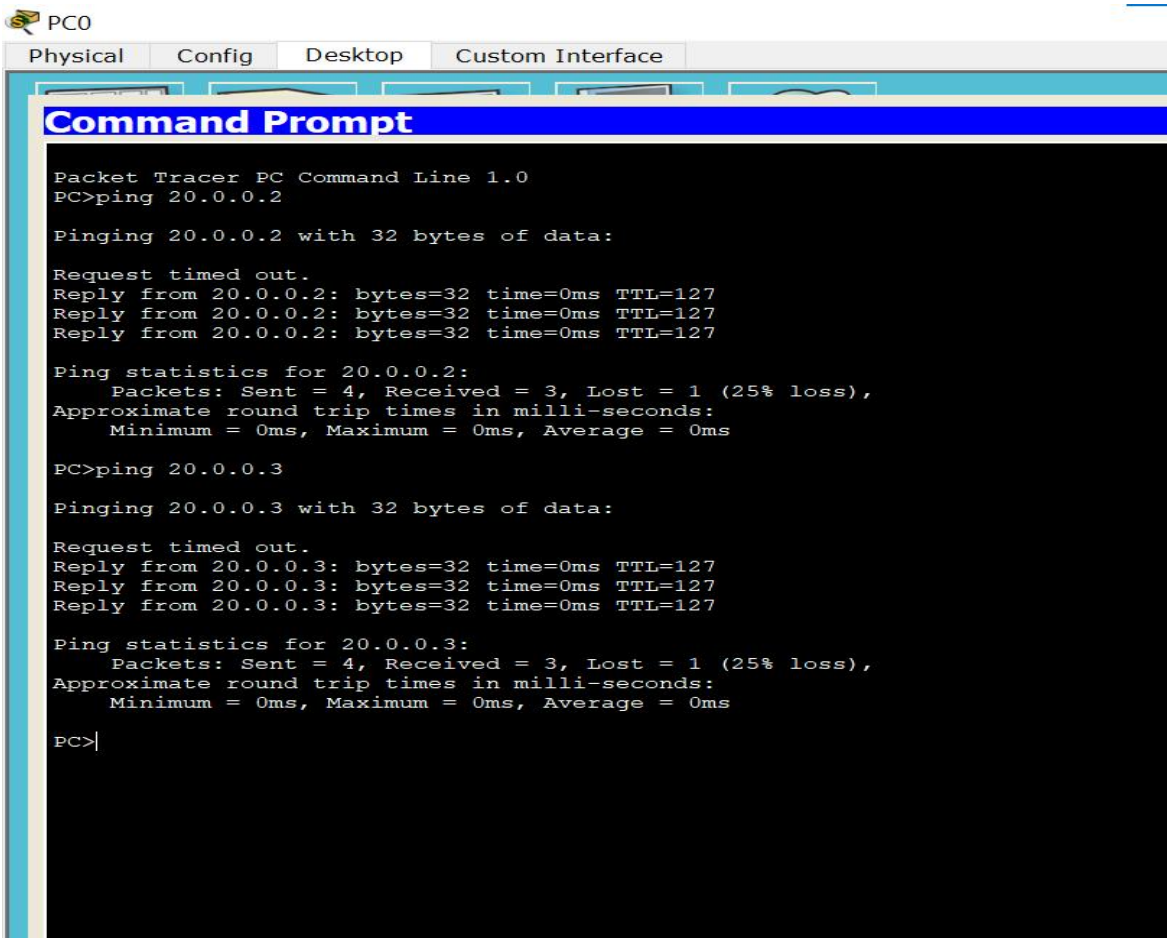
OUTPUT:

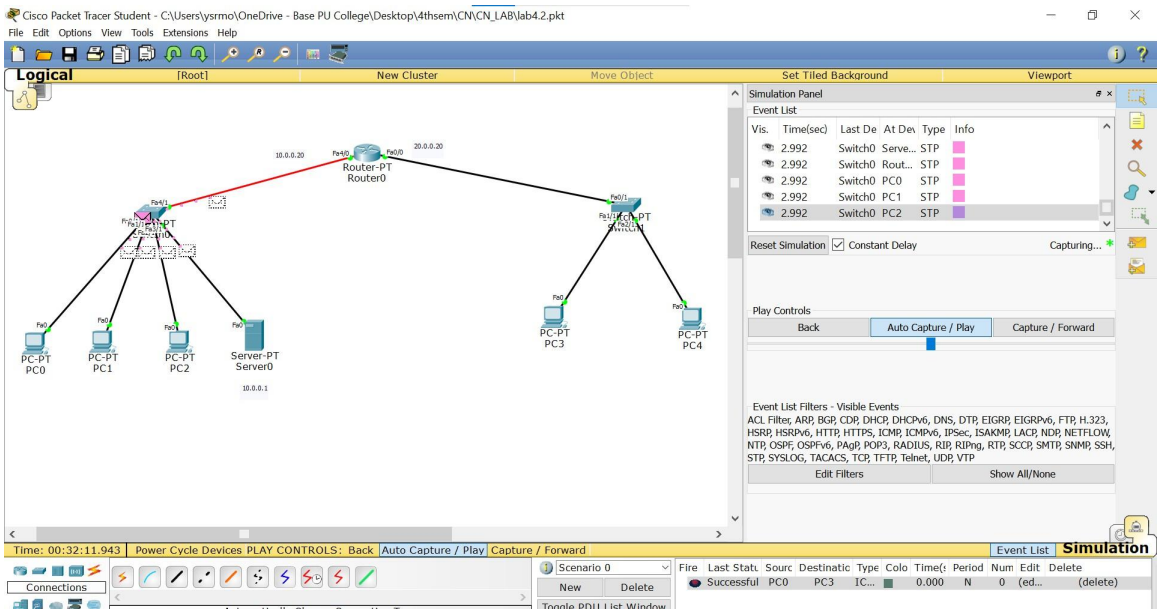
PROGRAM 4.1:





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>


Cisco Packet Tracer Student - C:\Users\ysrmo\OneDrive - Base PU College\Desktop\4thsem\CN\CN_LAB\lab4.2.pkt
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router-PT Router0
Server-PT Server0
PC-PT PC0
PC-PT PC1
PC-PT PC2
PC-PT PC3
PC-PT PC4
Simulation Panel
Event List
Reset Simulation
Constant Delay
Capturing...
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
Edit Filters
Show All/None
Time: 00:32:11.943
Power Cycle Devices PLAY CONTROLS: Back
Auto Capture / Play
Capture / Forward
Event List
Simulation
Connections
Scenario 0
New
Delete