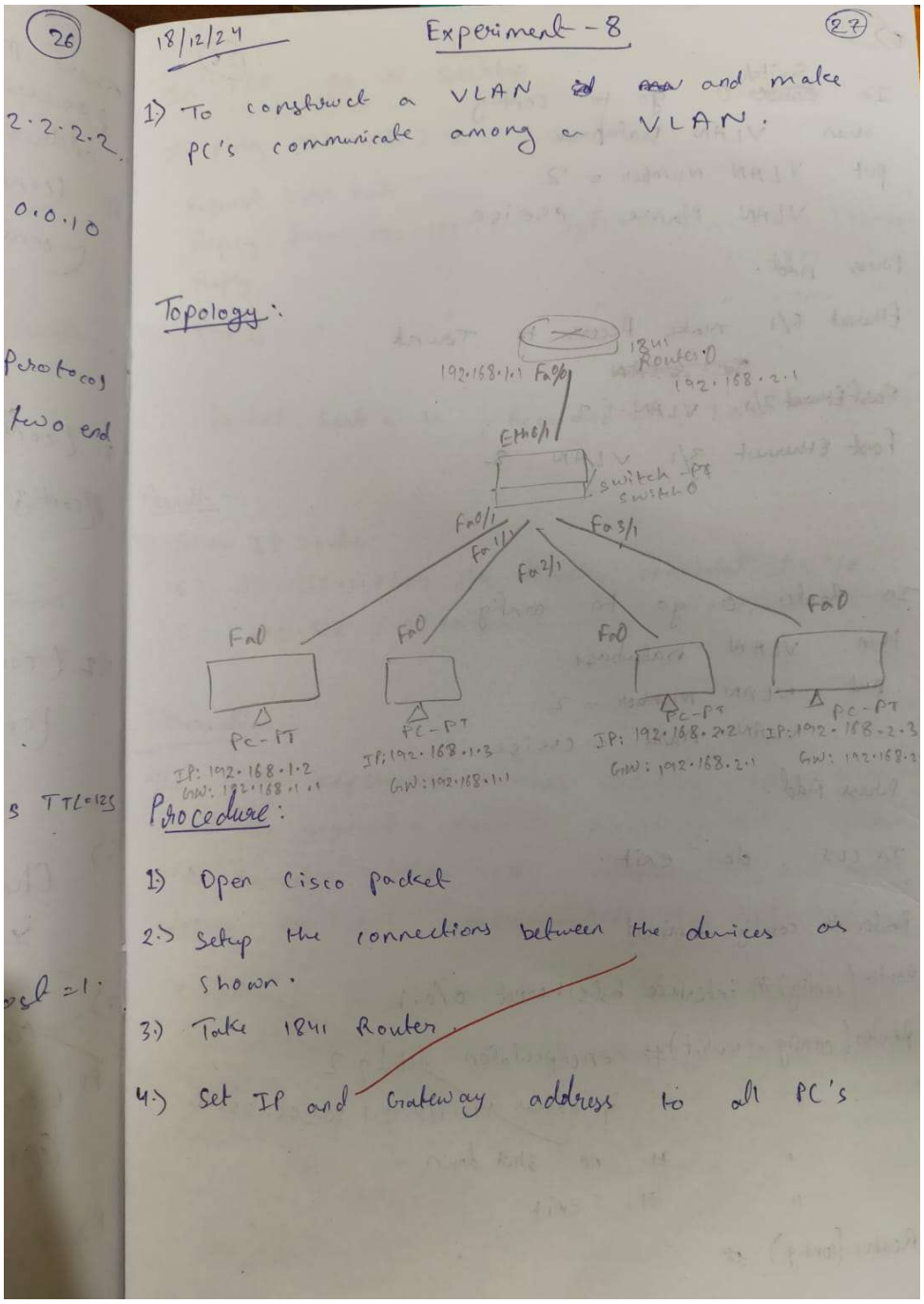
Program 12

Aim: To construct a VLAN and make the PC's communicate among a VLAN .

Topology , Procedure and Observation:



5:)

In Switch 0 go to config
then VLAN Database
put VLAN Number = 2
VLAN Name = cseise

Press Add.

Ethernet 6/1 make Access to Trunk

~~Set VLAN~~

FastEthernet 2/1 VLAN 2

Fast Ethernet 3/1 VLAN 2

In Router 0 go to config
then VLAN Database
put VLAN Number = 2
VLAN Name = cseise

Press Add.

In CLI, do exit.

Router # config terminal

Router(config)# interface fastethernet 0/0.1

Router(config-subif)# encapsulation dot1q 2

" # ip address 192.168.2.1 255.255.255.0

" # no shut down

" # exit

Router(config) #

In PC0 go to Desktop

>> ping 192.168.2.2

Request time out

Reply from 192.168.2.2: byte=32 time=3ms TTL=127

Reply " " " " =0ms "

Reply " " " " =0ms "

Packet Sent = 4 , Received = 3, Lost = 1 (25% loss)

Result:

Show IP route

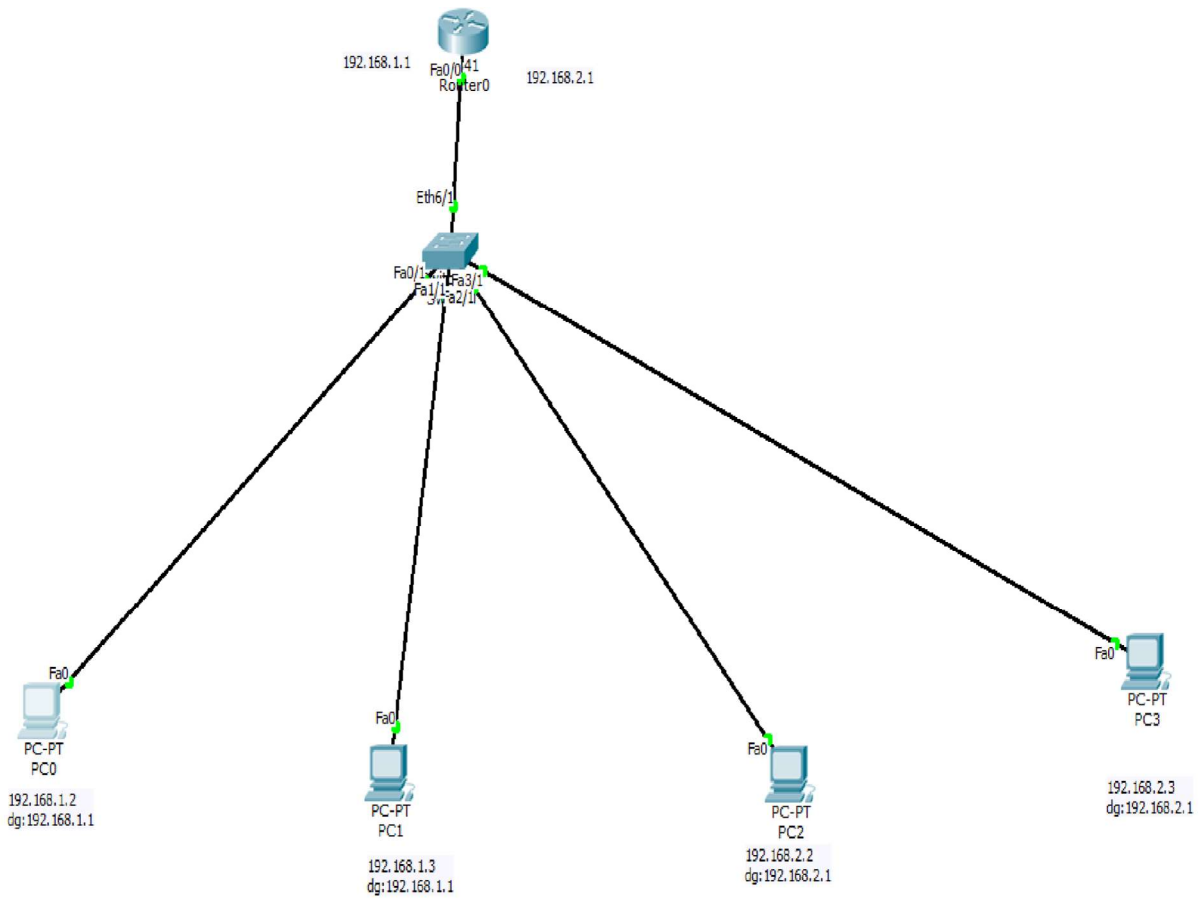
C: 192.168.1.0/24 is directly connected Fa 0/0

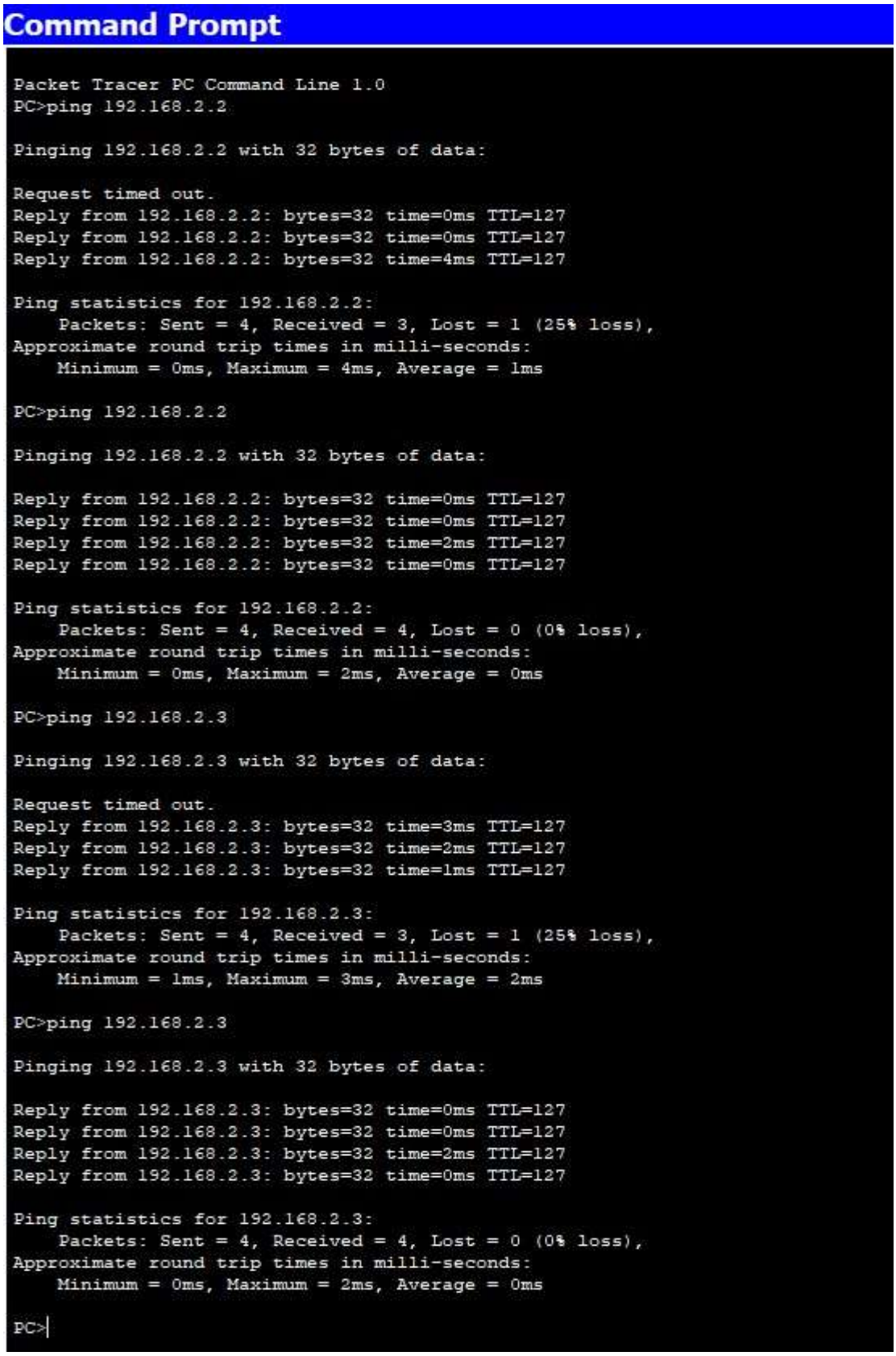
C: 192.168.2.0/24 ——— Fa 0/0.1

Observation:

The VLAN experiment involves creating and configuring VLAN to segment a network, assigning IP's to device for seamless intra VLAN communication and using dot1q, encapsulation for inter VLAN connectivity to communicate through a single trunk link. This experiment highlights the importance of VLAN's in optimizing and managing modern network effectively.

Screen Shots:




Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 192.168.2.2
Pinging 192.168.2.2 with 32 bytes of data:
Request timed out.
Reply from 192.168.2.2: bytes=32 time=0ms TTL=127
Reply from 192.168.2.2: bytes=32 time=0ms TTL=127
Reply from 192.168.2.2: bytes=32 time=4ms TTL=127
Ping statistics for 192.168.2.2:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 4ms, Average = 1ms
PC>ping 192.168.2.2
Pinging 192.168.2.2 with 32 bytes of data:
Reply from 192.168.2.2: bytes=32 time=0ms TTL=127
Reply from 192.168.2.2: bytes=32 time=0ms TTL=127
Reply from 192.168.2.2: bytes=32 time=2ms TTL=127
Reply from 192.168.2.2: bytes=32 time=0ms TTL=127
Ping statistics for 192.168.2.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 2ms, Average = 0ms
PC>ping 192.168.2.3
Pinging 192.168.2.3 with 32 bytes of data:
Request timed out.
Reply from 192.168.2.3: bytes=32 time=3ms TTL=127
Reply from 192.168.2.3: bytes=32 time=2ms TTL=127
Reply from 192.168.2.3: bytes=32 time=1ms TTL=127
Ping statistics for 192.168.2.3:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 1ms, Maximum = 3ms, Average = 2ms
PC>ping 192.168.2.3
Pinging 192.168.2.3 with 32 bytes of data:
Reply from 192.168.2.3: bytes=32 time=0ms TTL=127
Reply from 192.168.2.3: bytes=32 time=0ms TTL=127
Reply from 192.168.2.3: bytes=32 time=2ms TTL=127
Reply from 192.168.2.3: bytes=32 time=0ms TTL=127
Ping statistics for 192.168.2.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 2ms, Average = 0ms
PC>