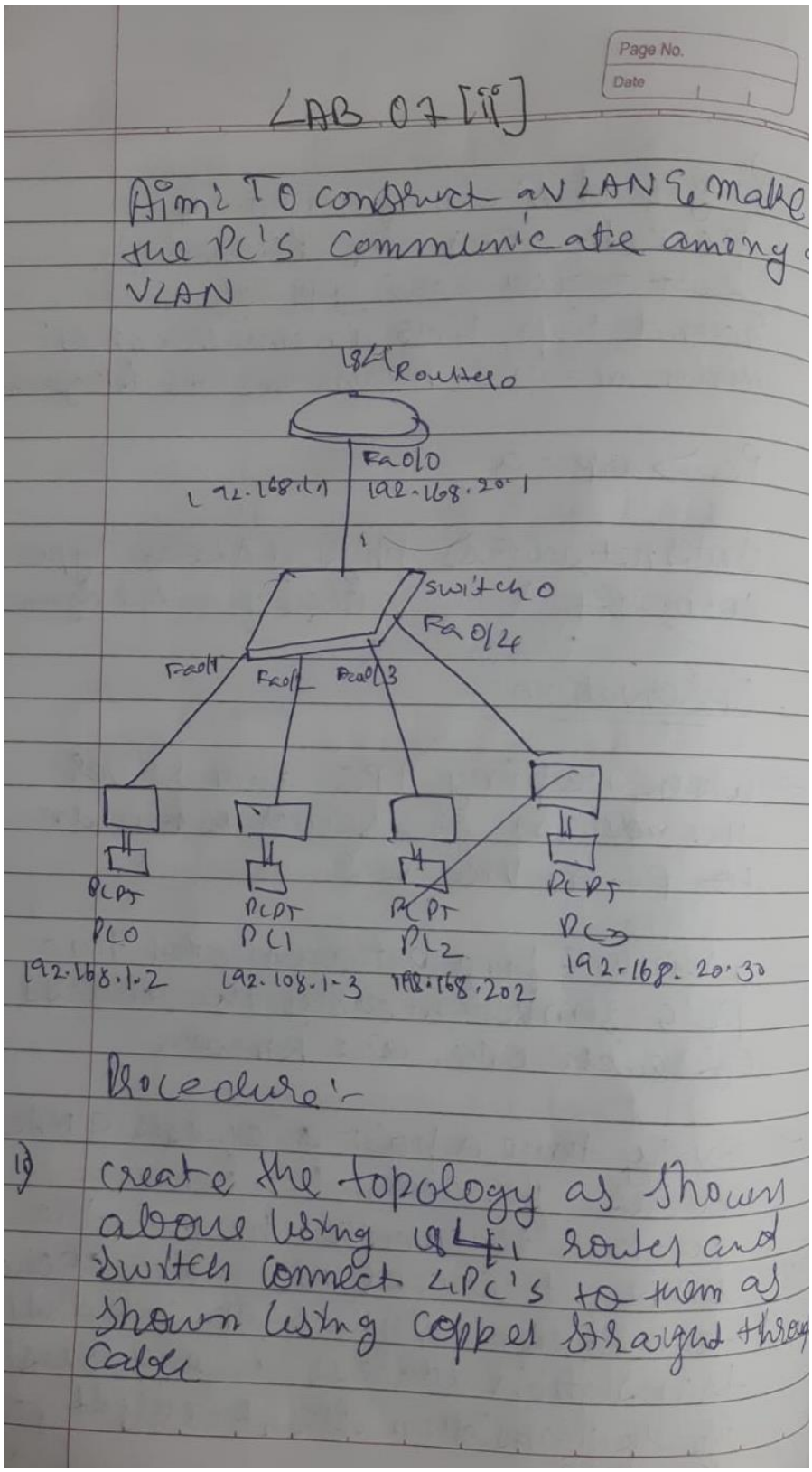
LAB 9

To construct a VLAN and make a pc communicate among VLAN.

OBSERVATION:



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2 We use class C addressing here

3. Set IP address & gateways as follows

PC0 IP address = 192.168.1.2 Gateway: 192.168.1.1
PC1 IP → 192.168.1.3 Gateway: 192.168.1.1
IP → 192.168.20.2 Gateway: 192.168.20.1
IP → 192.168.20.3 Gateway: 192.168.20.1

Observation:

We can ping each and every device to the other device
So we can observe that wireless connection is done accessfully
When connection is established there is stripped lines connecting access points and end devices.

→ Go to config tab of switch
open VLAN database
set VLAN number = 20
VLAN name = New VLAN
click on add

→ In switch go to fast ethernet 5/0 and connect it to router.

and configure it - Select Trunk and choose 20, New VLAN

→ For Fa 0/3 and Fa 0/4 Select 10, New LAN and keep access as it is

→ Open config tab in Router, goto VLAN database Add VLAN no: 10

→ In Router goto CLI mode fa 0/0

Router(config)# ip address 192.168.1.1 255.255.255.0

Router(config)# no shut

Router(config)# interface fastEthernet 0/0.1

Router(config)# encapsulation dot1q 20

" " " # ip address 192.168.20.1 255.255.255.0

no shut

exit

Ping output

PC > ping 192.168.20.2

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Pinging 192.168.20.2 with 32 bytes of data

Request timed out.

Reply from 192.168.20.2 bytes=32 time=1ms TTL=

" " " " " " " " "

" " "

Ping Statistics for 192.168.20.2

Packets Sent = 4 Recieved = 3 lost = 1 (25% loss)

Approximate round trip in ms!

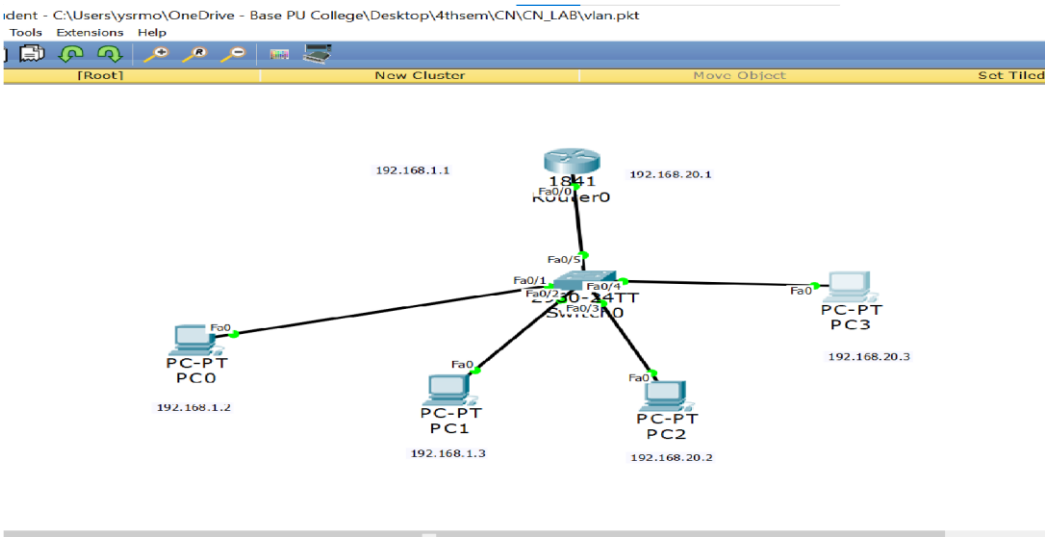
Min = 0 ms Max = 2ms Average = 0ms

Observation 19/8/2023

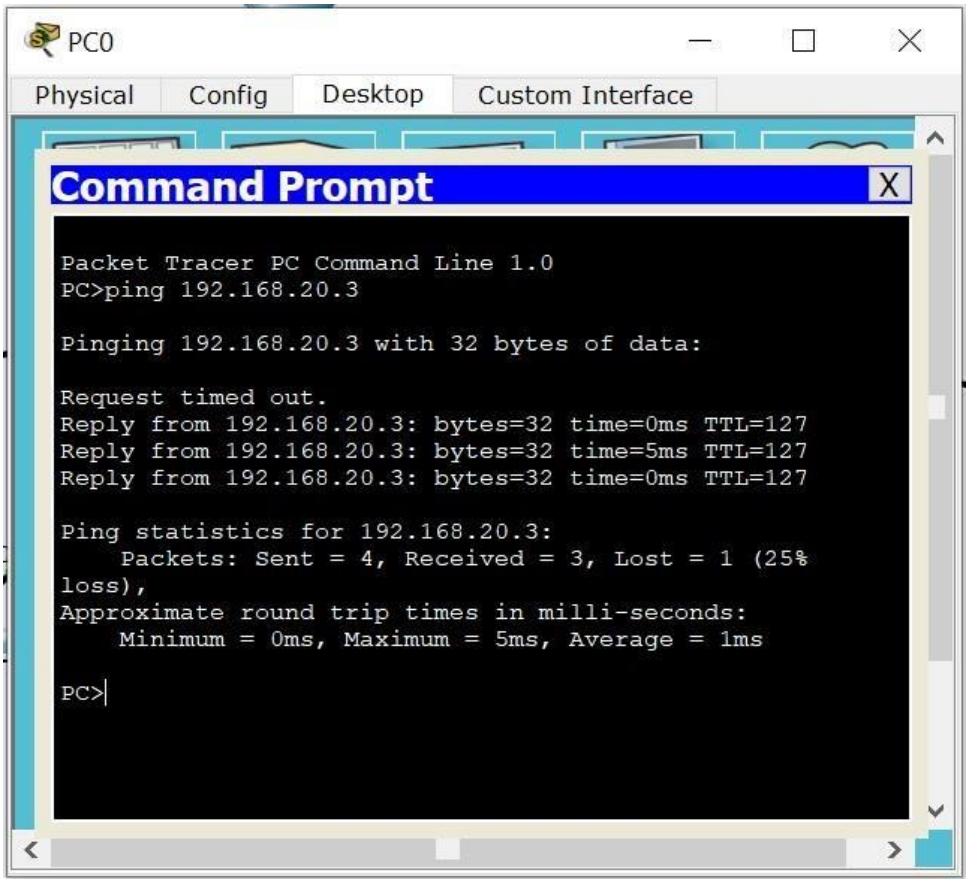
⇒ We can observe that after VLAN is configured we can successfully ping PC2 (192.168.20.2) from PC0 (192.168.1.2)

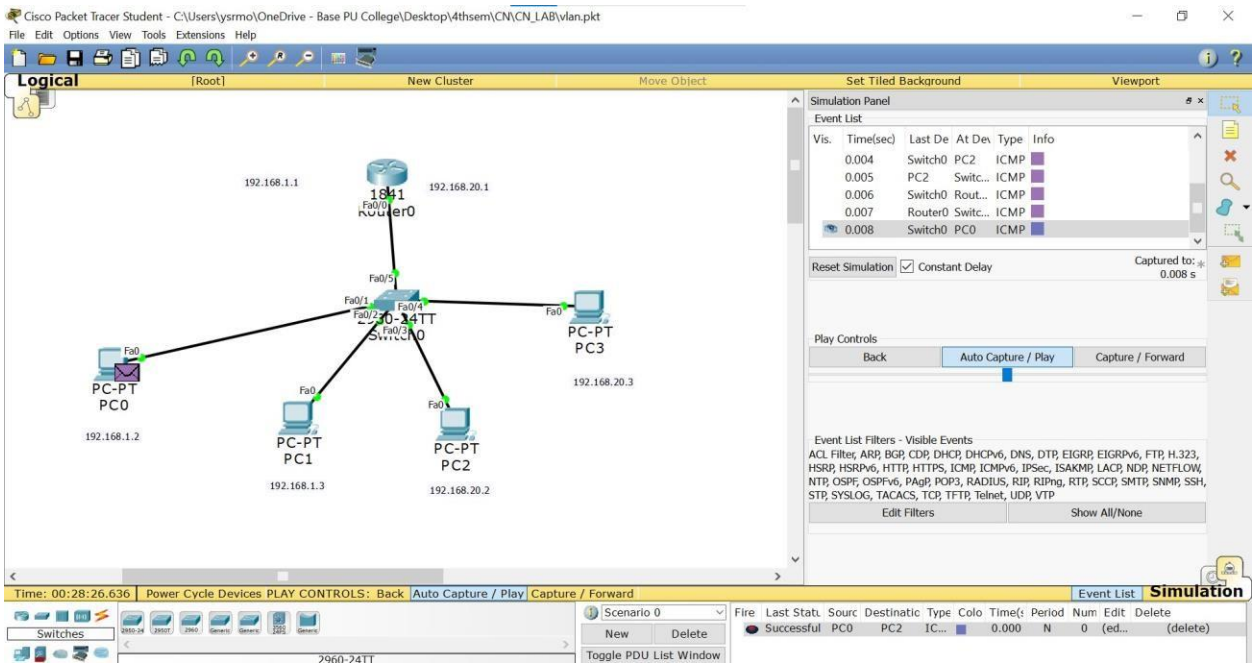
⇒ PC2 and PC3 are grouped together and communication among them is done via VLAN 192.168.20.1 is a sub interface 0/0.1 router.

TOPOLOGY:



OUTPUT:




Cisco Packet Tracer Student - C:\Users\ysrmo\OneDrive - Base PU College\Desktop\4thsem\CN\CN_LAB\vlan.pkt
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
192.168.1.1
1841
Router0
192.168.20.1
Fa0/5
Fa0/1
Fa0/2
Fa0/3
Fa0/4
2960-24TT
Switch0
Fa0
PC-PT
PC0
192.168.1.2
PC-PT
PC1
192.168.1.3
PC-PT
PC2
192.168.20.2
PC-PT
PC3
192.168.20.3
Simulation Panel
Event List
Vis. Time(sec) Last De At De Type Info
0.004 Switch0 PC2 ICMP
0.005 PC2 Switc... ICMP
0.006 Switch0 Rout... ICMP
0.007 Router0 Switc... ICMP
0.008 Switch0 PC0 ICMP
Reset Simulation
Constant Delay
Captured to: 0.008 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: 00:28:26.636
Power Cycle Devices
PLAY CONTROLS: Back
Auto Capture / Play
Capture / Forward
Event List
Simulation
Switches
2960-24TT
Scenario 0
New
Delete
Toggle PDU List Window
Fire Last Stat Sourc Destinatic Type Colo Time(s Period Num Edit Delete
Successful PC0 PC2 IC... 0.000 N 0 (ed... (delete)