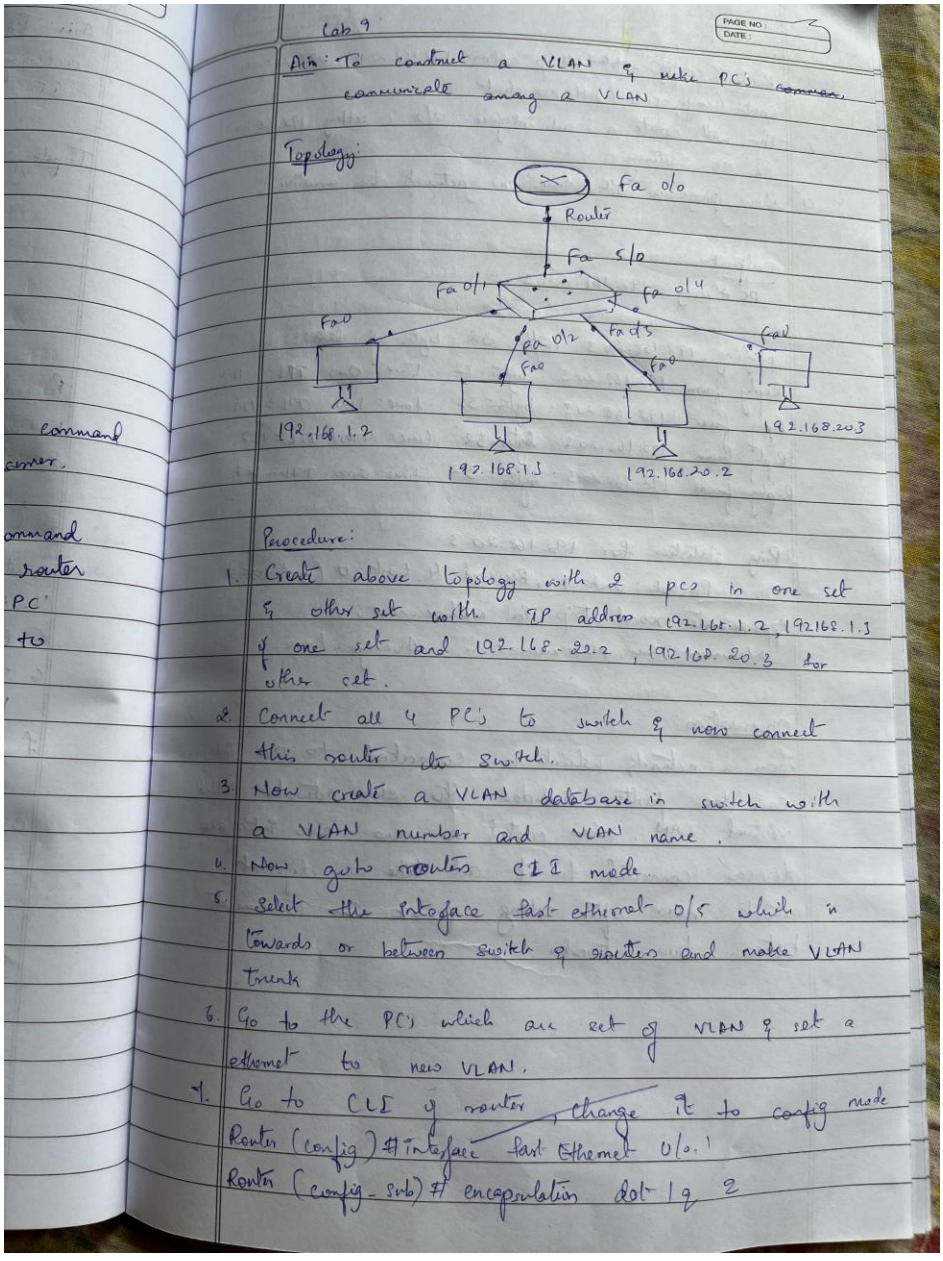
LAB 9

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

OBSERVATION:



Lab 9

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Aim: To construct a VLAN & make PC's communicate among a VLAN

Topology:

Procedure:

1. Create above topology with 2 pcs in one set & other set with IP address 192.168.1.2, 192.168.1.3 of one set and 192.168.20.2, 192.168.20.3 for other set.
2. Connect all 4 PC's to switch & now connect this router to switch.
3. Now create a VLAN database in switch with a VLAN number and VLAN name.
4. Now goto routers CLI mode
5. Select the interface fast ethernet 0/5 which is towards or between switch & routers and make VLAN Trunk
6. Go to the PC's which are set of VLAN & set a ethernet to new VLAN.
7. Go to CLI of router, change it to config mode
   Router (config) # interface fast Ethernet 0/0.1
   Router (config-sub) # encapsulation dot1q 2

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Router (config-subif) # ip address 192.168.20.1 255.255.255.0
Router (config-subif) # no shut

8. This will create a sub interface 0/0 ; setting 192.168.20.1 as its gateway.

9. Now ping a PC from one network to another

Output:

PC > ping 192.168.20.3

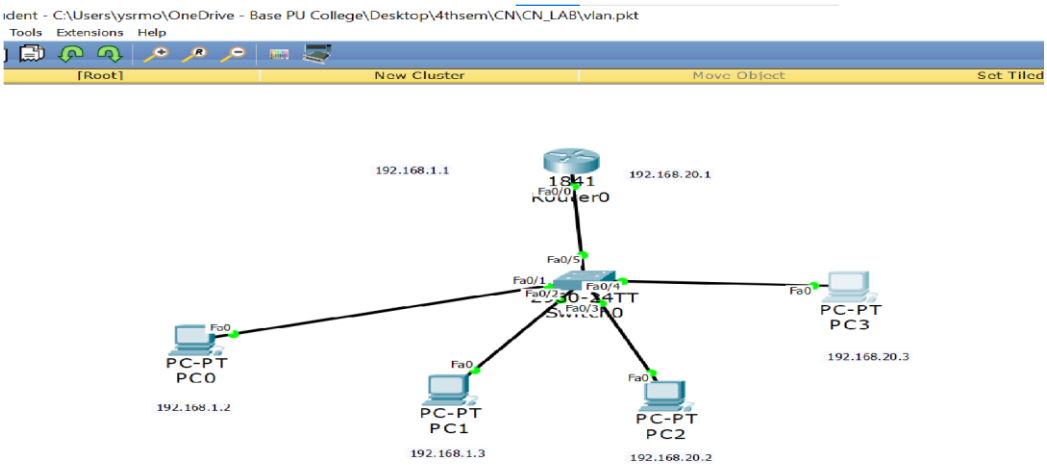
pinging 192.168.20.3 with 32 bytes of data:
Reply from 192.168.20.3 : bytes = 32 time = 0ms TTL = 127
Reply from 192.168.20.3 : bytes = 32 time = 1ms TTL = 127
Reply from 192.168.20.3 : bytes = 32 time = 4ms TTL = 127
Reply from 192.168.20.3 : bytes = 32 time = 0ms TTL = 127.

Ping statistics for 192.168.20.3
Packets : sent = 4, Received = 4, Lost = 0 (0% Loss),
Approximate round trip in milliseconds :
Minimum = 0ms, Maximum = 4ms, Average = 1ms.

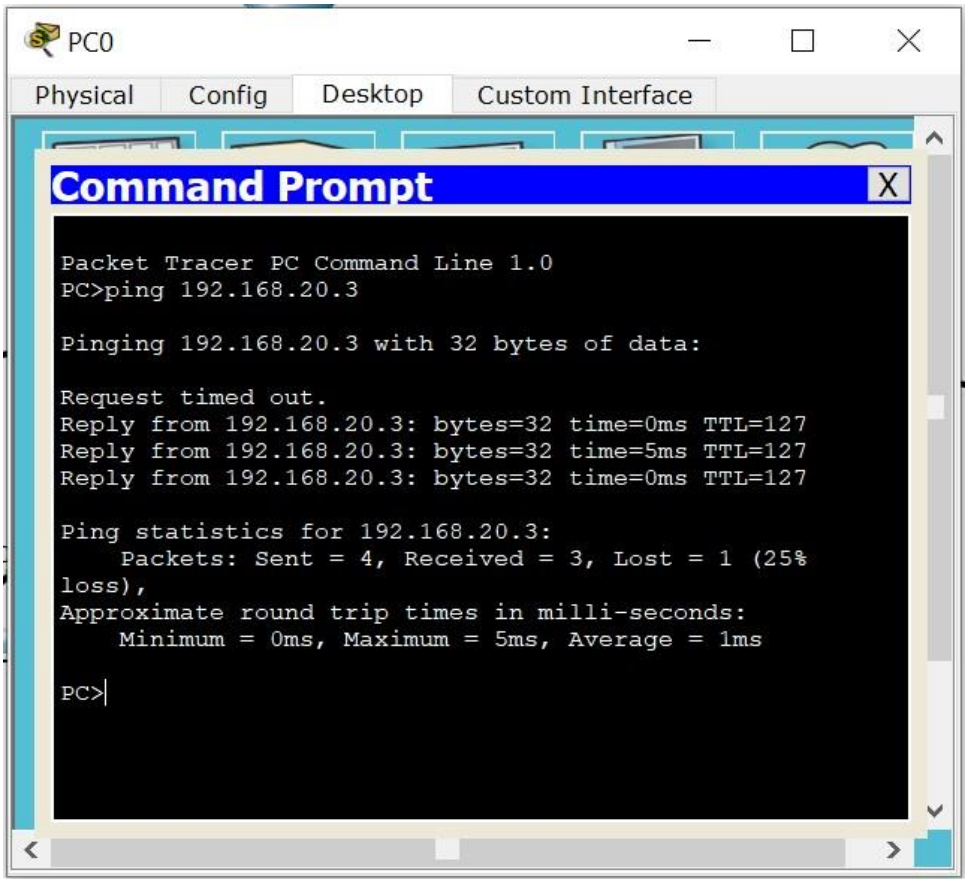
Observations:

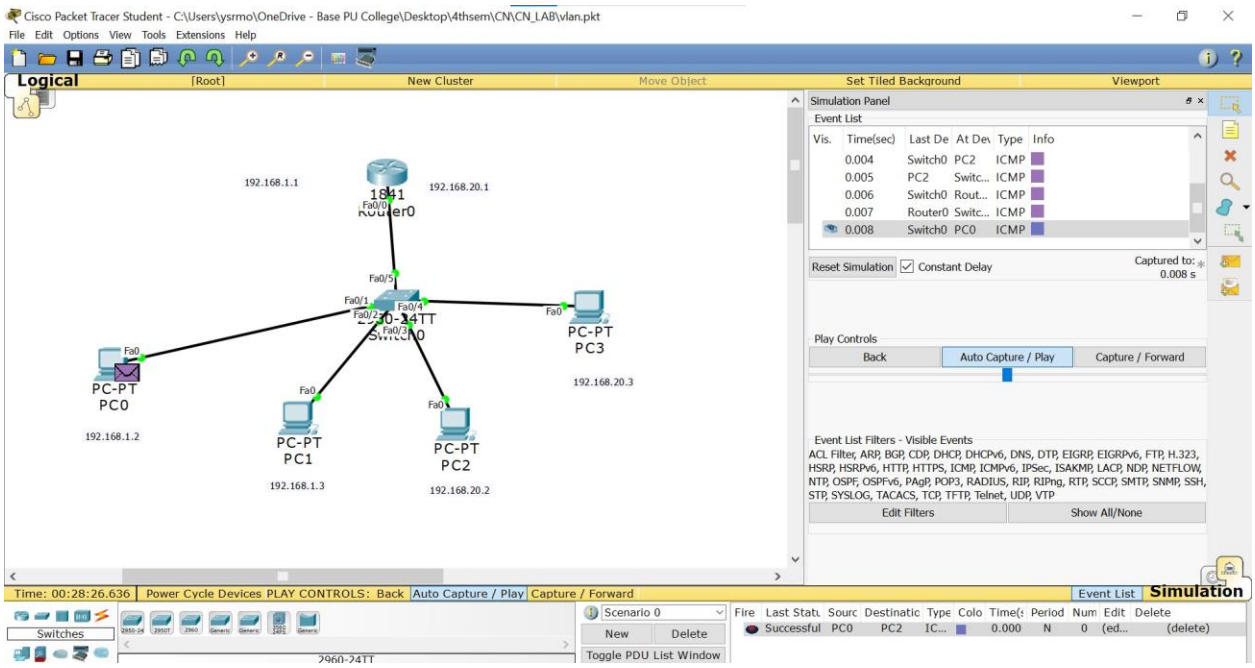
From a network which is connected to one interface can be further divided into sub networks called virtual LAN. When created a new sub interface devices connected to it act like a different network, now after setting up, we can communicate between two networks.

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
Scenario 0
New
Delete
Toggle PDU List Window
Fire Last Statu Sourc Destinatic Type Colo Time(s Period Num Edit Delete
Successful PC0 PC2 IC... 0.000 N 0 (ed... (delete)