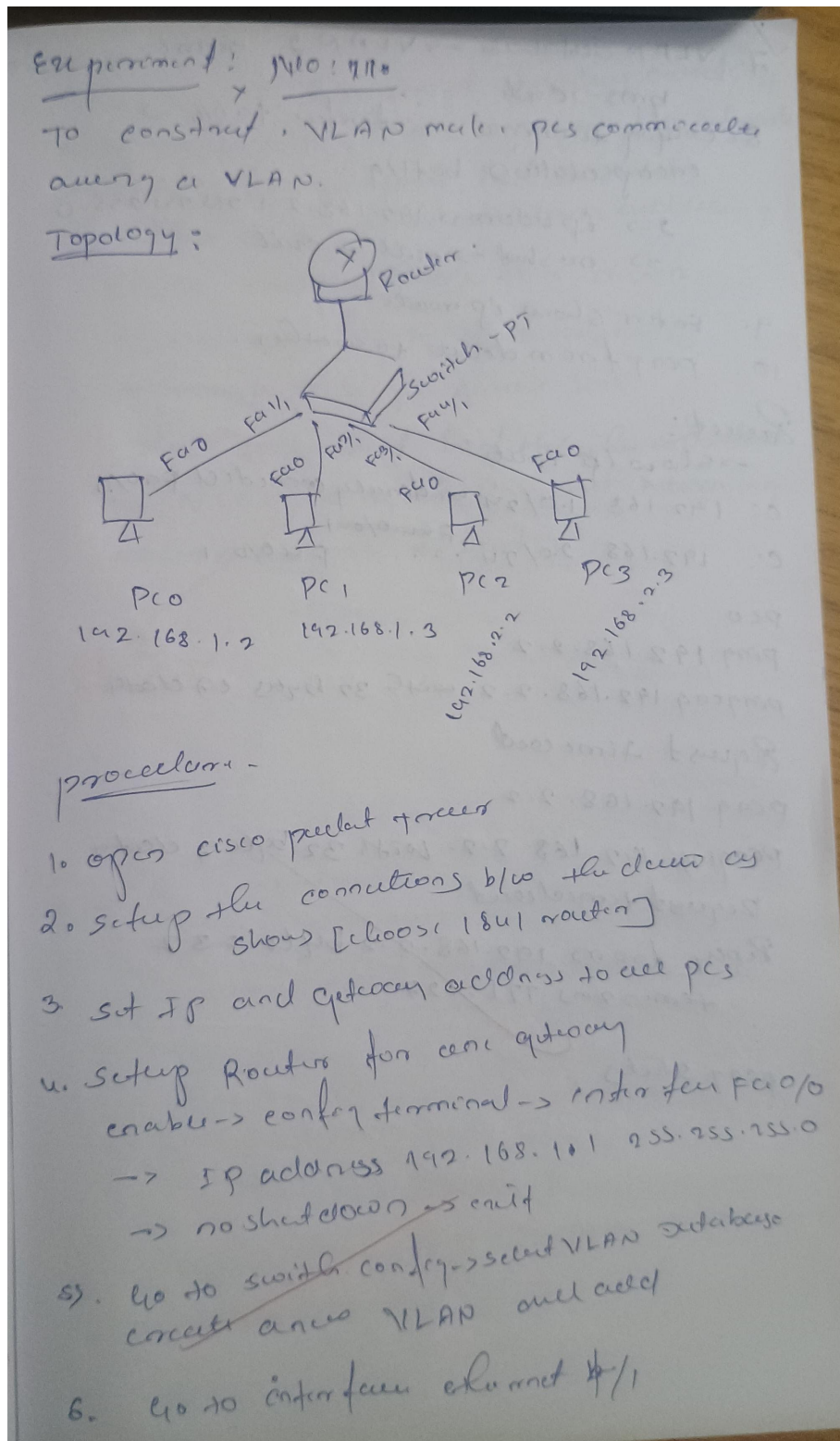


EXPERIMENT-11 To construct a VLAN and make the PC's communicate among a VLAN
Observation:



7. VLAN database -> VLAN 2, name

brms -> cril

8. config terminal -> interface fa 0/0 ->
encapsulation dot1q

2 -> ip address 192.168.2.1 255.255.255.0

-> no shut -> exit -> exit

9. Enter show ip route

10. ping from device to another.

Result:

-> show ip route

C: 192.168.1.0/24 is directly connected fa0/0

C: 192.168.2.0/24 ~~fa0/0.1~~ fa0/0.1

PC0

ping 192.168.2.2

ping pong 192.168.2.2 with 32 bytes of data

Request timed out

ping 192.168.2.2

pong ping 192.168.2.2 with 32 bytes of data

Request timed out

Reply from 192.168.2.2 bytes = 32

time=2ms TTL=127

ping stats

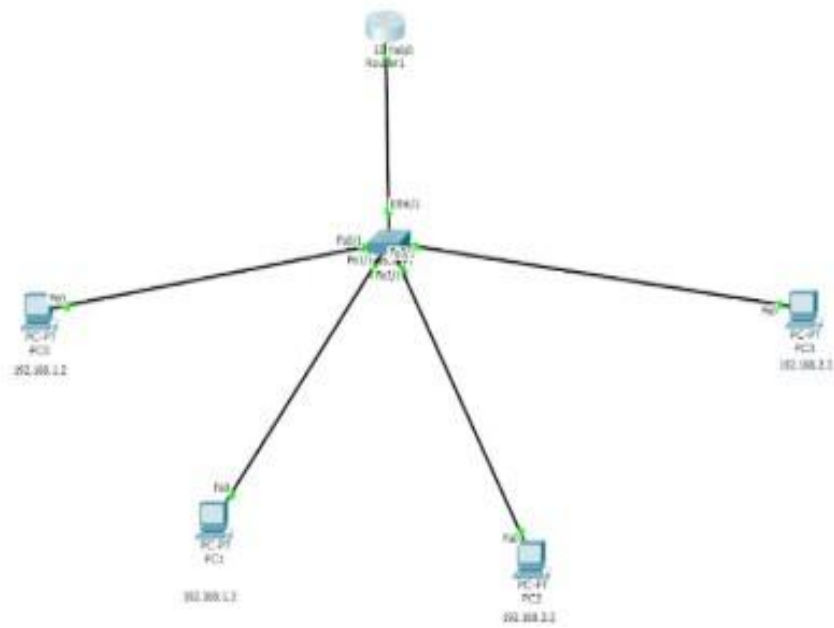
observation -

The VLAN experiment involves creating and configuring VLAN to segment a network assigning IPs to devices for seamless communication and using dot1q encapsulation for inter VLAN connectivity to communicate through a single physical link.

This experiment highlights the importance of VLAN in optimizing and managing modern network efficiently.

By the
3/11/24

Screenshot of the topology:



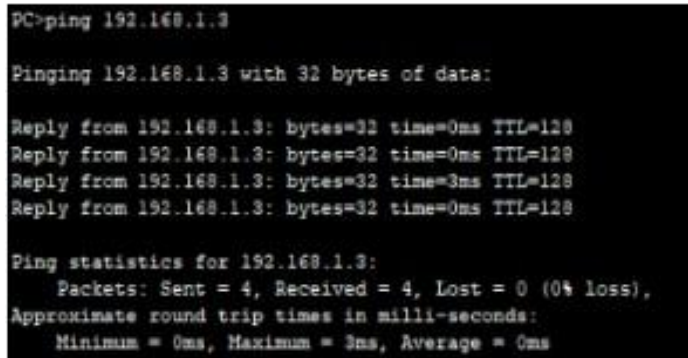
Screenshot of the output:



```
Router>enable
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet 0/0
Router(config-if)#ip address 192.168.1.1
% Incomplete command.
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINE-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
exit
Router(config)#
Router(config)#exit
Router#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Router(vlan)#
%SYS-5-CONFIG: 1: Configured from console by console
vlan 2 name HWLAN
VLAN 2 modified:
  Name: HWLAN
Router(vlan)#exit
```



```
PC>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time=0ms TTL=128
Reply from 192.168.1.3: bytes=32 time=0ms TTL=128
Reply from 192.168.1.3: bytes=32 time=3ms TTL=128
Reply from 192.168.1.3: bytes=32 time=0ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 3ms, Average = 0ms
```