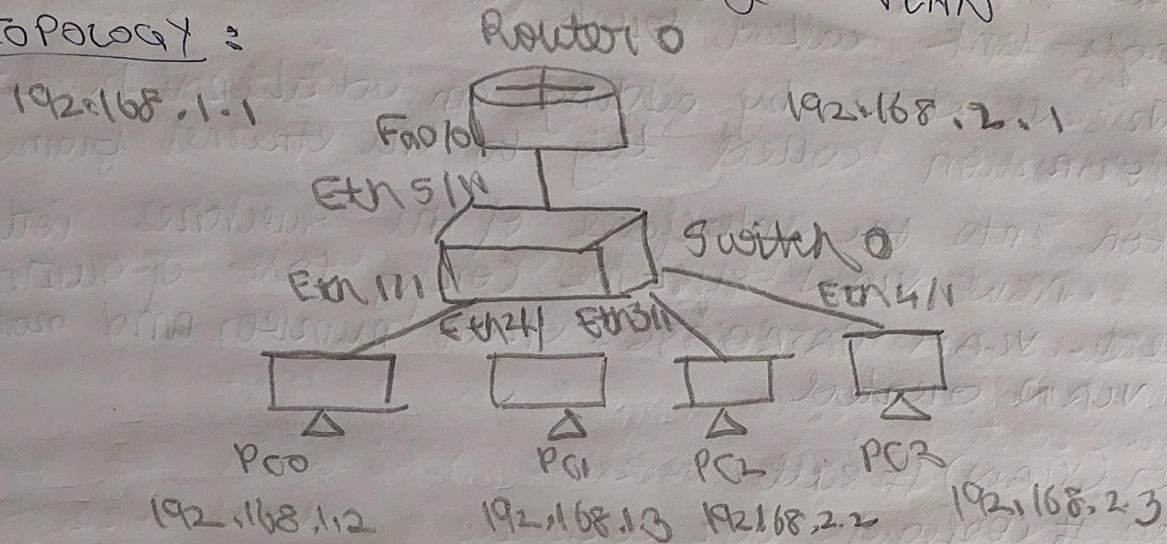


## EXPERIMENT 10

AIM: Configure a VLAN and enable communication between PCs among a VLAN

TOPOLOGY:



Connect 4 PCs to the switch and a router as well to the switch. Assign the IP addresses to the PCs to set def gateway.

PROCEDURE:

- 1) Choose the 1841 router and connect to a switch and 4 PC's via ethernet interface and fastethernet interface respectively
- 2) Set the IP addresses of the PC and configure the switch with IP address 192.168.1.1  
Router > enable  
Router # config terminal  
Router (config) # interface Fa0/0/1  
Router (config-if) # ip address 192.168.1.1 255.255.255.255  
Router (config-if) # no shut
- 3) In the switch, go to config mode and select VLAN Database.



Set the VLAN number and VLAN name on interface i.e, fastethernet 0/1 and make it the trunk. VLAN trunking allows switches to forward frame from different VLAN over a single link called trunk.

5) This is done by adding an additional header information called tag to the ethernet frame.

6) Look into the interface of the switches in 2. NEW VLAN systems. Config table of switch select VLAN DATABASE - enter number and name of VLAN created -

Router (VLAN) # exit

Router # config +

Router (config) # interface fastethernet 0/0.1

Router (config-subif) # encapsulation dot 1q 2

Router (config-subif) # ip address 192.168.1.1 255.255.255.255

Router (config-subif) # no shut

Router (config-subif) # exit

Router (config) # exit

OBSERVATION :

A VLAN segments a network into virtual groups to enhance security and reduce broadcast traffic. In pingging over the VLAN, the PCs are able to communicate.

✓  
26/12/21