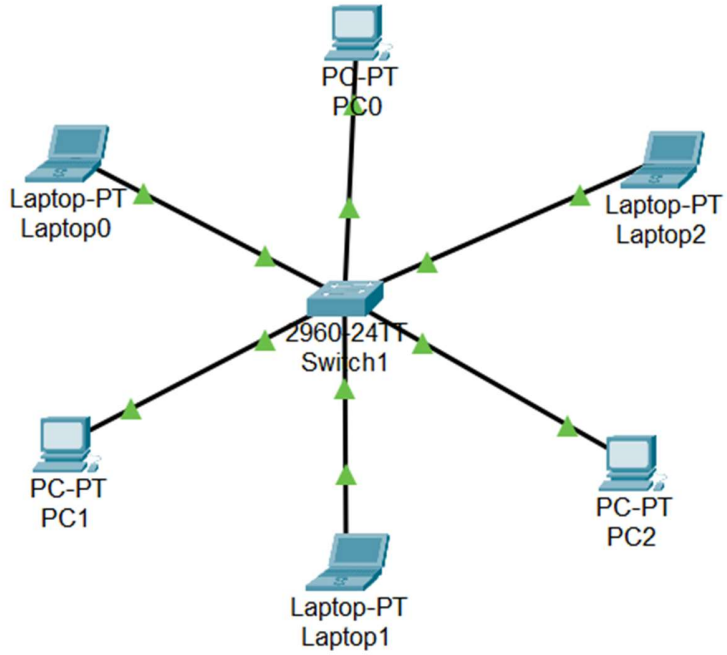
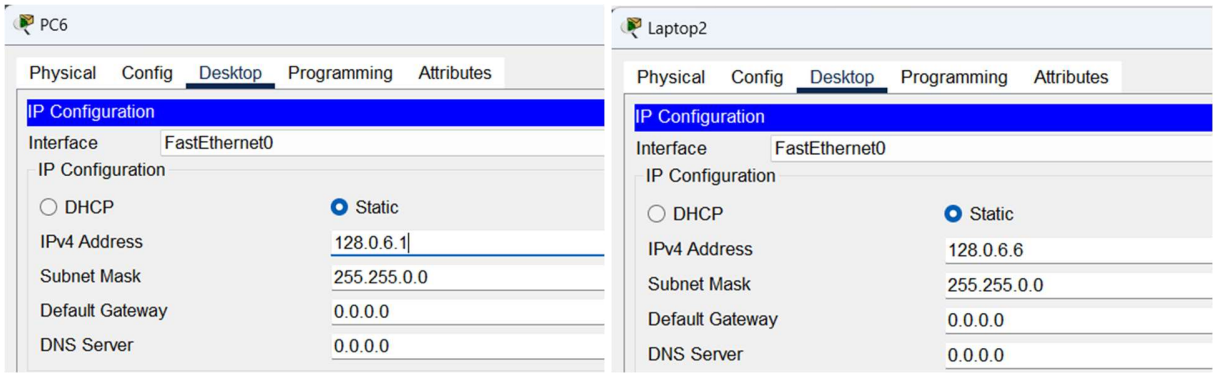
Marwadi University Marwadi Chandarana Group	**Marwadi University** **Faculty of Engineering and Technology** **Department of Information and Communication Technology**	
Subject: Computer Networks (01CT0503)	**Aim:** Simulate VLAN and verify the VLAN concepts the results.	
Experiment No: 10	**Date:** 28-08-2023	**Enrolment No:** 92210133006

Aim: Simulate VLAN and verify the VLAN concepts the results.

Step 1: Open Cisco Packet Tracer and create a small network with 1 router and 6 devices.



Step 2: First, we need to configure the IP address for all devices (PC) and assured that all devices has same network address. For example, if you choose the class B and network address 128.0 than for all the PC first two byte of address must be the same for connectivity.



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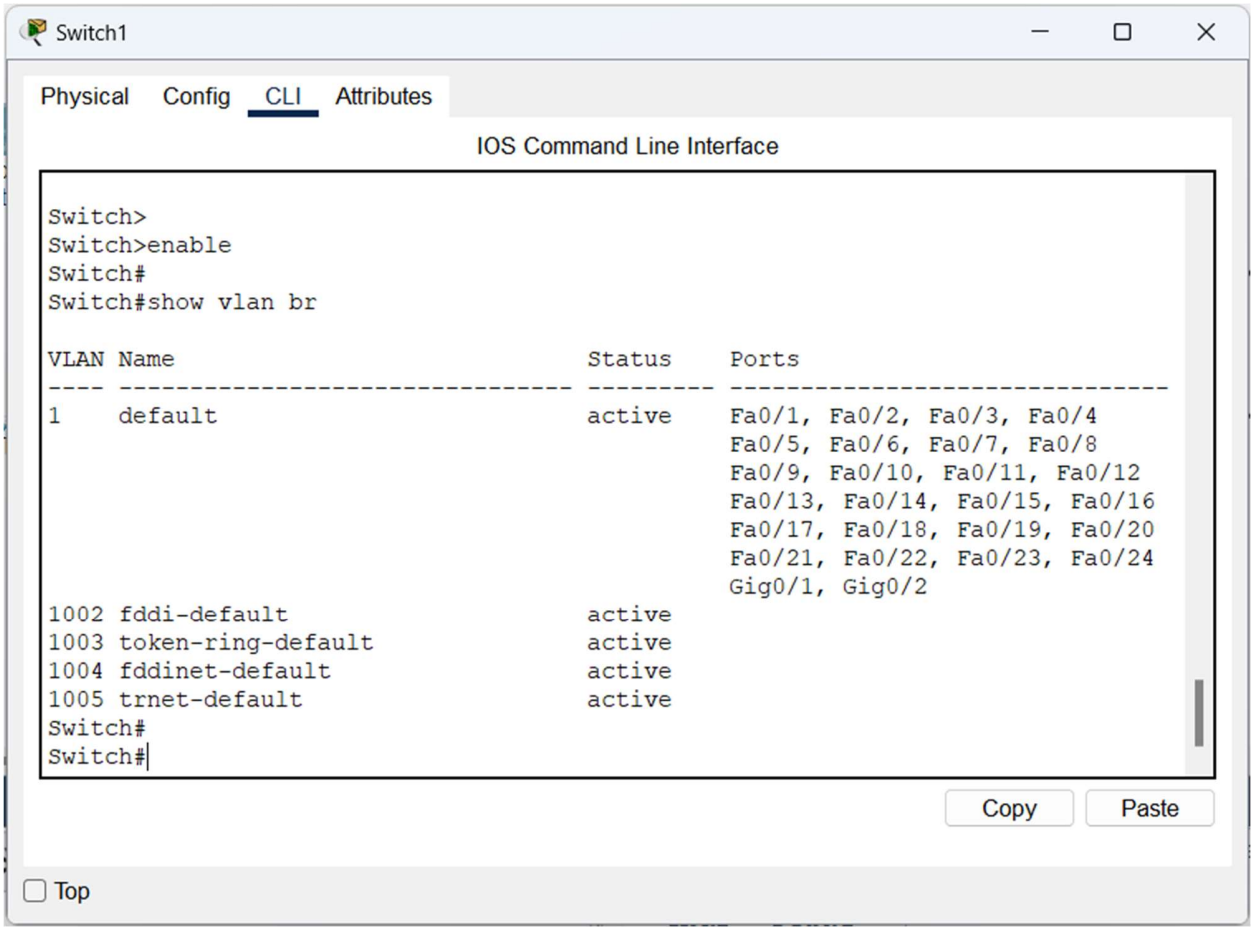
Step 3: Open on router and click on the CLI tab to access the (command line interface) for configuring the router.
Enter the "enable" command to switch from user mode to privilege mode, then use the "show vlan br" command to see the list of virtual LAN.



In Picture we can see that the by default one VLAN is there with name default, id 1 and access of all ports.

Step 4: Enter "configure terminal" or "config t" command to switch from privilege mode to configuration mode.
In configuration mode, enter "vlan 2" command to create VLAN with given vlan id.
Enter "name vlan_name" command to give name to created VLAN.

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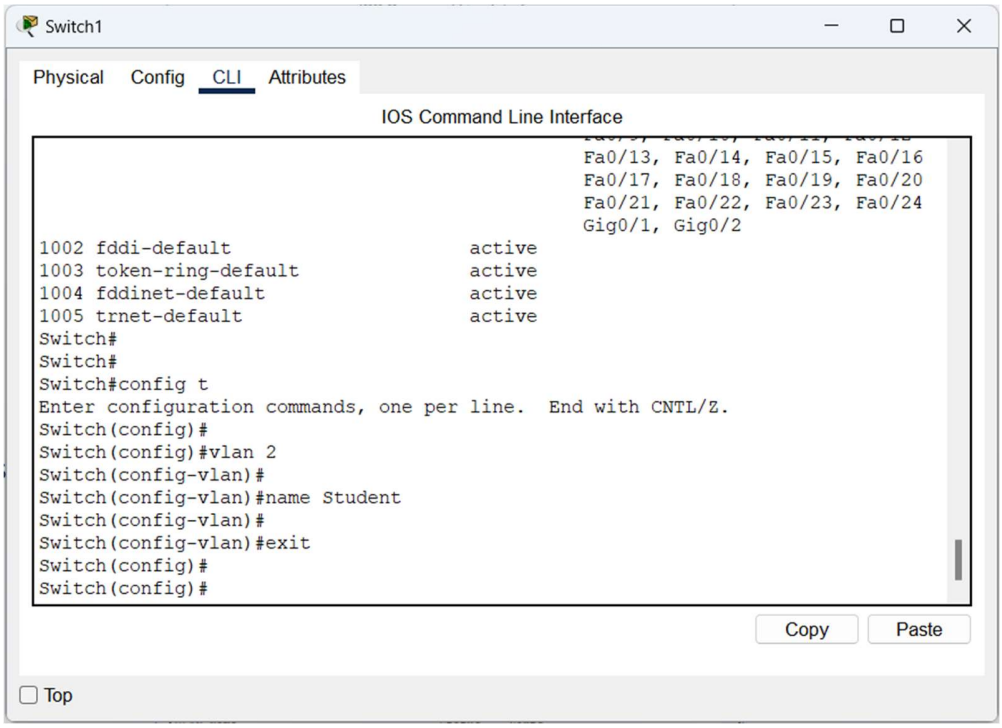
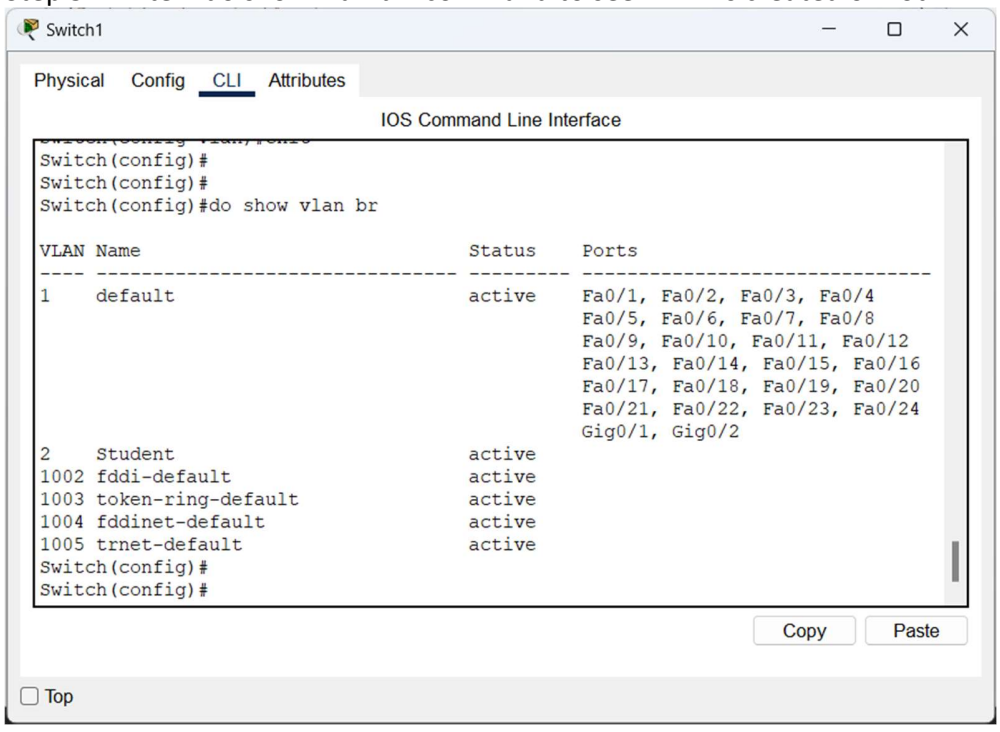


Step 5: Enter "do show vlan br" command to see VLAN is created or not.



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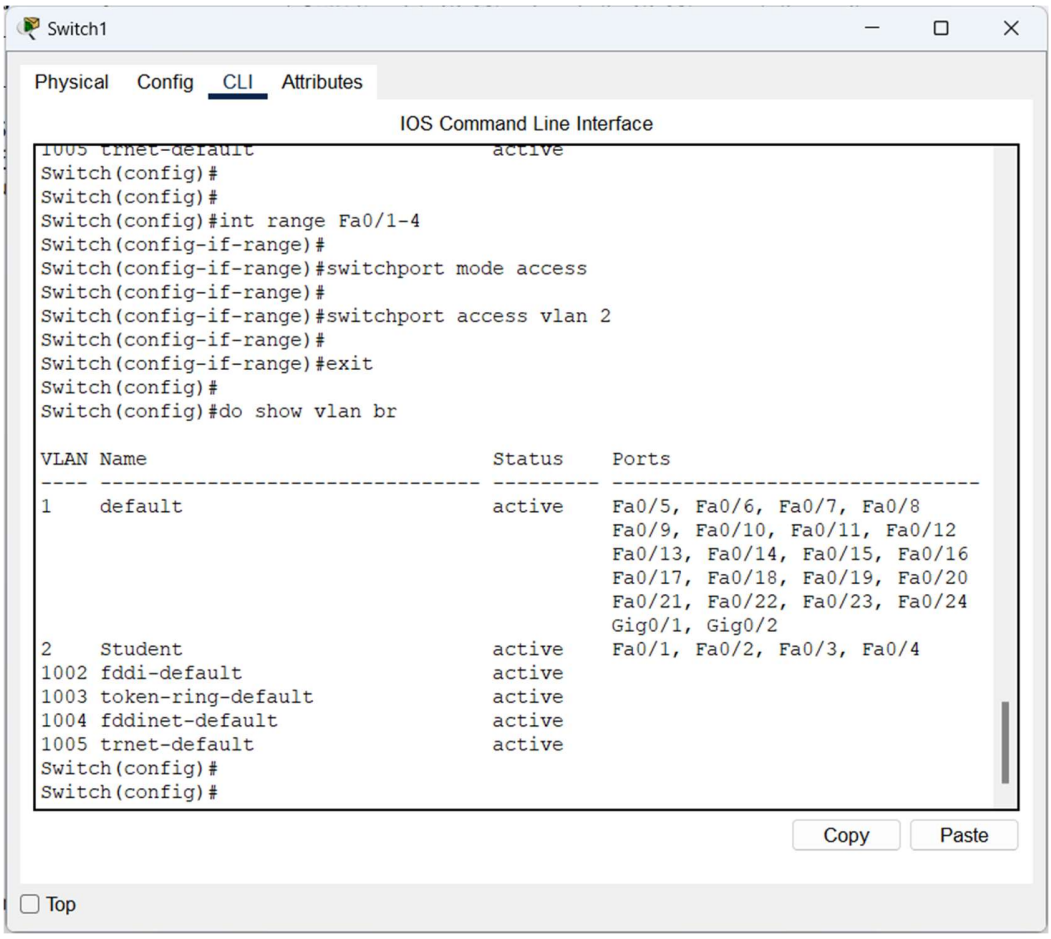
Step 6: Enter "int range Fa0/1-4" command to define port for VLAN with given port.
Enter "switchport mode access" command to configure ports as accessline mode.
Enter "switchport access vlan 2" command to assign accessline ports to given VLAN.
Enter "exit" command to go one mode back.
Enter "do show vlan br" command to see ports assigned to VLAN or not.



In above we can see that ports Fa0/1 to Fa0/4 are configured to VLAN 2 (Student).

Step 7: Now for checking the connectivity of PC1 we go to the command prompt of PC1 and use the command ping and that destination ip which is in VLAN of PC1's ip. "ping 128.0.0.5" for my task.
For Testing network of VLAN we test ping.

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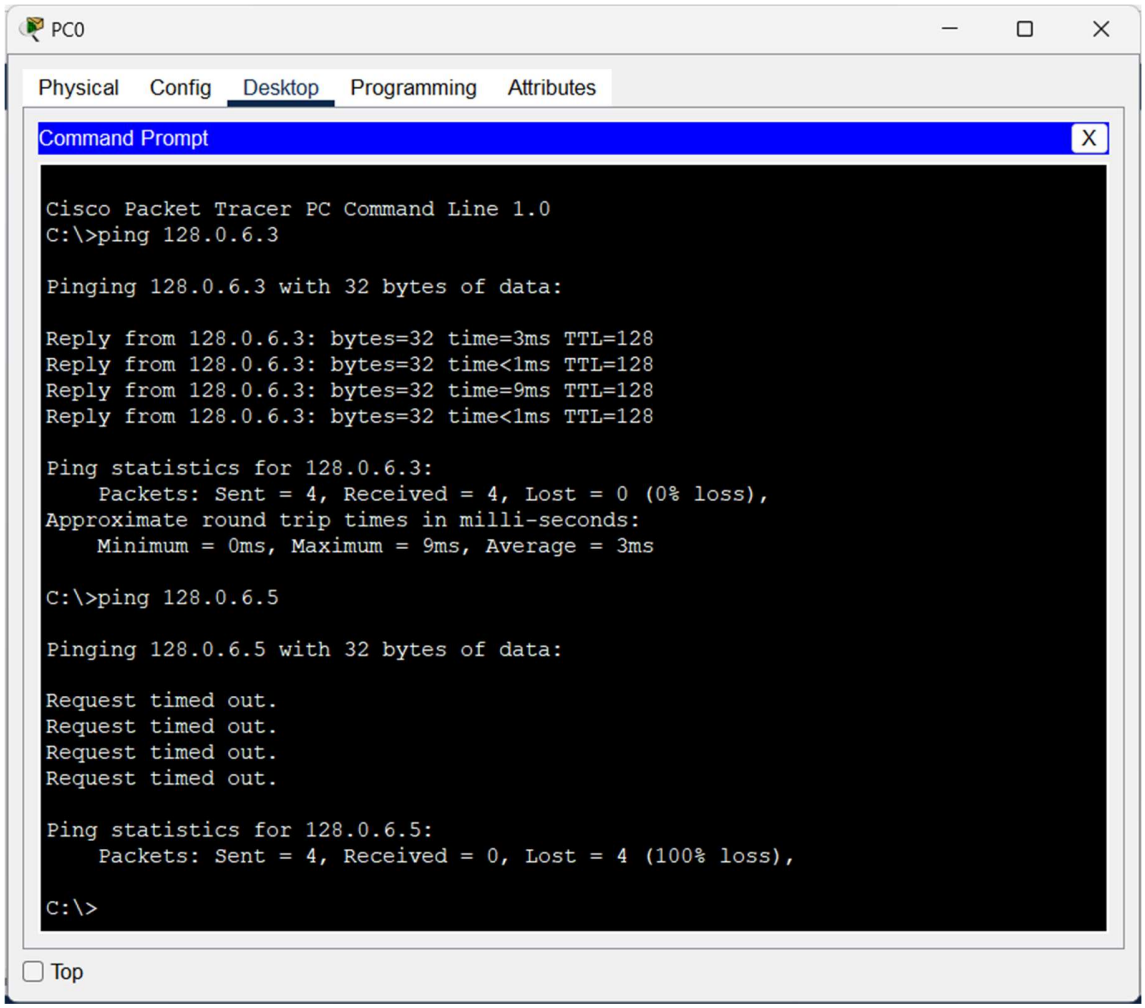

Here, PC0 and PC1 is connected because they are in same VLAN called Student and PC1 and PC2 show Request timed out because there are not in same VLAN.

Conclusion:

Through this experiment, I learned how to create VLAN and how to assign range of ports to that VLAN and make those ports to accessline. Using VLAN we can create subnetwork in network using ports.