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Class/Section	8501 A/S06
Ex. No:	4
Name of the Experiment	Configuration of intra VLAN network
Drive link	https://drive.google.com/drive/folders/1x_AZnzMtxU3bNbyWcDyRehAxhaMwzn-_?usp=drive_link

Ex.No:04	
Date : **02/01/2025**	**Configuration of Intra VLAN network**

Objective(s):

To design and implement Intra VLAN using switch configuration

Introduction:

A VLAN is a group of devices on one or more LANs that are configured to communicate as if they were attached to the same wire, when in fact they are located on a number of different LAN segments. Because VLANs are based on logical instead of physical connections, they are extremely flexible.

VLANs define broadcast domains in a Layer 2 network. A broadcast domain is the set of all devices that will receive broadcast frames originating from any device within the set. Broadcast domains are typically bounded by routers because routers do not forward broadcast frames. Layer 2 switches create broadcast domains based on the configuration of the switch. Switches are multiport bridges that allow you to create multiple broadcast domains. Each broadcast domain is like a distinct virtual bridge within a switch. Design the above mentioned topologies and verify the connectivity.
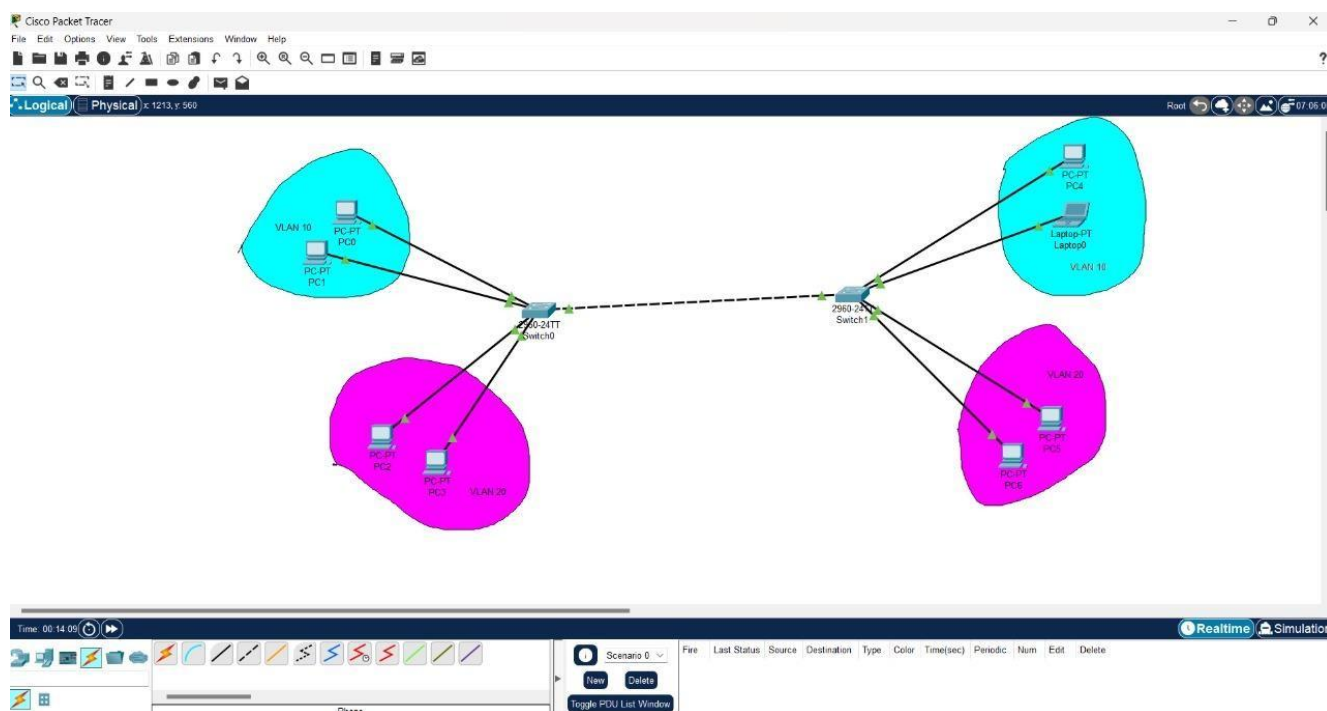
1. **Device Requirements:**
   1. PC0,PC01,PC02,PC03,PC04,PC05,PC06.

   2. Switch0,Switch1.

   3. Laptop0.

   4. Wire(Copper Straight -Through)

   5. Wire(Copper Cross Over)

2. **Network Diagram for your experiment (draw the diagram either hand drawing/ms paint or any other drawing tools)**
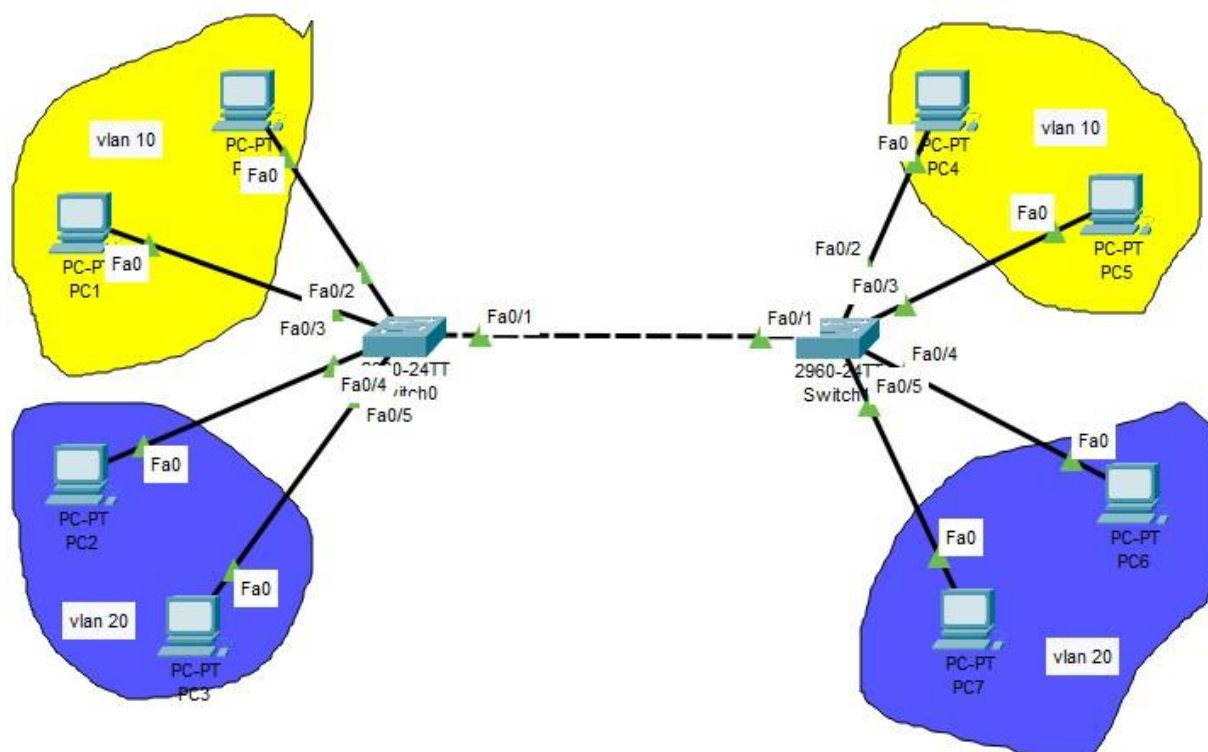
3. Network Diagram (Packet tracer diagram before configuration):

4. Configuration details:

Device Name	Interface Name	IP Address	Subnet mask
PC0	Fa0	192.168.10.1	255.255.255.0
PC1	Fa0	192.168.10.2	255.255.255.0

PC2	Fa0	192.168.20.2	255.255.255.0
PC3	Fa0	192.168.20.3	255.255.255.0
PC4	Fa0	192.168.10.3	255.255.255.0
PC5	Fa0	192.168.20.5	255.255.255.0
PC6	Fa0	192.168.20.4	255.255.255.0
Laptop0	Fa0	192.168.10.4	255.255.255.0
Switch0	Fa03		
Switch1	Fa01		

5. **Describe step by step configuration steps properly (you may copy the commands used in the configuration tab and paste it.)**

1. Create VLANs

❼ configure terminal
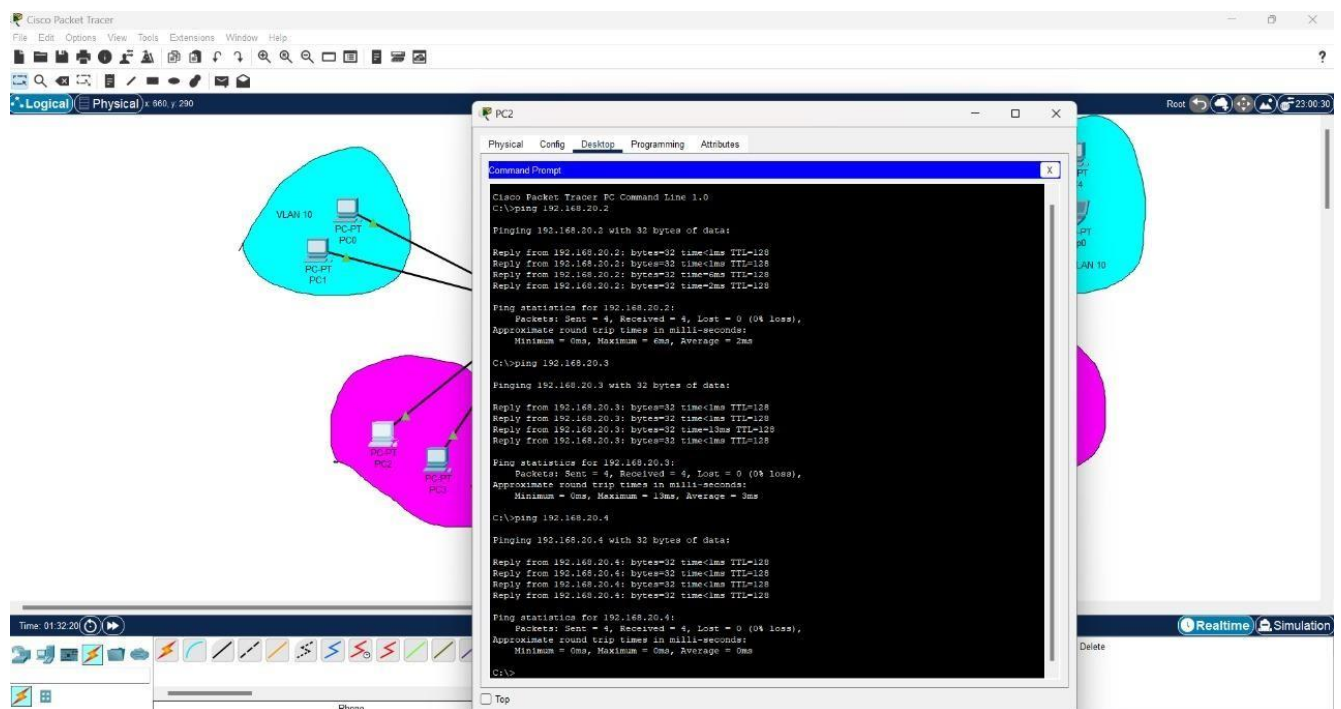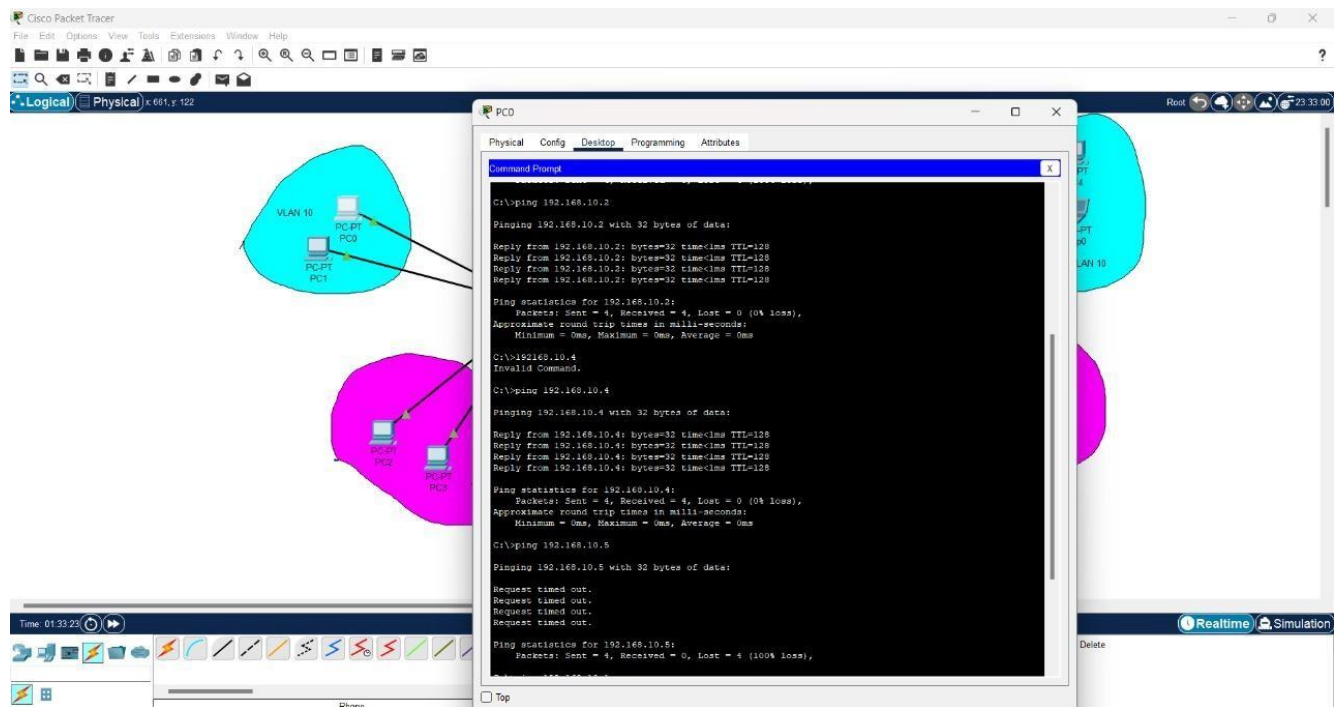
❼ vlan10

❼ name HR

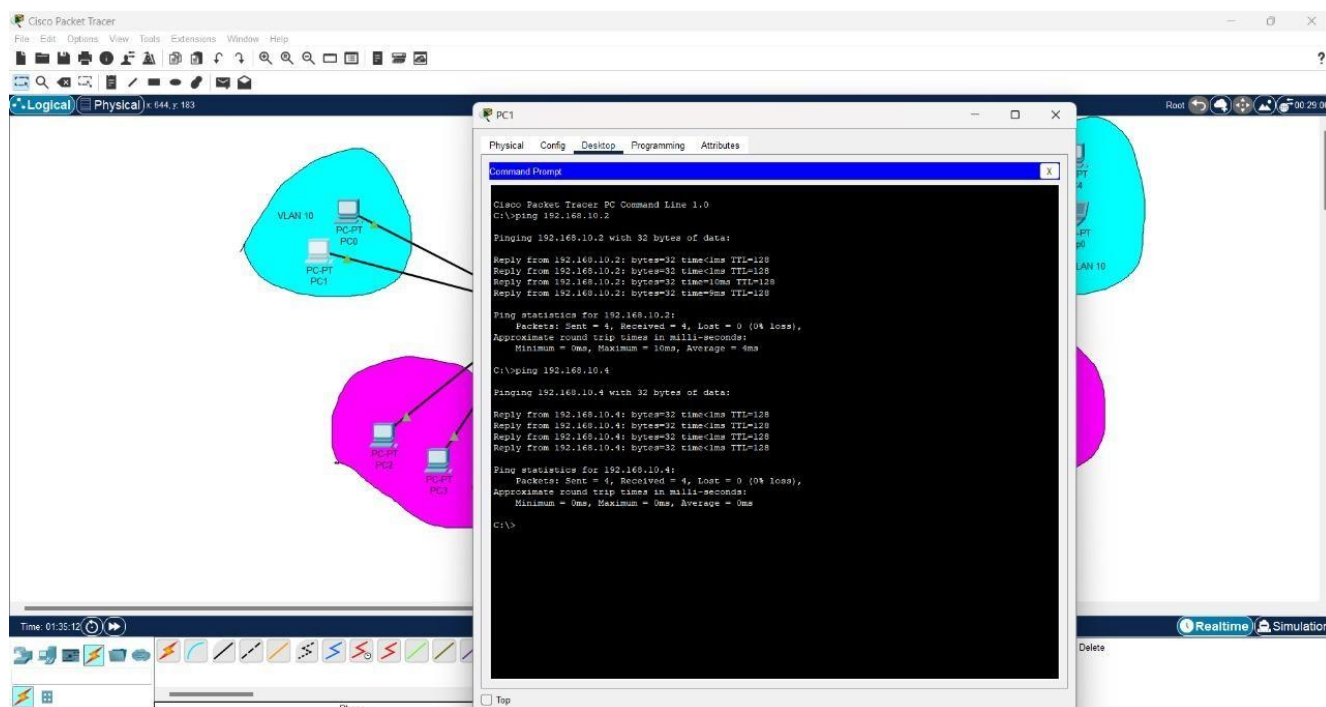❼ exit

❼ vlan20

❼ do show vlan

2. Configure interfaces

❼ interface FastEthernet0/1

❾ switchport mode access

❾ switchport access vlan 10

❾ exit

❾ do show vlan

3. Configure trunking

❾ Interface fastEtherenet0/23-24

❾ switchport mode trunk

6. Output Diagram (Minimum 3 screenshot):

Google Drive link of the packet tracer file (give view permission):

Link: https://drive.google.com/drive/folders/1x_AZnzMtxU3bNbyWcDyRehAxhaMwzn-_?usp=drive_link

CONCLUSION (provide conclusion about this experiment):
The study concludes that Cisco Packet Tracer is a robust and user-friendly tool for Configuration of Intra vlan Network. It plays a critical role in preparing individuals for industry certifications and real-world network management challenges. Its capabilities, combined with its accessibility, make it a cornerstone in the toolkit of network engineers and educators.

Rubrics for Experiment Assessment:

Rubrics	Good	Normal	Poor	Marks
Creation of Topology (4)	Created the topology, Identify the proper devices and making the connections **(4)**	Created the topology, Identify the proper devices, making the connections But missing some features **(3)**	Created wrong topology, Failed to Identify the proper devices and making connections **(1)**	
Verify the connectivity (4)	Verified the connectivity in all the levels **(4)**	Verified the connectivity at some levels (only some nodes) **(2)**	Verified the connectivity is not done. **(1)**	
Timely Completion (2)	Completed the lab before the allotted time **(2)**	Completed the lab after the deadline **(1)**	Did not submitted before grading **(0)**	
			Total	

Result: Thus the Design a Configuration of Intra VLAN network has been done successfully.