Date: 02/07/2025

Lab Practical #05:

Study the concept of VLAN using packet tracer.

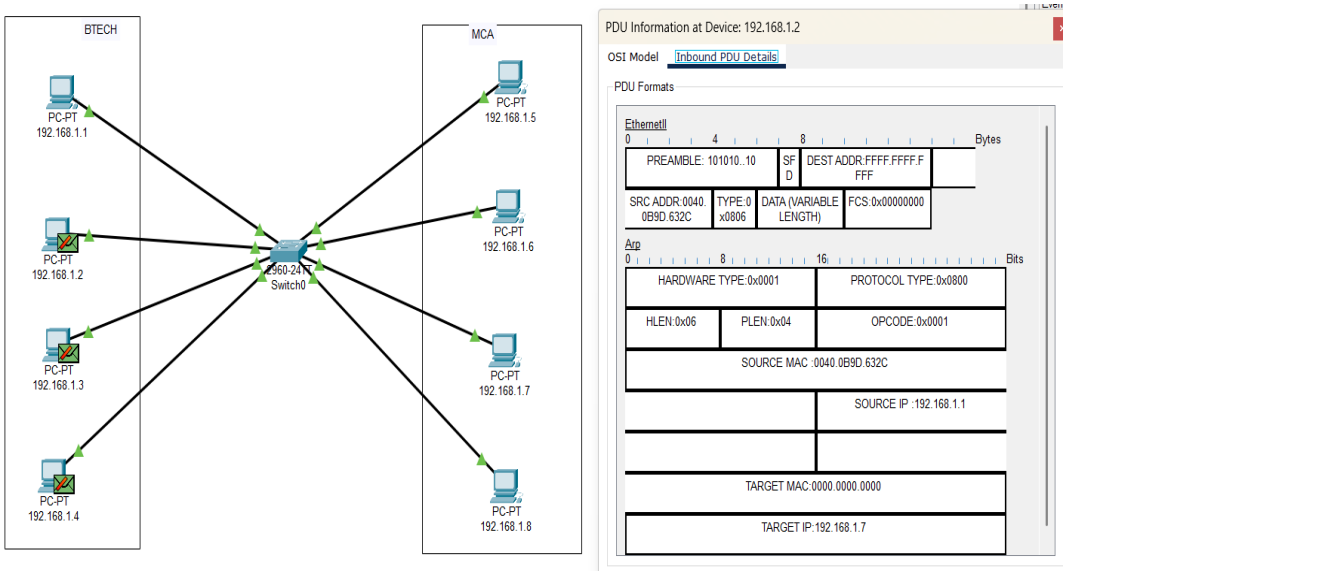
Practical Assignment #05:

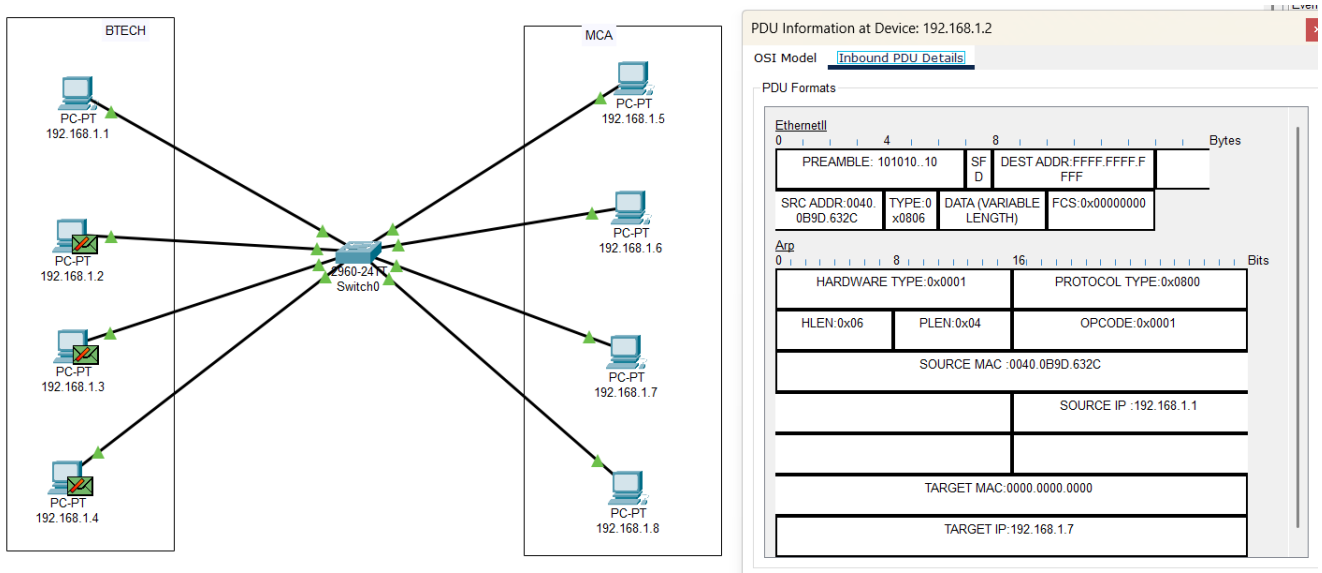
1. Implement the different network structures in VLAN and VLAN trunking. Also check connectivity between them using ping command or PDU utility.

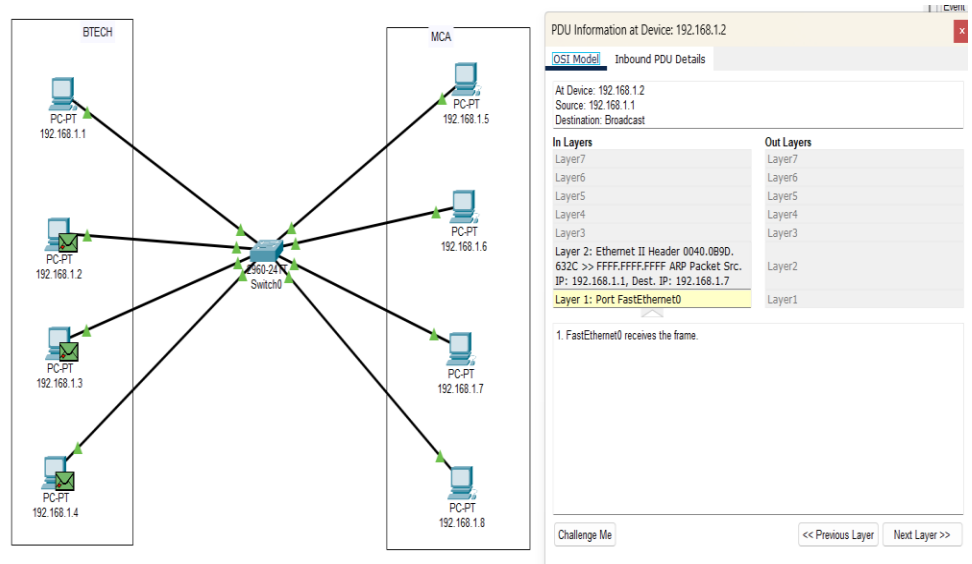
Steps to Configure VLANs in Cisco Packet Tracer

1. Set Up the Network Topology
    - Open Cisco Packet Tracer.
    - Place a 2960 switch on the workspace.
    - Add multiple PCs and connect them to the switch using Copper Straight-Through cables.
2. Access the Switch Configuration
    - Click on the switch device.
    - Navigate to the Config tab.
3. Add VLANs
    - In the left menu, choose VLAN Database.
    - In the VLAN configuration table:
        - Enter a VLAN ID (e.g., 10) and a VLAN Name (e.g., Sales), then press Add.
        - Enter another VLAN ID (e.g., 20) with a Name (e.g., HR), then press Add.
4. Configure Switch Ports for VLANs
    - Select an interface such as FastEthernet0/1 from the left panel.
    - Change the Port Mode to Access.
    - From the VLAN dropdown, assign the correct VLAN ID (e.g., 10).
    - Repeat for other interfaces, assigning each to the correct VLAN.
5. Assign IP Addresses to End Devices
    - For each PC: go to Desktop → IP Configuration.
    - Assign IP addresses within the same subnet for devices in the same VLAN.
6. Test VLAN Connectivity
    - Use the ping command: PCs in the same VLAN should communicate successfully.
    - PCs in different VLANs will be unable to communicate unless a router-on-a-stick setup or a Layer 3 switch is used.

Date: 02/07/2025







Date: 02/07/2025