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EXPT: 10 DESIGN A SIMPLE TOPOLOGY AND CONFIGURE WITH ONE ROUTER, TWO SWITCHES AND PCS USING CISCO PACKET TRACER

AIM:

To design and configure a simple network topology using one router, two switches, and PCs in Cisco Packet Tracer and verify successful communication between networks.

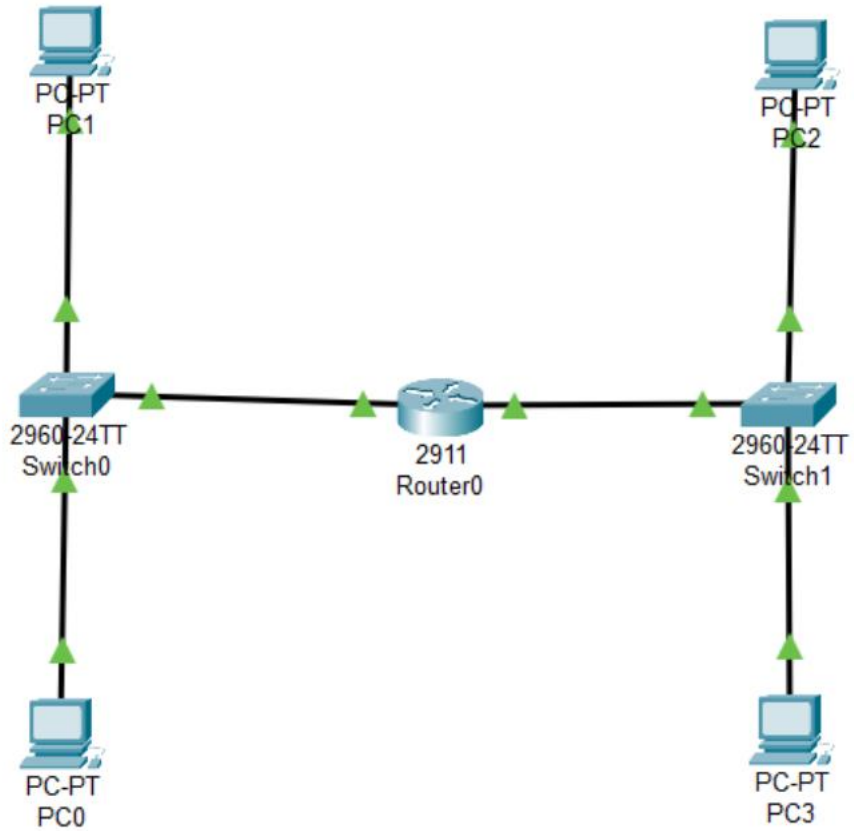
ALGORITHM:

1. Start Cisco Packet Tracer.
2. Select and place required network devices:
    - One Router (e.g., Cisco 2911)
    - Two Switches (e.g., 2960)
    - Four PCs
3. Connect devices using Copper Straight-Through cables:
    - Connect PC0 → Switch0 (F0/1)
    - Connect PC1 → Switch0 (F0/2)
    - Connect PC2 → Switch1 (F0/1)
    - Connect PC3 → Switch1 (F0/2)
    - Connect Switch0 → Router (G0/0)
    - Connect Switch1 → Router (G0/1)
4. Assign IP addresses to PCs:
    - LAN 1: 192.168.1.0/24
        - PC0 and PC1 get IPs in this network
    - LAN 2: 192.168.2.0/24
        - PC2 and PC3 get IPs in this network
5. Configure router interfaces:
    - Enter global configuration mode.
    - Configure G0/0 with IP: 192.168.1.1 255.255.255.0
    - Configure G0/1 with IP: 192.168.2.1 255.255.255.0
    - Use no shutdown on both interfaces to enable them.
6. Set Default Gateway on PCs:

- For PC0, PC1 → Default Gateway: 192.168.1.1
- For PC2, PC3 → Default Gateway: 192.168.2.1

7. Verify communication:
   - Open command prompt on a PC in LAN1 (e.g., PC0).
   - Ping a PC in LAN2 (e.g., PC2).
   - Check whether replies are received.
8. Stop the configuration.
   - If ping replies are successful, the topology is functioning correctly.

TOPOLOGY:



RESULT:

A simple network topology using one router, two switches, and multiple PCs was designed and configured successfully in Cisco Packet Tracer. Communication between both networks was verified using the ping command.