Networking Lab: Basic Connectivity Using Packet Tracer

Objective: Learn to set up a basic network in Cisco Packet Tracer by connecting PCs to a switch and testing connectivity using the command prompt.

Step 1: Setting Up the Workspace

1. **Open Packet Tracer** on lab computers.

2. **Add Devices**:
    - From the **End Devices** section in the side menu, drag and drop **4 PCs** onto the workspace.
    - From the **Network Devices** section, choose a **Switch** (2960 Switch).

Step 2: Connecting Devices

1. **Select the Connections Tool**:
    - Click on the **Connections** icon (lightning bolt) in the side menu.
2. **Connect PCs to the Router/Switch**:
    - For each PC:
        1. Click on the PC, select the **FastEthernet0** interface.
        2. Click on the router/switch, and select an available port (e.g., **FastEthernet0/1**, **FastEthernet0/2**, etc.).
    - Repeat this process for all 4 PCs, ensuring each is connected to a unique port on the router/switch.

Step 3: Configuring IP Addresses

1. **Open the PC Configuration Window**:
    - Click on a PC, and then click on the **Desktop** tab.
    - Select **IP Configuration**.
2. **Assign IP Addresses**:
    - Assign the following IP addresses to each PC:
        - **PC1**: IP Address: 192.168.1.2, Subnet Mask: 255.255.255.0
        - **PC2**: IP Address: 192.168.1.3, Subnet Mask: 255.255.255.0
        - **PC3**: IP Address: 192.168.1.4, Subnet Mask: 255.255.255.0
        - **PC4**: IP Address: 192.168.1.5, Subnet Mask: 255.255.255.0
3. ~~**Configure the Default Gateway** (if using a router):~~
    - ~~Set the **Default Gateway** to 192.168.1.1 for all PCs.~~
4. **Repeat the Process** for all 4 PCs.

Step 4: Configuring the Switch

Configuration is only needed in the case of a router.
If Using a Switch: No additional configuration is needed for this basic lab.

Step 5: Testing Connectivity

1. **Open the Command Prompt**:
    - On a PC, click the **Desktop** tab and select **Command Prompt**.
2. **Ping Other PCs**:

    - Type the ping command followed by the IP address of another PC. For example:
      ping 192.168.1.3
    - Observe the output. Successful replies indicate proper connectivity.
3. **Test Connectivity Between All PCs**:
    - Ping each PC from every other PC to ensure full connectivity.

Step 6: Save Your Work

1. **Save the Packet Tracer File**:
    - Click on **File** > **Save As** and name your file (e.g., Basic_Network_Lab.pkt).

Expected Outcome:

- All PCs should be able to communicate with each other successfully.
- You should see Reply from... messages in the Command Prompt after executing the ping command.

End of Lab