**Connecting Two PCs with a Switch in Cisco Packet Tracer**

This scenario has been created through the basic steps of creating a simple network in Cisco Packet Tracer, connecting two PCs via a switch. We'll cover the necessary terminology and provide specific instructions.

**Terminology:**

* **Packet Tracer:** A network simulation tool by Cisco Systems that allows users to create network topologies and simulate network behavior.
* **Topology:** The arrangement of elements (devices, connections) in a network.
* **PC:** Personal Computer, the end device in this scenario.
* **Switch:** A networking device that connects multiple devices on a local area network (LAN). It forwards data packets only to the intended recipient.
* **Ethernet Cable:** A type of network cable used to physically connect devices to a network. In Packet Tracer, we'll use a "Copper Straight-Through" cable.
* **IP Address:** A unique numerical address assigned to each device on a network. It allows devices to identify and communicate with each other.
* **Subnet Mask:** Used to divide an IP address into a network address and a host address. It helps determine which devices are on the same local network.

**Instructions:**

1. **Launch Packet Tracer:** Open the Cisco Packet Tracer application on your computer.
2. **Create the Topology:**
   * **Add Devices:**
     + Click on the "End Devices" icon in the bottom left corner of the screen.
     + Choose "Generic PC" and drag two PCs onto the workspace.
     + Click on the "Network Devices" icon.
     + Choose "Switches" and select a switch model (e.g., "2960-24TT"). Drag it onto the workspace.
   * **Connect Devices:**
     + Click on the "Connections" icon (lightning bolt).
     + Select the "Copper Straight-Through" cable.
     + Click on the first PC, then click on the switch to connect them. Repeat this for the second PC.
3. **Configure IP Addresses:**
   * **PC1:**
     + Double-click on the first PC to open its configuration window.
     + Go to the "Desktop" tab and click on "IP Configuration."
     + Select "Static" and enter the following:
       - IP Address: 192.168.1.10
       - Subnet Mask: 255.255.255.0
   * **PC2:**
     + Repeat the above steps for the second PC, but use the following IP address:
       - IP Address: 192.168.1.20
       - Subnet Mask: 255.255.255.0
4. **Verify Connectivity:**
   * **Ping Test:**
     + On PC1, go to the "Desktop" tab and click on "Command Prompt."
     + Type ping 192.168.1.20 and press Enter.
     + You should see "Reply from 192.168.1.20..." messages, indicating successful communication.

**Explanation:**

In this scenario, you've created a basic network with two PCs connected to a switch. The switch acts as a central hub, allowing the two PCs to communicate with each other. By assigning IP addresses and subnet masks, you've enabled the PCs to identify each other on the network. The ping test confirms that the connection is working, and data can be transmitted between the PCs.

This simple exercise introduces you to the fundamental concepts of networking and the basic functionalities of Cisco Packet Tracer. You can further explore Packet Tracer by adding more devices, configuring different network protocols, and simulating more complex network scenarios.