**Switch-Based Network Communication Setup**

**1. Topology:  
A diagram of a computer network

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Create a Topology as shown in the diagram in Cisco Packet Tracer. Ensure that both PC0 and PC1 are powered on.

**2. Physical Connections:**

Verify that both PCs have their network interface cards (NICs) connected to the switch via Ethernet cables.

PC0 should be connected to FastEthernet port Fa0/1, and PC1 should be connected to FastEthernet port Fa0/2 on the switch.

**3. IP Configuration:** Click on PC 0.

Then it will open new prompt then go to desktop tab and in that select IP Configuration and add IP address and subnet mask as shown in below.  
  
 **Do same process for PC1 also.** Confirm that both PCs are configured with the correct IP addresses and subnet masks:

PC0: IP address 192.168.10.2 with a subnet mask of 255.255.255.0

PC1: IP address 192.168.10.3 with the same subnet mask

**A screenshot of a computer

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**4. Ping from PC0 to PC1:**

Click On PC0, go to desktop tab, open Command Prompt or Terminal.

Type the following command and press Enter:

ping 192.168.10.3  
  
A screenshot of a computer

Description automatically generated

Observe the output for replies from IP address 192.168.10.3, which indicates successful communication between PC0 and PC1.

**5. Troubleshooting:**

If there are no replies, troubleshoot by:

Checking physical connections (cables, NICs, switch ports).

Verifying configurations on both PCs (IP addresses, subnet masks).

Ensuring no firewall settings are blocking ICMP packets.

Confirming that Switch0 is operational and not isolating traffic between ports Fa0/1 and Fa0/2.