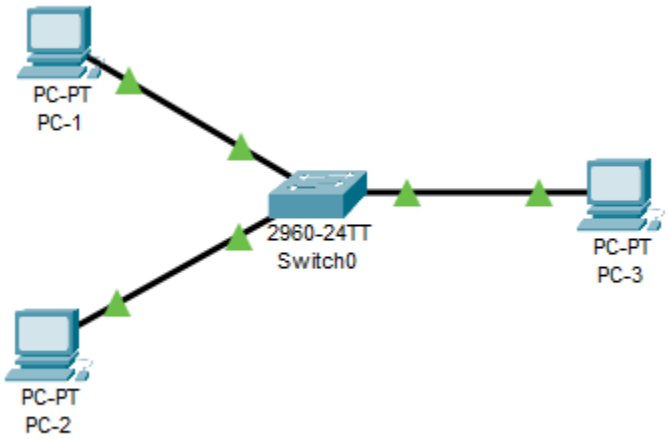
Project-01: Basic LAN

1. Objective

To create a basic LAN using a switch and connect multiple PCs using static IP addressing.

2. Network Topology

- One Layer-2 switch
- Three PCs connected to the switch using straight through cable
- All devices are in same network



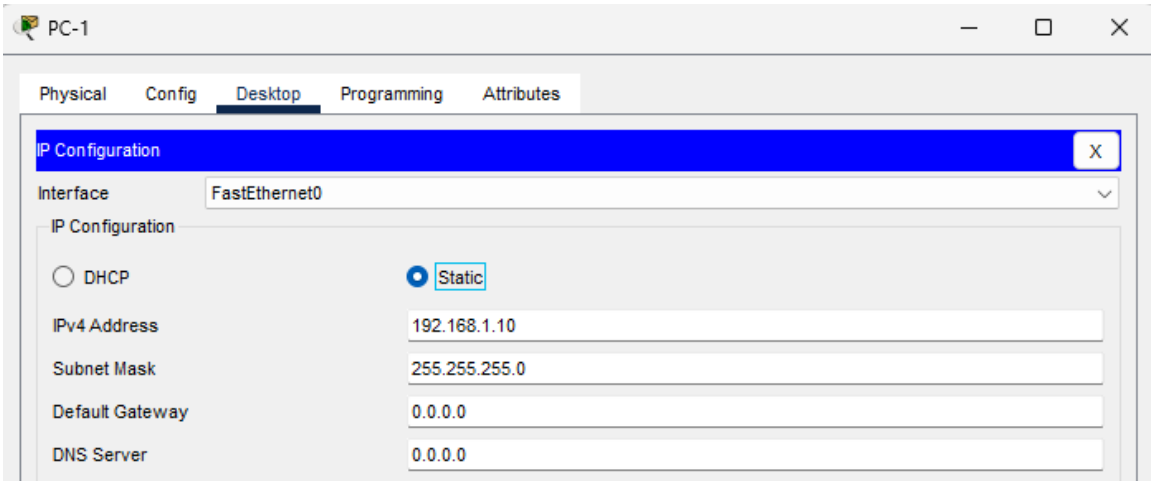
3. IP Addressing

Device	IP Address	Subnet Mask
PC-1	192.168.1.10	255.255.255.0
PC-2	192.168.1.11	255.255.255.0
PC-3	192.168.1.12	255.255.255.0

All PCs are in same subnet, so no router is required.

4. Configuration Steps

- Assigned static IP address on each PC
- No configuration needed on switch

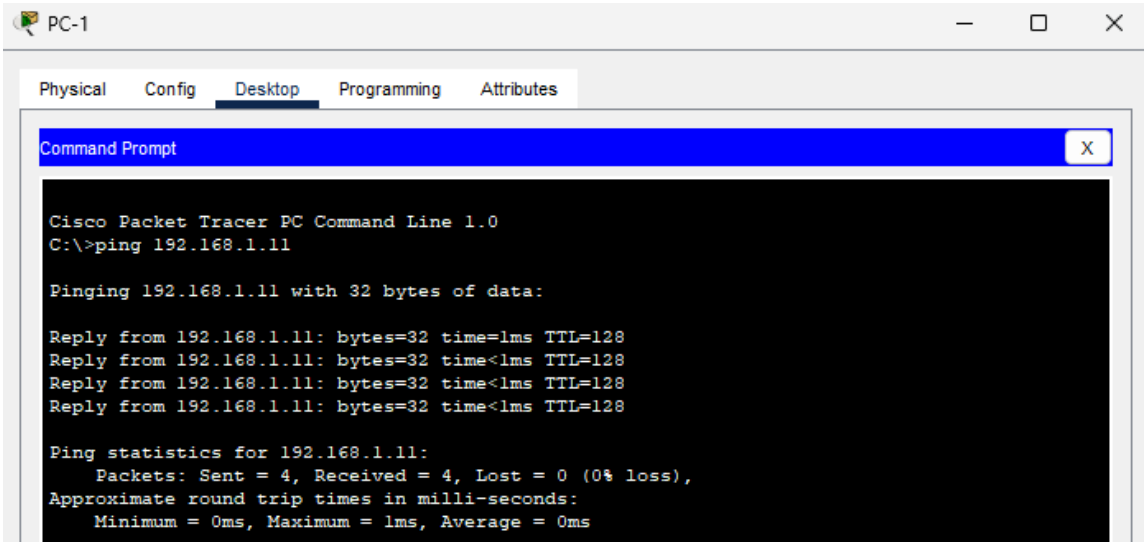


(Repeat for PC-2 & PC-3)

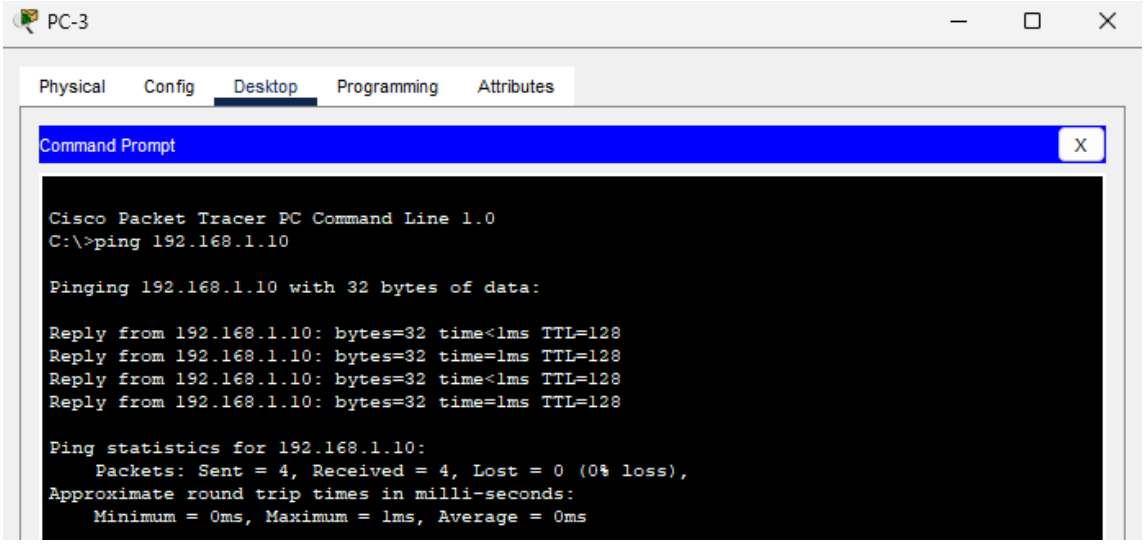
5. Verification

- Ping tested between all PCs

Ping test from PC-1 to PC-2



Ping test from PC-3 to PC-1



6. Explanation

The switch works at Layer-2 and forwards traffic based on MAC address.
Since all PCs are in same network, communication happens directly through the switch.

7. Common Issues

- Wrong IP address
- Duplicate IP
- Cable connection issue