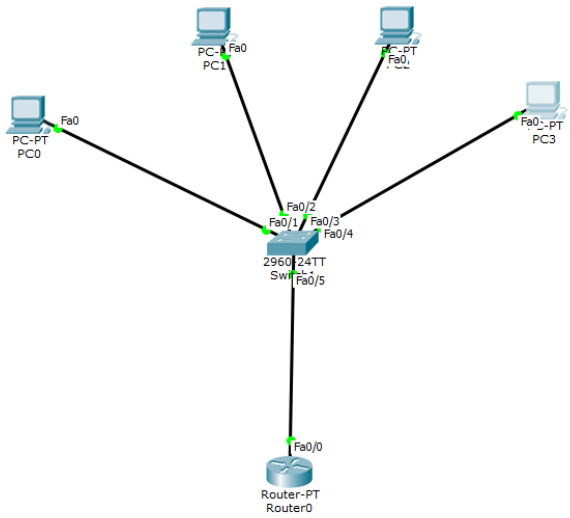
Program – 10:

Aim: To construct a VLAN and make the PC's communicate among a VLAN.

Topology:



Procedure:

1. Topology

- One Router
- One 2960–24TT Switch
- Four PCs (PC0, PC1, PC2, PC3)
- Connections using Copper Straight-Through cables

2. Router Configuration

Open CLI

- enable
- configure terminal

Configure Interfaces

Fa0/0

- interface Fa0/0
- ip address 10.0.0.1 255.0.0.0
- no shutdown
- exit

Fa0/0.1 (Sub-interface for VLAN 20)

- interface Fa0/0.1
- encapsulation dot1Q 2
- ip address 20.0.0.1 255.0.0.0
- no shutdown
- exit

3. PC Configurations

PC0

- Go to **Config → FastEthernet**
- IP Address: **10.0.0.2**
- Default Gateway: **10.0.0.1**

PC1

- Go to **Config → FastEthernet**
- IP Address: **10.0.0.3**
- Default Gateway: **10.0.0.1**

PC2

- Go to **Config → FastEthernet**
- IP Address: **20.0.0.3**
- Default Gateway: **20.0.0.1**

PC3

- Go to **Config → FastEthernet**
- IP Address: **20.0.0.2**
- Default Gateway: **20.0.0.1**

4. Switch Configuration

Create VLANs

- Go to **Config → VLAN Database**
- VLAN Number: **2**
- VLAN Name: **vlan**

Assign Ports to VLANs

Configure Trunk Port

- FastEthernet0/5 (connection to router):
  - Change **Access → Trunk**

Assign VLAN 2 Ports

- Fa0/3 and Fa0/4 (connections to PC2 and PC3):
  - Change VLAN → **2**

(PC0 and PC1 remain in default VLAN 1)

Output:

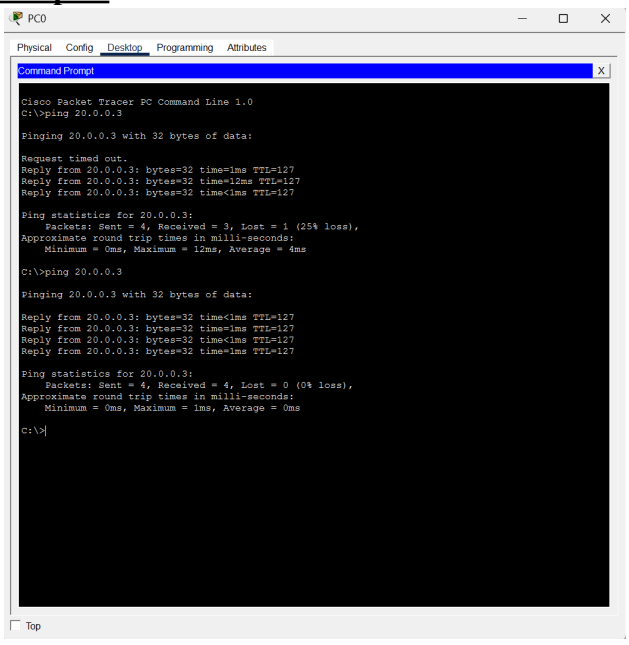


Fig 10.1 pinging to the other vLan -PC0 to PC2