EX 8A PROCEDURE:

1. **Open Cisco Packet Tracer** and create a new project.

2. **Add devices**: Drag two switches and four PCs onto the workspace.

3. **Connect devices**: Use copper straight-through cables to connect PCs to switch ports (e.g., PC1 to Fa0/1, PC2 to Fa0/2, PC3 to Fa0/3, PC4 to Fa0/4).

4. **Create VLANs**: Access the CLI of the first switch and enter the following commands:

Switch# config terminal

Switch(config)# vlan 10

Switch(config-vlan)# name Sales

Switch(config-vlan)# vlan 20

Switch(config-vlan)# name IT

5. **Assign VLANs to ports**: Still in the CLI, assign VLANs to the respective ports:

Switch(config)# *interface range fa0/1-2*

Switch(config-if-range)# *switchport mode access*

Switch(config-if-range)# *switchport access vlan 10*

Switch(config-if-range)# *exit*

Switch(config)# *interface range fa0/3-4*

Switch(config-if-range)# *switchport mode access*

Switch(config-if-range)# *switchport access vlan 20*

6. **Configure trunk port**: Set up the trunk port for inter-VLAN communication:

Switch(config)# *interface fa0/5*

Switch(config-if)# *switchport mode trunk*

7. **Assign IP addresses**: Configure static IP addresses on each PC according to their VLAN:

   - PC1: 192.168.1.10, Subnet Mask: 255.255.255.0, Gateway: 192.168.1.1

   - PC2: 192.168.1.20, Subnet Mask: 255.255.255.0, Gateway: 192.168.1.1

   - PC3: 192.168.2.10, Subnet Mask: 255.255.255.0, Gateway: 192.168.2.1

   - PC4: 192.168.2.20, Subnet Mask: 255.255.255.0, Gateway: 192.168.2.1

8. **Configure router for inter-VLAN routing** (if applicable): Connect a router and set up sub-interfaces for each VLAN.

9. **Verify configuration**: Use the command show vlan brief on the switch CLI to check VLAN assignments.

10. **Test connectivity**: Use the ping command from one PC to another within the same VLAN to ensure proper configuration and communication.