. **VLAN (Virtual Local Area Network):**

A VLAN is a logical segmentation of a network that groups devices into the same broadcast domain, configured on a switch.

Devices within a VLAN can communicate with each other directly, but they are isolated from devices in other VLANs unless routing is enabled.

Example:

VLAN 10: Represents the HR department's computers.

VLAN 20: Represents the Finance department's computers. Only devices within VLAN 10 can exchange data with one another, while VLAN 20 operates similarly.

**2. Inter-VLAN Routing:**

Inter-VLAN Routing is the process of enabling communication between different VLANs.

This is accomplished using a Layer 3 device, such as a router or a Layer 3 switch, which facilitates data traffic between VLANs.

Example:

A router or Layer 3 switch is configured to enable communication between VLAN 10 (HR) and VLAN 20 (Finance), allowing these departments to share resources, such as a printer or server.