**TASK:**

**Solution:**

### **Difference Between VLAN and Inter-VLAN Routing**

#### **VLAN (Virtual Local Area Network)**

* VLAN segments a physical network into smaller, isolated logical networks.
* Devices within the same VLAN can communicate directly, but devices in different VLANs cannot communicate without a router or Layer 3 switch.

**Example**:

* VLAN 10: Admin Department (PC1, PC2).
* VLAN 20: Sales Department (PC3, PC4).
* PCs in VLAN 10 cannot communicate with VLAN 20 unless inter-VLAN routing is configured.

#### **Inter-VLAN Routing**

* Inter-VLAN Routing allows communication between different VLANs using a router or Layer 3 switch.
* Essential for scenarios where different VLANs need to share data or resources.

**Example**:

* VLAN 10: Admin (PC1, PC2).
* VLAN 20: Sales (PC3, PC4).
* A router or Layer 3 switch enables communication between these VLANs.

**VLAN & INTER VLAN STRUCTURE**: