**Trunk:**

* **Definition**: A trunk is a network link that carries multiple VLANs (Virtual Local Area Networks) simultaneously.
* **Purpose**: Used to efficiently transport data between switches or between switches and routers.
* **Encapsulation**: Typically uses protocols like IEEE 802.1Q to tag VLAN traffic.
* **Bandwidth Utilization**: Maximizes bandwidth by allowing multiple VLANs to share a single link.

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

* **Definition**: A VLAN is a logical segmentation of a network into separate broadcast domains.
* **Purpose**: Improves network performance, security, and management by isolating traffic.
* **Types**:
  + **Port-based VLAN**: Assigns VLANs based on switch ports.
  + **MAC-based VLAN**: Assigns VLANs based on device MAC addresses.
  + **Protocol-based VLAN**: Assigns VLANs based on the protocol used.
* **Benefits**:
  + Reduces broadcast traffic.
  + Enhances security by isolating sensitive data.
  + Simplifies network management and reconfiguration.