# VIRTUALIZATION

**Virtualization is a technology that allows you to create multiple virtual versions of something, such as computers (Virtual Machines), storage devices, or networks, all running on a single physical machine**

**A Virtual Machine (VM)** is essentially a virtual representation of a physical computer.

Key Characteristics of a Virtual Machine:

1. Operating System: A VM has its own OS, which can be different from the host machine's OS. For example, you can run Windows inside a VM on a Linux machine.
2. Isolation: Each VM is isolated from others. This means that if one VM crashes, it doesn’t affect the others running on the same host machine.
3. Resource Sharing: A VM uses the resources (like CPU, memory, and storage) of the host machine.

**A hypervisor** is a piece of software or hardware that creates and manages virtual machines (VMs) on a physical computer (host machine)