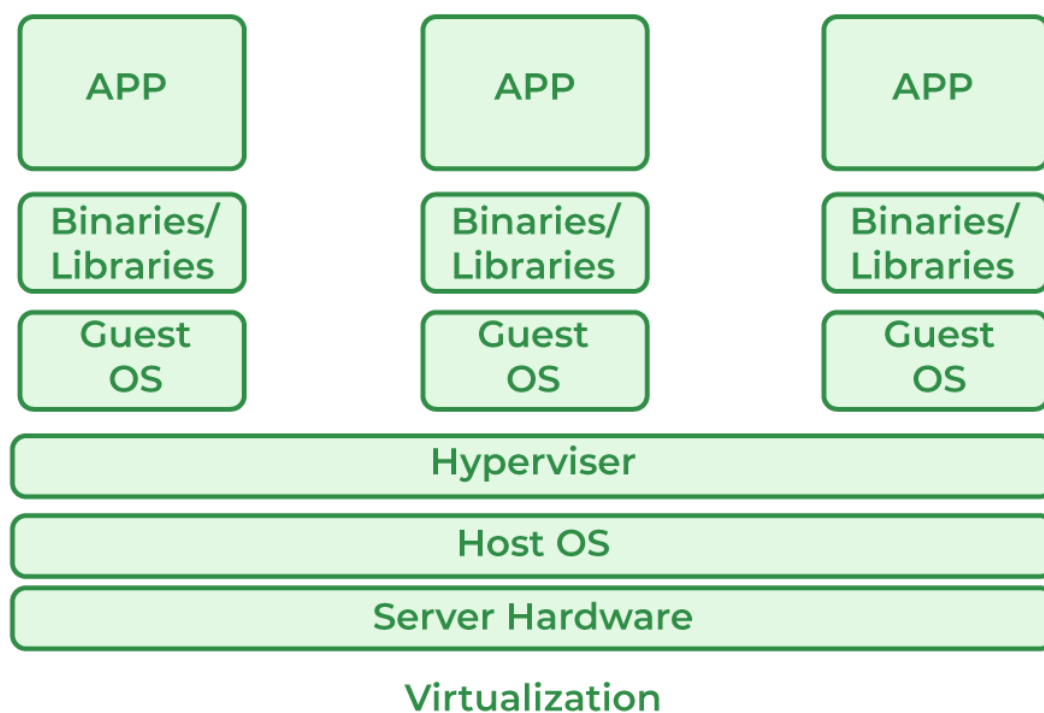


What is Virtualization?

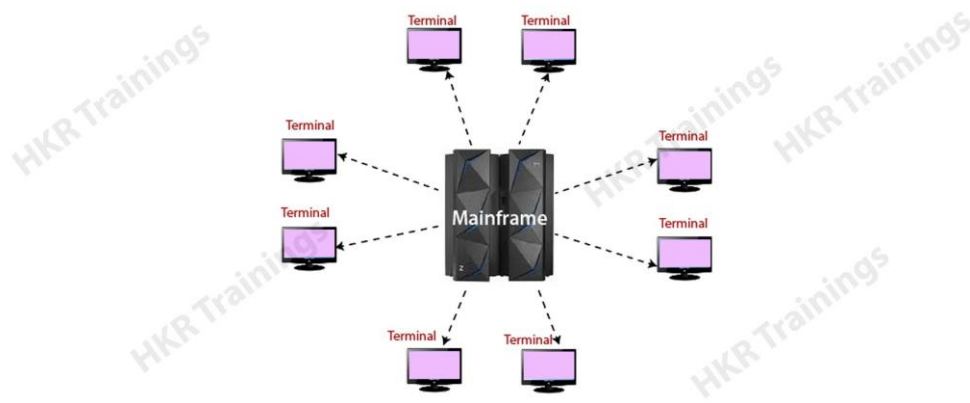
Virtualization is a technique of how to separate a service from the underlying physical delivery of that service. It is the process of creating a virtual version of something like computer hardware. It was initially developed during the **mainframe era**. It involves using specialized software to create a virtual or software-created version of a computing resource rather than the actual version of the same resource. With the help of Virtualization, multiple operating systems and applications can run on the same machine and its same hardware at the same time, increasing the utilization and flexibility of hardware.

In other words, one of the main cost-effective, hardware-reducing, and energy-saving techniques used by cloud providers is Virtualization. Virtualization allows sharing of a single physical instance of a resource or an application among multiple customers and organizations at one time. It does this by assigning a logical name to physical storage and providing a pointer to that physical resource on demand. The term virtualization is often synonymous with hardware virtualization, which plays a fundamental role in efficiently delivering Infrastructure-as-a-Service (IaaS) solutions for [cloud computing](#). Moreover, virtualization technologies provide a virtual environment for not only executing applications but also for storage, memory, and networking.



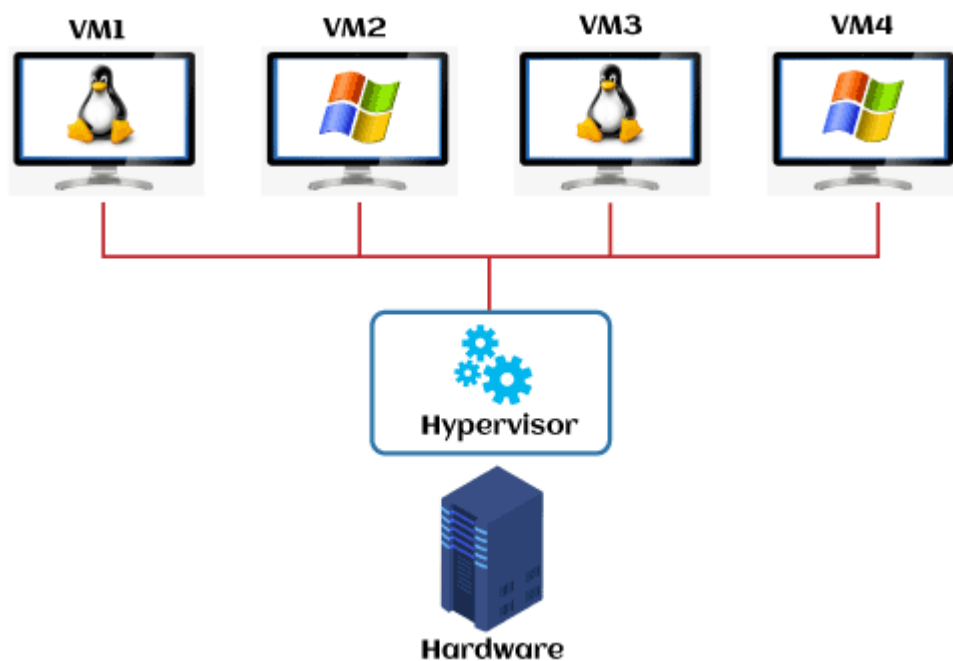
What is main-frame?

Centralized Computing: Mainframes were large, centralized computers used by big corporations and academic institutions. They enabled multiple users to access and share the CPU and memory, a concept known as time-sharing.



What is Hypervisor?

A hypervisor is a form of virtualization software used in Cloud hosting to divide and allocate the resources on various pieces of hardware. The program which provides partitioning, isolation, or abstraction is called a virtualization hypervisor. The hypervisor is a hardware virtualization technique that allows multiple guest operating systems (OS) to run on a single host system at the same time. A hypervisor is sometimes also called a virtual machine manager(VMM).



Some of the softwares used are:

