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Cloud Development Model

The Cloud Development Model refers to how applications are built, deployed, and managed in cloud environments. It promotes scalability, flexibility, and faster delivery of services using cloud-native tools and services.

There are three main cloud development models:

- Infrastructure as a Service (IaaS)

Developers manage applications and runtime while cloud providers offer infrastructure (like virtual machines, networking, storage).
Example: AWS EC2, Google Compute Engine.

- Platform as a Service (PaaS)

Developers focus on writing code; cloud providers handle the platform, OS, and infrastructure.
Example: Google App Engine, AWS Elastic Beanstalk.

- Software as a Service (SaaS)

Entire applications are delivered over the internet. Users simply use the software without managing anything.
Example: Gmail, Microsoft 365, Google Drive.

Cloud development models encourage automation, micro services architecture, DevOps practices, and containerization (like Docker & Kubernetes), which help in building modern, scalable, and efficient applications

Summary
Today, I explored the concept of virtualization, which allows multiple virtual machines to run on a single physical machine. I studied a typical application stack and how it transitions to a virtualized stack in cloud environments. Additionally, I learned about the key characteristics of cloud-based virtual machines (VMs), such as scalability, isolation, and elasticity. Finally, I reviewed some common drawbacks of virtualization, including performance overhead and security challenges.