

Types of Architecture

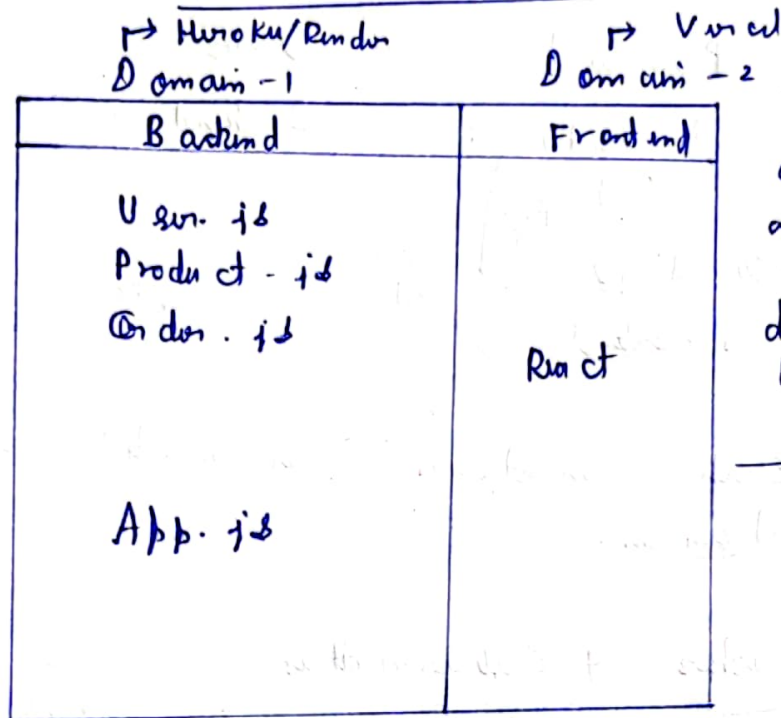
① Monolith

② Multi-tier

③ Microservices

→ Monolith → Small project.

E-commerce App



when Backend and Frontend are communicating on diff. tier/domain
 → Multi-tier

when there is only single instance of Backend (i.e. when we define all APIs together in separate files). when frontend and backend is hosted on single domain.

→ Next.js

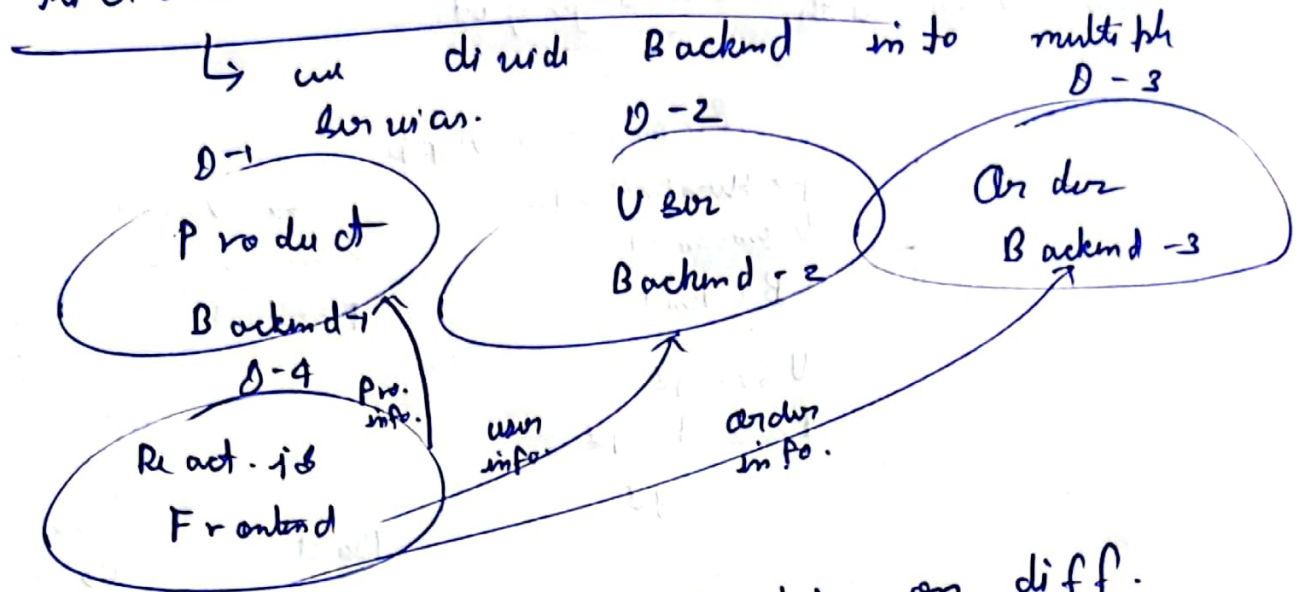
→ API (Backend)
 → APP (Frontend)

In Monolith, Problems

- only one code base → only one language JS/TypeScript i.e. same tech stack.
- Redploy whole code again even for a minor change in code.
- More time in deployment → more traffic
- can't scale on specific API i.e. have to scale entirely (Vertical scaling)
 - processor
 - RAM

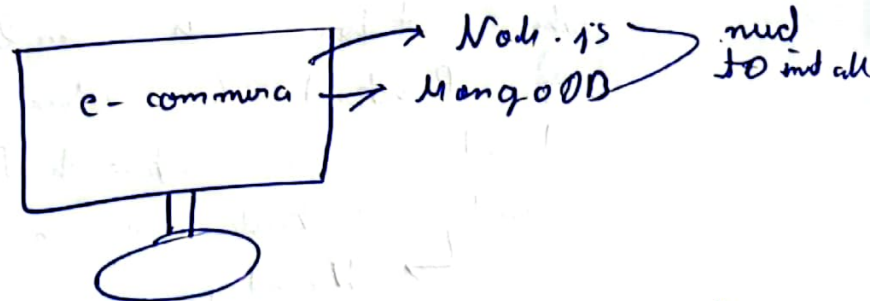
↳ can't have different version of dependencies.

Microservices architecture

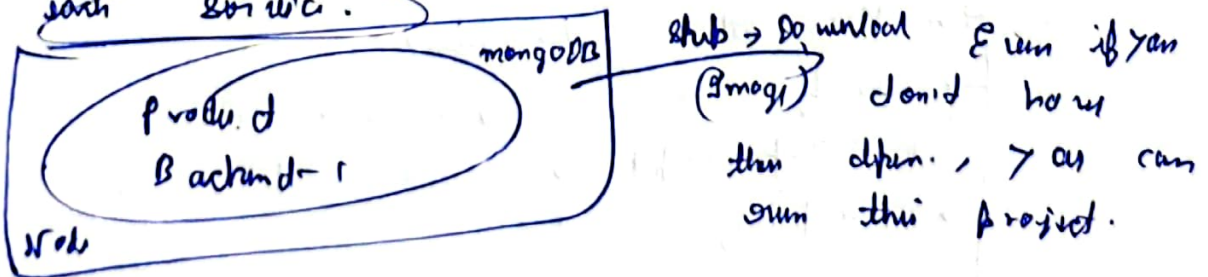


→ Each instance is hosted on diff. domain.

Docker + Kubernetes



we will make individual containers for each service.



Sub → Download Even if you don't know the dep., you can run this project.



Kubernetes - orchestration tool - scales the service as per the need.

↳ we can also add minor changes to each service individually.

↳ deployment fast.

↳ can have diff. version of dependencies.

↳ Suitable for large complex project.

Problem

↳ Large team, complexity ↑
