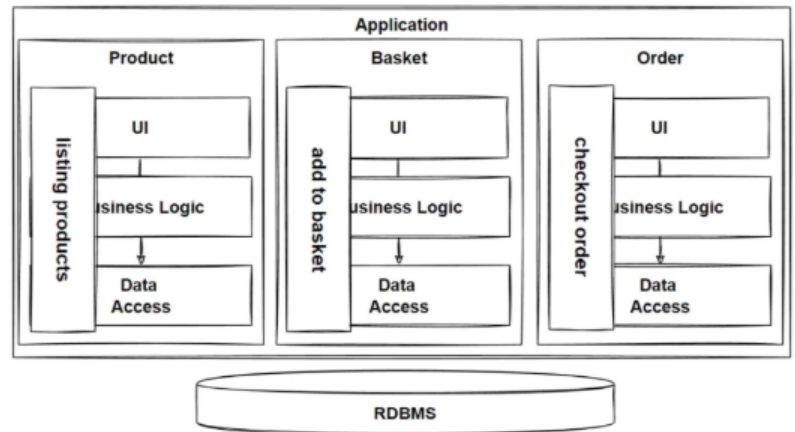


Modular Monolith Architecture (MMA)

MMA - a single application that is structured internally into separate, clearly defined modules, each responsible for a specific business function and designed to work independently inside the same system.



E-Commerce App with Modular Monolithic Architecture

Prons

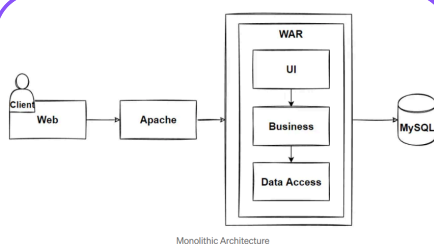
- Faster development and deployment
- Easier refactoring due to internal visibility
- High data consistency
- Lower maintenance costs
- Good migration path to microservices

Cons

- Lack of possibility to use various technologies
- No ability to scale independently
- Scalability and performance limits

ARCHITECTURES COMPARISON

MONOLITHIC ARCHITECTURE



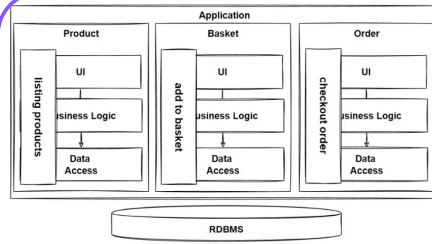
Monolithic Architecture

Entire application is built and deployed as a single cohesive codebase.

No module separation or boundaries.

Often results in tight coupling and low flexibility, especially in large-scale systems.

MODULAR MONOLITH ARCHITECTURE

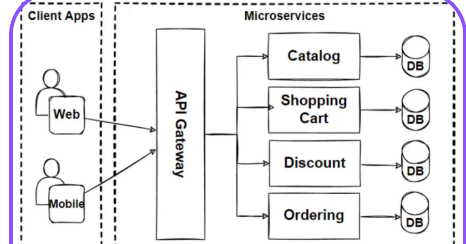


E-Commerce App with Modular Monolithic Architecture

A single application with internally modularized components, each with its own boundaries and responsibilities.

A middle ground between monolith and microservices.

MICROSERVICES ARCHITECTURE



Microservices Architecture

Application is split into multiple independently deployable services.

Each service owns its own data and logic.

Often complex and expensive.

Modular Monolith Architecture Use Case:



- Small to Medium-Sized Projects
 - Example: Local e-commerce platform for a small business
- Simpler Applications
 - Example: Content management system for a blog
- Tightly Coupled Systems
 - Example: Hospital management system
- Transitional Architecture
 - Example: Shopify - small platform with potential to evolve into a big player

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