

"SOLID Pair Programming"

Dansk Industri, February 2023



Agenda

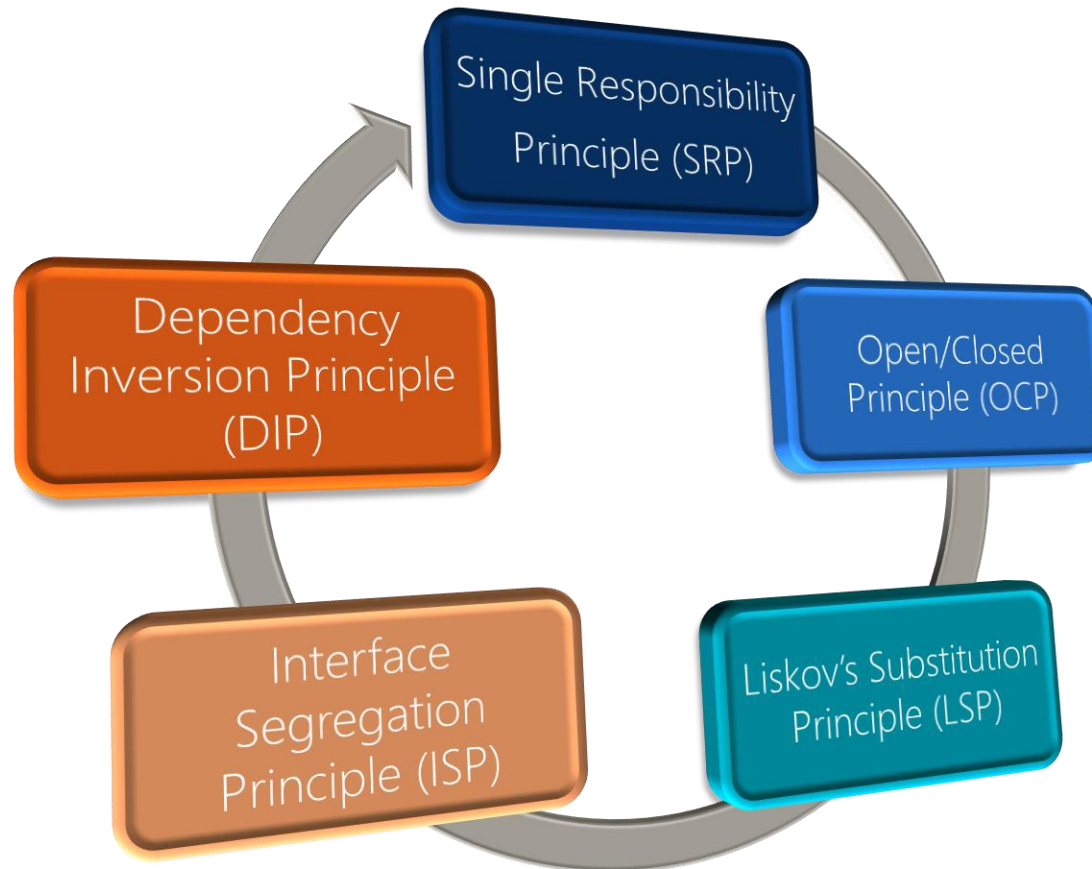
Wednesday 2023-02-22:

- ▶ 9.00: Common Introduction (~1 hour)
- ▶ 10.00 – 16.30: Mob Programming Team A

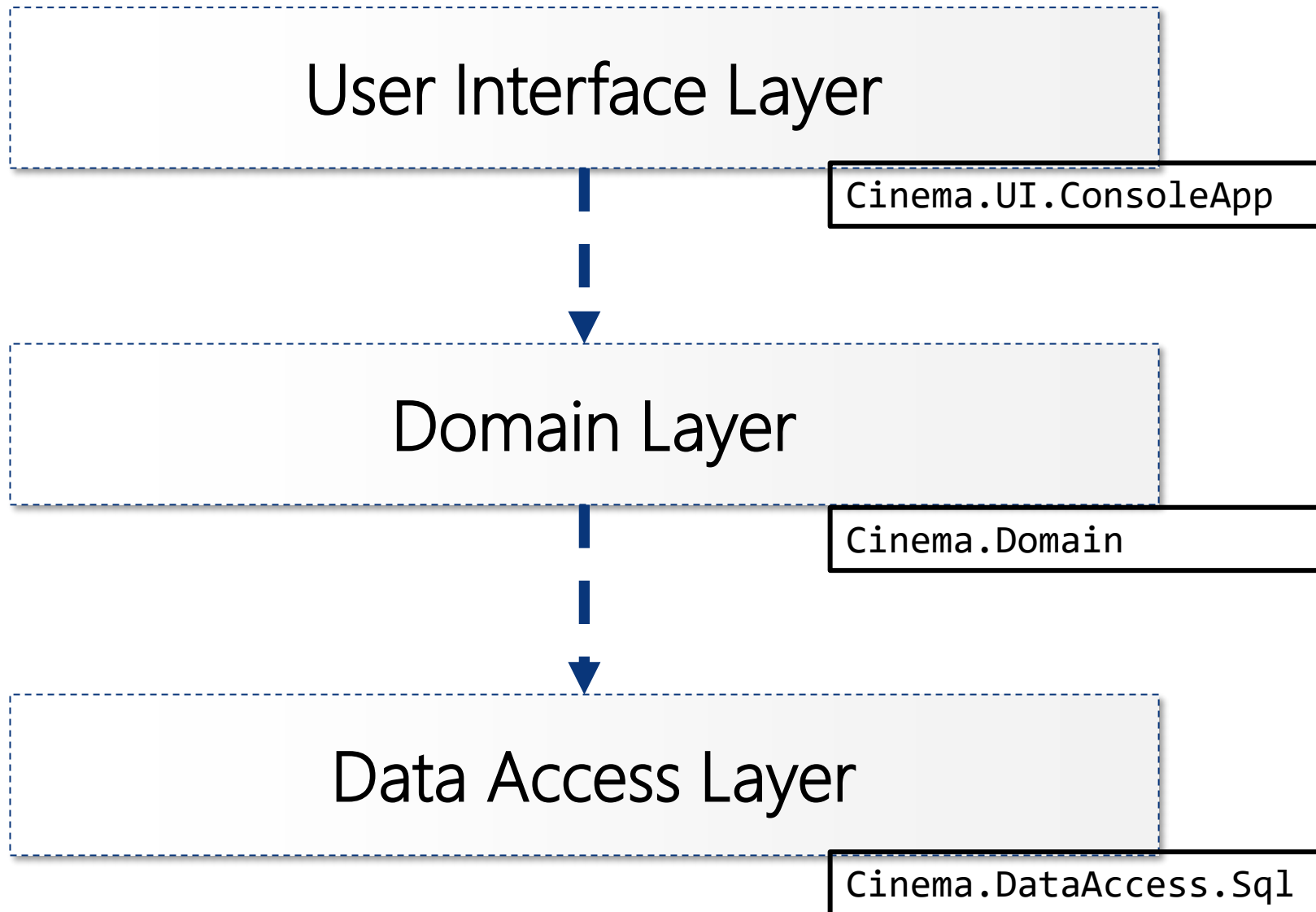
Thursday 2023-02-23:

- ▶ 9.00 – 15.30: Mob Programming Team B
- ▶ 15.30: Common Concluding Remarks

The Five Principles of SOLID



Beautiful Layered Design?



Discussion:

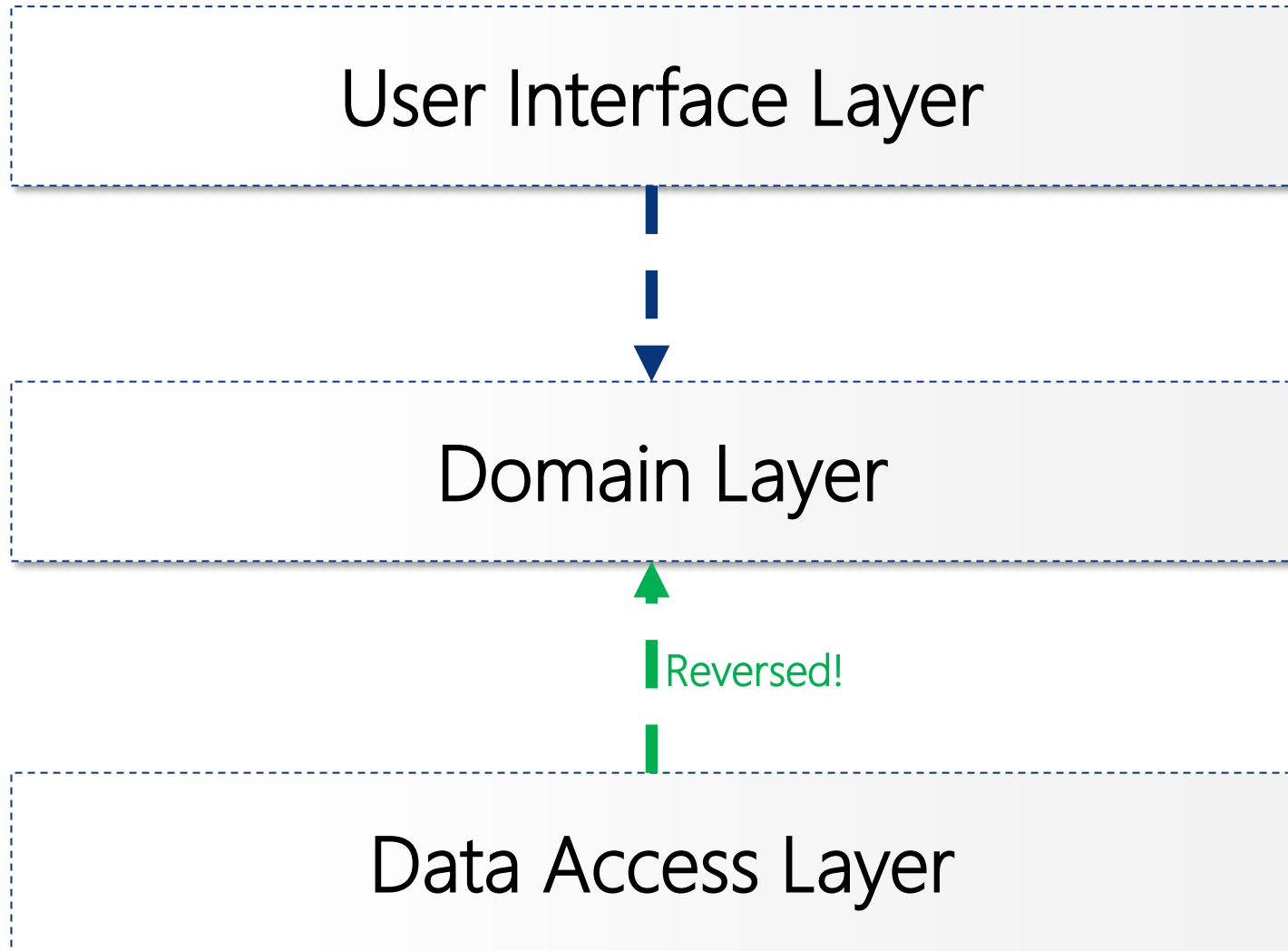
Evaluating the Design

- ▶ Can we change the UI Layer from Console to e.g. Web or WPF?
- ▶ Can we unit test the Domain Layer?
- ▶ Can we change the Data Access Layer?

Anti-Pattern: Entourage

- ▶ *When A depends upon B, and you group B and C in the same assembly, then if C depends upon D, in effect, you have equipped A with a dependency upon D.*
- ▶ Outline
 - If you keep the interfaces and implementations in the same assembly, you essentially inherit dependencies' dependencies.
 - Entourage means ask for one assembly and it gives all its assemblies.
 - Nuget packages are potentially evil!
- ▶ See:
"Adaptive Code" (2nd Edition)
Gary McLean Hall (2017)

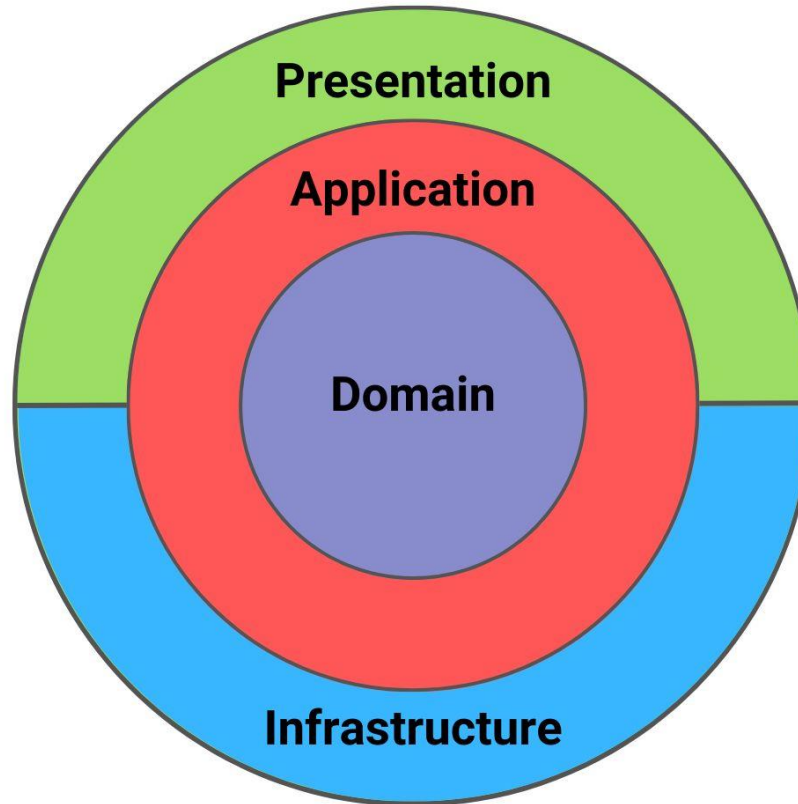
Better SOLID Design



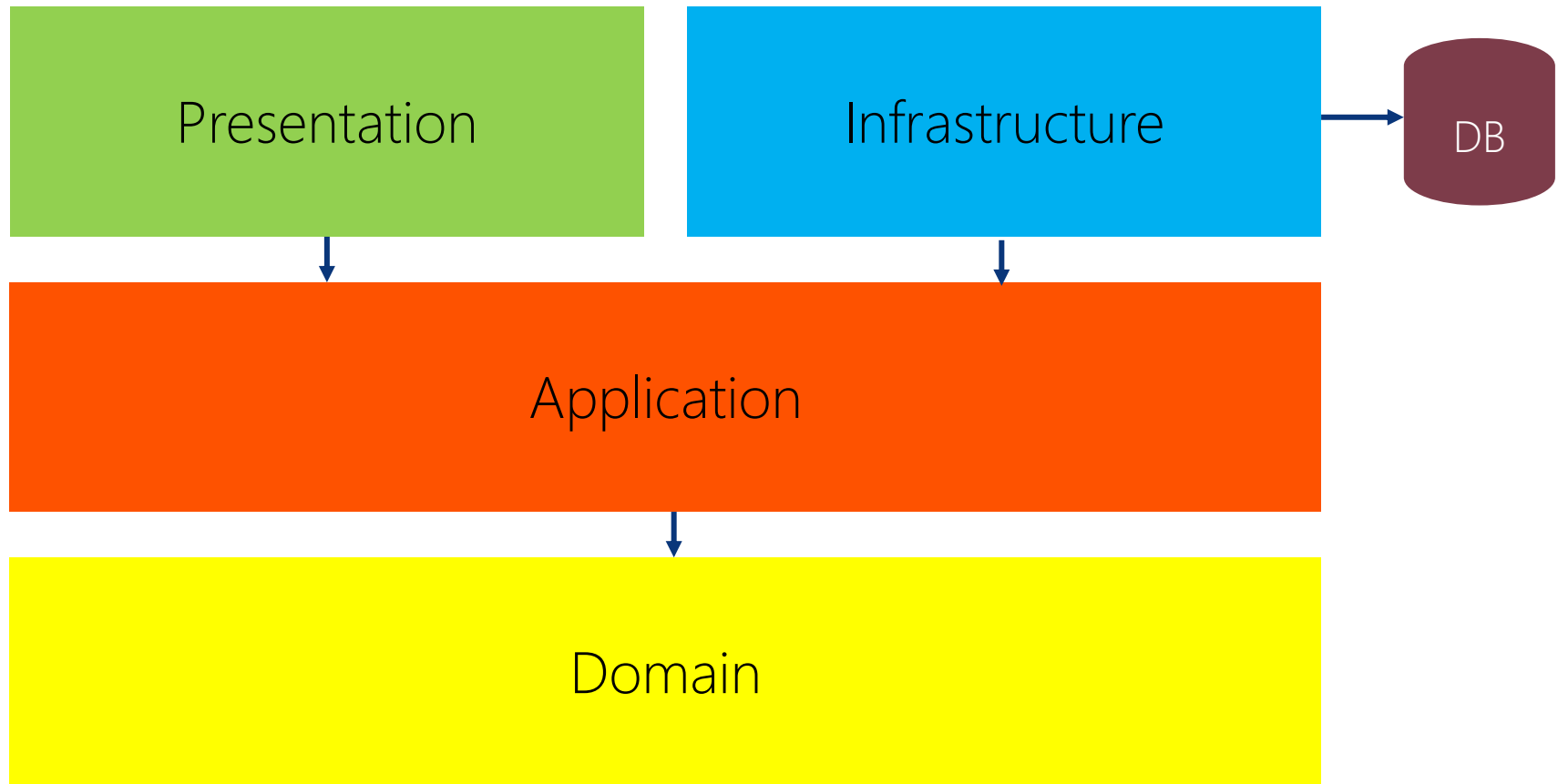
Architectural Principles in Summary

- ▶ Ports and Adapters a.k.a. Hexagonal Architecture
 - Alistair Cockburn (2005)
 - <https://alistaircockburn.us/hexagonal-architecture/>
- ▶ Onion Architecture
 - Jeffrey Palermo (2008)
 - <https://jeffreypalermo.com/2008/07/the-onion-architecture-part-1/>
- ▶ Clean Architecture a.k.a. Screaming Architecture
 - Robert C. Martin (2012)
 - <https://blog.cleancoder.com/uncle-bob/2012/08/13/the-clean-architecture.html>

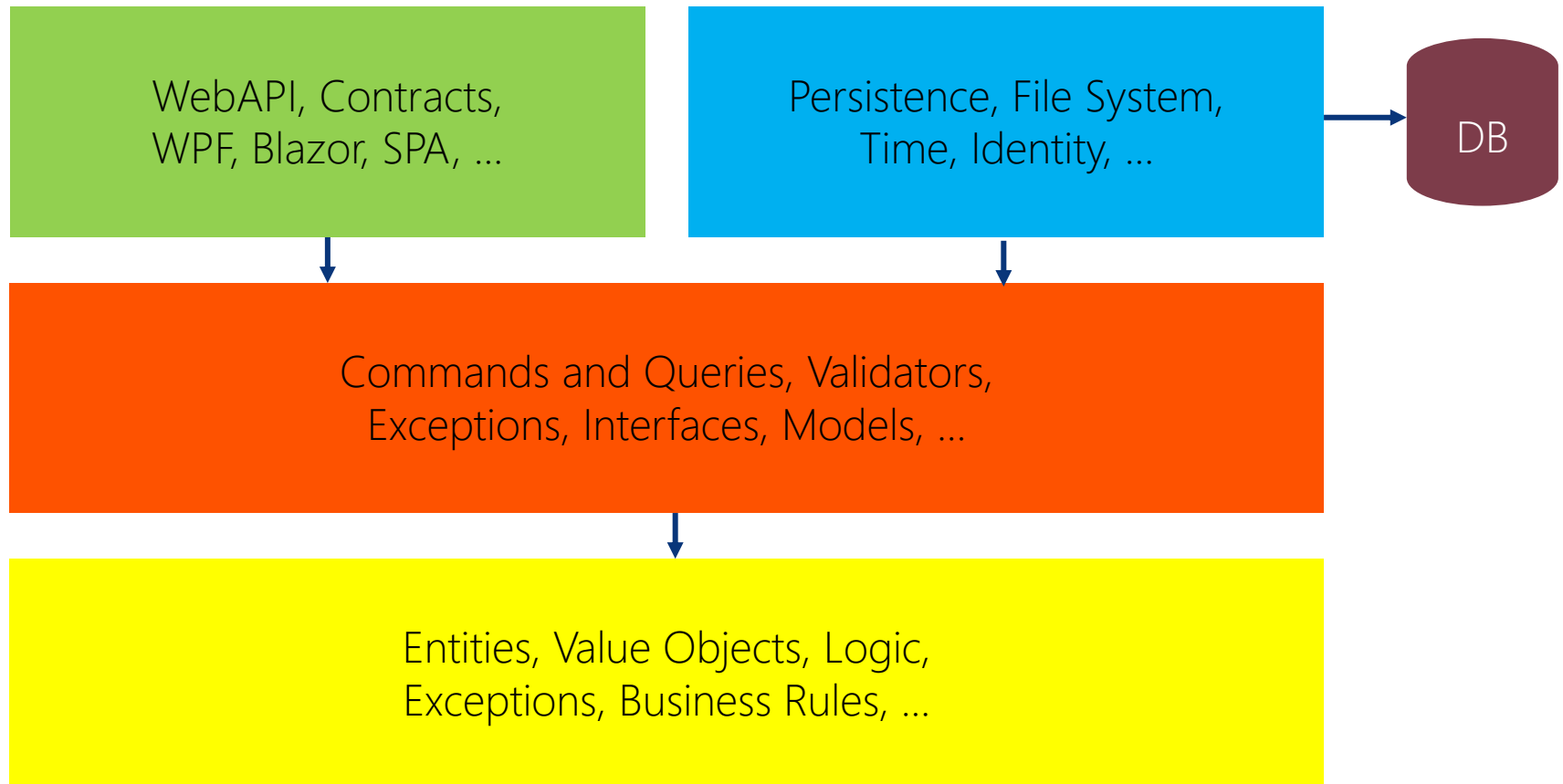
Usually Presented as...



Clean Architecture



A More Detailed Look Inside



Steps

- ▶ Clean Architecture Structure
- ▶ Implement Create Company + Repository
- ▶ Introduce Time
- ▶ Error Handling using Problems
- ▶ ErrorOr and not Exceptions
- ▶ CQRS with MediatR
- ▶ Mapping Discussion
- ▶ Fluent Validation via Pipeline Behaviors
- ▶ ...



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