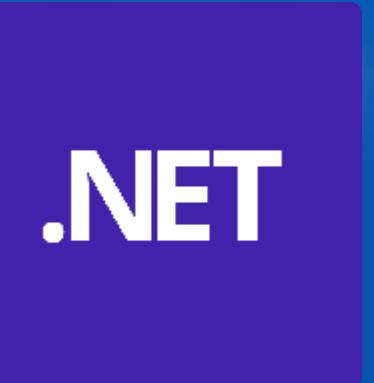


Clean Architecture with ASP.NET Core 10

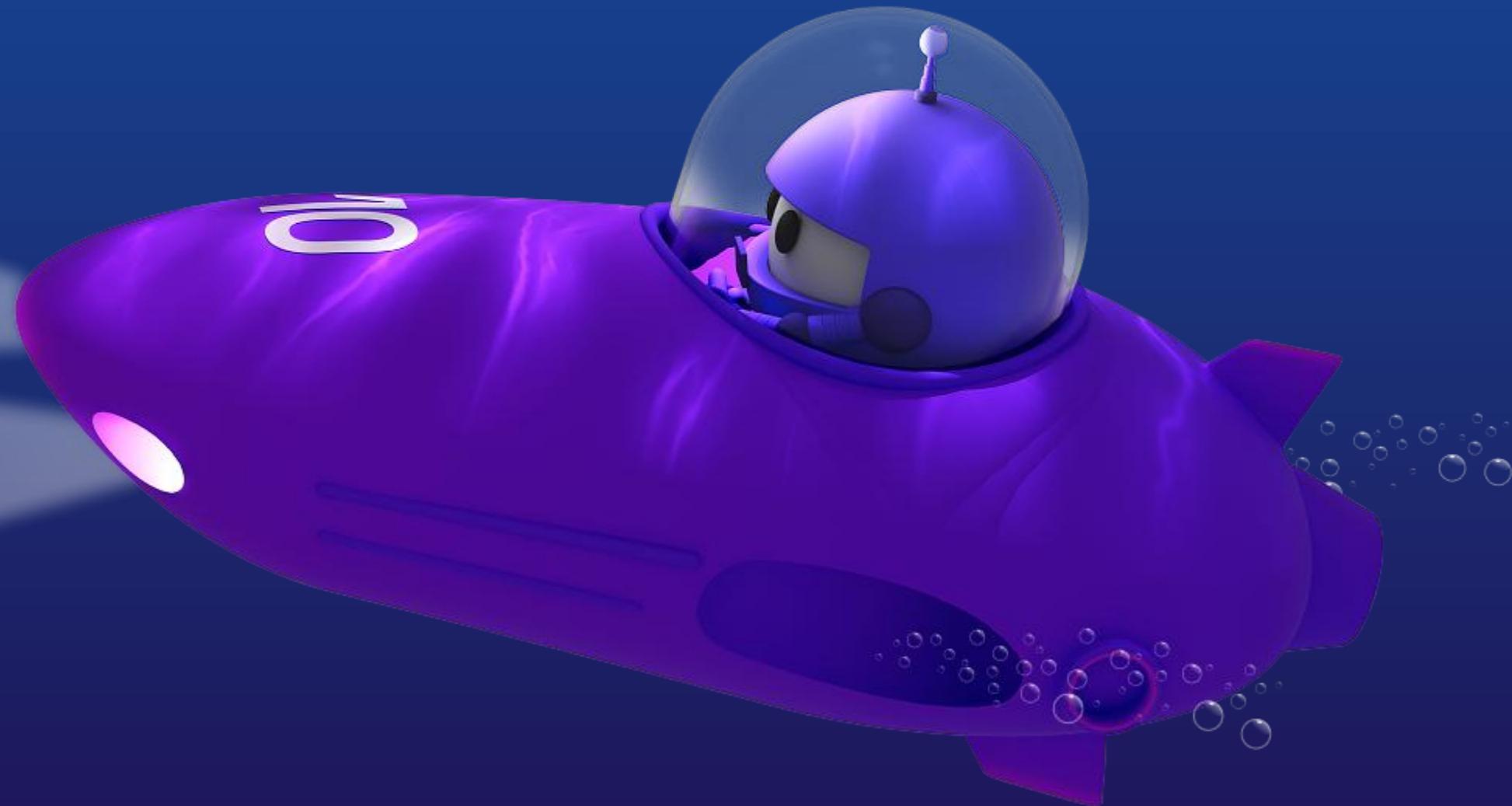


Ardalis

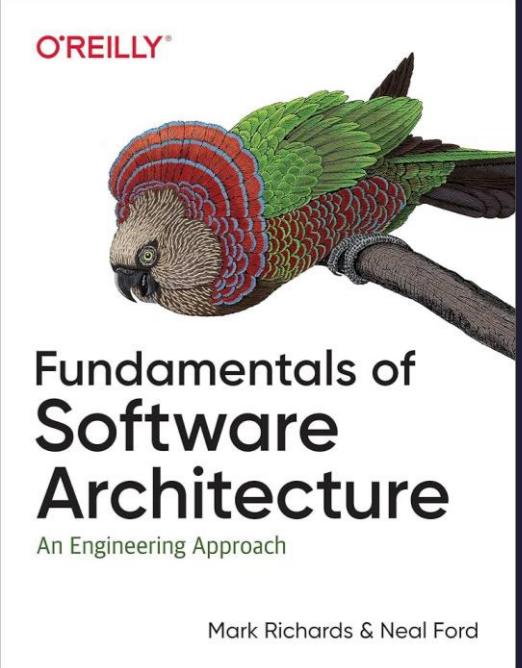
Principal Architect, NimblePros

Ardalis.com | NimblePros.com

Card: dnx -y ardaliscard



**Everything in software
architecture is a
trade-off.**



It
depends.TM

Context is King

Your application's
architecture should suit your
situation

What are you building?

What performance is required?

Who are the users?

What volume of data is expected?

How many users do you expect?

What is the team's skillset?

And many more...

Architecture Characteristics (ilities)

Overall
Cost

Performance

Fault
Tolerance

Reliability

Modularity

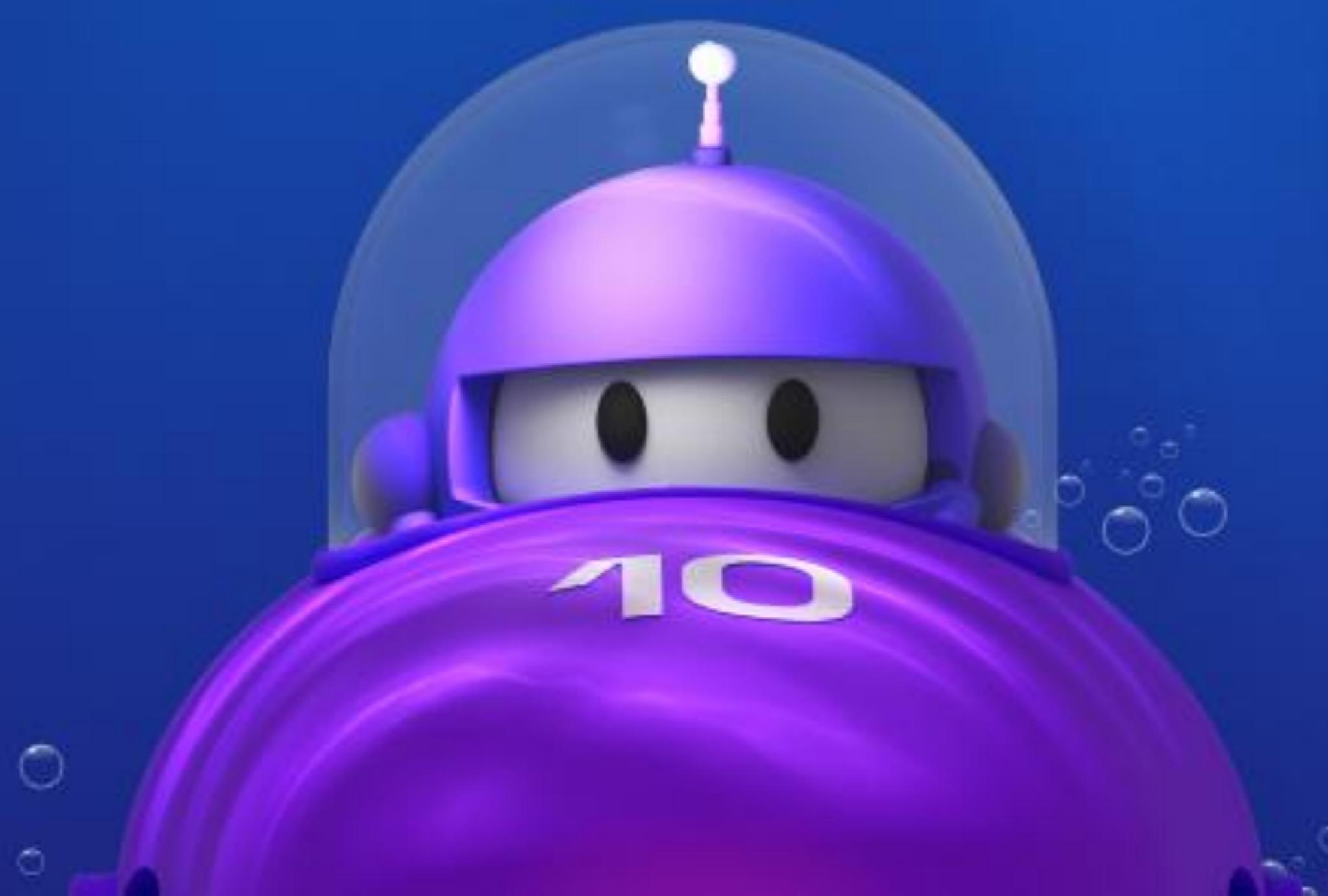
Scalability

Elasticity

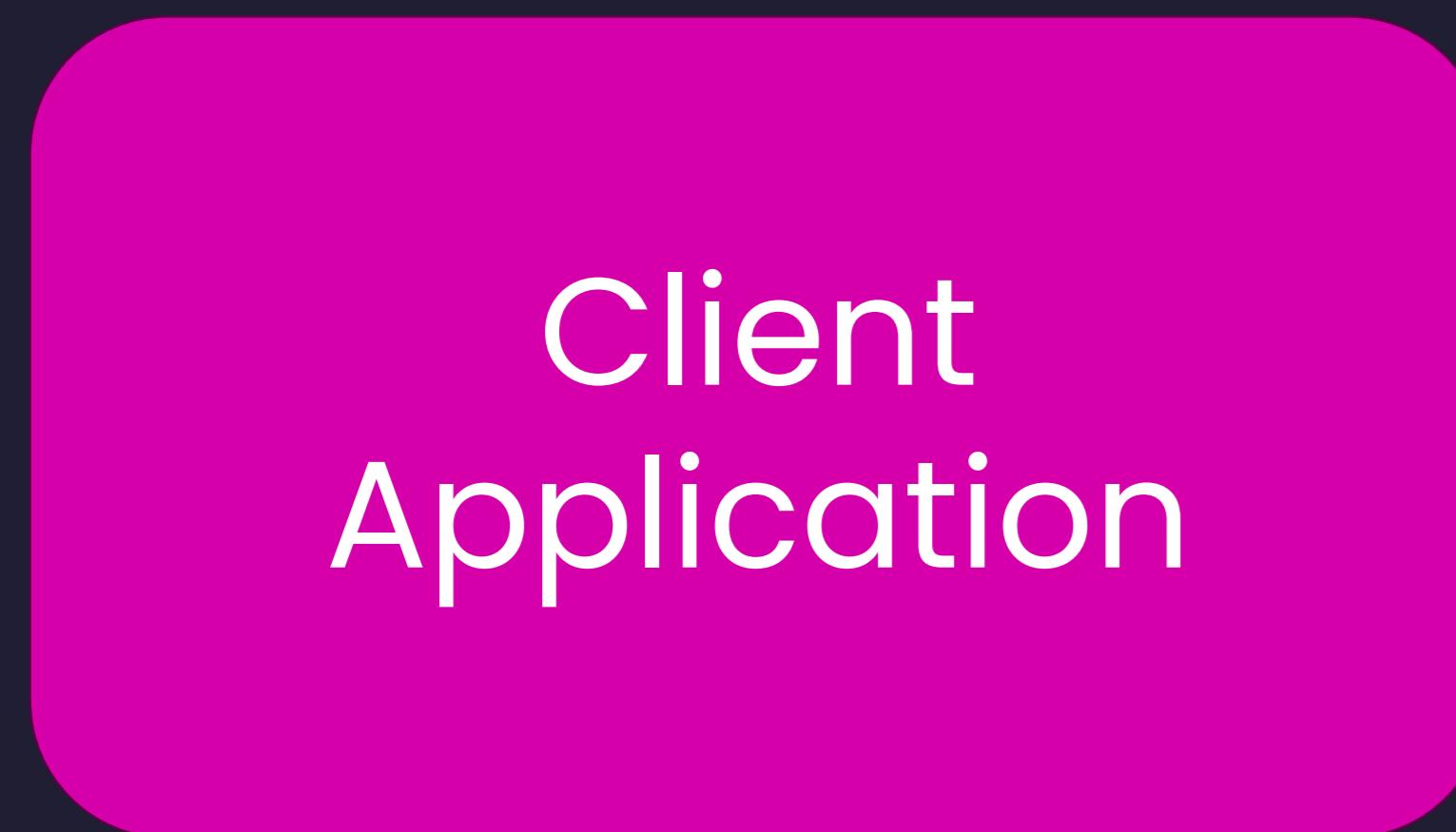
Simplicity

Deployability

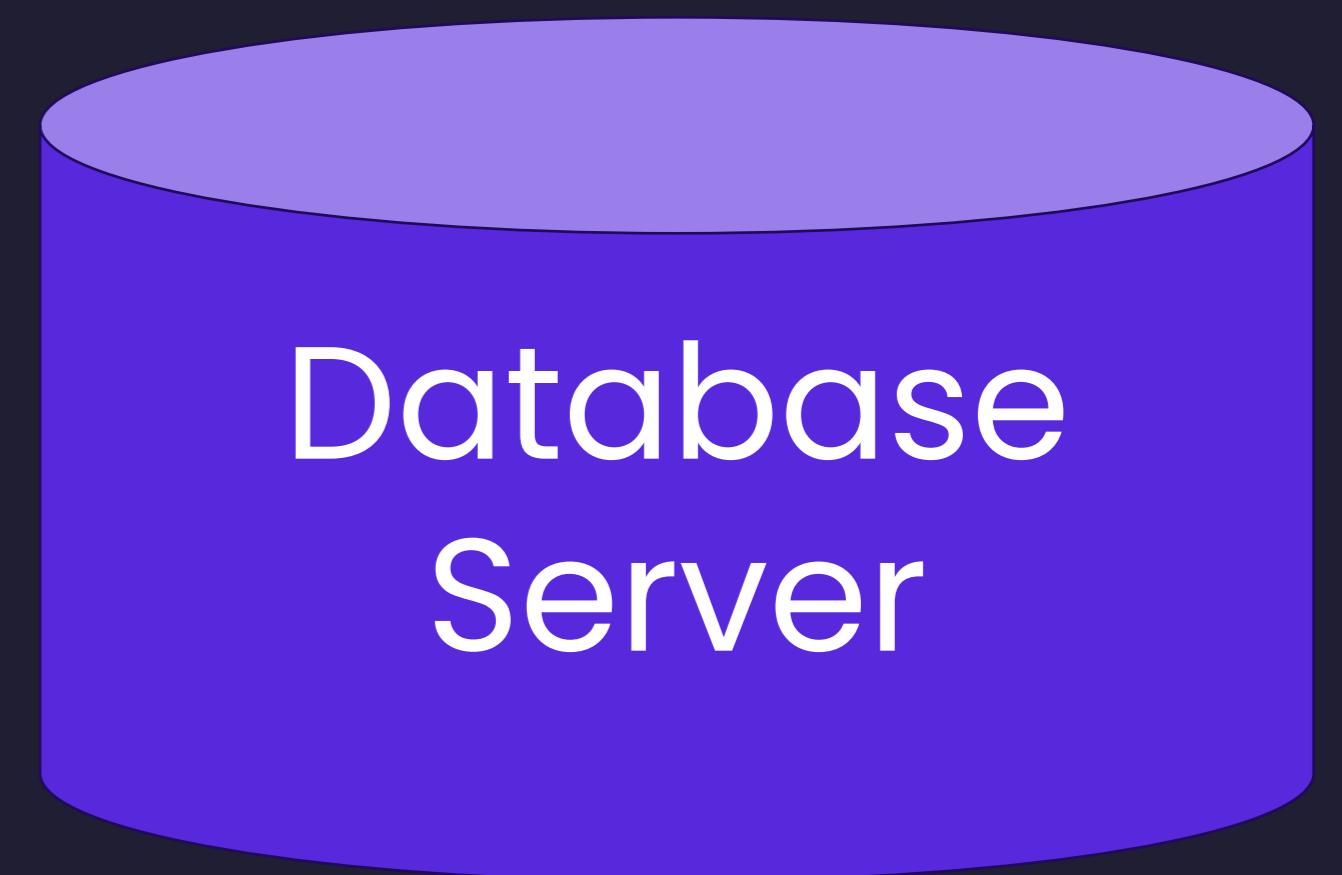
Testability



what context led to
Clean Architecture?



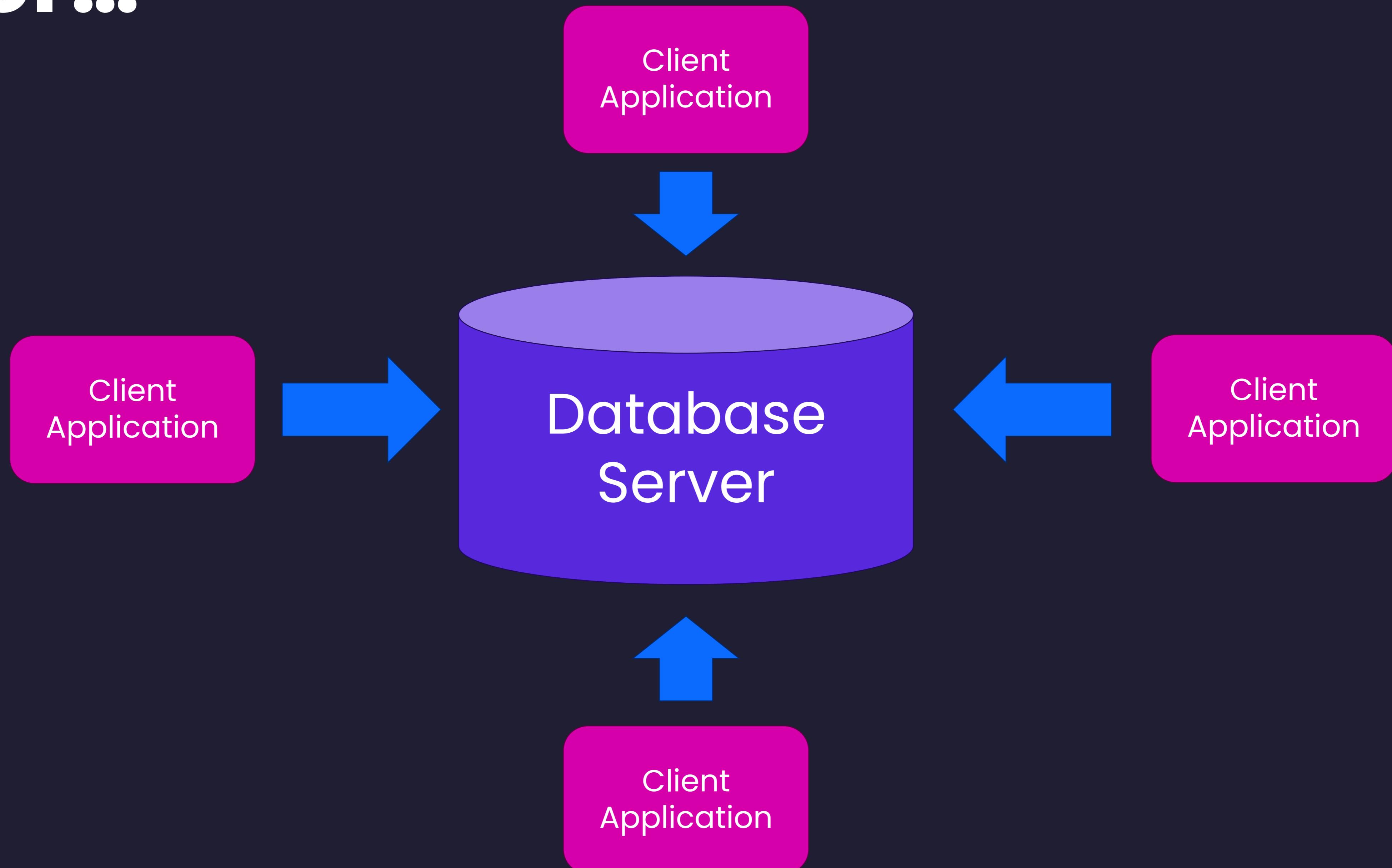
Client
Application



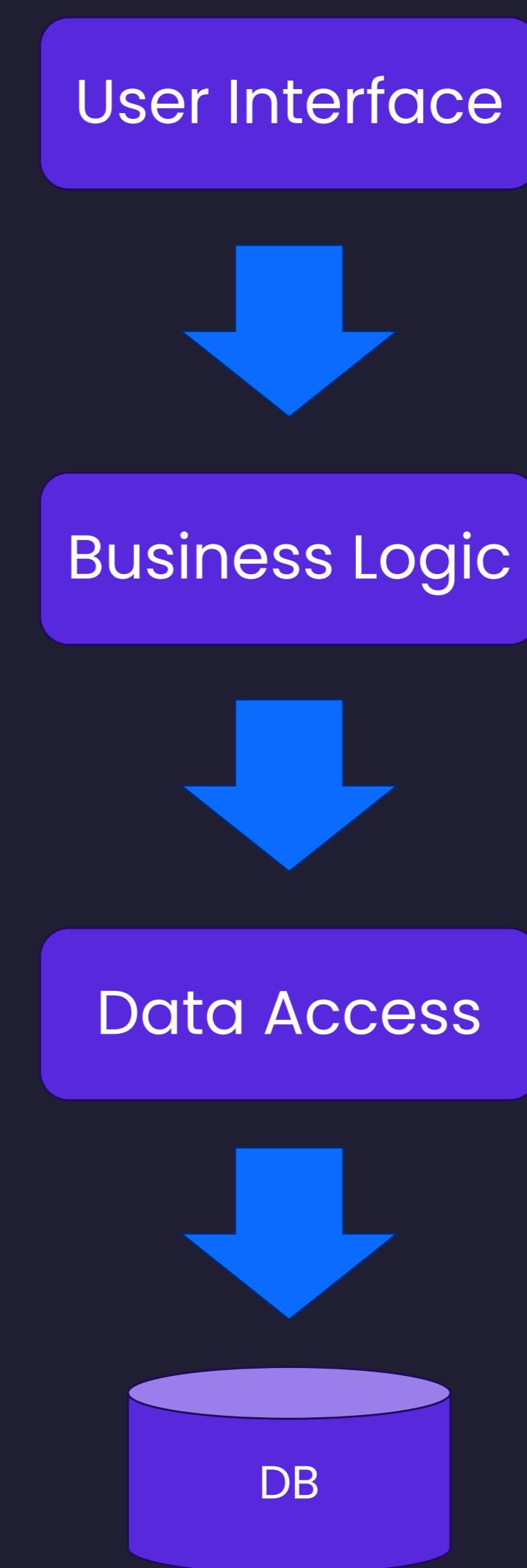
Database
Server

Client – Server
Architecture

Later...

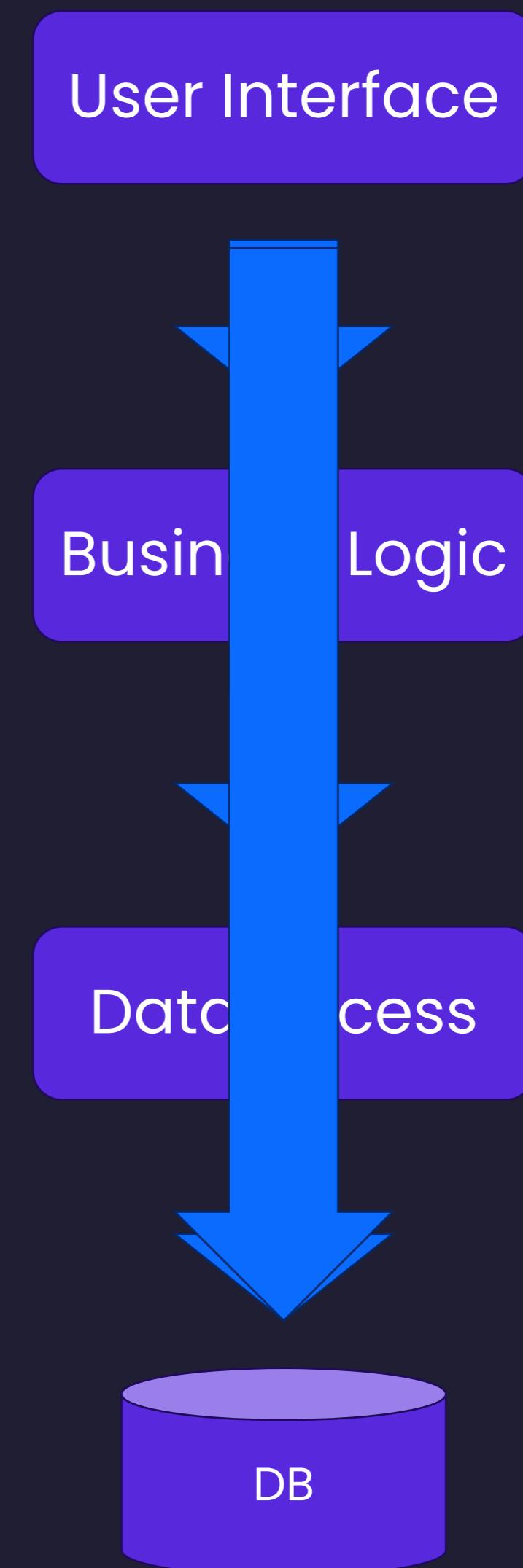


Layered Architecture



One problem...

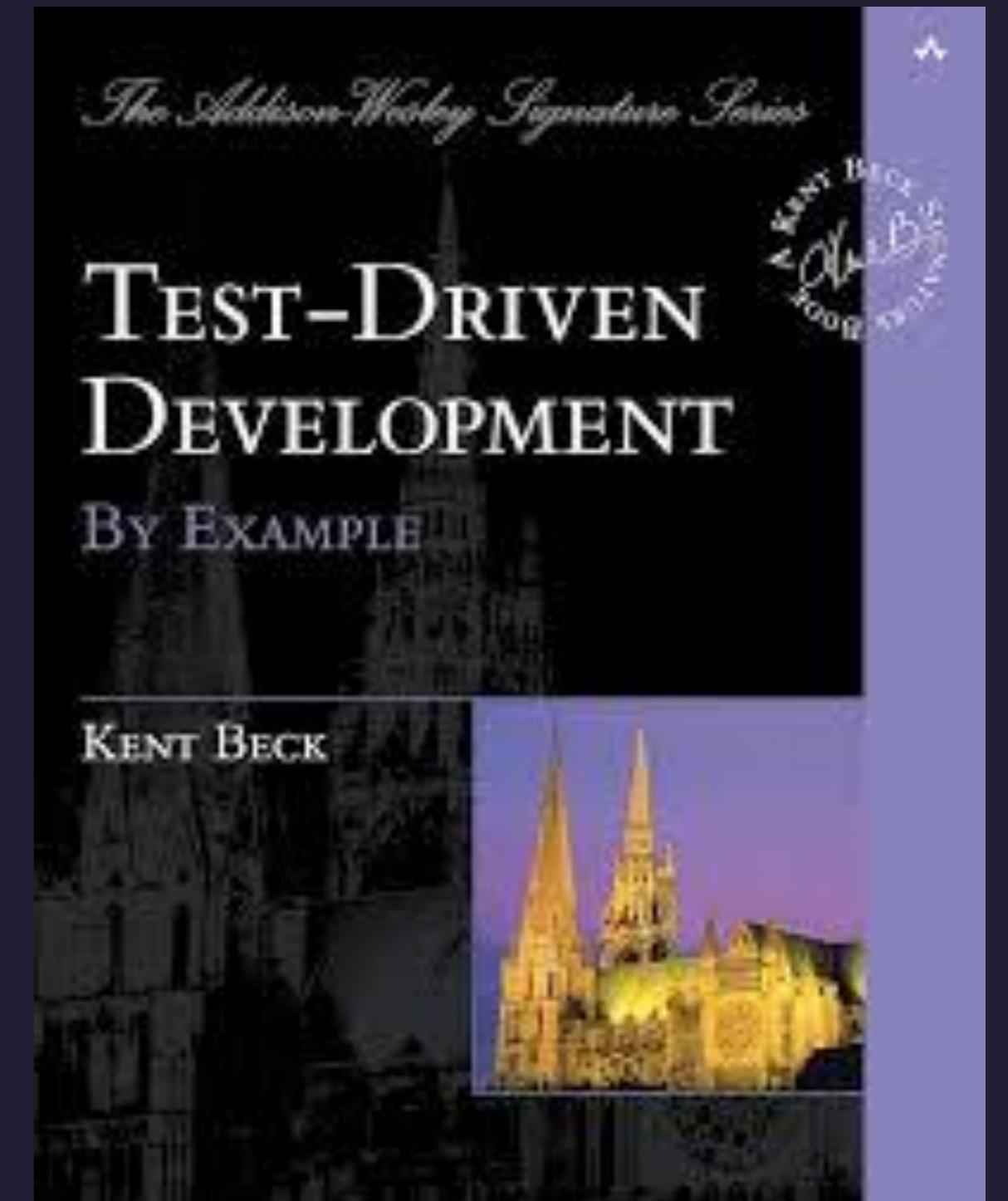
All layers depend
on the database

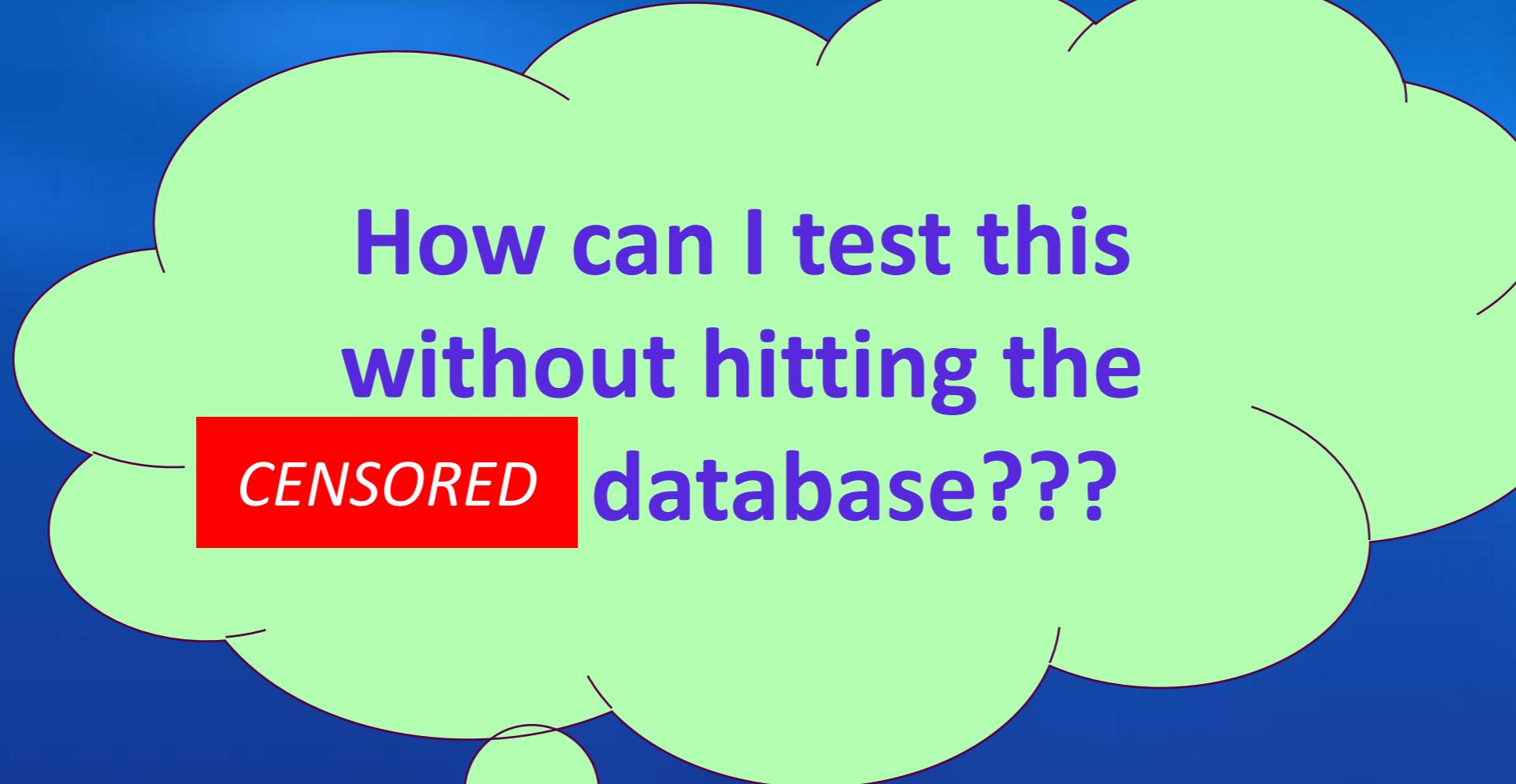


“Write tests until fear is transformed into boredom.”

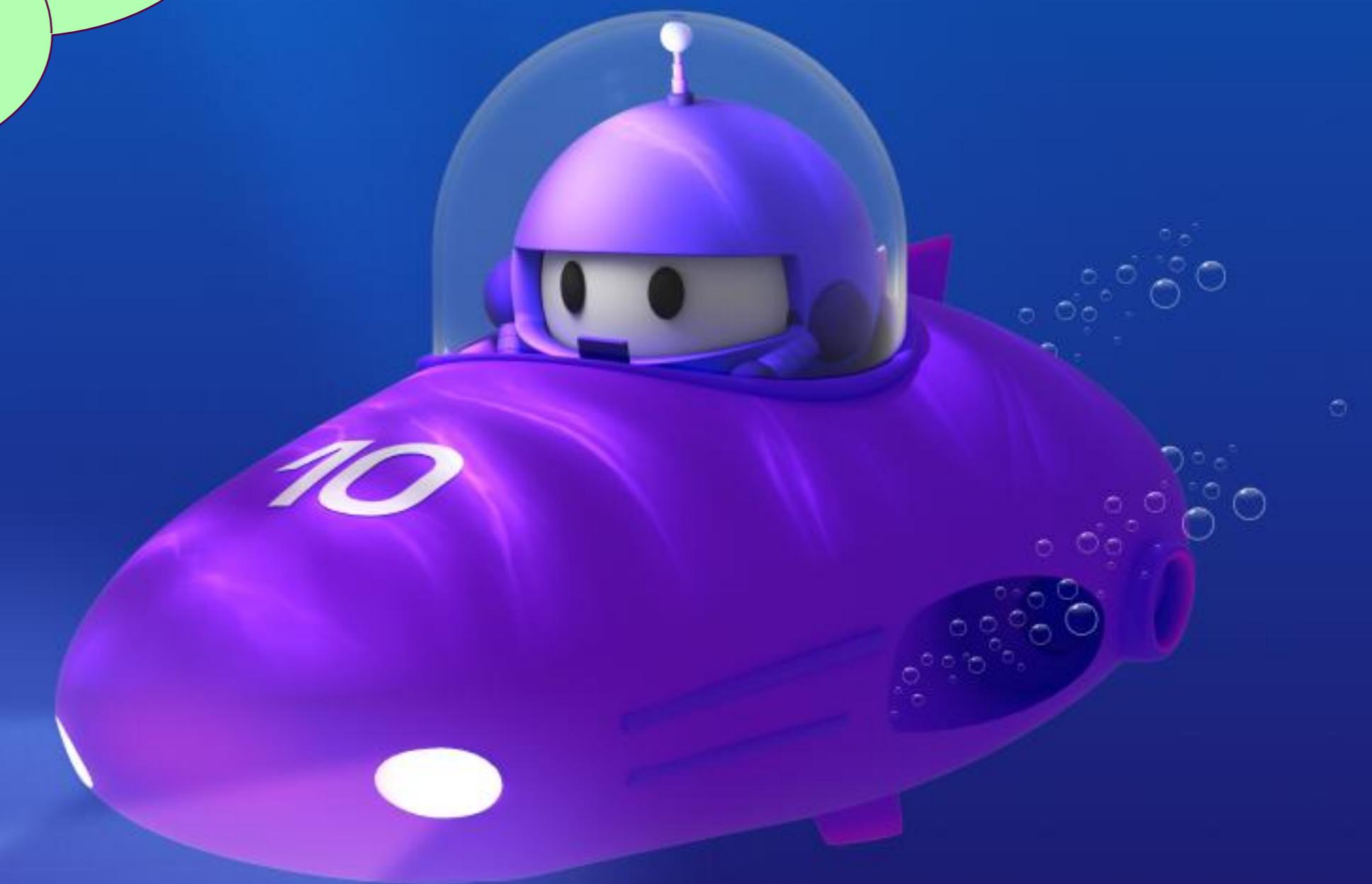
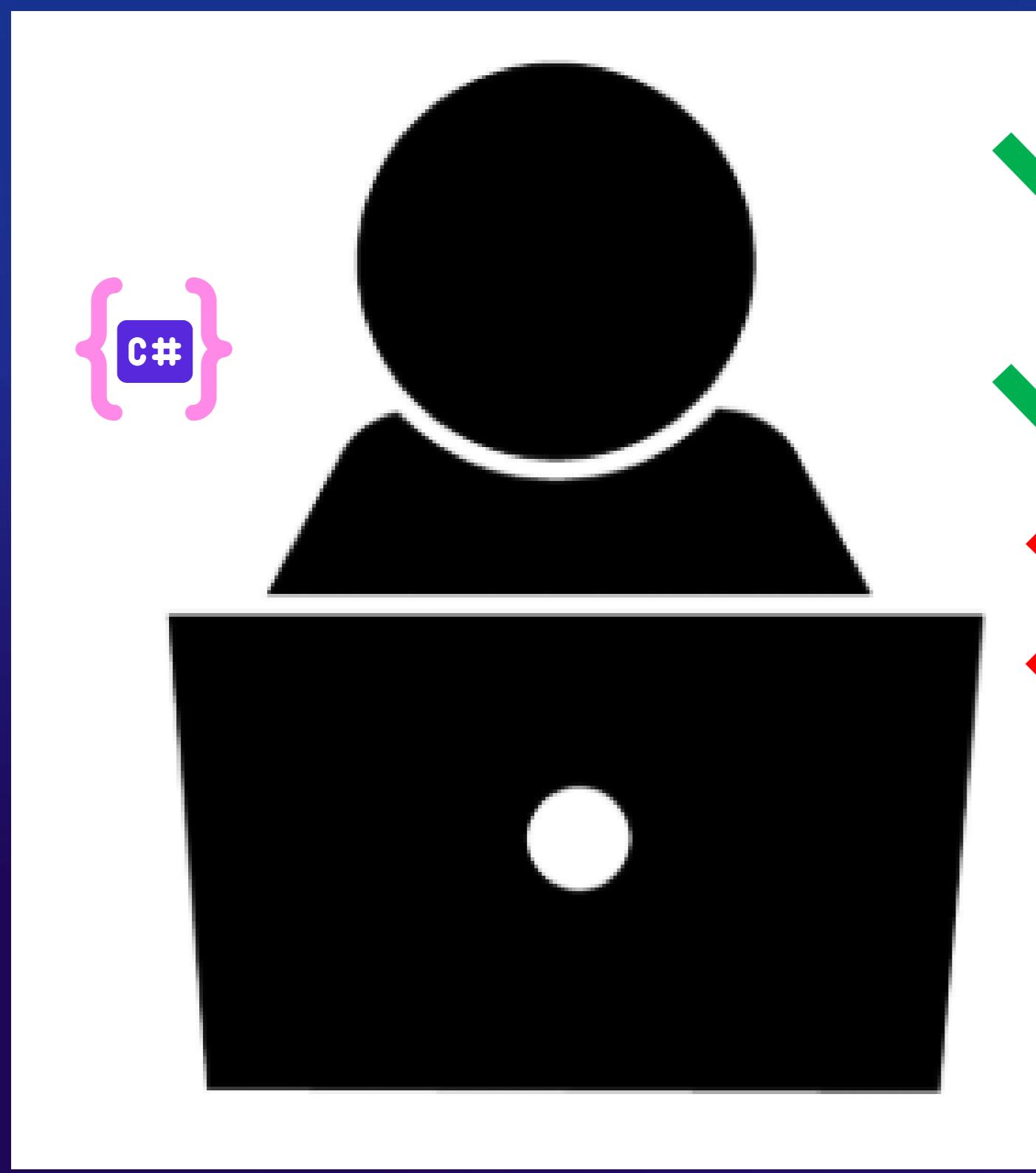
Kent Beck

Test Driven Development By Example, 2002





How can I test this
without hitting the
CENSORED database???



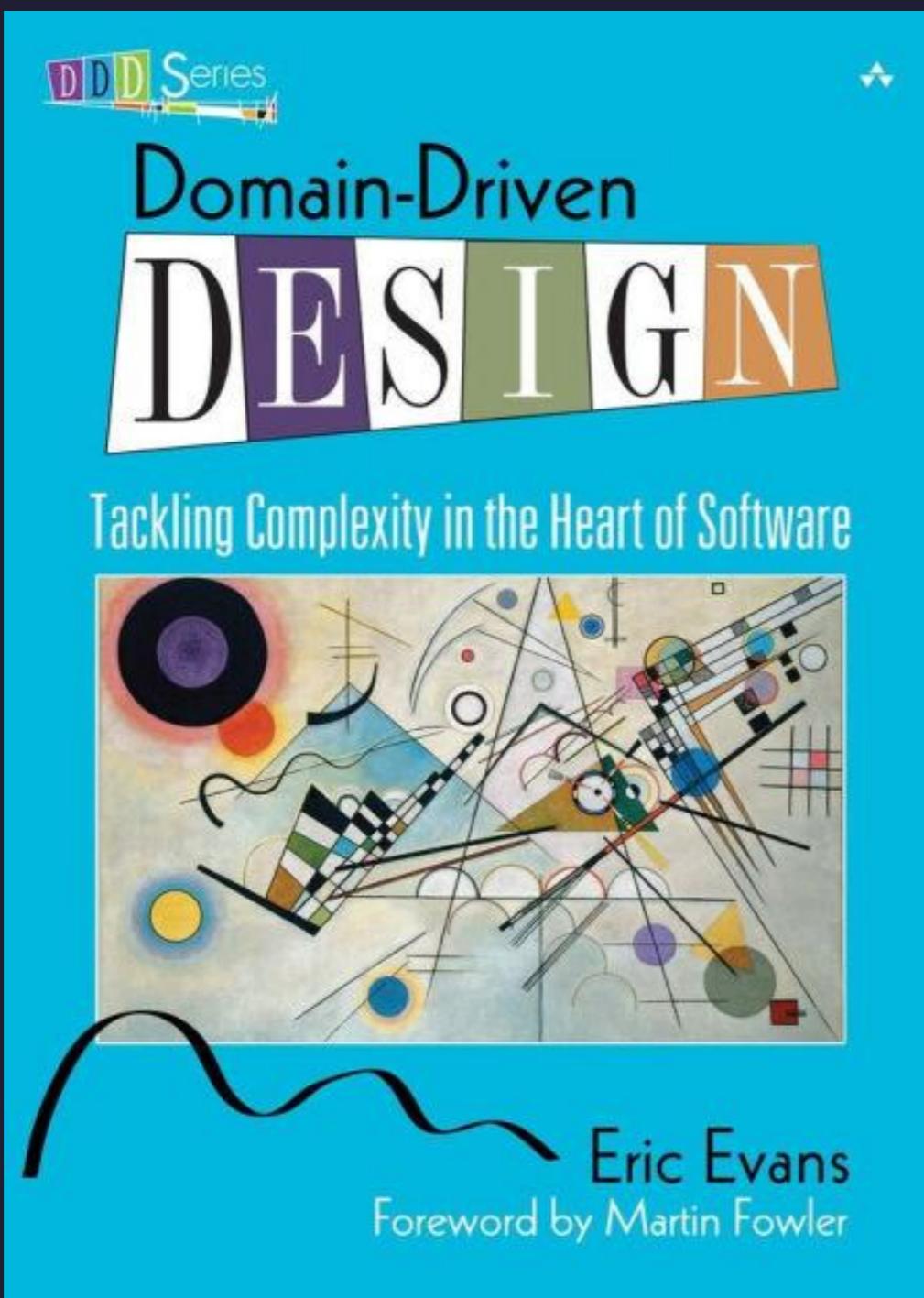
OLD MAN YELLS AT DATABASES



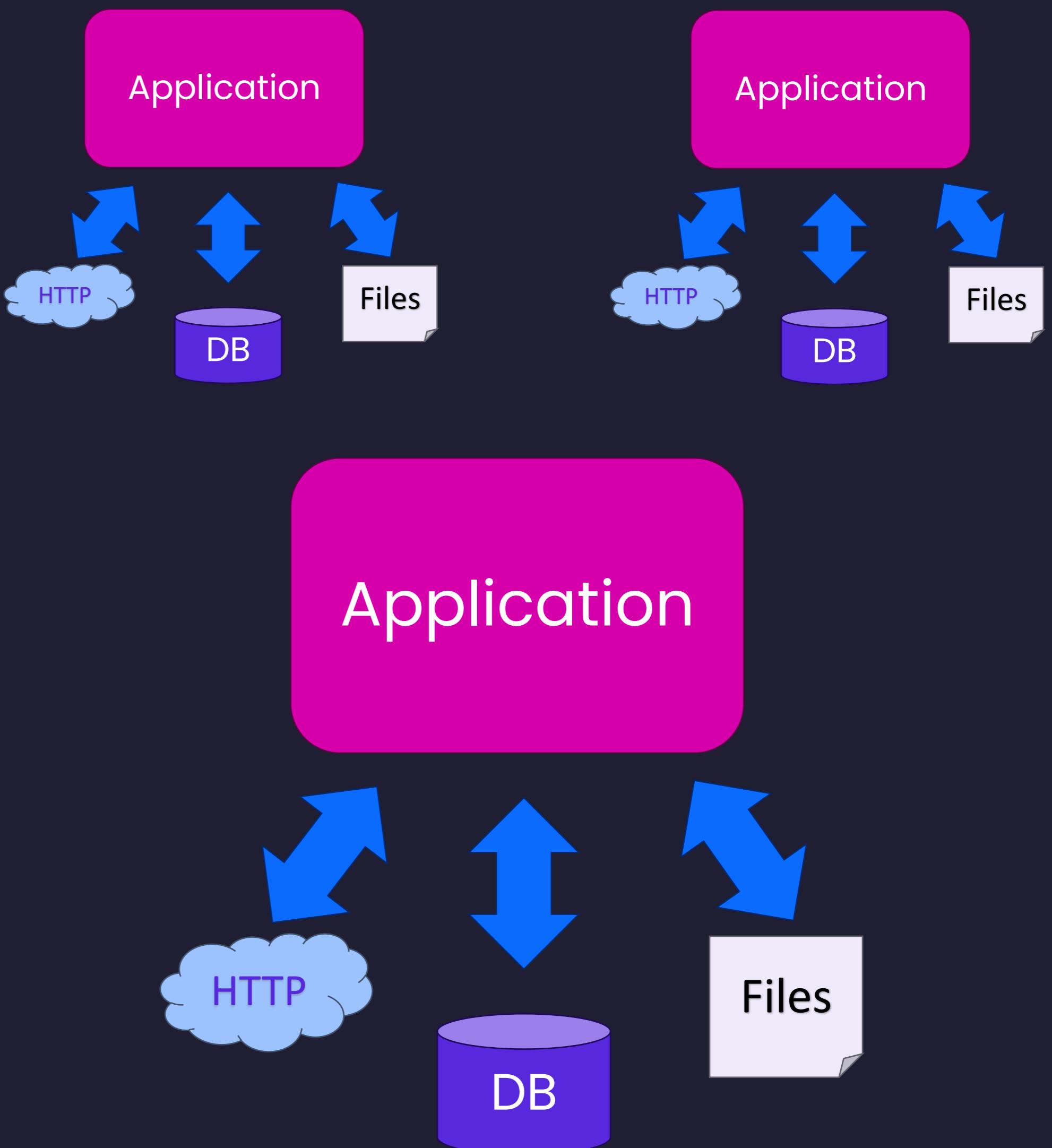
imgflip.com



A Domain-Centric Approach



2003



Hexagonal Architecture (2005)

Core Business
Domain Logic

Entities

Value
Objects

Aggregates

Services

User
Interface

Application
Services

Persistence Port

Infrastructure
Persistence Adapter

DB

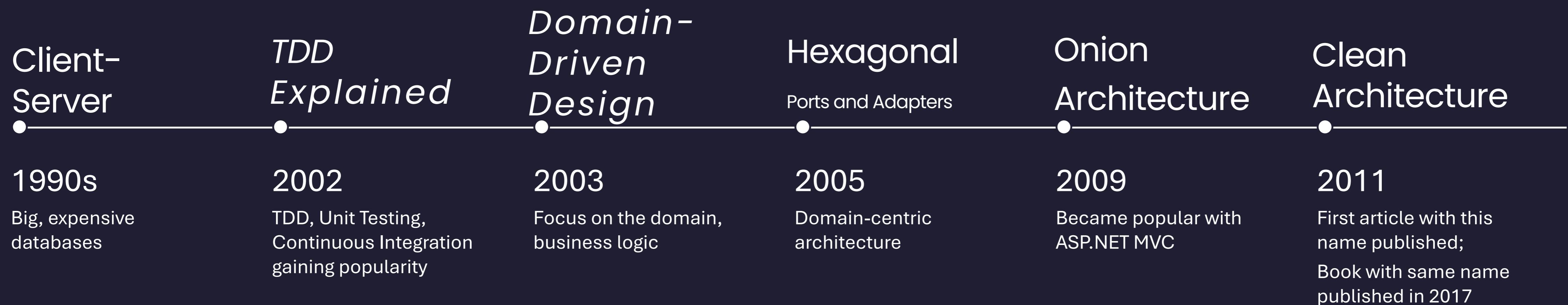
Other Ports

Infrastructure
Adapters

Other
Systems

Tests

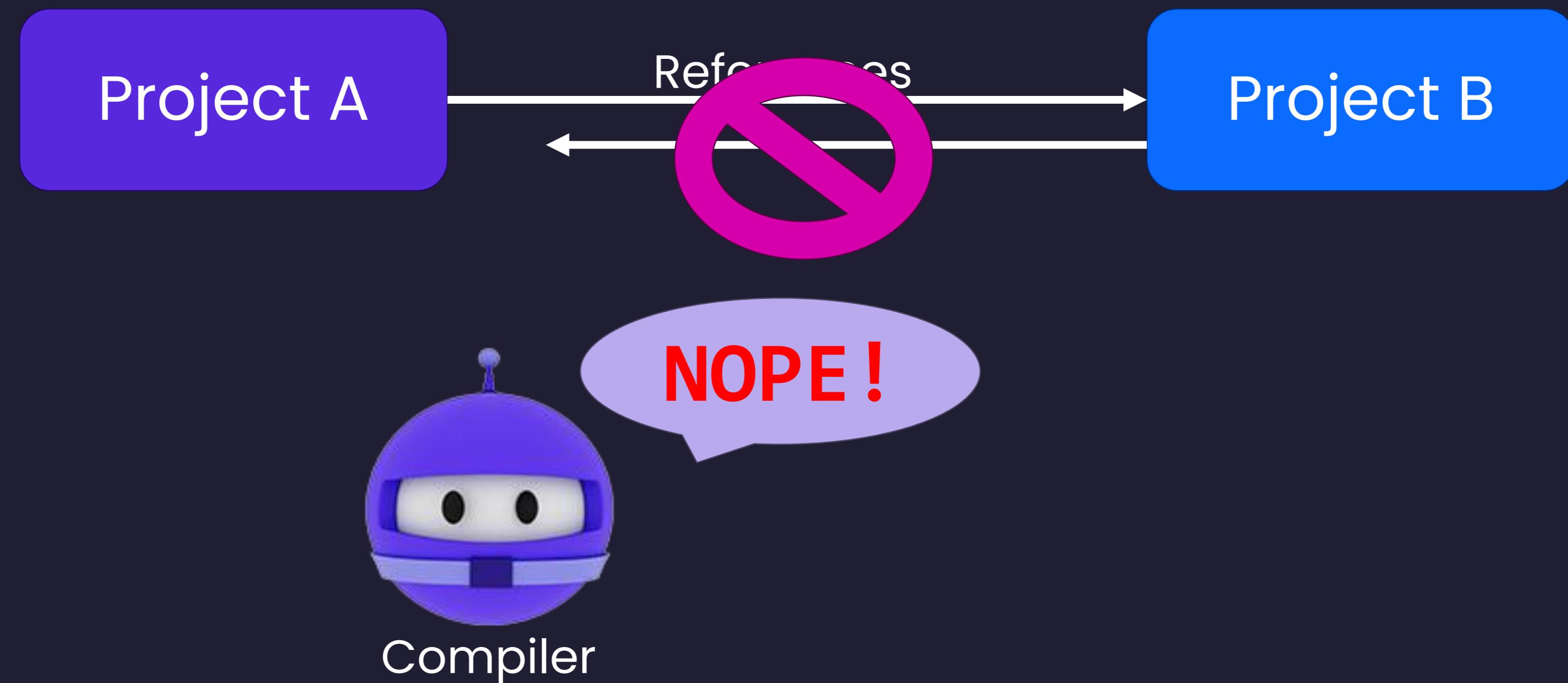
Leading to Clean Architecture

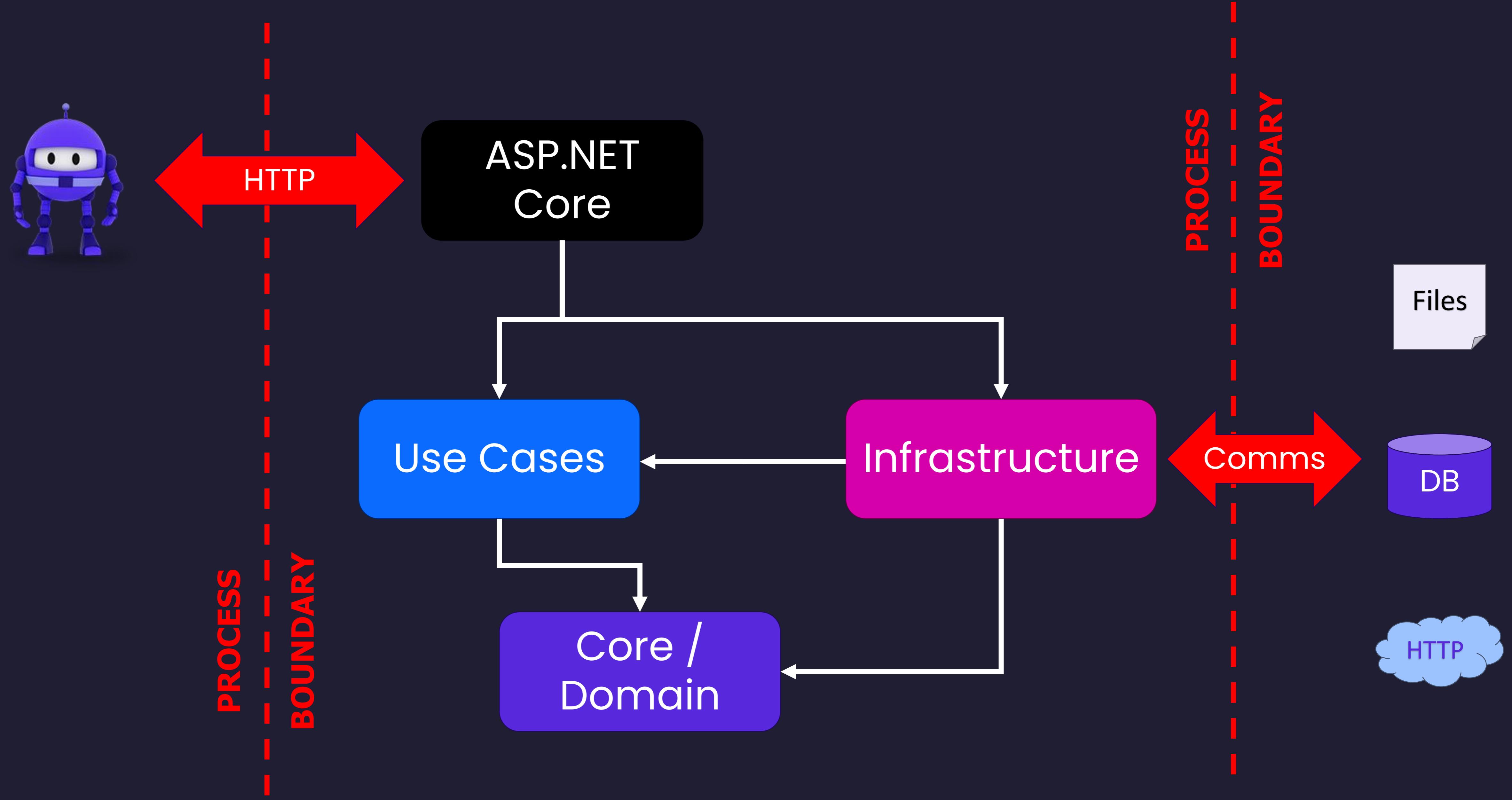


The Dependency Rule

Dependencies flow toward the
core/domain, **not** infrastructure

No Circular References Allowed in .NET Projects





01 Demo: Create and Explore a Clean Architecture ASP.NET Core and Aspire App

```
dotnet new install Ardalис.CleanArchitecture.Template
```

```
dotnet new clean-arch -?
```

```
dotnet new clean-arch -o NimblePros.DotNetConf
```



02 Demo: Create a Single Project Clean Architecture ASP.NET Core App

with compile-time rule enforcement

```
dotnet new install Ardalис.MinimalClean.Template  
  
dotnet new min-clean -?  
  
dotnet new min-clean -o NimblePros.DotNetConf
```



Thank you!

Live Session Feedback



Session Links and Resources

ardalis.com/dotnetconf25-clean-arch

