Entity Framework in the Enterprise

ARCHITECTING A DATA LAYER

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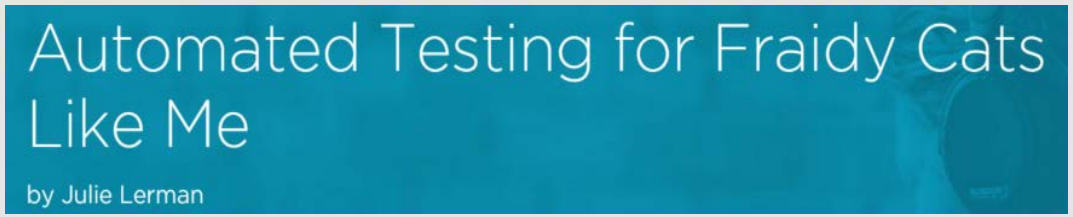
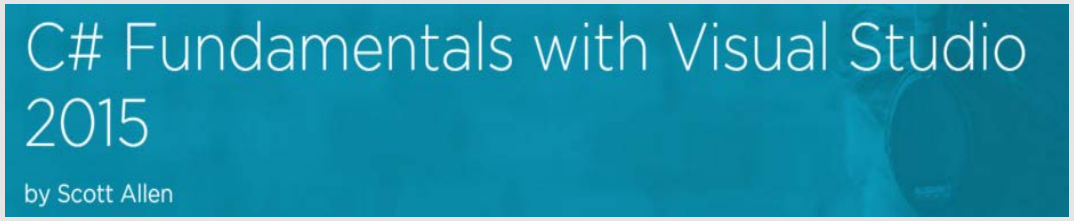
Helpful Preparation





Bonus:

Module Overview

Demo-Ware vs Real-World Software

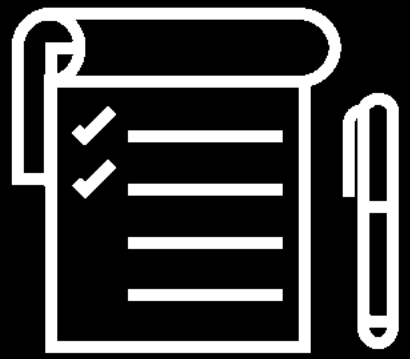
Encapsulating EF Code (Repositories?)

Smaller Data Model, Focused DbContext

EF and Domain-Driven Design

EF6 and Automated Testing

Course Overview



Current Module

Encapsulating EF Code (Repositories?)

Smaller Data Model, Focused DbContext

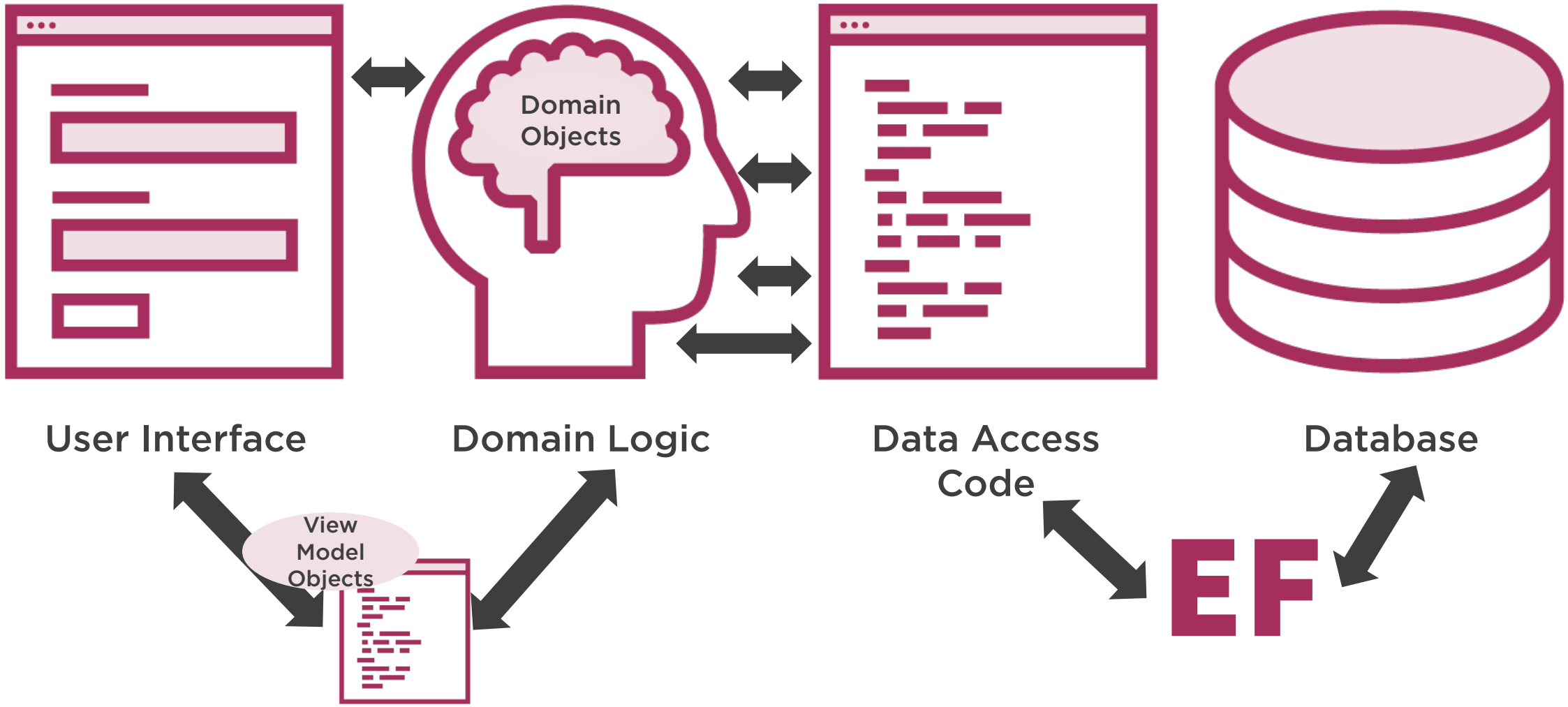
EF and Domain-Driven Design

Handling State in Disconnected Apps

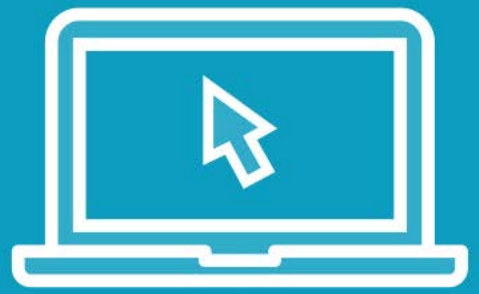
EF6 and Automated Testing

Task focused
Surrounding code is glue
Not built for re-use

Architectural Starting Point



Demo



Demoware Pros & Cons

Separation of Concerns

First Pass at Breaking Apart Single Project

Removing Entity Framework from the UI

DbSet Is A Repository

Entity Framework DbSet

"represents the collection of all entities** [of a single type] **in the context, or that can be queried from the database"*

DbSet.(LINQ query methods)

DbSet<Type>.Add/Attach

DbSet.Remove

*msdn.microsoft.com/en-us/library/gg696460(v=vs.113).aspx

Repository Pattern

"in-memory domain object collection"*

Execute Queries defined elsewhere

Add objects to repository

Remove objects from repository

*martinfowler.com/eaaCatalog/repository.html

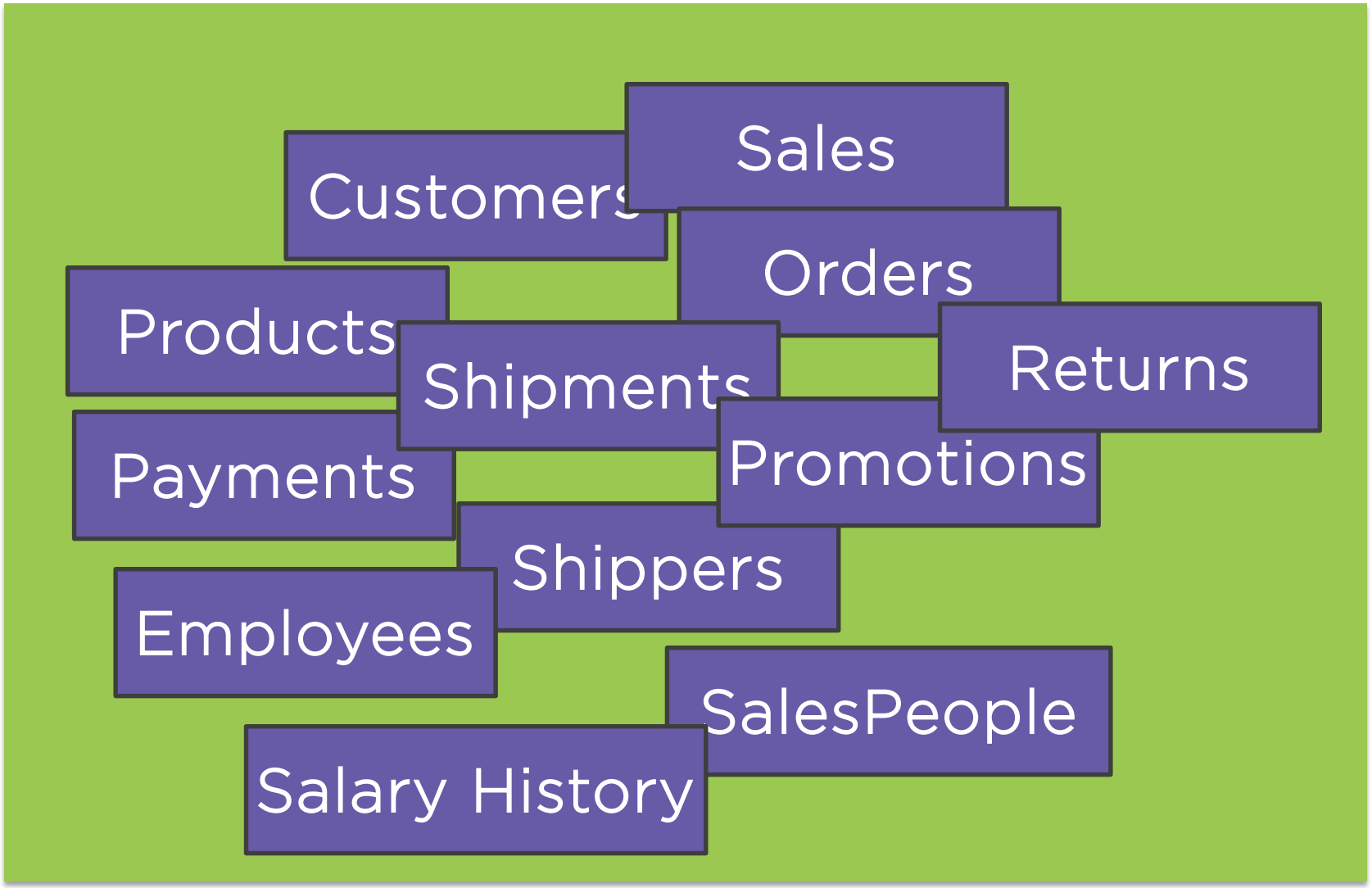
Encapsulated
Data Access Code

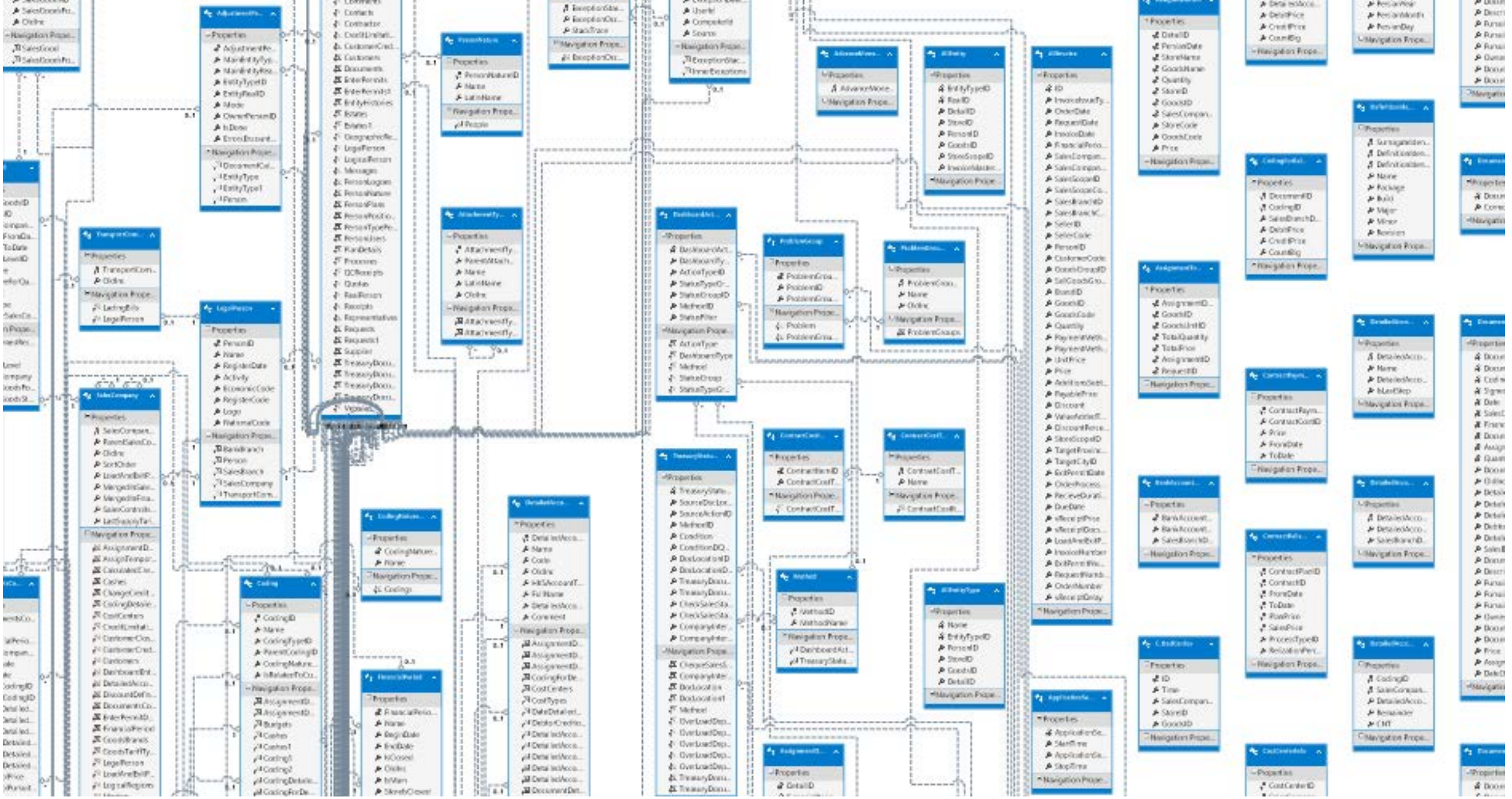
vs.

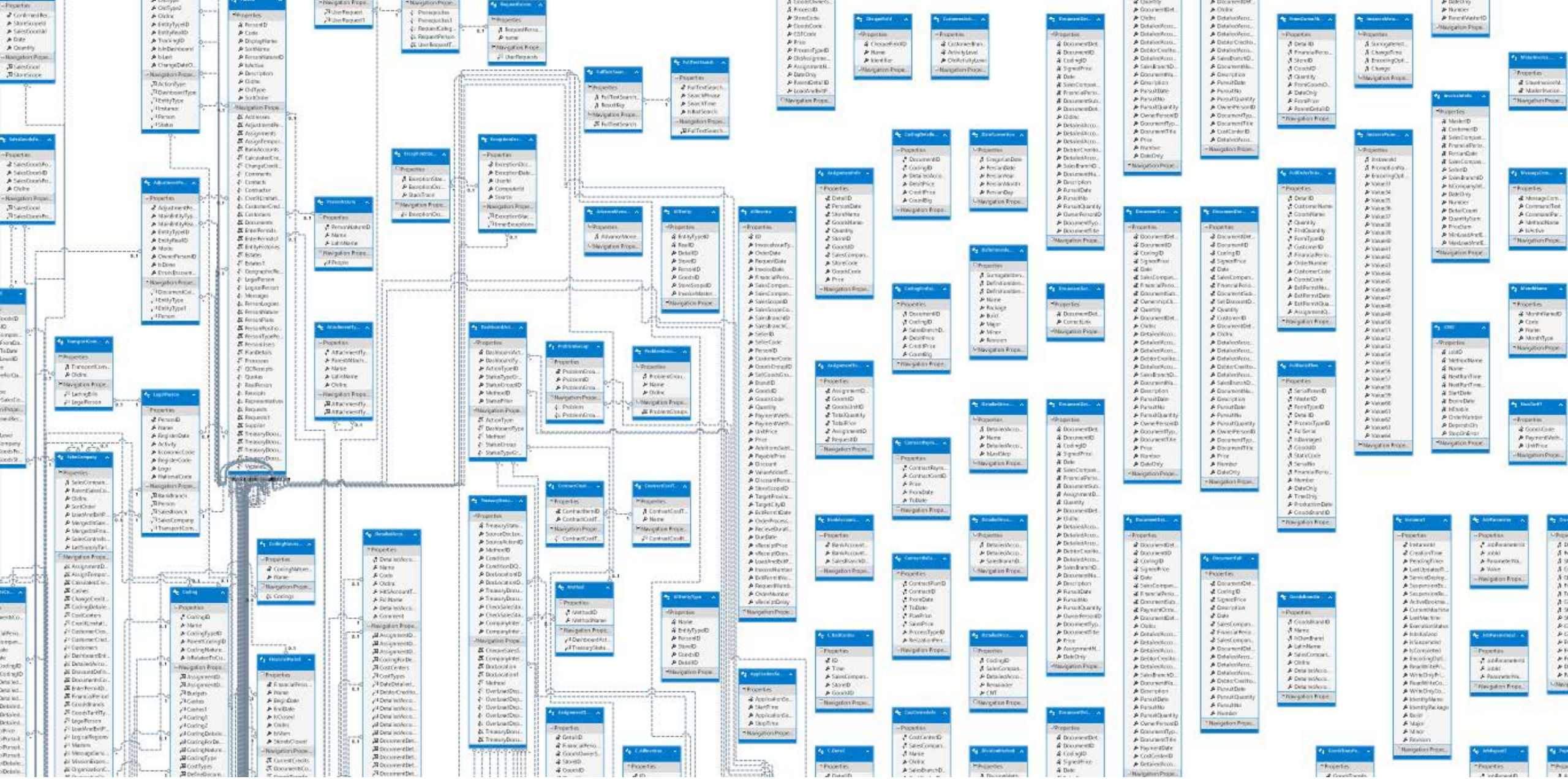
Repository Pattern
(Queryable Collection)

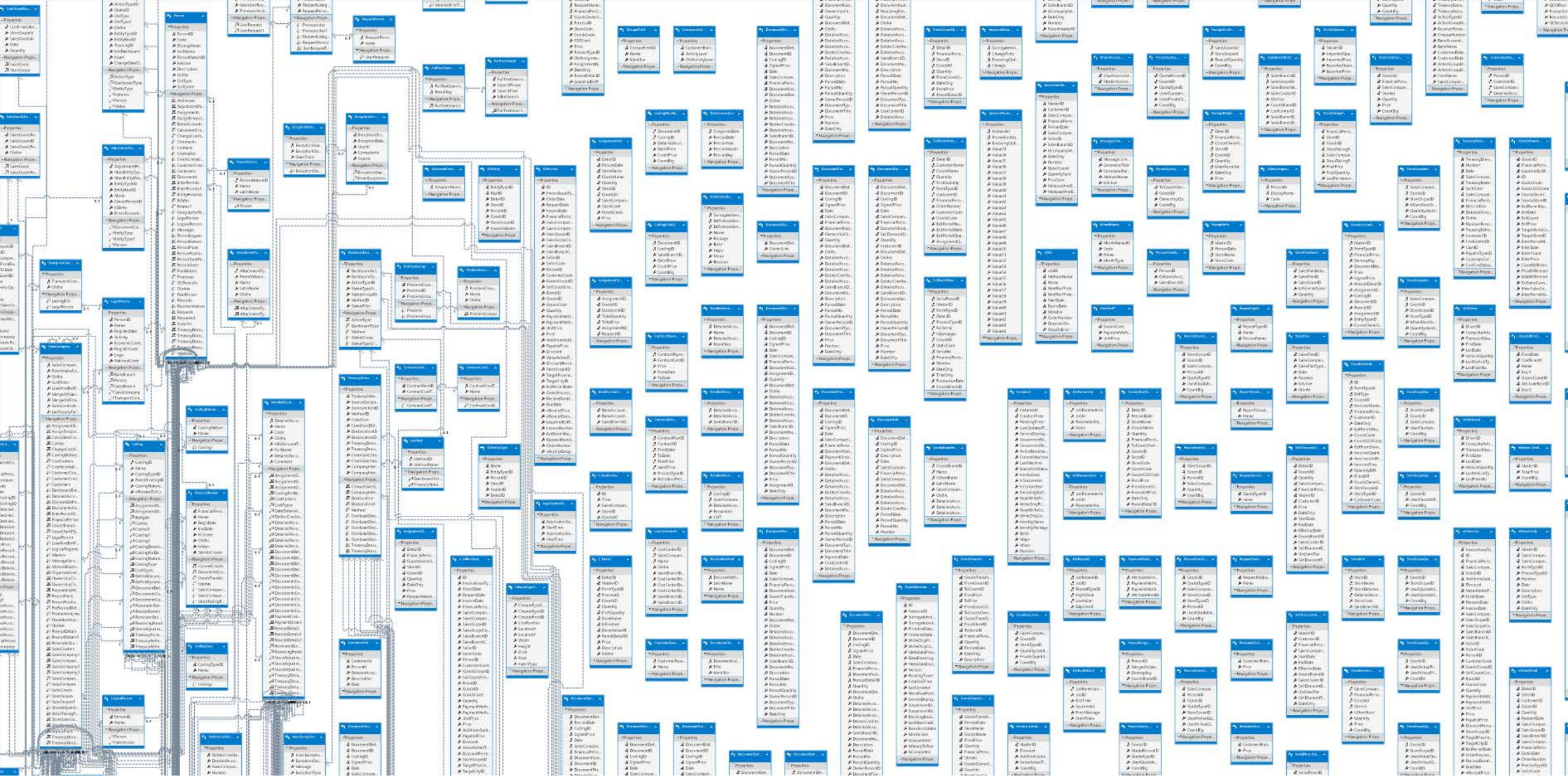
EF, Bounded Contexts & Other Domain-Driven Design Concepts

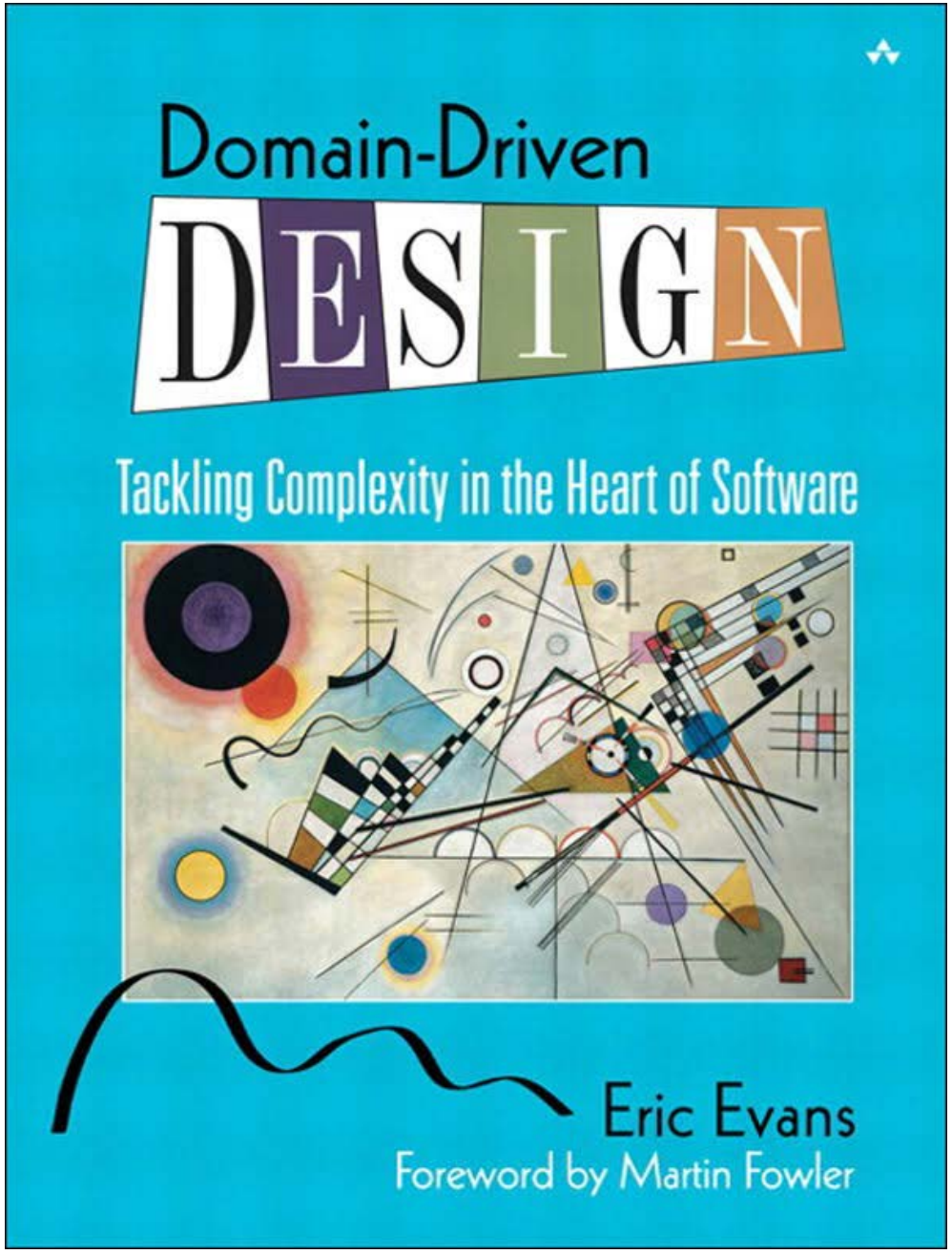
Defining the Model

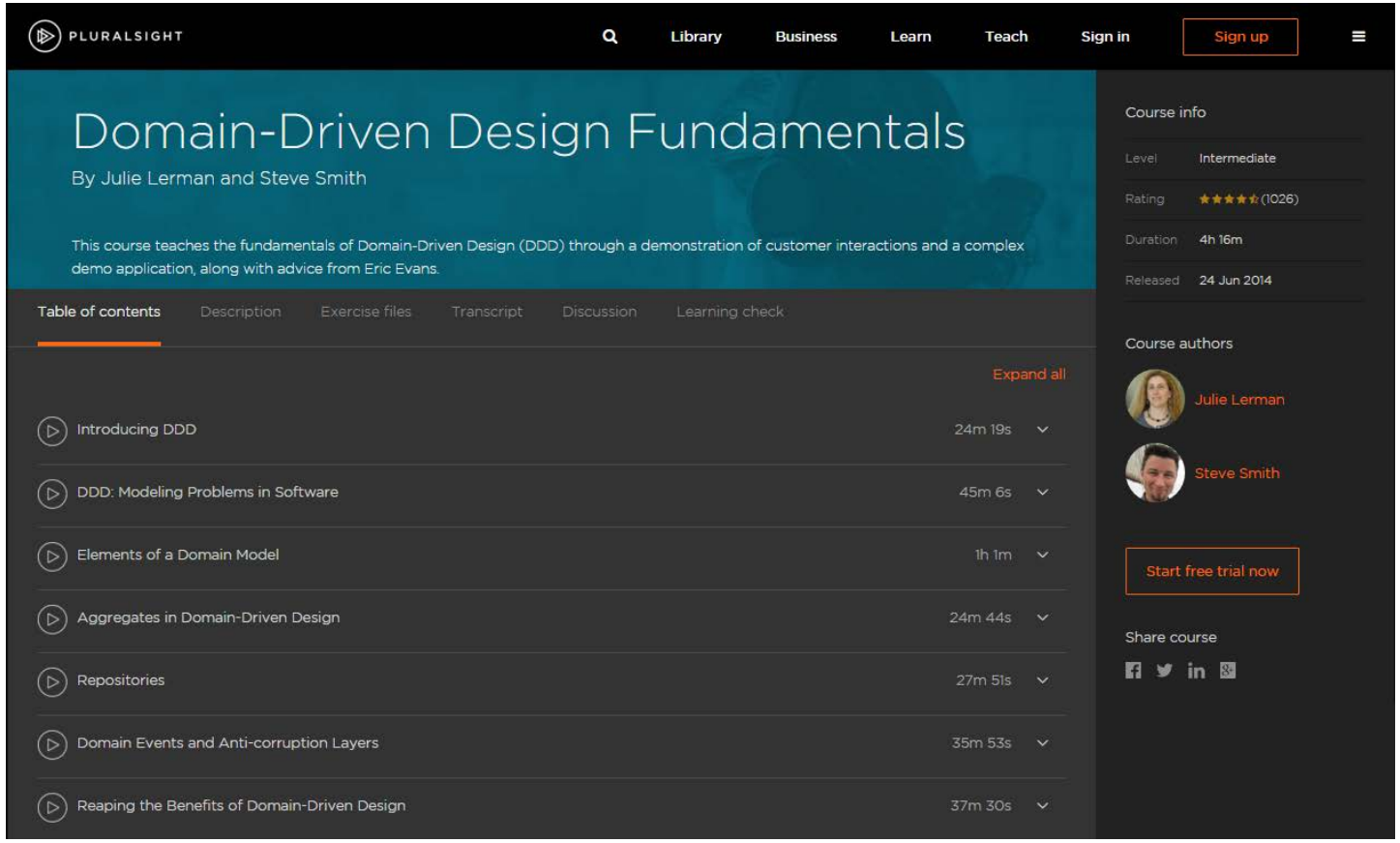






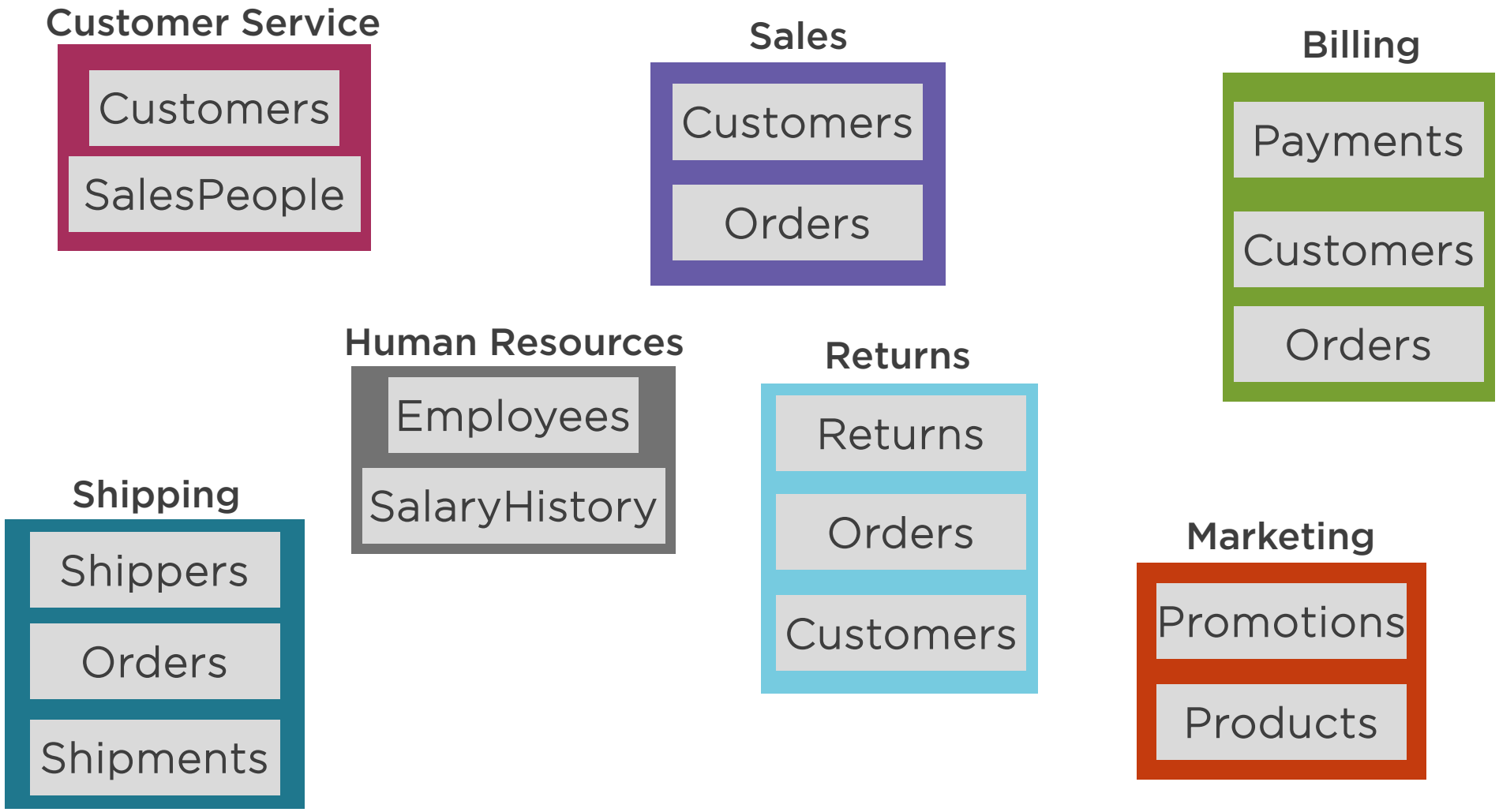






www.bit.ly/PS-DDD

Domain-Driven Design: "Bounded Contexts"



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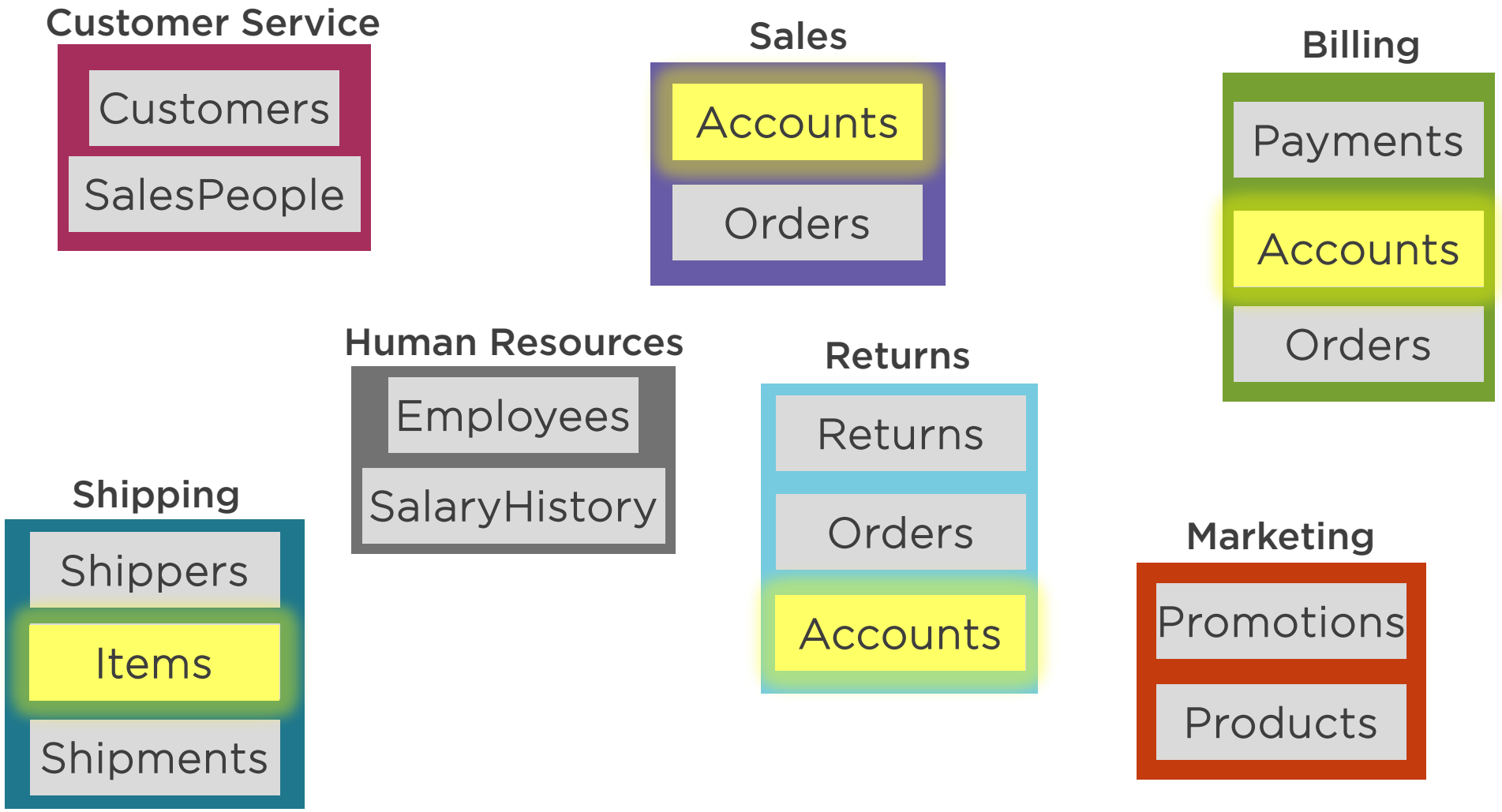
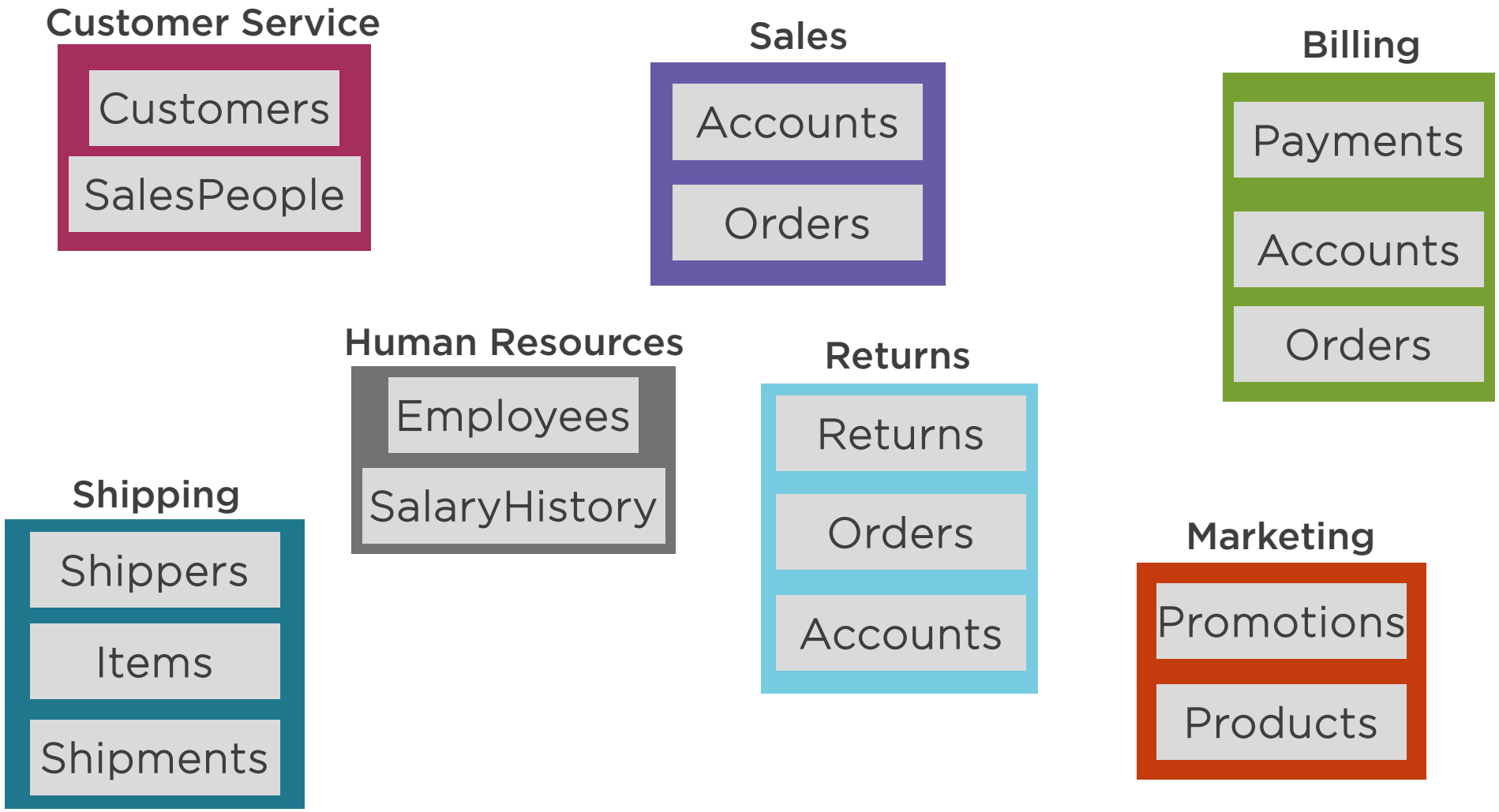


Focused DbContexts



Entity Framework & Designing for Testing

Automated Tests Make Testing Easier

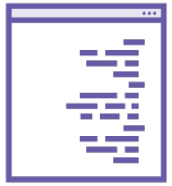
Unit Tests

Test small bits of independent logic

Test this

Test this

Test this

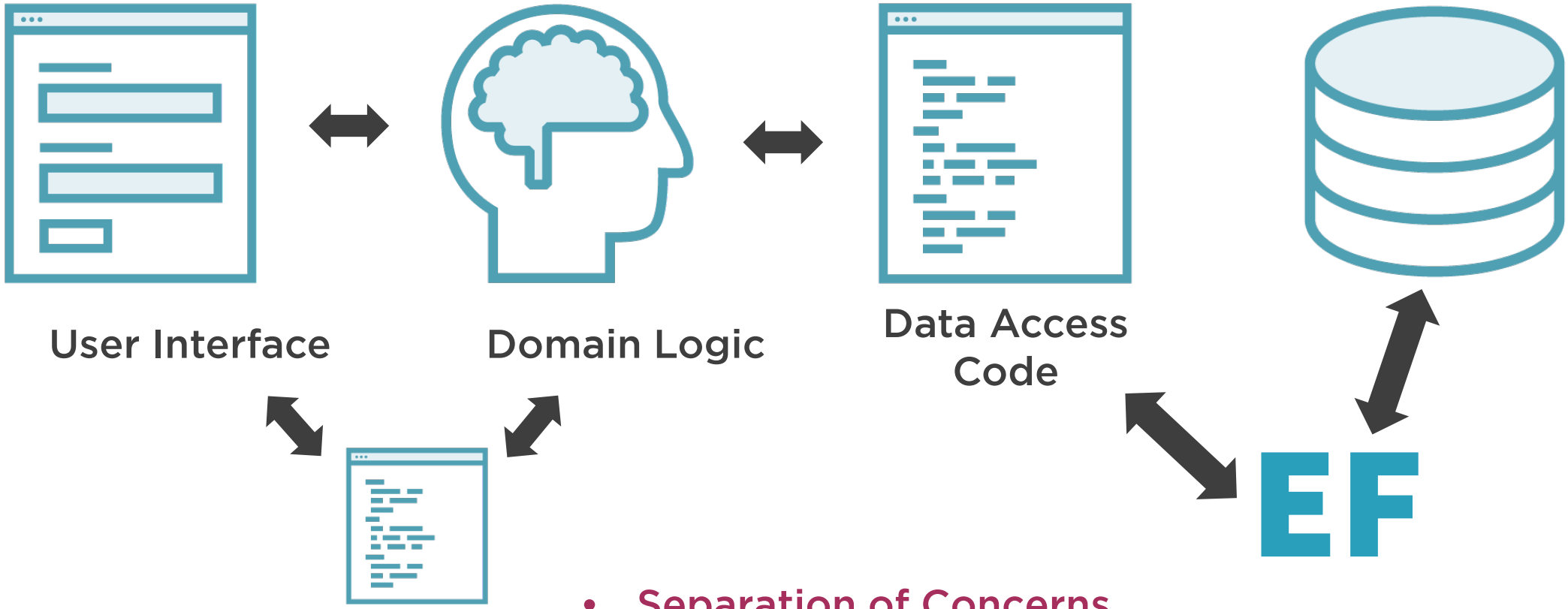


Integration Tests

Logic from multiple sources

Test this

Good Design Makes Testing Easier



- Separation of Concerns
- Dependency Injection

Architecting a Data Layer

Demo-Ware vs Real-World Software

Encapsulating EF Code (Repositories?)

Domain-Driven Design Bounded Contexts

Focused Data Models/EF DbContext

EF6 and Automated Testing

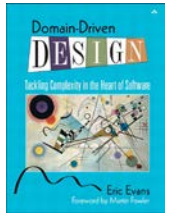
Resources

Helpful Pluralsight Courses

- Getting Started with Entity Framework 6 bit.ly/PS-EF6Start
- Automated Testing for Fraidy Cats Like Me bit.ly/PS-Testing
- C# Fundamentals with Visual Studio 2015 bit.ly/1JxmjH8
- Domain-Driven Design Fundamentals bit.ly/PS-DDD
- SOLID Principles of Object Oriented Design bit.ly/1PhN6ny

How EF6 Enables Mocking DbSets More Easily bit.ly/JL_EF6Mock

Domain-Driven Design, Eric Evans



domainlanguage.com/ddd

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