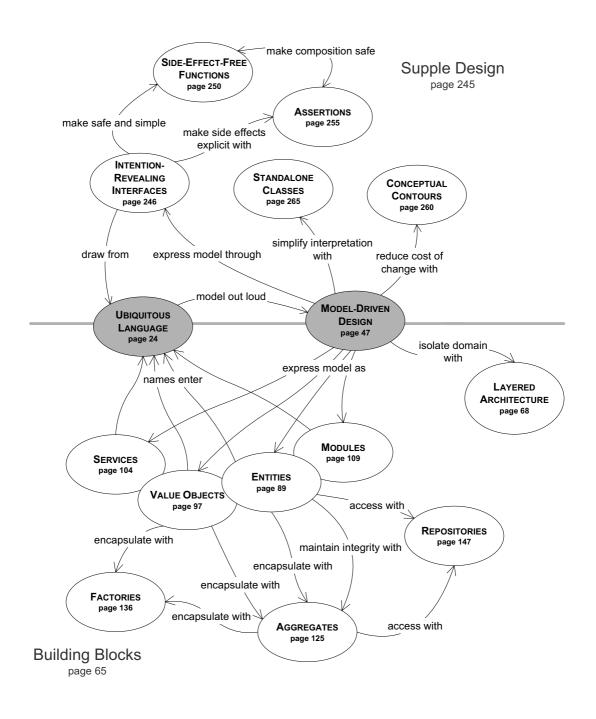
Domain-Driven DRSIGN

Tackling Complexity in the Heart of Software



Eric Evans
Foreword by Martin Fowler



Domain-Driven Design: Tackling Complexity in the Heart of Software

Table of Contents

Contents

Foreword

Preface

Acknowledgments

Part I: Putting the Domain Model to Work

Chapter 1: Crunching Knowledge

Ingredients of Effective Modeling

Knowledge Crunching

Continuous Learning

Knowledge-Rich Design

Deep Models

Chapter 2: Communication and the Use of Language

UBIQUITOUS LANGUAGE

Modeling Out Loud

One Team, One Language

Documents and Diagrams

Explanatory Models

Chapter 3: Binding Model and Implementation

MODEL-DRIVEN DESIGN

Modeling Paradigms and Tool Support

Letting the Bones Show: Why Models Matter to Users



HANDS-ON MODELERS

Part II: The Building Blocks of a Model-Driven Design

Chapter 4: Isolating the Domain

LAYERED ARCHITECTURE

The Domain Layer Is Where the Model Lives

THE SMART UI ANTI-PATTERN

Other Kinds of Isolation

Chapter 5: A Model Expressed in Software

Associations

ENTITIES (A.K.A. REFERENCE OBJECTS)

VALUE OBJECTS

SERVICES

MODULES (A.K.A. PACKAGES)

Modeling Paradigms

Chapter 6: The Life Cycle of a Domain Object

AGGREGATES

FACTORIES

REPOSITORIES

Designing Objects for Relational Databases

Chapter 7: Using the Language: An Extended Example

Introducing the Cargo Shipping System

Isolating the Domain: Introducing the Applications

Distinguishing ENTITIES and VALUE OBJECTS

Designing Associations in the Shipping Domain

AGGREGATE Boundaries

Selecting REPOSITORIES

Walking Through Scenarios



Object Creation

Pause for Refactoring: An Alternative Design of the Cargo AGGREGATE

MODULES in the Shipping Model

Introducing a New Feature: Allocation Checking

A Final Look

Part III: Refactoring Toward Deeper Insight

Chapter 8: Breakthrough

Story of a Breakthrough

Opportunities

Focus on Basics

Epilogue: A Cascade of New Insights

Chapter 9: Making Implicit Concepts Explicit 205

Digging Out Concepts

How to Model Less Obvious Kinds of Concepts

Chapter 10: Supple Design

INTENTION-REVEALING INTERFACES

SIDE-EFFECT-FREE FUNCTIONS

ASSERTIONS

CONCEPTUAL CONTOURS

STANDALONE CLASSES

CLOSURE OF OPERATIONS

Declarative Design

A Declarative Style of Design

Angles of Attack

Chapter 11: Applying Analysis Patterns

Chapter 12: Relating Design Patterns to the Model

STRATEGY (A.K.A. POLICY)



COMPOSITE

Why Not FLYWEIGHT?

Chapter 13: Refactoring Toward Deeper Insight

Initiation

Exploration Teams

Prior Art

A Design for Developers

Timing

Crisis as Opportunity

Part IV: Strategic Design

Chapter 14: Maintaining Model Integrity

BOUNDED CONTEXT

CONTINUOUS INTEGRATION

CONTEXT MAP

Relationships Between BOUNDED CONTEXTS

SHARED KERNEL

CUSTOMER/SUPPLIER DEVELOPMENT TEAMS

CONFORMIST

ANTICORRUPTION LAYER

SEPARATE WAYS

OPEN HOST SERVICE

PUBLISHED LANGUAGE

Unifying an Elephant

Choosing Your Model Context Strategy

Transformations

Chapter 15: Distillation

CORE DOMAIN



An Escalation of Distillations

GENERIC SUBDOMAINS

DOMAIN VISION STATEMENT

HIGHLIGHTED CORE

COHESIVE MECHANISMS

Distilling to a Declarative Style

SEGREGATED CORE

ABSTRACT CORE

Deep Models Distill

Choosing Refactoring Targets

Chapter 16: Large-Scale Structure

EVOLVING ORDER

SYSTEM METAPHOR

RESPONSIBILITY LAYERS

KNOWLEDGE LEVEL

PLUGGABLE COMPONENT FRAMEWORK

How Restrictive Should a Structure Be?

Refactoring Toward a Fitting Structure

Chapter 17: Bringing the Strategy Together

Combining Large-Scale Structures and BOUNDED CONTEXTS

Combining Large-Scale Structures and Distillation

Assessment First

Who Sets the Strategy?

Six Essentials for Strategic Design Decision Making

Conclusion

Appendix: The Use of Patterns in This Book

Glossary



Α

В

С

D

Ε

F

ı

М

Ν

R

S

U

٧

W

References

Photo Credits

Index