

NET Domain Driven Design With C

Patterns, Domain-Driven Design (DDD), and Test-Driven Development (TDD) enable architects and developers to create systems that are powerful, robust, and maintainable. Now, there’s a comprehensive, practical guide to leveraging all these techniques primarily in Microsoft .NET environments, but the discussions are just as useful for Java developers. Drawing on seminal work by Martin Fowler (Patterns of Enterprise Application Architecture) and Eric Evans (Domain-Driven Design), Jimmy Nilsson shows how to create real-world architectures for any .NET application. Nilsson illuminates each principle with clear, well-annotated code examples based on C# 1.1 and 2.0. His examples and discussions will be valuable both to C# developers and those working with other .NET languages and any databases—even with other platforms, such as J2EE. Coverage includes · Quick primers on patterns, TDD, and refactoring · Using architectural techniques to improve software quality · Using domain models to support business rules and validation · Applying enterprise patterns to provide persistence support via NHibernate · Planning effectively for the presentation layer and UI testing · Designing for Dependency Injection, Aspect Orientation, and other new paradigms

Microservices are responsible for very tightly focused capabilities that are part of a more complex server-side software system. Microservices, when done well, are malleable, scalable, resilient, and allow a short lead time from start of implementation to deployment to production. When using microservices, the need for the technology to be lightweight and low ceremony grows, because creating new microservices needs to be quick and easy. OWIN is great for reuse of plumbing code and a lightweight web framework, like Nancy, is ideal. Microservices in .NET Core teaches readers how to build and deploy secure and operations-friendly microservices using Nancy. The book starts with an introduction to the microservices architectural style. Next, readers learn important practical aspects of developing microservices from simple core concepts to more sophisticated. Throughout the book, readers will see many code examples implementing it with lightweight .NET technologies’ most prominently Nancy. By the end, they’ll be able to quickly and easily build reliable and operations-friendly microservices using Nancy, OWIN and other open technologies. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

As Python continues to grow in popularity, projects are becoming larger and more complex. Many Python developers are now taking an interest in high-level software design patterns such as hexagonal/clean architecture, event-driven architecture, and the strategic patterns prescribed by domain-driven design (DDD). But translating those patterns into Python isn’t always straightforward. With this hands-on guide, Harry Percival and Bob Gregory from MADE.com introduce proven architectural design patterns to help Python developers manage application complexity—and get the most value out of their test suites. Each pattern is illustrated with concrete examples in beautiful, idiomatic Python, avoiding some of the verbosity of Java and C# syntax. Patterns include: Dependency inversion and its links to ports and adapters (hexagonal/clean architecture) Domain-driven design’s distinction between entities, value objects, and aggregates Repository and Unit of Work patterns for persistent storage Events, commands, and the message bus Command-query responsibility segregation (CQRS) Event-driven architecture and reactive microservices “For software developers of all experience levels looking to improve their results, and design and implement domain-driven enterprise applications consistently with the best current state of professional practice, Implementing Domain-Driven Design will impart a treasure trove of knowledge hard won within the DDD and enterprise application architecture communities over the last couple decades.” –Randy Stafford, Architect At-Large, Oracle Coherence Product Development “This book is a must-read for anybody looking to put DDD into practice.” –Udi Dahan, Founder of NServiceBus Implementing Domain-Driven Design presents a top-down approach to understanding domain-driven design (DDD) in a way that fluently connects strategic patterns to fundamental tactical programming tools. Vaughn Vernon couples guided approaches to implementation with modern architectures, highlighting the importance and value of focusing on the business domain while balancing technical considerations. Building on Eric Evans’ seminal book, Domain-Driven Design, the author presents practical DDD techniques through examples from familiar domains. Each principle is backed up by realistic Java examples—all applicable to C# developers—and all content is tied together by a single case study: the delivery of a large-scale Scrum-based SaaS system for a multitenant environment. The author takes you far beyond “DDD-lite” approaches that embrace DDD solely as a technical toolset, and shows you how to fully leverage DDD’s “strategic design patterns” using Bounded Context, Context Maps, and the Ubiquitous Language. Using these techniques and examples, you can reduce time to market and improve quality, as you build software that is more flexible, more scalable, and more tightly aligned to business goals. Coverage includes Getting started the right way with DDD, so you can rapidly gain value from it Using DDD within diverse architectures, including Hexagonal, SOA, REST, CQRS, Event-Driven, and Fabric/Grid-Based Appropriately designing and applying Entities—and learning when to use Value Objects instead Mastering DDD’s powerful new Domain Events technique Designing Repositories for ORM, NoSQL, and other databases

Clean Architecture
Tackling Complexity in the Heart of Software
Professional ASP.NET Design Patterns
Fowler
Microservices in .net Core
Modern Web Development
Working Effectively with Legacy Code

How do you detangle a monolithic system and migrate it to a microservice architecture? How do you do it while maintaining business-as-usual? As a companion to Sam Newman’s extremely popular Building Microservices, this new book details a proven method for transitioning an existing monolithic system to a microservice architecture. With many illustrative examples, insightful migration patterns, and a bevy of practical advice to transition your monolith enterprise into a microservice operation, this practical guide covers multiple scenarios and strategies for a successful migration, from initial planning all the way through application and database decomposition. You’ll learn several tried and tested patterns and techniques that you can use as you migrate your existing architecture. Ideal for organizations looking to transition to microservices, rather than rebuild Helps companies determine whether to migrate, when to migrate, and where to begin Addresses communication, integration, and the migration of legacy systems Discusses multiple migration patterns and where they apply Provides database rebuild examples, along with synchronization strategies Explores application decomposition, including several architectural refactoring patterns Delves into details of database decomposition, including the impact of breaking referential and transactional integrity, new failure modes, and more

Know the fundamentals of creating and deploying microservices using .NET 6 and gain insight from prescriptive guidance in this book on the when and why to incorporate them. The microservices architecture is a way of distributing process workloads to independent applications. This distribution allows for the independent applications to scale and evolve separately. It also enables developers to dismantle large applications into smaller, easier-to-maintain, scalable parts. While the return is valuable and the concept straightforward, applying it to an application is far more complicated. Where do you start? How do you find the optimal dividing point for your app, and strategically, how should your app be parceled out into separate services? Pro Microservices in .NET 6 will introduce you to all that and more. The authors get you started with an overview of microservices, .NET 6, event storming, and domain-driven design. You will use that foundational information to build a reference application throughout the book. From there, you will create your first microservice using .NET 6 that you can deploy into Docker and Azure Kubernetes Service. You will also learn about communication styles, decentralizing data, and testing microservices. Finally, you will learn about logging, metrics, tracing, and use that information for debugging. What You Will Learn Build a foundation of basic microservices architecture design Follow an example of using event storming and domain-driven design to understand the monolithic application modified for microservices Understand, via detailed commands, how Docker is used to containerize applications Get an overview of creating microservices from a monolithic application Call microservices using RPC and messaging communication styles with MassTransit Comprehend decentralizing data and handling distributed transactions Use Azure Kubernetes Service to host and scale your microservices Know the methods to make your microservices more robust Discover testing techniques for RPC and messaging communication styles Apply the applications you build for actual use Practice cross-cutting concerns such as logging, metrics, and tracing Who This Book Is For Developers and software architects. Readers should have basic familiarity with Visual Studio and experience with .NET, ASP.NET Core, and C#.

Annotation Over the past 10 years, distributed systems have become more fine-grained. From the large multi-million line long monolithic applications, we are now seeing the benefits of smaller self-contained services. Rather than heavy-weight, hard to change Service Oriented Architectures, we are now seeing systems consisting of collaborating microservices. Easier to change, deploy, and if required retire, organizations which are in the right position to take advantage of them are yielding significant benefits. This book takes an holistic view of the things you need to be cognizant of in order to pull this off. It covers just enough understanding of technology, architecture, operations and organization to show you how to move towards finer-grained systems.

Presenting four amazing Wrox books from an unparalleled author team cover the exciting new features of .NET 3.5. This essential boxed set contains the following key titles: Professional ASP.NET 3.5 covers all the important new features of the 3.5 version of ASP.NET, Professional C# 2008 provides the necessary background information on how the .NET architecture works, .NET Domain-Driven Design with C# takes you through the intense process of designing and implementing the domain model, and Professional LINQ shows you how to effectively use LINQ to query XML, SQLdatabases, ADO.NET DataSets, and other data sources.

Domain Storytelling
Implementing Domain-Driven Design
Support Constant Change
Domain-Driven Design in PHP
Domain-driven Design
Software Architecture with C# 9 and .NET 5
Problem - Design - Solution

Vaughn Vernon presents concrete and realistic domain-driven design (DDD) techniques through examples from familiar domains, such as a Scrum-based project management application that integrates with a collaboration suite and security provider. Each principle is backed up by realistic Java examples, and all content is tied together by a single case study of a company charged with delivering a set of advanced software systems with DDD. Writing for students at all levels of experience, Farley illuminates durable principles at the heart of effective software development. He distills the discipline into two core exercises: first, learning and exploration, and second, managing complexity. For each, he defines principles that can help students improve everything from their mindset to the quality of their code, and describes approaches proven to promote success. Farley’s ideas and techniques cohere into a unified, scientific, and foundational approach to solving practical software development problems within realistic economic constraints. This general, durable, and pervasive approach to software engineering can help students solve problems they haven’t encountered yet, using today’s technologies and tomorrow’s. It offers students deeper insight into what they do every day, helping them create better software, faster, with more pleasure and personal fulfillment.

Storytelling is at the heart of human communication—why not use it to overcome costly misunderstandings when designing software? By telling and visualising stories, domain experts and team members make business processes and domain knowledge tangible. Domain Storytelling enables everyone to understand the relevant people, activities, and work items. With this guide, the method’s inventors explain how domain experts and teams can work together to capture insights with simple pictographs, show their work, solicit feedback, and get everyone on the same page. Stefan Hofer and Henning Schwentner introduce the methods easy pictographic language, scenario-based modeling techniques, workshop format, and relationship to other modeling methods. Using step-by-step case studies, they guide you through solving many common problems: Fully align all project participants and stakeholders, both technical and business-focused Master a simple set of symbols and rules for modeling any process or workflow Use workshop-based collaborative modeling to find better solutions faster Draw clear boundaries to organise your domain, software, and teams Transform domain knowledge into requirements, embedded naturally into an agile process Move your models from diagrams and sticky notes to code Gain better visibility into your IT landscape so you can consolidate or optimise it This guide is for everyone who wants more effective software—from developers, architects, and team leads to the domain experts, product owners, and executives who rely on it every day.

Learn to solve complex business problems by understanding users better, finding the right problem to solve, and building lean event-driven systems to give your customers what they really want. About This Book Understand and implement the DDD approach to software design and development Learn how DDD applies directly to various architectural styles such as REST, reactive systems, and microservices Provide a level of independence to the teams, more refined capabilities of services, and more decoupled interactions Who This Book Is For This book is for .NET developers, who know C# at intermediate level; for those who seek to deliver value, not just write code. Intermediate level of competence in JavaScript will be helpful to follow the UI chapters. What You Will Learn Discover domain complexity together with business stakeholders Avoid common pitfalls when creating the domain model Understand the concept of bounded context and aggregate Design and build temporal models based on behavior and not only data Explore benefits and drawbacks of event-sourcing Figure out CQRS and to-the-point read models with projections Practice building one-way flow UI with Vue.js Learn how task-based UI matches with DDD principles Understand how to develop complex systems in ever changing world In Detail Developers across the world are rapidly adopting Domain-Driven Design principles that deliver powerful results in writing software dealing with complex business requirements. This book will help you involve business stakeholders into discussions about the software you are planning to build for them. By figuring out the temporal nature of behavior-driven domain models and understanding that language lives in a context, you will be able to build leaner, more agile, and modular systems, which adapt to the constant flow of changes that life brings. The book starts off by uncovering domain complexity and how to capture the behavior aspect of the domain language. You will understand EventStorming before using it on design level. With more knowledge about the domain, we will create a new .NET Core project and write some code to transfer our events from sticky notes to C#. The book will show how to use aggregates to handle commands and produce events. You will learn about Bounded Contexts, Context Map, Event Sourcing, and CQRS. After translating domain models into executable C# code, you will create a frontend for your application using Vue.js. You will learn about refactoring ...

Patterns, Principles, and Practices of Domain-Driven Design
Using Jakarta EE, Eclipse MicroProfile, Spring Boot, and the Axon Framework
Implementing Domain-driven Design
Understanding domains, technologies, and user experience
A Collaborative, Visual, and Agile Way to Build Domain-Driven Software
History of Monmouth County, New Jersey
Functional and Reactive Domain Modeling

As the first technical book of its kind, this unique resource walks you through the process of building a real-world application using Domain-Driven Design implemented in C#. Based on a real application for an existing company, each chapter is broken down into specific modules so that you can identify the problem, decide what solution will provide the best results, and then execute that design to solve the problem. With each chapter, you’ll build a complete project from beginning to end.

The software development ecosystem is constantly changing, providing a constant stream of new tools, frameworks, techniques, and paradigms. Over the past few years, incremental developments in core engineering practices for software development have created the foundations for rethinking how architecture changes over time, along with ways to protect important architectural characteristics as it evolves. This practical guide ties those parts together with a new way to think about architecture and time.

Describes ways to incorporate domain modeling into software development. Solve complex business problems by understanding users better, finding the right problem to solve, and building lean event-driven systems to give your customers what they really want Key FeaturesApply DDD principles using modern tools such as EventStorming, Event Sourcing, and CQRS Learn how DDD applies directly to various architectural styles such as REST, reactive systems, and microservices Empower teams to work flexibly with improved services and decoupled interactions Book Description Developers across the world are rapidly adopting DDD principles to deliver powerful results when writing software that deals with complex business requirements. This book will guide you in involving business stakeholders when choosing the software you are planning to build for them. By figuring out the temporal nature of behavior-driven domain models, you will be able to build leaner, more agile, and modular systems. You’ll begin by uncovering domain complexity and learn how to capture the behavioral aspects of the domain language. You will then learn about EventStorming and advance to creating a new project in .NET Core 2.1; you’ll also write some code to transfer your events from sticky notes to C#. The book will show you how to use aggregates to handle commands and produce events. As you progress, you’ll get to grips with Bounded Contexts, Context Map, Event Sourcing, and CQRS. After translating domain models into executable C# code, you will create a frontend for your application using Vue.js. In addition to this, you’ll learn how to refactor your code and cover event versioning and migration essentials. By the end of this DDD book, you will have gained the confidence to implement the DDD approach in your organization and be able to explore new techniques that complement what you’ve learned from the book. What you will learn Discover and resolve domain complexity together with business stakeholders Avoid common pitfalls when creating the domain model Study the concept of Bounded Context and aggregate Design and build temporal models based on behavior and not only data Explore benefits and drawbacks of Event Sourcing Get acquainted with CQRS and to-the-point read models with projections Practice building one-way flow UI with Vue.js Understand how a task-based UI conforms to DDD principles Who this book is for This book is for .NET developers who have an intermediate level understanding of C#, and for those who seek to deliver value, not just write code. Intermediate level of competence in JavaScript will be helpful to follow the UI chapters.

Architecture Patterns with Python
Programming Entity Framework

Doing What Works to Build Better Software Faster
Applying Domain-Driven Design and Patterns
Architecting software solutions using microservices, DevOps, and design patterns for Azure, 2nd Edition
Domain Modeling Made Functional
Building software is harder than ever. As a developer, you not only have to chase ever-changing technological trends but also need to understand the business domains behind the software. This practical book provides you with a set of core patterns, principles, and practices for analyzing business domains, understanding business strategy, and, most importantly, aligning software design with its business needs. Author Vlad Khononov shows you how these practices lead to robust implementation of business logic and help to future-proof software design and architecture. You’ll examine the relationship between domain-driven design (DDD) and other methodologies to ensure you make architectural decisions that will allow you to solve common problems faced during development. By the end of this book, you will be able to build and deliver highly scalable enterprise-ready apps that meet your organization’s business requirements. What you will learn Use different techniques to overcome real-world architectural challenges and solve design consideration issues Apply architectural approaches such as layered architecture, service-oriented architecture (SOA), and microservices Leverage tools such as containers, Docker, Kubernetes, and Blazor to manage microservices effectively Get up to speed with Azure tools and features for delivering global solutions Program and maintain Azure Functions using C# 9 and its latest features Understand when it is best to use test-driven development (TDD) as an approach for software development Write automated functional test cases Get the best of DevOps principles to enable CI/CD environments Who this book is for This book is for engineers and senior software developers aspiring to become architects or looking to build enterprise applications with the .NET Stack. Basic familiarity with C# and .NET is required to get the most out of this book.

Domain-Driven Design (DDD) software modeling delivers powerful results in practice, not just in theory, which is why developers worldwide are rapidly moving to adopt it. Now, for the first time, there’s an accessible guide to the basics of DDD: What it is, what problems it solves, how it works, and how to quickly gain value from it. Concise, readable, and actionable, Domain-Driven Design Distilled never buries you in detail—it focuses on what you need to know to get results. Vaughn Vernon, author of the best-selling Implementing Domain-Driven Design, draws on his twenty years of experience applying DDD principles to real-world situations. He is uniquely well-qualified to demystify its complexities, illuminate its subtleties, and help you solve the problems you might encounter. Vernon guides you through each core DDD technique for building better software. You’ll learn how to segregate domain models using the powerful Bounded Contexts pattern, to develop a Ubiquitous Language within an explicitly bounded context, and to help domain experts and developers work together to create that language. Vernon shows how to use Subdomains to handle legacy systems and to integrate multiple Bounded Contexts to define both team relationships and technical mechanisms. Domain-Driven Design Distilled brings DDD to life. Whether you’re a developer, architect, analyst, consultant, or customer, Vernon helps you truly understand it so you can benefit from its remarkable power. Coverage includes What DDD can do for you and your organization—and why it’s so important The cornerstones of strategic design with DDD: Bounded Contexts and Ubiquitous Language Strategic design with Subdomains Context Mapping: helping teams work

together and integrate software more strategically Tactical design with Aggregates and Domain Events Using project acceleration and management tools to establish and maintain team cadence

Foreword by Diego Vega (Program Manager, Microsoft Corp., Redmond, Seattle, U.S.)By the time we released the first version of Entity Framework we were constantly getting feedback from the DDD Community about things that were missing in EF. The main issues were blockers for practicing DDD with EF, such as lack of Persistence Ignorance support, difficulties of testability and high friction in some areas of the API. Members of the DDD Community and the EF team spent considerable time discussing and cross-educating each other these subjects and on the true potential of EF. This had a strong influence in the second version of the EF, called EF 4.0, and the improvements that later crystallized in EF 4.1, which included massive improvements intended to address many of those concerns. EF is still going to evolve to improve the experience and to make it easier to fall into what many like to call the "Pit of Success" of software development. But in EF 4 we already reached an important turning point: When customers pick EF for using it in their applications, they often come to us to ask for best practices, e.g. how to implement things with less and more maintainable code. Many of these customers now learn about concepts like Persistence Ignorance and Testability for the first time in our forums, blogs and conference talks! Therefore we are always looking for ways to disseminate this information.This book is a necessary and great attempt to distill the existing body of best practices for doing DDD with EF. I hope it will be very useful for those customers in need of such kind of guidance. Like EF, I hope this book will also evolve over time to accommodate new knowledge and scenarios. I am looking forward to seeing the impact of this initial work, as well as other things coming from the authors in the future.Target audience of the GuideThis guide is targeted to the people involved in the entire lifecycle of software products or corporate applications with custom development. Specially, the following roles are applicable: Software Architect Lead Developer and Developer

The World Book Encyclopedia

Monolith to Microservices

Tackling complexity in the heart of software by putting DDD principles into practice

Microsoft .NET - Architecting Applications for the Enterprise

Professional ASP.NET 3.5, Professional C# 2008, Professional LINQ, .NET Domain-Driven Design with C#

Domain-driven Design Using Naked Objects

A Craftsman's Guide to Software Structure and Design

Master powerful new approaches to web architecture, design, and user experience This book presents a pragmatic, problem-driven, user-focused approach to planning, designing, and building dynamic web solutions. You'll learn how to gain maximum value from Domain-Driven Design (DDD), define optimal supporting architecture, and succeed with modern UX-first design approaches. The author guides you through choosing and implementing specific technologies and addresses key user-experience topics, including mobile-friendly and responsive design. You'll learn how to gain more value from existing Microsoft technologies such as ASP.NET MVC and SignalR by using them alongside other technologies such as Bootstrap, AJAX, JSON, and JQuery. By using these techniques and understanding the new ASP.NET Core 1.0, you can quickly build advanced web solutions that solve today's problems and deliver an outstanding user experience. **Microsoft MVP Dino Esposito shows you how to:** Plan websites and web apps to mirror real-world social and business processes Use DDD to dissect and master the complexity of business domains Use UX-Driven Design to reduce costs and give customers what they want Realistically compare server-side and client-side web paradigms Get started with the new ASP.NET Core 1.0 Simplify modern visual webpage construction with Bootstrap Master practical, efficient techniques for running ASP.NET MVC projects Consider new options for implementing persistence and working with data models Understand Responsive Web Design's pros, cons, and tradeoffs Build truly mobile-friendly, mobile-optimized websites About This Book For experienced developers and solution architects who want to plan and develop web solutions more effectively Assumes basic familiarity with the Microsoft web development stack

An encyclopedia designed especially to meet the needs of elementary, junior high, and senior high school students.

Get a thorough introduction to ADD.NET Entity Framework 4 -- Microsoft's core framework for modeling and interacting with data in .NET applications. The second edition of this acclaimed guide provides a hands-on tour of the framework latest version in Visual Studio 2010 and .NET Framework 4. Not only will you learn how to use EF4 in a variety of applications, you'll also gain a deep understanding of its architecture and APIs. Written by Julia Lerman, the leading independent authority on the framework, Programming Entity Framework covers it all -- from the Entity Data Model and Object Services to WCF Services, MVC Apps, and unit testing. This book highlights important changes for experienced developers familiar with the earlier version. Understand the core concepts you need to make the best use of the EF4 in your applications Learn to query your data, using either LINQ to Entities or Entity SQL Create Windows Forms, WPF, ASP.NET Web Forms, and ASP.NET MVC applications Build and consume WCF Services, WCF Data Services, and WCF RIA Services Use Object Services to work directly with your entity objects Create persistent ignorant entities, repositories, and write unit tests Delve into model customization, relationship management, change tracking, data concurrency, and more Get scores of reusable examples -- written in C# (with notes on Visual Basic syntax) -- that you can implement right away

Hands-On Domain-Driven Design with .NET CoreTackling complexity in the heart of software by putting DDD principles into practicePackt Publishing Ltd

Learning Domain-Driven Design

Practical Domain-Driven Design in Enterprise Java

With C#, the Nancy Framework, and Owin Middleware

Tackle Software Complexity with Domain-Driven Design and F#

N-Layered Domain-Oriented Architecture Guide with .Net 4.0

Enabling Test-Driven Development, Domain-Driven Design, and Event-Driven Microservices

With examples in Java

You want increased customer satisfaction, faster development cycles, and less wasted work. Domain-driven design (DDD) combined with functional programming is the innovative combo that will get you there. In this pragmatic, down-to-earth guide, you'll see how applying the core principles of functional programming can result in software designs that model real-world requirements both elegantly and concisely - often more so than an object-oriented approach. Practical examples in the open-source F# functional language, and examples from familiar business domains, show you how to apply these techniques to build software that is business-focused, flexible, and high quality. Domain-driven design is a well-established approach to designing software that ensures that domain experts and developers work together effectively to create high-quality software. This book is the first to combine DDD with techniques from statically typed functional programming. This book is perfect for newcomers to DDD or functional programming - all the techniques you need will be introduced and explained. Model a complex domain accurately using the F# type system, creating compilable code that is also readable documentation---ensuring that the code and design never get out of sync. Encode business rules in the design so that you have "compile-time unit tests," and eliminate many potential bugs by making illegal states unrepresentable. Assemble a series of small, testable functions into a complete use case, and compose these individual scenarios into a large-scale design. Discover why the combination of functional programming and DDD leads naturally to service-oriented and hexagonal architectures. Finally, create a functional domain model that works with traditional databases, NoSQL, and event stores, and safely expose your domain via a website or API. Solve real problems by focusing on real-world requirements for your software. What You Need: The code in this book is designed to be run interactively on Windows, Mac and Linux.You will need a recent version of F# (4.0 or greater), and the appropriate .NET runtime for your platform.Full installation instructions for all platforms at fsharp.org.

A software architect's digest of core practices, pragmatically applied Designing effective architecture is your best strategy for managing project complexity – and improving your results. But the principles and practices of software architecting – what the authors call the “science of hard decisions” – have been evolving for cloud, mobile, and other shifts. Now fully revised and updated, this book shares the knowledge and real-world perspectives that enable you to design for success – and deliver more successful solutions. In this fully updated Second Edition, you will: Learn how only a deep understanding of domain can lead to appropriate architecture Examine domain-driven design in both theory and implementation Shift your approach to code first, model later – including multilayer architecture Capture the benefits of prioritizing software maintainability See how reability, testability, and extensibility lead to code quality Take a user experience (UX) first approach, rather than designing for data Review patterns for organizing business logic Use event sourcing and CQRS together to model complex business domains more effectively Delve inside the persistence layer, including patterns and implementation.

This work has been selected by scholars as being culturally important and is part of the knowledge base of civilization as we know it. This work is in the public domain in the United States of America, and possibly other nations. Within the United States, you may freely copy and distribute this work, as no entity (individual or corporate) has a copyright on the body of the work. Scholars believe, and we concur, that this work is important enough to be preserved, reproduced, and made generally available to the public. To ensure a quality reading experience, this work has been proofread and republished using a format that seamlessly blends the original graphical elements with text in an easy-to-read typeface. We appreciate your support of the preservation process, and thank you for being an important part of keeping this knowledge alive and relevant.

Get more out of your legacy systems: more performance, functionality, reliability, and manageability Is your code easy to change? Can you get nearly instantaneous feedback when you do change it? Do you understand it? If the answer to any of these questions is no, you have legacy code, and it is draining time and money away from your development efforts. In this book, Michael Feathers offers start-to-finish strategies for working more effectively with large, untested legacy code bases. This book draws on material Michael created for his renowned Object Mentor seminars: techniques Michael has used in mentoring to help hundreds of developers, technical managers, and testers bring their legacy systems under control. The topics covered include Understanding the mechanics of software change: adding features, fixing bugs, improving design, optimizing performance Getting legacy code into a test harness Writing tests that protect you against introducing new problems Techniques that can be used with any language or platform—with examples in Java, C++, C, and C# Accurately identifying where code changes need to be made Coping with legacy systems that aren't object-oriented Handling applications that don't seem to have any structure This book also includes a catalog of twenty-four dependency-breaking techniques that help you work with program elements in isolation and make safer changes.

Microservices Patterns

Domain-Driven Design Distilled

.NET 3.5 Wrox Box

WORK EFFECT LEG CODE _p1

With Examples in C# and .NET

Pro Microservices in .NET 6

Evolutionary Patterns to Transform Your Monolith

Methods for managing complex software construction following the practices, principles and patterns of Domain-Driven Design with code examples in C# This book presents the philosophy of Domain-Driven Design (DDD) in a down-to-earth and practical manner for experienced developers building applications for complex domains. A focus is placed on the principles and practices of decomposing a complex problem space as well as the implementation patterns and best practices for shaping a maintainable solution space. You will learn how to build effective domain models through the use of tactical patterns and how to retain their integrity by applying the strategic patterns of DDD. Full end-to-end coding examples demonstrate techniques for integrating a decomposed and distributed solution space while coding best practices and patterns advise you on how to architect applications for maintenance and scale. Offers a thorough introduction to the philosophy of DDD for professional developers Includes masses of code and examples of concept in action that other books have only covered theoretically Covers the patterns of CQRS, Messaging, REST, Event Sourcing and Event-Driven Architectures Also ideal for Java developers who want to better understand the implementation of DDD

Real examples written in PHP showcasing DDD Architectural Styles, Tactical Design, and Bounded Context Integration About This Book Focuses on practical code rather than theory Full of real-world examples that you can apply to your own projects Shows how to build PHP apps using DDD principles Who This Book Is For This book is for PHP developers who want to apply a DDD mindset to their code. You should have a good understanding of PHP and some knowledge of DDD. This book doesn't dwell on the theory, but instead gives you the code that you need. **What You Will Learn** Correctly design all design elements of Domain-Driven Design with PHP Learn all tactical patterns to achieve a fully worked-out Domain-Driven Design Apply hexagonal architecture within your application Integrate bounded contexts in your applications Use REST and Messaging approaches In Detail Domain-Driven Design (DDD) has arrived in the PHP community, but for all the talk, there is very little real code. Without being in a training session and with no PHP real examples, learning DDD can be challenging. This book changes all that. It details how to implement tactical DDD patterns and gives full examples of topics such as integrating Bounded Contexts with REST, and DDD messaging strategies. In this book, the authors show you, with tons of details and examples, how to properly design Entities, Value Objects, Services, Domain Events, Aggregates, Factories, Repositories, Services, and Application Services with PHP. They show how to apply Hexagonal Architecture within your application whether you use an open source framework or your own. Style and approach This highly practical book shows developers how to apply domain-driven design principles to PHP. It is full of solid code examples to work through. Design patterns are time-tested solutions to recurring problems, letting the designer build programs on solutions that have already proved effective Provides developers with more than a dozen ASP.NET examples showing standard design patterns and how using them helpsbuild a richer understanding of ASP.NET architecture, as well as better ASP.NET applications Builds a solid understanding of ASP.NET architecture that can be used over and over again in many projects Covers ASP.NET code to implement many standard patterns including Model-View-Controller (MVC), ETL, Master-Master Snapshot, Master-Slave-Snapshot, Façade, Singleton, Factory, Single Access Point, Roles, Limited View, observer, page controller, common communication patterns, and more Practical Software Architecture Solutions from the Legendary Robert C. Martin (“Uncle Bob”) By applying universal rules of software architecture, you can dramatically improve developer productivity throughout the life of any software system. Now, building upon the success of his best-selling books Clean Code and The Clean Coder, legendary software craftsman Robert C. Martin (“Uncle Bob”) reveals those rules and helps you apply them. Martin’s Clean Architecture doesn’t merely present options. Drawing on over a half-century of experience in software environments of every imaginable type, Martin tells you what choices to make and why they are critical to your success. As you’ve come to expect from Uncle Bob, this book is packed with direct, no-nonsense solutions for the real challenges you’ll face—the ones that will make or break your projects. Learn what software architects need to achieve—and core disciplines and practices for achieving it Master essential software design principles for addressing function, component separation, and data management See how programming paradigms impose discipline by restricting what developers can do Understand what’s critically important and what’s merely a “detail” Implement optimal, high-level structures for web, database, thick-client, console, and embedded applications Define appropriate boundaries and layers, and organize components and services See why designs and architectures go wrong, and how to prevent (or fix) these failures Clean Architecture is essential reading for every current or aspiring software architect, systems analyst, system designer, and software manager—and for every programmer who must execute someone else’s designs. Register your product for convenient access to downloads, updates, and/or corrections as they become available.

.NET Domain-Driven Design with C#

Designing Fine-Grained Systems

Hands-On Domain Driven Design with .NET

Modern Software Engineering

Domain-Driven Design Quickly

Building Data Centric Apps with the ADO.NET Entity Framework

With Examples Using ASP.NET Core 6, MassTransit, and Kubernetes

See how Domain-Driven Design (DDD) combines with Jakarta EE MicroProfile or Spring Boot to offer a complete suite for building enterprise-grade applications. In this book you will see how these all come together in one of the most efficient ways to develop complex software, with a particular focus on the DDD process. Practical Domain-Driven Design in Enterprise Java starts by building out the Cargo Tracker reference application as a monolithic application using the Jakarta EE platform. By doing so, you will map concepts of DDD (bounded contexts, language, and aggregates) to the corresponding available tools (CDI, JAX-RS, and JPA) within the Jakarta EE platform. Once you have completed the monolithic application, you will walk through the complete conversion of the monolith to a microservices-based architecture, again mapping the concepts of DDD and the corresponding available tools within the MicroProfile platform (config, discovery, and fault tolerance). To finish this section, you will examine the same microservices architecture on the Spring Boot platform. The final set of chapters looks at what the application would be like if you used the CQRS and event sourcing patterns. Here you'll use the Axon framework as the base framework. What You Will Learn Discover the DDD architectural principles and use the DDD design patterns Use the new Eclipse Jakarta EE platform Work with the Spring Boot framework Implement microservices design patterns, including context mapping, logic design, entities, integration, testing, and security Carry out event sourcing Apply CQRS Who This Book Is For Junior developers intending to start working on enterprise Java; senior developers transitioning from monolithic- to microservices-based architectures; and architects transitioning to a DDD philosophy of building applications.

"A comprehensive overview of the challenges teams face when moving to microservices, with industry-tested solutions to these problems." - Tim Moore, Lightbend 44 reusable patterns to develop and deploy reliable production-quality microservices-based applications, with worked examples in Java Key Features 44 design patterns for building and deploying microservices applications Drawing on decades of unique experience from author and microservice architecture pioneer Chris Richardson A pragmatic approach to the benefits and the drawbacks of microservices architecture Solve service decomposition, transaction management, and inter-service communication Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Microservices Patterns teaches you 44 reusable patterns to reliably develop and deploy production-quality microservices-based applications. This invaluable set of design patterns builds on decades of distributed system experience, adding new patterns for composing services into systems that scale and perform under real-world conditions. More than just a patterns catalog, this practical guide with worked examples offers industry-tested advice to help you design, implement, test, and deploy your microservices-based application. What You Will Learn How (and why!) to use microservices architecture Service decomposition strategies Transaction management and querying patterns Effective testing strategies Deployment patterns This Book Is Written For Written for enterprise developers familiar with standard enterprise application architecture. Examples are in Java. About The Author Chris Richardson is a Java Champion, a JavaOne rock star, author of Manning’s POJOs in Action, and creator of the original CloudFoundry.com. Table of Contents Escaping monolithic hell Decomposition strategies Interprocess communication in a microservice architecture Managing transactions with sagas Designing business logic in a microservice architecture Developing business logic with event sourcing Implementing queries in a microservice architecture External API patterns Testing microservices: part 1 Testing microservices: part 2 Developing production-ready services Deploying microservices Refactoring to microservices

Summary Functional and Reactive Domain Modeling teaches you how to think of the domain model in terms of pure functions and how to compose them to build larger abstractions. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Traditional distributed applications won't cut it in the reactive world of microservices, fast data, and sensor networks. To capture their dynamic relationships and dependencies, these systems require a different approach to domain modeling. A domain model composed of pure functions is a more natural way of representing a process in a reactive system, and it maps directly onto technologies and patterns like Akka, CQRS, and event sourcing. About the Book Functional and Reactive Domain Modeling teaches you consistent, repeatable techniques for building domain models in reactive systems. This book reviews the relevant concepts of FP and reactive architectures and then methodically introduces this new approach to domain modeling. As you read, you'll learn where and how to apply it, even if your systems aren't purely reactive or functional. An expert blend of theory and practice, this book presents strong examples you'll return to again and again as you apply these principles to your own projects.

What's Inside Real-world libraries and frameworks Establish meaningful reliability guarantees Isolate domain logic from side effects Introduction to reactive design patterns About the Reader Readers should be comfortable with functional programming and traditional domain modeling. Examples use the Scala language. About the Author Software architect Debasish Ghosh was an early adopter of reactive design using Scala and Akka. He's the author of DSLs in Action, published by Manning in 2010. Table of Contents Functional domain modeling: an introduction Scala for functional domain models Designing functional domain models Functional patterns for domain models Modularization of domain models Being reactive Modeling with reactive streams Reactive persistence and event sourcing Testing your domain model Summary - core thoughts and principles Domain Driven Design is a vision and approach for dealing with highly complex domains that is based on making the domain itself the main focus of the project, and maintaining a software model that reflects a deep understanding of the domain. This book is a short, quickly-readable summary and introduction to the fundamentals of DDD; it does not introduce any new concepts; it attempts to concisely summarize the essence of what DDD is, drawing mostly Eric Evans' original book, as well other sources since published such as Jimmy Nilsson's Applying Domain Driven Design, and various DDD discussion forums. The main topics covered in the book include: Building Domain Knowledge, The Ubiquitous Language, Model Driven Design, Refactoring Toward Deeper Insight, and Preserving Model Integrity. Also included is an interview with Eric Evans on Domain Driven Design today.

Building Evolutionary Architectures

Hands-On Domain-Driven Design with .NET Core

Pattern Enterpr Applica Arch

Building Microservices

Dbcontext

The practice of enterprise application development has benefited from the emergence of many new enabling technologies. Multi-tiered object-oriented platforms, such as Java and .NET, have become commonplace. These new tools and technologies are capable of building powerful applications, but they are not easily implemented. Common failures in enterprise applications often occur because their developers do not understand the architectural lessons that experienced object developers have learned. Patterns of Enterprise Application Architecture is written in direct response to the stiff challenges that face enterprise application developers. The author, noted object-oriented designer Martin Fowler, noticed that despite changes in technology—from Smalltalk to CORBA to Java to .NET--the same basic design ideas can be adapted and applied to solve common problems. With the help of an expert group of contributors, Martin distills over forty recurring solutions into patterns. The result is an indispensable handbook of solutions that are applicable to any enterprise application platform. This book is actually two books in one. The first section is a short tutorial on developing enterprise

applications, which you can read from start to finish to understand the scope of the book's lessons. The next section, the bulk of the book, is a detailed reference to the patterns themselves. Each pattern provides usage and implementation information, as well as detailed code examples in Java or C#. The entire book is also richly illustrated with UML diagrams to further explain the concepts. Armed with this book, you will have the knowledge necessary to make important architectural decisions about building an enterprise application and the proven patterns for use when building them. The topics covered include · Dividing an enterprise application into layers · The major approaches to organizing business logic · An in-depth treatment of mapping between objects and relational databases · Using Model-View-Controller to organize a Web presentation · Handling concurrency for data that spans multiple transactions · Designing distributed object interfaces
Shows how to perform set operations with the DbSet class, control change tracking, fix concurrency conflicts, and confirm changes made to data.
Provides information on domain-driven design to build application software for enterprise applications.