Implementation Patterns Kent Beck

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Leading Lean Software Development
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The Patterns Handbook
Design Patterns and Best Practices in Java

ADRIENNE WELLS

xUnit Test Patterns
Addison-Wesley Professional
Building on their breakthrough bestsellers Lean Software Development and Implementing Lean Software Development, Mary and Tom Poppendieck's latest book shows software leaders and team members exactly how to drive high-value change throughout a software organization—and make it stick. They go far beyond generic implementation guidelines, demonstrating exactly how to make lean work in real projects, environments, and companies. The Poppendiecks organize this book around the crucial concept of frames, the unspoken mental constructs that shape our perspectives and control our behavior in ways we rarely notice. For software leaders and team members, some frames lead to long-term failure, while others offer a strong foundation for success. Drawing on decades of experience, the authors present twenty-four frames that offer a coherent, complete framework for leading lean software development. You'll discover powerful new ways to act as competency leader, product champion, improvement mentor, front-line leader, and even visionary. Systems thinking: focusing on customers, bringing predictability to demand, and revamping policies that cause inefficiency Technical excellence: implementing low-dependency architectures, TDD, and evolutionary development processes, and promoting deeper developer expertise Reliable delivery: managing your biggest risks more effectively, and optimizing both workflow and schedules Relentless improvement: seeing problems, solving problems, sharing the knowledge Great people: finding and growing professionals with purpose, passion, persistence, and pride Aligned leaders: getting your entire leadership team on the same page From the world's number one experts in Lean software development, Leading Lean Software Development will be indispensable to everyone who wants to transform the promise of lean into reality—in enterprise IT and software companies alike.
Essential Java Style
Pearson Education
This classic book is the definitive real-world style guide for better Smalltalk programming. This author presents a set of patterns that organize all the informal experience successful Smalltalk programmers have learned the hard way. When programmers understand these patterns, they can write much more effective code. The concept of Smalltalk patterns is introduced, and the book explains why they work. Next, the book introduces proven patterns for working with methods, messages, state, collections, classes and formatting. Finally, the book walks through a development example utilizing patterns. For programmers, project managers, teachers and students -- both new and experienced. This book presents a set of patterns that organize all the informal experience of successful Smalltalk programmers. This book will help you understand these patterns, and empower you to write

more effective code.
Kent Beck's Guide to Better Smalltalk Addison-Wesley Professional
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
User Stories Applied
"O'Reilly Media, Inc." Widely considered one of the best practical guides to programming, Steve McConnell’s original CODE COMPLETE has been helping developers write better software for more than a decade. Now this classic book has been fully updated and revised with leading-edge practices—and hundreds of new code samples—illustrating the art and science of software construction. Capturing the body of knowledge available from research, academia, and everyday commercial practice, McConnell synthesizes the most effective techniques and must-know principles into clear, pragmatic guidance. No matter what your experience level, development environment, or project size, this book will inform and stimulate your thinking—and help you build the highest quality code. Discover the timeless techniques and strategies that help you: Design for minimum complexity and maximum

creativity Reap the benefits of collaborative development Apply defensive programming techniques to reduce and flush out errors Exploit opportunities to refactor—or evolve—code, and do it safely Use construction practices that are right-weight for your project Debug problems quickly and effectively Resolve critical construction issues early and correctly Build quality into the beginning, middle, and end of your project

Refactoring to Patterns Packt Publishing Ltd

Test-Driven Development (TDD) is now an established technique for delivering better software faster. TDD is based on a simple idea: Write tests for your code before you write the code itself. However, this "simple" idea takes skill and judgment to do well. Now there's a practical guide to TDD that takes you beyond the basic concepts. Drawing on a decade of experience building real-world systems, two TDD pioneers show how to let tests guide your development and “grow” software that is coherent, reliable, and maintainable. Steve Freeman and Nat Pryce describe the processes they use, the design principles they strive to achieve, and some of the tools that help them get the job done. Through an extended worked example, you’ll learn how TDD works at multiple levels, using tests to drive the features and the object-oriented structure of the code, and using Mock Objects to discover and then describe relationships between objects. Along the way, the book systematically addresses challenges that development teams encounter with TDD—from integrating TDD into your processes to testing your most difficult features. Coverage includes Implementing TDD effectively: getting started, and maintaining your momentum throughout the project Creating cleaner, more expressive, more sustainable code Using tests to stay relentlessly focused on sustaining quality Understanding how TDD, Mock Objects, and Object-Oriented Design come together in the context of a real software development project Using Mock Objects to guide object-oriented designs Succeeding where TDD is difficult: managing complex test data, and testing persistence and concurrency

Code Quality Addison-Wesley Professional

Page 26: How can I avoid off-by-one errors? Page 143: Are Trojan Horse attacks for real? Page 158: Where should I look when my application can't handle its workload? Page 256: How can I detect memory leaks? Page 309: How do I target my application to international markets? Page 394: How should I name my code's identifiers? Page 441: How can I find and improve the code coverage of my tests? Diomidis Spinellis' first book, Code Reading, showed programmers how to understand and modify key functional properties of software. Code Quality focuses on non-functional properties, demonstrating how to meet such critical requirements as reliability, security, portability, and maintainability, as well as efficiency in time and space. Spinellis draws on hundreds of examples from open source projects--such as the Apache web and application servers, the BSD Unix systems, and the HSQLDB Java database--to illustrate

concepts and techniques that every professional software developer will be able to appreciate and apply immediately. Complete files for the open source code illustrated in this book are available online at: http://www.spinellis.gr/codequality/

The Productive Programmer John Wiley & Sons

The Definitive Refactoring Guide, Fully Revamped for Ruby With refactoring, programmers can transform even the most chaotic software into well-designed systems that are far easier to evolve and maintain. What's more, they can do it one step at a time, through a series of simple, proven steps. Now, there's an authoritative and extensively updated version of Martin Fowler's classic refactoring book that utilizes Ruby examples and idioms throughout–not code adapted from Java or any other environment. The authors introduce a detailed catalog of more than 70 proven Ruby refactorings, with specific guidance on when to apply each of them, step-by-step instructions for using them, and example code illustrating how they work. Many of the authors' refactorings use powerful Ruby-specific features, and all code samples are available for download. Leveraging Fowler's original concepts, the authors show how to perform refactoring in a controlled, efficient, incremental manner, so you methodically improve your code's structure without introducing new bugs. Whatever your role in writing or maintaining Ruby code, this book will be an indispensable resource. This book will help you Understand the core principles of refactoring and the reasons for doing it Recognize "bad smells" in your Ruby code Rework bad designs into well-designed code, one step at a time Build tests to make sure your refactorings work properly Understand the challenges of refactoring and how they can be overcome Compose methods to package code properly Move features between objects to place responsibilities where they fit best Organize data to make it easier to work with Simplify conditional expressions and make more effective use of polymorphism Create interfaces that are easier to understand and use Generalize more effectively Perform larger refactorings that transform entire software systems and may take months or years Successfully refactor Ruby on Rails code

Growing Object-Oriented Software, Guided by Tests

Pearson Education

In 1994, Design Patterns changed the landscape of object-oriented development by introducing classic solutions to recurring design problems. In 1999, Refactoring revolutionized design by introducing an effective process for improving code. With the highly anticipated Refactoring to Patterns, Joshua Kerievsky has changed our approach to design by forever uniting patterns with the evolutionary process of refactoring. This book introduces the theory and practice of pattern-directed refactorings: sequences of low-level refactorings that allow designers to safely move designs to, towards, or away from pattern implementations. Using code from real-world projects, Kerievsky documents the thinking and steps underlying over two dozen pattern-based design transformations. Along the way he offers

insights into pattern differences and how to implement patterns in the simplest possible ways. Coverage includes: A catalog of twenty-seven pattern-directed refactorings, featuring real-world code examples Descriptions of twelve design smells that indicate the need for this book's refactorings General information and new insights about patterns and refactoring Detailed implementation mechanics: how low-level refactorings are combined to implement high-level patterns Multiple ways to implement the same pattern–and when to use each Practical ways to get started even if you have little experience with patterns or refactoring Refactoring to Patterns reflects three years of refinement and the insights of more than sixty software engineering thought leaders in the global patterns, refactoring, and agile development communities. Whether you're focused on legacy or "greenfield" development, this book will make you a better software designer by helping you learn how to make important design changes safely and effectively.

Implementing Lean Software Development Prentice Hall Professional
Written by two world class programmers and software designers, this guide explains how to extend Eclipse for software projects and how to use Eclipse to create software tools that improve development time.

Refactoring Pearson Education
Quite simply, test-driven development is meant to eliminate fear in application development. While some fear is healthy (often viewed as a conscience that tells programmers to "be careful!"), the author believes that byproducts of fear include tentative, grumpy, and uncommunicative programmers who are unable to absorb constructive criticism. When programming teams buy into TDD, they immediately see positive results. They eliminate the fear involved in their jobs, and are better equipped to tackle the difficult challenges that face them. TDD eliminates tentative traits, it teaches programmers to communicate, and it encourages team members to seek out criticism However, even the author admits that grumpiness must be worked out individually! In short, the premise behind TDD is that code should be continually tested and refactored. Kent Beck teaches programmers by example, so they can painlessly and dramatically increase the quality of their work.

Code Reading Pearson Education India
Refactoring is gaining momentum amongst the object oriented programming community. It can transform the internal dynamics of applications and has the capacity to transform bad code into good code. This book offers an introduction to refactoring.

Object-Oriented Design And Patterns Pearson Education
Extreme Programming Installed explains the core principles of Extreme Programming and details each step in the XP development cycle. This book conveys the essence of the XP approach--techniques for implementation, obstacles likely to be encountered, and experience-based advice for successful execution.

Applying UML and Patterns: An Introduction to Object Oriented

Analysis and Design and Interative Development: 3rd Edition Pearson Education
Our civilization runs on software. Yet the art of creating it continues to be a dark mystery, even to the experts. To find out why it's so hard to bend computers to our will, Scott Rosenberg spent three years following a team of maverick software developers—led by Lotus 1-2-3 creator Mitch Kapor—designing a novel personal information manager meant to challenge market leader Microsoft Outlook. Their story takes us through a maze of abrupt dead ends and exhilarating breakthroughs as they wrestle not only with the abstraction of code, but with the unpredictability of human behavior—especially their own.
Code Complete Simon and Schuster
"This book is an indispensable resource." - Greg Wright, Kainos Software Ltd. Radically improve your testing practice and software quality with new testing styles, good patterns, and reliable automation. Key Features A practical and results-driven approach to unit testing Refine your existing unit tests by implementing modern best practices Learn the four pillars of a good unit test Safely automate your testing process to save time and money Spot which tests need refactoring, and which need to be deleted entirely Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About The Book Great testing practices maximize your project quality and delivery speed by identifying bad code early in the development process. Wrong tests will break your code, multiply bugs, and increase time and costs. You owe it to yourself—and your projects—to learn how to do excellent unit testing. Unit Testing Principles, Patterns and Practices teaches you to design and write tests that target key areas of your code including the domain model. In this clearly written guide, you learn to develop professional-quality tests and test suites and integrate testing throughout the application life cycle. As you adopt a testing mindset, you'll be amazed at how better tests cause you to write better code. What You Will Learn Universal guidelines to assess any unit test Testing to identify and avoid anti-patterns Refactoring tests along with the production code Using integration tests to verify the whole system This Book Is Written For For readers who know the basics of unit testing. Examples are written in C# and can easily be applied to any language. About the Author Vladimir Khorikov is an author, blogger, and Microsoft MVP. He has mentored numerous teams on the ins and outs of unit testing. Table of Contents: PART 1 THE BIGGER PICTURE 1 ¦ The goal of unit testing 2 ¦ What is a unit test? 3 ¦ The anatomy of a unit test PART 2 MAKING YOUR TESTS WORK FOR YOU 4 ¦ The four pillars of a good unit test 5 ¦ Mocks and test fragility 6 ¦ Styles of unit testing 7 ¦ Refactoring toward valuable unit tests PART 3 INTEGRATION TESTING 8 ¦ Why integration testing? 9 ¦ Mocking best practices 10 ¦ Testing the database PART 4 UNIT TESTING ANTI-PATTERNS 11 ¦ Unit testing anti-patterns
Design Patterns Addison-Wesley
Written for Smalltalk programmers, this book is designed to help readers become more effective

Smalltalk developers and object technology users.
Unit Testing Principles, Practices, and Patterns Cambridge University Press
Thoroughly reviewed and eagerly anticipated by the agile community, User Stories Applied offers a requirements process that saves time, eliminates rework, and leads directly to better software. The best way to build software that meets users' needs is to begin with "user stories": simple, clear, brief descriptions of functionality that will be valuable to real users. In User Stories Applied, Mike Cohn provides you with a front-to-back blueprint for writing these user stories and weaving them into your development lifecycle. You'll learn what makes a great user story, and what makes a bad one. You'll discover practical ways to gather user stories, even when you can't speak with your users. Then, once you've compiled your user stories, Cohn shows how to organize them, prioritize them, and use them for planning, management, and testing. User role modeling: understanding what users have in common, and where they differ Gathering stories: user interviewing, questionnaires, observation, and workshops Working with managers, trainers, salespeople and other "proxies" Writing user stories for acceptance testing Using stories to prioritize, set schedules, and estimate release costs Includes end-of-chapter practice questions and exercises User Stories Applied will be invaluable to every software developer, tester, analyst, and manager working with any agile method: XP, Scrum... or even your own home-grown approach.
Patterns of Enterprise Application Architecture Cambridge University Press
Automated testing is a cornerstone of agile development. An effective testing strategy will deliver new functionality more aggressively, accelerate user feedback, and improve quality. However, for many developers, creating effective automated tests is a unique and unfamiliar challenge. xUnit Test Patterns is the definitive guide to writing automated tests using xUnit, the most popular unit testing framework in use today. Agile coach and test automation expert Gerard Meszaros describes 68 proven patterns for making tests easier to write, understand, and maintain. He then shows you how to make them more robust and repeatable--and far more cost-effective. Loaded with information, this book feels like three books in one. The first part is a detailed tutorial on test automation that covers everything from test strategy to in-depth test coding. The second part, a catalog of 18 frequently encountered "test smells," provides trouble-shooting guidelines to help you determine the root cause of problems and the most applicable patterns. The third part contains detailed descriptions of each pattern, including refactoring instructions illustrated by extensive code samples in multiple programming languages.
JUnit Recipes Addison-Wesley Professional
Software Expert Kent Beck Presents a Catalog of Patterns Infinitely Useful for Everyday Programming Great code doesn’t just function: it clearly and consistently communicates your intentions, allowing other programmers to understand your code, rely on it, and modify it

with confidence. But great code doesn’t just happen. It is the outcome of hundreds of small but critical decisions programmers make every single day. Now, legendary software innovator Kent Beck—known worldwide for creating Extreme Programming and pioneering software patterns and test-driven development—focuses on these critical decisions, unearthing powerful “implementation patterns” for writing programs that are simpler, clearer, better organized, and more cost effective. Beck collects 77 patterns for handling everyday programming tasks and writing more readable code. This new collection of patterns addresses many aspects of development, including class, state, behavior, method, collections, frameworks, and more. He uses diagrams, stories, examples, and essays to engage the reader as he illuminates the patterns. You’ll find proven solutions for handling everything from naming variables to checking exceptions.
Working Effectively with Legacy Code Adobe Press
Anyone who develops software for a living needs a proven way to produce it better, faster, and cheaper. The Productive Programmer offers critical timesaving and productivity tools that you can adopt right away, no matter what platform you use. Master developer Neal Ford not only offers advice on the mechanics of productivity-how to work smarter, spurn interruptions, get the most out your computer, and avoid repetition-he also details valuable practices that will help you elude common traps, improve your code, and become more valuable to your team. You'll learn to: Write the test before you write the code Manage the lifecycle of your objects fastidiously Build only what you need now, not what you might need later Apply ancient philosophies to software development Question authority, rather than blindly adhere to standards Make hard things easier and impossible things possible through meta-programming Be sure all code within a method is at the same level of abstraction Pick the right editor and assemble the best tools for the job This isn't theory, but the fruits of Ford's real-world experience as an Application Architect at the global IT consultancy ThoughtWorks. Whether you're a beginner or a pro with years of experience, you'll improve your work and your career with the simple and straightforward principles in The Productive Programmer.
Refactoring Pearson Education
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