

Xunit Test Patterns Refactoring Code Gerard Meszaros

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Test-Driven Development with ABAP Objects - Winfried Schwarzmann 2019
Code-based test improvement --
Design-based test improvement --
Robust integration test -- Minimizing dependencies -- Isolated component test -- Redesign with unit tests.
Mockito Cookbook - Marcin Grzejszczak 2014-06-24

This is a focused guide with lots of practical recipes with presentations of business issues and presentation of the whole test of the system. This book shows the use of Mockito's popular unit testing frameworks such as JUnit, PowerMock, TestNG, and so on. If you are a software developer with no testing experience (especially with Mockito) and you want to start using Mockito in the most efficient way then this book is for you. This book assumes that you

have a good knowledge level and understanding of Java-based unit testing frameworks.

Working Effectively with Legacy Code - Michael Feathers 2004-09-22

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.

Refactoring to Patterns - Joshua Kerievsky 2004-08-05

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.

Strategic Monoliths and Microservices

- Vaughn Vernon 2021-05-15

Most recent microservices books fully buy into the hype, starting from the premise that microservices are nearly always the best approach to developing enterprise systems. But that isn't always a safe assumption:

in fact, in some cases, it can be disastrous, leading to architectures that serve nobody well. Strategic Microservices and Monoliths helps business decision-makers and technical team members collaborate to clearly understand their strategic problems, and identify their optimal architectural approaches, whether those turns out to be distributed microservices, well-modularized monoliths, or coarser-grade services partway between the two. Writing for executives and IT professionals alike, leading software architecture expert Vaughn Vernon and Tomasz Jaskula guide you through making balanced architecture compositional decisions based on need and purpose rather than popular opinion, so you can maximize business value and deliver systems that evolve more

easily. Throughout, the authors provide realistic application examples, showing how to construct well-designed monoliths that are maintainable and extensible, and how to decompose massively tangled legacy systems into truly effective microservices.

Domain-Driven Design in PHP - Carlos Buenosvinos 2017-06-14
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.

Implementation Patterns - Kent Beck
2007-10-23

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.

Software Requirement Patterns -
Stephen Withall 2007-06-13

Learn proven, real-world techniques for specifying software requirements with this practical reference. It details 30 requirement “patterns” offering realistic examples for situation-specific guidance for building effective software requirements. Each pattern explains what a requirement needs to convey,

offers potential questions to ask, points out potential pitfalls, suggests extra requirements, and other advice. This book also provides guidance on how to write other kinds of information that belong in a requirements specification, such as assumptions, a glossary, and document history and references, and how to structure a requirements specification. A disturbing proportion of computer systems are judged to be inadequate; many are not even delivered; more are late or over budget. Studies consistently show one of the single biggest causes is poorly defined requirements: not properly defining what a system is for and what it's supposed to do. Even a modest contribution to improving requirements offers the prospect of saving businesses part of

a large sum of wasted investment. This guide emphasizes this important requirement need—determining what a software system needs to do before spending time on development. Expertly written, this book details solutions that have worked in the past, with guidance for modifying patterns to fit individual needs—giving developers the valuable advice they need for building effective software requirements. [Complete Guide to Test Automation](#) - Arnon Axelrod 2018-09-22 Rely on this robust and thorough guide to build and maintain successful test automation. As the software industry shifts from traditional waterfall paradigms into more agile ones, test automation becomes a highly important tool that allows your development teams to

deliver software at an ever-increasing pace without compromising quality. Even though it may seem trivial to automate the repetitive tester's work, using test automation efficiently and properly is not trivial. Many test automation endeavors end up in the "graveyard" of software projects. There are many things that affect the value of test automation, and also its costs. This book aims to cover all of these aspects in great detail so you can make decisions to create the best test automation solution that will not only help your test automation project to succeed, but also allow the entire software project to thrive. One of the most important details that affects the success of the test automation is how easy it is to maintain the automated tests.

Complete Guide to Test Automation provides a detailed hands-on guide for writing highly maintainable test code. What You'll Learn Know the real value to be expected from test automation Discover the key traits that will make your test automation project succeed Be aware of the different considerations to take into account when planning automated tests vs. manual tests Determine who should implement the tests and the implications of this decision Architect the test project and fit it to the architecture of the tested application Design and implement highly reliable automated tests Begin gaining value from test automation earlier Integrate test automation into the business processes of the development team Leverage test automation to improve your

organization's performance and quality, even without formal authority Understand how different types of automated tests will fit into your testing strategy, including unit testing, load and performance testing, visual testing, and more Who This Book Is For Those involved with software development such as test automation leads, QA managers, test automation developers, and development managers. Some parts of the book assume hands-on experience in writing code in an object-oriented language (mainly C# or Java), although most of the content is also relevant for nonprogrammers.

Refactoring - Jay Fields 2009-10-15

The first refactoring guide specifically for Ruby - one of today's fastest growing programming languages Co-authored by Martin

Fowler based on his legendary Refactoring, which started the refactoring revolution.

Effective Unit Testing - Lasse Koskela 2013-02-16

Summary Effective Unit Testing is written to show how to write good tests—tests that are concise and to the point, expressive, useful, and maintainable. Inspired by Roy Osherove's bestselling *The Art of Unit Testing*, this book focuses on tools and practices specific to the Java world. It introduces you to emerging techniques like behavior-driven development and specification by example, and shows you how to add robust practices into your toolkit. About Testing Test the components before you assemble them into a full application, and you'll get better software. For Java developers,

there's now a decade of experience with well-crafted tests that anticipate problems, identify known and unknown dependencies in the code, and allow you to test components both in isolation and in the context of a full application. About this Book Effective Unit Testing teaches Java developers how to write unit tests that are concise, expressive, useful, and maintainable. Offering crisp explanations and easy-to-absorb examples, it introduces emerging techniques like behavior-driven development and specification by example. Programmers who are already unit testing will learn the current state of the art. Those who are new to the game will learn practices that will serve them well for the rest of their career. Purchase of the print book comes with an offer of a free

PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. About the Author Lasse Koskela is a coach, trainer, consultant, and programmer. He hacks on open source projects, helps companies improve their productivity, and speaks frequently at conferences around the world. Lasse is the author of Test Driven, also published by Manning. What's Inside A thorough introduction to unit testing Choosing best-of-breed tools Writing tests using dynamic languages Efficient test automation Table of Contents PART 1 FOUNDATIONS The promise of good tests In search of good Test doubles PART 2 CATALOG Readability Maintainability Trustworthiness PART 3 DIVERSIONS Testable design Writing tests in other JVM languages Speeding up test execution

Test-Driven Development in Swift -
Gio Lodi 2021-07-02

Leverage Swift to practice effective and efficient test-driven development (TDD) methodology. Software testing and TDD are evergreen programming concepts—yet Swift developers haven't widely adopted them. What's needed is a clear roadmap to learn and adopt TDD in the Swift world. Over the past years, Apple has invested in XCTest and Xcode's testing infrastructure, making testing a new top priority in their ecosystem. Open-source libraries such as Quick and Nimble have also reached maturity. The tools are there. This book will show you how to wield them. TDD has much more to offer than catching bugs. With this book, you'll learn a philosophy for building software. TDD enables engineers to solve problems

incrementally, writing only as much code as necessary. By decomposing big problems into small steps, you can move along at a fast pace, always making visible progress. Participate in the test-driven development journey by building a real iOS application and incorporating new concepts through each chapter. The book's concepts will emerge as you figure out ways to use tests to drive the solutions to the problems of each chapter. Through the TDD of a single application, you'll be introduced to all the staples and advanced concepts of the craft, understand the trade offs each technique offers, and review an iterative process of software development. Test-Driven Development in Swift provides the path for a highly efficient way to make amazing apps. What You'll Learn

Write tests that are easy to maintain
Look after an ever-growing test suite
Build a testing vocabulary that can
be applied outside the Swift world
See how Swift programming enhances
the TDD flow seen in dynamic
languages Discover how compiler
errors can provide the same helpful
guidance as failing tests do Who This
Book Is For Mid-level developers keen
to write higher quality code and
improve their workflows. Also,
developers that have already been
writing tests but feel they are not
getting the most out of them.

Refactoring - Jay Fields 2009-10-15
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

Turing (A Novel about Computation) - Christos H. Papadimitriou 2005-02-11 The world of computation according to Turing, an interactive tutoring program, as told to star-crossed lovers: a novel. Our hero is Turing, an interactive tutoring program and namesake (or virtual emanation?) of Alan Turing, World War II code breaker and father of computer science. In this unusual novel, Turing's idiosyncratic version of intellectual history from a computational point of view unfolds in tandem with the story of a love

affair involving Ethel, a successful computer executive, Alexandros, a melancholy archaeologist, and Ian, a charismatic hacker. After Ethel (who shares her first name with Alan Turing's mother) abandons Alexandros following a sundrenched idyll on Corfu, Turing appears on Alexandros's computer screen to unfurl a tutorial on the history of ideas. He begins with the philosopher-mathematicians of ancient Greece—"discourse, dialogue, argument, proof... can only thrive in an egalitarian society"—and the Arab scholar in ninth-century Baghdad who invented algorithms; he moves on to many other topics, including cryptography and artificial intelligence, even economics and developmental biology. (These lessons are later critiqued amusingly and developed further in postings by a

fictional newsgroup in the book's afterword.) As Turing's lectures progress, the lives of Alexandros, Ethel, and Ian converge in dramatic fashion, and the story takes us from Corfu to Hong Kong, from Athens to San Francisco—and of course to the Internet, the disruptive technological and social force that emerges as the main locale and protagonist of the novel. Alternately pedagogical and romantic, Turing (A Novel about Computation) should appeal both to students and professionals who want a clear and entertaining account of the development of computation and to the general reader who enjoys novels of ideas.

Refactoring Workbook - William C. Wake 2004
& Most software practitioners deal

with inherited code; this book teaches them how to optimize it & & Workbook approach facilitates the learning process & & Helps you identify where problems in a software application exist or are likely to exist

How Google Tests Software - James A. Whittaker 2012-03-21

2012 Jolt Award finalist! Pioneering the Future of Software Test Do you need to get it right, too? Then, learn from Google. Legendary testing expert James Whittaker, until recently a Google testing leader, and two top Google experts reveal exactly how Google tests software, offering brand-new best practices you can use even if you're not quite Google's size...yet! Breakthrough Techniques You Can Actually Use Discover 100% practical, amazingly scalable

techniques for analyzing risk and planning tests...thinking like real users...implementing exploratory, black box, white box, and acceptance testing...getting usable feedback...tracking issues...choosing and creating tools...testing "Docs & Mocks," interfaces, classes, modules, libraries, binaries, services, and infrastructure...reviewing code and refactoring...using test hooks, presubmit scripts, queues, continuous builds, and more. With these techniques, you can transform testing from a bottleneck into an accelerator—and make your whole organization more productive!

The Agile Testing Collection - Janet Gregory 2015-06-22

A Comprehensive Collection of Agile Testing Best Practices: Two Definitive Guides from Leading

Pioneers Janet Gregory and Lisa Crispin haven't just pioneered agile testing, they have also written two of the field's most valuable guidebooks. Now, you can get both guides in one indispensable eBook collection: today's must-have resource for all agile testers, teams, managers, and customers. Combining comprehensive best practices and wisdom contained in these two titles, The Agile Testing Collection will help you adapt agile testing to your environment, systematically improve your skills and processes, and strengthen engagement across your entire development team. The first title, Agile Testing: A Practical Guide for Testers and Agile Teams, defines the agile testing discipline and roles, and helps you choose, organize, and

use the tools that will help you the most. Writing from the tester's viewpoint, Gregory and Crispin chronicle an entire agile software development iteration, and identify and explain seven key success factors of agile testing. The second title, More Agile Testing: Learning Journeys for the Whole Team, addresses crucial emerging issues, shares evolved practices, and covers key issues that delivery teams want to learn more about. It offers powerful new insights into continuous improvement, scaling agile testing across teams and the enterprise, overcoming pitfalls of automation, testing in regulated environments, integrating DevOps practices, and testing mobile/embedded and business intelligence systems. The Agile Testing Collection will help you do

all this and much more. Customize agile testing processes to your needs, and successfully transition to them Organize agile teams, clarify roles, hire new testers, and quickly bring them up to speed Engage testers in agile development, and help agile team members improve their testing skills Use tests and collaborate with business experts to plan features and guide development Design automated tests for superior reliability and easier maintenance Plan “just enough,” balancing small increments with larger feature sets and the entire system Test to identify and mitigate risks, and prevent future defects Perform exploratory testing using personas, tours, and test charters with session- and thread-based techniques Help testers, developers, and operations experts

collaborate on shortening feedback cycles with continuous integration and delivery Both guides in this collection are thoroughly grounded in the authors’ extensive experience, and supported by examples from actual projects. Now, with both books integrated into a single, easily searchable, and cross-linked eBook, you can learn from their experience even more easily.

Java Unit Testing with JUnit 5 -
Shekhar Gulati 2017-11-10

Explore the new way of building and maintaining test cases with Java test driven development (TDD) using JUnit 5. This book doesn't just talk about the new concepts, it shows you ways of applying them in TDD and Java 8 to continuously deliver code that excels in all metrics. Unit testing and test driven development have now become

part of every developer's skill set. For Java developers, the most popular testing tool has been JUnit, and JUnit 5 is built using the latest features of Java. With Java Unit Testing with JUnit 5, you'll master these new features, including method parameters, extensions, assertions and assumptions, and dynamic tests. You'll also see how to write clean tests with less code. This book is a departure from using older practices and presents new ways of performing tests, building assertions, and injecting dependencies. What You Will Learn Write tests the JUnit 5 way Run your tests from within your IDE Integrate tests with your build and static analysis tools Migrate from JUnit 4 to JUnit 5 Who This Book Is For Java developers both with and without any prior unit testing

experience.

Growing Object-Oriented Software, Guided by Tests - Steve Freeman
2009-10-12

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

97 Things Every Programmer Should Know - Kevlin Henney 2010-02-05

Tap into the wisdom of experts to learn what every programmer should know, no matter what language you use. With the 97 short and extremely useful tips for programmers in this book, you'll expand your skills by adopting new approaches to old problems, learning appropriate best practices, and honing your craft through sound advice. With contributions from some of the most

experienced and respected practitioners in the industry-- including Michael Feathers, Pete Goodliffe, Diomidis Spinellis, Cay Horstmann, Verity Stob, and many more--this book contains practical knowledge and principles that you can apply to all kinds of projects. A few of the 97 things you should know: "Code in the Language of the Domain" by Dan North "Write Tests for People" by Gerard Meszaros "Convenience Is Not an -ility" by Gregor Hohpe "Know Your IDE" by Heinz Kabutz "A Message to the Future" by Linda Rising "The Boy Scout Rule" by Robert C. Martin (Uncle Bob) "Beware the Share" by Udi Dahan

Pragmatic Software Testing - Rex Black 2016-04-25

A hands-on guide to testing techniques that deliver reliable

software and systems Testing even a simple system can quickly turn into a potentially infinite task. Faced with tight costs and schedules, testers need to have a toolkit of practical techniques combined with hands-on experience and the right strategies in order to complete a successful project. World-renowned testing expert Rex Black provides you with the proven methods and concepts that test professionals must know. He presents you with the fundamental techniques for testing and clearly shows you how to select and apply successful strategies to test a system with budget and time constraints. Black begins by discussing the goals and tactics of effective and efficient testing. Next, he lays the foundation of his technique for risk-based testing,

explaining how to analyze, prioritize, and document risks to the quality of the system using both informal and formal techniques. He then clearly describes how to design, develop, and, ultimately, document various kinds of tests. Because this is a hands-on activity, Black includes realistic, life-sized exercises that illustrate all of the major test techniques with detailed solutions.

The Nature of Software Development -

Ron Jeffries 2015-02-19

You need to get value from your software project. You need it "free, now, and perfect." We can't get you there, but we can help you get to "cheaper, sooner, and better." This book leads you from the desire for value down to the specific activities that help good Agile projects deliver

better software sooner, and at a lower cost. Using simple sketches and a few words, the author invites you to follow his path of learning and understanding from a half century of software development and from his engagement with Agile methods from their very beginning. The book describes software development, starting from our natural desire to get something of value. Each topic is described with a picture and a few paragraphs. You're invited to think about each topic; to take it in. You'll think about how each step into the process leads to the next. You'll begin to see why Agile methods ask for what they do, and you'll learn why a shallow implementation of Agile can lead to only limited improvement. This is not a detailed map, nor a step-by-step set of instructions for

building the perfect project. There is no map or instructions that will do that for you. You need to build your own project, making it a bit more perfect every day. To do that effectively, you need to build up an understanding of the whole process. This book points out the milestones on your journey of understanding the nature of software development done well. It takes you to a location, describes it briefly, and leaves you to explore and fill in your own understanding. What You Need: You'll need your Standard Issue Brain, a bit of curiosity, and a desire to build your own understanding rather than have someone else's detailed ideas poured into your head.

Test-Driven iOS Development - Graham Lee 2012-04-12

As iOS apps become increasingly

complex and business-critical, iOS developers must ensure consistently superior code quality. This means adopting best practices for creating and testing iOS apps. Test-Driven Development (TDD) is one of the most powerful of these best practices. Test-Driven iOS Development is the first book 100% focused on helping you successfully implement TDD and unit testing in an iOS environment. Long-time iOS/Mac developer Graham Lee helps you rapidly integrate TDD into your existing processes using Apple's Xcode 4 and the OUnit unit testing framework. He guides you through constructing an entire Objective-C iOS app in a test-driven manner, from initial specification to functional product. Lee also introduces powerful patterns for applying TDD in iOS development, and

previews powerful automated testing capabilities that will soon arrive on the iOS platform. Coverage includes Understanding the purpose, benefits, and costs of unit testing in iOS environments Mastering the principles of TDD, and applying them in areas from app design to refactoring Writing usable, readable, and repeatable iOS unit tests Using OCUit to set up your Xcode project for TDD Using domain analysis to identify the classes and interactions your app needs, and designing it accordingly Considering third-party tools for iOS unit testing Building networking code in a test-driven manner Automating testing of view controller code that interacts with users Designing to interfaces, not implementations Testing concurrent code that typically runs in the

background Applying TDD to existing apps Preparing for Behavior Driven Development (BDD) The only iOS-specific guide to TDD and unit testing, Test-Driven iOS Development covers both essential concepts and practical implementation.

Fit for Developing Software - Rick Mugridge 2005-06-29

The Fit open source testing framework brings unprecedented agility to the entire development process. *Fit for Developing Software* shows you how to use Fit to clarify business rules, express them with concrete examples, and organize the examples into test tables that drive testing throughout the software lifecycle. Using a realistic case study, Rick Mugridge and Ward Cunningham--the creator of Fit--introduce each of Fit's underlying concepts and techniques,

and explain how you can put Fit to work incrementally, with the lowest possible risk. Highlights include Integrating Fit into your development processes Using Fit to promote effective communication between businesspeople, testers, and developers Expressing business rules that define calculations, decisions, and business processes Connecting Fit tables to the system with "fixtures" that check whether tests are actually satisfied Constructing tests for code evolution, restructuring, and other changes to legacy systems Managing the quality and evolution of tests A companion Web site (<http://fit.c2.com/>) that offers additional resources and source code

Dependency Injection In.Net - Mark Seemann

Dependency Injection in .NET is a

comprehensive guide than introduces DI and provides an in-depth look at applying DI practices to .NET apps. In it, you will also learn to integrate DI together with such technologies as Windows Communication Foundation, ASP.NET MVC, Windows Presentation Foundation and other core .NET components. Building on your existing knowledge of C# and the .NET platform, this book will be most beneficial for readers who have already built at least a few software solutions of intermediate complexity. Most examples are in plain C# without use of any particular DI framework. Later, the book introduces several well-known DI frameworks, such as StructureMap, Windsor and Spring.NET. For each framework, it presents examples of its particular usage, as well as examines how the framework

relates to the common patterns presented earlier in the book. Unit Testing Principles, Practices, and Patterns - Vladimir Khorikov
2020-01-06

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

ATDD by Example - Markus Gärtner 2013 With Acceptance Test-Driven Development (ATDD), business customers, testers, and developers can collaborate to produce testable requirements that help them build higher quality software more rapidly. However, ATDD is still widely misunderstood by many practitioners. **ATDD by Example** is the first practical, entry-level, hands-on guide to implementing and successfully applying it. ATDD pioneer Markus Gärtner walks readers step by step through deriving the right systems from business users, and then implementing fully automated, functional tests that

accurately reflect business requirements, are intelligible to stakeholders, and promote more effective development. Through two end-to-end case studies, Gärtner demonstrates how ATDD can be applied using diverse frameworks and languages. Each case study is accompanied by an extensive set of artifacts, including test automation classes, step definitions, and full sample implementations. These realistic examples illuminate ATDD's fundamental principles, show how ATDD fits into the broader development process, highlight tips from Gärtner's extensive experience, and identify crucial pitfalls to avoid. Readers will learn to Master the thought processes associated with successful ATDD implementation Use ATDD with Cucumber to describe

software in ways businesspeople can understand Test web pages using ATDD tools Bring ATDD to Java with the FitNesse wiki-based acceptance test framework Use examples more effectively in Behavior-Driven Development (BDD) Specify software collaboratively through innovative workshops Implement more user-friendly and collaborative test automation Test more cleanly, listen to test results, and refactor tests for greater value If you're a tester, analyst, developer, or project manager, this book offers a concrete foundation for achieving real benefits with ATDD now-and it will help you reap even more value as you gain experience.

Lessons Learned in Software Testing - Cem Kaner 2011-08-02
Decades of software testing

experience condensed into the most important lessons learned. The world's leading software testing experts lend you their wisdom and years of experience to help you avoid the most common mistakes in testing software. Each lesson is an assertion related to software testing, followed by an explanation or example that shows you the how, when, and why of the testing lesson. More than just tips, tricks, and pitfalls to avoid, *Lessons Learned in Software Testing* speeds you through the critical testing phase of the software development project without the extensive trial and error it normally takes to do so. The ultimate resource for software testers and developers at every level of expertise, this guidebook features:

- * Over 200 lessons gleaned from over 30 years of

- combined testing experience
- * Tips, tricks, and common pitfalls to avoid by simply reading the book rather than finding out the hard way
- * Lessons for all key topic areas, including test design, test management, testing strategies, and bug reporting
- * Explanations and examples of each testing trouble spot help illustrate each lesson's assertion

Developer Testing - Alexander Tarlinder 2016-09-07

How do successful agile teams deliver bug-free, maintainable software—iteration after iteration?

The answer is: By seamlessly combining development and testing. On such teams, the developers write testable code that enables them to verify it using various types of automated tests. This approach keeps

regressions at bay and prevents “testing crunches”—which otherwise may occur near the end of an iteration—from ever happening. Writing testable code, however, is often difficult, because it requires knowledge and skills that cut across multiple disciplines. In *Developer Testing*, leading test expert and mentor Alexander Tarlinder presents concise, focused guidance for making new and legacy code far more testable. Tarlinder helps you answer questions like: When have I tested this enough? How many tests do I need to write? What should my tests verify? You’ll learn how to design for testability and utilize techniques like refactoring, dependency breaking, unit testing, data-driven testing, and test-driven development to achieve the highest

possible confidence in your software. Through practical examples in Java, C#, Groovy, and Ruby, you’ll discover what works—and what doesn’t. You can quickly begin using Tarlinder’s technology-agnostic insights with most languages and toolsets while not getting buried in specialist details. The author helps you adapt your current programming style for testability, make a testing mindset “second nature,” improve your code, and enrich your day-to-day experience as a software professional. With this guide, you will understand the discipline and vocabulary of testing from the developer’s standpoint. Base developer tests on well-established testing techniques and best practices. Recognize code constructs that impact testability. Effectively name, organize, and execute unit tests

Master the essentials of classic and “mockist-style” TDD Leverage test doubles with or without mocking frameworks Capture the benefits of programming by contract, even without runtime support for contracts Take control of dependencies between classes, components, layers, and tiers Handle combinatorial explosions of test cases, or scenarios requiring many similar tests Manage code duplication when it can’t be eliminated Actively maintain and improve your test suites Perform more advanced tests at the integration, system, and end-to-end levels Develop an understanding for how the organizational context influences quality assurance Establish well-balanced and effective testing strategies suitable for agile teams

Pragmatic Unit Testing in Java 8 with

JUnit - Jeff Langr 2015-03-09

The Pragmatic Programmers classic is back! Freshly updated for modern software development, Pragmatic Unit Testing in Java 8 With JUnit teaches you how to write and run easily maintained unit tests in JUnit with confidence. You'll learn mnemonics to help you know what tests to write, how to remember all the boundary conditions, and what the qualities of a good test are. You'll see how unit tests can pay off by allowing you to keep your system code clean, and you'll learn how to handle the stuff that seems too tough to test. Pragmatic Unit Testing in Java 8 With JUnit steps you through all the important unit testing topics. If you've never written a unit test, you'll see screen shots from Eclipse, IntelliJ IDEA, and NetBeans that will

help you get past the hard part-- getting set up and started. Once past the basics, you'll learn why you want to write unit tests and how to effectively use JUnit. But the meaty part of the book is its collected unit testing wisdom from people who've been there, done that on production systems for at least 15 years: veteran author and developer Jeff Langr, building on the wisdom of Pragmatic Programmers Andy Hunt and Dave Thomas. You'll learn: How to craft your unit tests to minimize your effort in maintaining them. How to use unit tests to help keep your system clean. How to test the tough stuff. Memorable mnemonics to help you remember what's important when writing unit tests. How to help your team reap and sustain the benefits of unit testing. You won't just learn

about unit testing in theory--you'll work through numerous code examples. When it comes to programming, hands-on is the only way to learn!
Fowler - Martin Fowler 2012-03-09
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

Professional JavaScript for Web Developers - Nicholas C. Zakas
2005-04-29

Dispels the myth that JavaScript is a "baby" language and demonstrates why it is the scripting language of choice used in the design of millions of Web pages and server-side applications Quickly covers JavaScript basics and then moves on to more advanced topics such as object-oriented programming, XML, Web services, and remote scripting Addresses the many issues that Web application developers face, including internationalization, security, privacy, optimization, intellectual property issues, and obfuscation Builds on the reader's basic understanding of HTML, CSS, and

the Web in general This book is also available as part of the 4-book JavaScript and Ajax Wrox Box (ISBN: 0470227818). This 4-book set includes: Professional JavaScript for Web Developers (ISBN: 0764579088) Professional Ajax 2nd edition (ISBN: 0470109491) Professional Web 2.0 Programming (ISBN: 0470087889) Professional Rich Internet Applications: Ajax and Beyond (ISBN: 0470082801)

Pro PHP Refactoring - Francesco Trucchia 2011-01-10

Many businesses and organizations depend on older high-value PHP software that risks abandonment because it is impossible to maintain. The reasons for this may be that the software is not well designed; there is only one developer (the one who created the system) who can develop

it because he didn't use common design patterns and documentation; or the code is procedural, not object-oriented. With this book, you'll learn to identify problem code and refactor it to create more effective applications using test-driven design.

xUnit Test Patterns - Gerard Meszaros
2007-05-21

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.

XUnit Test Patterns - Gerard Meszaros 2007

Improves software return on investment by teaching the reader how to refactor test code and reduce or prevent crippling test maintenance.

Test-Driven JavaScript Development - Christian Johansen 2010-09-09

For JavaScript developers working on increasingly large and complex projects, effective automated testing is crucial to success. Test-Driven JavaScript Development is a complete, best-practice guide to agile JavaScript testing and quality assurance with the test-driven development (TDD) methodology.

Leading agile JavaScript developer Christian Johansen covers all aspects of applying state-of-the-art

automated testing in JavaScript environments, walking readers through the entire development lifecycle, from project launch to application deployment, and beyond. Using real-life examples driven by unit tests, Johansen shows how to use TDD to gain greater confidence in your code base, so you can fearlessly refactor and build more robust, maintainable, and reliable JavaScript code at lower cost. Throughout, he addresses crucial issues ranging from code design to performance optimization, offering realistic solutions for developers, QA specialists, and testers. Coverage includes • Understanding automated testing and TDD • Building effective automated testing workflows • Testing code for both browsers and servers (using Node.js) • Using TDD to build cleaner

APIs, better modularized code, and more robust software • Writing testable code • Using test stubs and mocks to test units in isolation • Continuously improving code through refactoring • Walking through the construction and automated testing of fully functional software The accompanying Web site, tddjs.com, contains all of the book's code listings and additional resources.

Test Driven Development for Embedded

C - James W. Grenning 2011-04-25

Another day without Test-Driven Development means more time wasted chasing bugs and watching your code deteriorate. You thought TDD was for someone else, but it's not! It's for you, the embedded C programmer. TDD helps you prevent defects and build software with a long useful life. This is the first book to teach the

hows and whys of TDD for C programmers. TDD is a modern programming practice C developers need to know. It's a different way to program---unit tests are written in a tight feedback loop with the production code, assuring your code does what you think. You get valuable feedback every few minutes. You find mistakes before they become bugs. You get early warning of design problems. You get immediate notification of side effect defects. You get to spend more time adding valuable features to your product. James is one of the few experts in applying TDD to embedded C. With his 1.5 decades of training, coaching, and practicing TDD in C, C++, Java, and C# he will lead you from being a novice in TDD to using the techniques that few have mastered. This book is full of code

written for embedded C programmers. You don't just see the end product, you see code and tests evolve. James leads you through the thought process and decisions made each step of the way. You'll learn techniques for test-driving code right next to the hardware, and you'll learn design principles and how to apply them to C to keep your code clean and flexible. To run the examples in this book, you will need a C/C++ development environment on your machine, and the GNU GCC tool chain or Microsoft Visual Studio for C++ (some project conversion may be needed).

The Art of Unit Testing - Roy Osherove 2013-11-24

Summary The Art of Unit Testing, Second Edition guides you step by step from writing your first simple tests to developing robust test sets

that are maintainable, readable, and trustworthy. You'll master the foundational ideas and quickly move to high-value subjects like mocks, stubs, and isolation, including frameworks such as Moq, FakeItEasy, and Typemock Isolator. You'll explore test patterns and organization, working with legacy code, and even "untestable" code. Along the way, you'll learn about integration testing and techniques and tools for testing databases and other technologies. About this Book You know you should be unit testing, so why aren't you doing it? If you're new to unit testing, if you find unit testing tedious, or if you're just not getting enough payoff for the effort you put into it, keep reading. The Art of Unit Testing, Second Edition guides you step by step from

writing your first simple unit tests to building complete test sets that are maintainable, readable, and trustworthy. You'll move quickly to more complicated subjects like mocks and stubs, while learning to use isolation (mocking) frameworks like Moq, FakeItEasy, and Typemock Isolator. You'll explore test patterns and organization, refactor code applications, and learn how to test "untestable" code. Along the way, you'll learn about integration testing and techniques for testing with databases. The examples in the book use C#, but will benefit anyone using a statically typed language such as Java or C++. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. What's Inside Create readable, maintainable,

trustworthy tests Fakes, stubs, mock objects, and isolation (mocking) frameworks Simple dependency injection techniques Refactoring legacy code About the Author Roy Osherove has been coding for over 15 years, and he consults and trains teams worldwide on the gentle art of unit testing and test-driven development. His blog is at ArtOfUnitTesting.com. Table of Contents PART 1 GETTING STARTED The basics of unit testing A first unit test PART 2 CORE TECHNIQUES Using stubs to break dependencies Interaction testing using mock objects Isolation (mocking) frameworks Digging deeper into isolation frameworks PART 3 THE TEST CODE Test hierarchies and organization The pillars of good unit tests PART 4 DESIGN AND PROCESS

Integrating unit testing into the organization Working with legacy code Design and testability

Learning Test-Driven Development -

Saleem Siddiqui 2021-10-12

Your code is a testament to your skills as a developer. No matter what language you use, code should be clean, elegant, and uncluttered. By using test-driven development (TDD), you'll write code that's easy to understand, retains its elegance, and works for months, even years, to come. With this indispensable guide, you'll learn how to use TDD with three different languages: Go, JavaScript, and Python. Author Saleem Siddiqui shows you how to tackle domain complexity using a unit test-driven approach. TDD partitions requirements into small, implementable features, enabling you

to solve problems irrespective of the languages and frameworks you use. With Learning Test-Driven Development at your side, you'll learn how to incorporate TDD into your regular coding practice. This book helps you: Use TDD's divide-and-conquer approach to tame domain complexity Understand how TDD works across languages, testing frameworks, and domain concepts Learn how TDD enables continuous integration Support refactoring and redesign with TDD Learn how to write a simple and effective unit test harness in JavaScript Set up a continuous integration environment with the unit tests produced during TDD Write clean, uncluttered code using TDD in Go, JavaScript, and Python

Service Design Patterns - Robert Daigneau 2012

"Forewords by Martin Fowler and Ian Robinson"--From front cover.