

Agile Software Development Principles Patterns And Practices Robert C Martin

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Agile Software Architecture

- Muhammad Ali Babar

2013-11-27

Agile software development approaches have had significant impact on industrial software development practices. Today, agile software development has penetrated to most IT companies across the globe, with an intention to increase quality, productivity, and

profitability. Comprehensive knowledge is needed to understand the architectural challenges involved in adopting and using agile approaches and industrial practices to deal with the development of large, architecturally challenging systems in an agile way. Agile Software Architecture focuses on gaps in the requirements of applying architecture-centric approaches and principles of

agile software development and demystifies the agile architecture paradox. Readers will learn how agile and architectural cultures can co-exist and support each other according to the context. Moreover, this book will also provide useful leads for future research in architecture and agile to bridge such gaps by developing appropriate approaches that incorporate architecturally sound practices in agile methods. Presents a consolidated view of the state-of-art and state-of-practice as well as the newest research findings Identifies gaps in the requirements of applying architecture-centric approaches and principles of agile software development and demystifies the agile architecture paradox Explains whether or not and how agile and architectural cultures can co-exist and support each other depending upon the context Provides useful leads for future research in both architecture and agile to bridge such gaps by developing appropriate approaches, which incorporate

architecturally sound practices in agile methods

Agile Processes in Software Engineering and Extreme Programming - Peggy

Gregory 2021-06-09

This open access book constitutes the proceedings of the 22nd International Conference on Agile Software Development, XP 2021, which was held virtually during June 14-18, 2021. XP is the premier agile software development conference combining research and practice. It is a unique forum where agile researchers, practitioners, thought leaders, coaches, and trainers get together to present and discuss their most recent innovations, research results, experiences, concerns, challenges, and trends. XP conferences provide an informal environment to learn and trigger discussions and welcome both people new to agile and seasoned agile practitioners. This year's conference was held with the theme "Agile Turns Twenty While the World Goes Online". The 11 full and 2 short papers presented in this volume were

carefully reviewed and selected from 38 submissions. They were organized in topical sections named: agile practices; process assessment; large-scale agile; and short contributions.

Becoming an Agile Software

Architect - Rajesh R V

2021-03-19

A guide to successfully operating in a lean-agile organization for solutions architects and enterprise architects

Key Features

Develop the right combination of processes and technical excellence to address architectural challenges

Explore a range of architectural techniques to modernize legacy systems

Discover how to design and continuously improve well-architected sustainable software

Book Description

Many organizations have embraced Agile methodologies to transform their ability to rapidly respond to constantly changing customer demands. However, in this melee, many enterprises often neglect to invest in architects by

presuming architecture is not an intrinsic element of Agile software development. Since the role of an architect is not pre-defined in Agile, many organizations struggle to position architects, often resulting in friction with other roles or a failure to provide a clear learning path for architects to be productive. This book guides architects and organizations through new Agile ways of incrementally developing the architecture for delivering an uninterrupted, continuous flow of values that meets customer needs. You'll explore various aspects of Agile architecture and how it differs from traditional architecture. The book later covers Agile architects' responsibilities and how architects can add significant value by positioning themselves appropriately in the Agile flow of work. Through examples, you'll also learn concepts such as architectural decision backlog, the last responsible moment, value delivery, architecting for change, DevOps, and evolutionary collaboration. By

the end of this Agile book, you'll be able to operate as an architect in Agile development initiatives and successfully architect reliable software systems. What you will learn

Acquire clarity on the duties of architects in Agile development

Understand architectural styles such as domain-driven design and microservices

Identify the pitfalls of traditional architecture and learn how to develop solutions

Understand the principles of value and data-driven architecture

Discover DevOps and continuous delivery from an architect's perspective

Adopt Lean-Agile documentation and governance

Develop a set of personal and interpersonal qualities

Find out how to lead the transformation to achieve organization-wide agility

Who this book is for

This agile study guide is for architects currently working on agile development projects or aspiring to work on agile software delivery, irrespective of the methodology they are using. You will also find this book useful if you're a senior developer or a budding

architect looking to understand an agile architect's role by embracing agile architecture strategies and a lean-agile mindset. To understand the concepts covered in this book easily, you need to have prior knowledge of basic agile development practices.

Agile Software Development

- Robert C. Martin 2003

Section 1 Agile development

Section 2 Agile design

Section 3 The payroll case study

Section 4 Packaging the payroll system

Section 5 The weather station case study

Section 6

The ETS case study

Agile Software Development in the Large - Jutta Eckstein 2013

Who Says Large Teams Can't

Handle Agile Software

Development? Agile or

"lightweight" processes have

revolutionized the software

development industry. They're

faster and more efficient than

traditional software

development processes. They

enable developers to embrace

requirement changes during

the project deliver working

software in frequent iterations

focus on the human factor in

software development
Unfortunately, most agile processes are designed for small or mid-sized software development projects-bad news for large teams that have to deal with rapid changes to requirements. That means all large teams! With Agile Software Development in the Large, Jutta Eckstein-a leading speaker and consultant in the agile community-shows how to scale agile processes to teams of up to 200. The same techniques are also relevant to teams of as few as 10 developers, especially within large organizations. Topics include the agile value system as used in large teams the impact of a switch to agile processes the agile coordination of several sub-teams the way project size and team size influence the underlying architecture Stop getting frustrated with inflexible processes that cripple your large projects! Use this book to harness the efficiency and adaptability of agile software development. Stop getting frustrated with

inflexible processes that cripple your large projects! Use this book to harness the efficiency and adaptability of agile software development. Agile Principles, Patterns, and Practices in C# - Robert C. Martin 2006-07-20
With the award-winning book Agile Software Development: Principles, Patterns, and Practices, Robert C. Martin helped bring Agile principles to tens of thousands of Java and C++ programmers. Now .NET programmers have a definitive guide to agile methods with this completely updated volume from Robert C. Martin and Micah Martin, Agile Principles, Patterns, and Practices in C#. This book presents a series of case studies illustrating the fundamentals of Agile development and Agile design, and moves quickly from UML models to real C# code. The introductory chapters lay out the basics of the agile movement, while the later chapters show proven techniques in action. The book includes many source code

examples that are also available for download from the authors' Web site. Readers will come away from this book understanding Agile principles, and the fourteen practices of Extreme Programming Spiking, splitting, velocity, and planning iterations and releases Test-driven development, test-first design, and acceptance testing Refactoring with unit testing Pair programming Agile design and design smells The five types of UML diagrams and how to use them effectively Object-oriented package design and design patterns How to put all of it together for a real-world project Whether you are a C# programmer or a Visual Basic or Java programmer learning C#, a software development manager, or a business analyst, Agile Principles, Patterns, and Practices in C# is the first book you should read to understand agile software and how it applies to programming in the .NET Framework.

Adaptive Code via C# - Gary McLean Hall 2014-10-10
Agile coding with design

patterns and SOLID principles As every developer knows, requirements are subject to change. But when you build adaptability into your code, you can respond to change more easily and avoid disruptive rework. Focusing on Agile programming, this book describes the best practices, principles, and patterns that enable you to create flexible, adaptive code--and deliver better business value. Expert guidance to bridge the gap between theory and practice Get grounded in Scrum: artifacts, roles, metrics, phases Organize and manage architectural dependencies Review best practices for patterns and anti-patterns Master SOLID principles: single-responsibility, open/closed, Liskov substitution Manage the versatility of interfaces for adaptive code Perform unit testing and refactoring in tandem See how delegation and abstraction impact code adaptability Learn best ways to implement dependency interjection Apply what you

learn to a pragmatic, agile coding project Get code samples at:
<http://github.com/garymclean/AdaptiveCode>

Lean-Agile Software Development - Alan Shalloway 2009-10-22

Agile techniques have demonstrated immense potential for developing more effective, higher-quality software. However, scaling these techniques to the enterprise presents many challenges. The solution is to integrate the principles and practices of Lean Software Development with Agile's ideology and methods. By doing so, software organizations leverage Lean's powerful capabilities for "optimizing the whole" and managing complex enterprise projects. A combined "Lean-Agile" approach can dramatically improve both developer productivity and the software's business value. In this book, three expert Lean software consultants draw from their unparalleled experience to gather all the insights,

knowledge, and new skills you need to succeed with Lean-Agile development. Lean-Agile Software Development shows how to extend Scrum processes with an Enterprise view based on Lean principles. The authors present crucial technical insight into emergent design, and demonstrate how to apply it to make iterative development more effective. They also identify several common development "anti-patterns" that can work against your goals, and they offer actionable, proven alternatives. Lean-Agile Software Development shows how to Transition to Lean Software Development quickly and successfully Manage the initiation of product enhancements Help project managers work together to manage product portfolios more effectively Manage dependencies across the software development organization and with its partners and colleagues Integrate development and QA roles to improve quality and eliminate waste Determine best

practices for different software development teams The book's companion Web site, www.netobjectives.com/lasd, provides updates, links to related materials, and support for discussions of the book's content.

UML for Java Programmers -

Robert C. Martin 2003

The Unified Modeling Language has become the industry standard for the expression of software designs. The Java programming language continues to grow in popularity as the language of choice for the serious application developer. Using UML and Java together would appear to be a natural marriage, one that can produce considerable benefit. However, there are nuances that the seasoned developer needs to keep in mind when using UML and Java together. Software expert Robert Martin presents a concise guide, with numerous examples, that will help the programmer leverage the power of both development concepts. The author ignores features of UML that do not

apply to java programmers, saving the reader time and effort. He provides direct guidance and points the reader to real-world usage scenarios. The overall practical approach of this book brings key information related to Java to the many presentations. The result is an highly practical guide to using the UML with Java.

Agile Software Development Quality Assurance -

Stamelos, Ioannis G. 2007-02-28

"This book provides the research and instruction used to develop and implement software quickly, in small iteration cycles, and in close cooperation with the customer in an adaptive way, making it possible to react to changes set by the constant changing business environment. It presents four values explaining extreme programming (XP), the most widely adopted agile methodology"--Provided by publisher.

The Art of Agile

Development - James Shore 2008

For those considering Extreme

Programming, this book provides no-nonsense advice on agile planning, development, delivery, and management taken from the authors' many years of experience. While plenty of books address the what and why of agile development, very few offer the information users can apply directly.

More C++ Gems - Robert C. Martin 2000-01-28

More C++ Gems picks up where the first book left off, presenting tips, tricks, proven strategies, easy-to-follow techniques, and usable source code.

The Clean Coder - Robert C. Martin 2011

Presents practical advice on the disciplines, techniques, tools, and practices of computer programming and how to approach software development with a sense of pride, honor, and self-respect.

[Organizational Patterns of Agile Software Development](#) - James O. Coplien 2005

For courses in Advanced Software Engineering or Object-Oriented Design. This

book covers the human and organizational dimension of the software improvement process and software project management - whether based on the CMM or ISO 9000 or the Rational Unified Process. Drawn from a decade of research, it emphasizes common-sense practices. Its principles are general but concrete; every pattern is its own built-in example. Historical supporting material from other disciplines is provided. Though even pattern experts will appreciate the depth and currency of the material, it is self-contained and well-suited for the layperson.

Microservices Patterns - Chris Richardson 2018-10-27

"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

Software Development From A to Z - Olga Filipova 2018-10-12

Understand the big picture of the software development process. We use software every day - operating systems, applications, document editing programs, home banking - but have you ever wondered who creates software and how it's created? This book guides you through the entire process, from conception to the finished product with the aid of user-centric design theory and tools. Software Development: From A to Z provides an overview of backend development - from databases to communication protocols including practical programming skills in Java and of frontend development - from HTML and CSS to npm registry and Vue.js framework. You'll review quality assurance engineering, including the theory about different kind of tests and practicing end-to-end testing using Selenium. Dive into the devops world where

authors discuss continuous integration and continuous delivery processes along with each topic's associated technologies. You'll then explore insightful product and project management coverage where authors talk about agile, scrum and other processes from their own experience. The topics that are covered do not require a deep knowledge of technology in general; anyone possessing basic computer and programming knowledge will be able to complete all the tasks and fully understand the concepts this book aims at delivering. You'll wear the hat of a project manager, product owner, designer, backend, frontend, QA and devops engineer, and find your favorite role. What You'll Learn

Understand the processes and roles involved in the creation of software Organize your ideas when building the concept of a new product Experience the work performed by stakeholders and other departments of expertise, their individual challenges, and how to overcome possible threats

Improve the ways stakeholders and departments can work with each other Gain ideas on how to improve communication and processes Who This Book Is For Anyone who is on a team that creates software and is curious to learn more about other stakeholders or departments involved. Those interested in a career change and want to learn about how software gets created. Those who want to build technical startups and wonder what roles might be involved in the process.

Adaptive Code - Gary McLean Hall 2017-04-18

Write code that can adapt to changes. By applying this book's principles, you can create code that accommodates new requirements and unforeseen scenarios without significant rewrites. Gary McLean Hall describes Agile best practices, principles, and patterns for designing and writing code that can evolve more quickly and easily, with fewer errors, because it doesn't impede change. Now revised, updated, and

expanded, *Adaptive Code, Second Edition* adds indispensable practical insights on Kanban, dependency inversion, and creating reusable abstractions. Drawing on over a decade of Agile consulting and development experience, McLean Hall has updated his best-seller with deeper coverage of unit testing, refactoring, pure dependency injection, and more. Master powerful new ways to:

- Write code that enables and complements Scrum, Kanban, or any other Agile framework
- Develop code that can survive major changes in requirements
- Plan for adaptability by using dependencies, layering, interfaces, and design patterns
- Perform unit testing and refactoring in tandem, gaining more value from both
- Use the "golden master" technique to make legacy code adaptive
- Build SOLID code with single-responsibility, open/closed, and Liskov substitution principles
- Create smaller interfaces to support more-diverse client and architectural needs
-

Leverage dependency injection best practices to improve code adaptability • Apply dependency inversion with the Stairway pattern, and avoid related anti-patterns About You This book is for programmers of all skill levels seeking more-practical insight into design patterns, SOLID principles, unit testing, refactoring, and related topics. Most readers will have programmed in C#, Java, C++, or similar object-oriented languages, and will be familiar with core procedural programming techniques. The Robert C. Martin Clean Code Collection (Collection) - Robert C. Martin 2011-11-10 The Robert C. Martin Clean Code Collection consists of two bestselling eBooks: Clean Code: A Handbook of Agile Software Craftmanship The Clean Coder: A Code of Conduct for Professional Programmers In Clean Code, legendary software expert Robert C. Martin has teamed up with his colleagues from Object Mentor to distill their best agile practice of cleaning code “on the fly” into a book

that will instill within you the values of a software craftsman and make you a better programmer--but only if you work at it. You will be challenged to think about what’s right about that code and what’s wrong with it. More important, you will be challenged to reassess your professional values and your commitment to your craft. In The Clean Coder, Martin introduces the disciplines, techniques, tools, and practices of true software craftsmanship. This book is packed with practical advice--about everything from estimating and coding to refactoring and testing. It covers much more than technique: It is about attitude. Martin shows how to approach software development with honor, self-respect, and pride; work well and work clean; communicate and estimate faithfully; face difficult decisions with clarity and honesty; and understand that deep knowledge comes with a responsibility to act. Readers of this collection will come away understanding How

to tell the difference between good and bad code How to write good code and how to transform bad code into good code How to create good names, good functions, good objects, and good classes How to format code for maximum readability How to implement complete error handling without obscuring code logic How to unit test and practice test-driven development What it means to behave as a true software craftsman How to deal with conflict, tight schedules, and unreasonable managers How to get into the flow of coding and get past writer's block How to handle unrelenting pressure and avoid burnout How to combine enduring attitudes with new development paradigms How to manage your time and avoid blind alleys, marshes, bogs, and swamps How to foster environments where programmers and teams can thrive When to say "No"--and how to say it When to say "Yes"--and what yes really means

Agile Software Development,

Principles, Patterns, and Practices - Robert C. Martin
2013-08-29

For courses in Object-Oriented Design, C++ Intermediate Programming, and Object-Oriented Programming. Written for software engineers "in the trenches," this text focuses on the technology—the principles, patterns, and process—that help software engineers effectively manage increasingly complex operating systems and applications. There is also a strong emphasis on the people behind the technology. This text will prepare students for a career in software engineering and serve as an on-going education for software engineers.

Modern Software Engineering - David Farley
2021-12-10

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.

Designing Object-oriented C++ Applications Using the Booch Method - Robert C. Martin 1995

For senior/graduate level courses on Object Oriented Design using C++, and the Booch (BC) - OOD book. A practical, problem-solving approach to the fundamental

concepts of Object Oriented Design and their application using C++. This book is written for the "engineer in the trenches". It is a serious guide for practitioners of Object-Oriented design. The style is narrative, and accessible for the beginner, and yet the topics are covered in enough depth to be relevant to the consummate designer. The principles of OOD explained, one by one, and then demonstrated with numerous examples and case studies. *Agile Database Techniques* - Scott Ambler 2012-09-17 Describes Agile Modeling Driven Design (AMDD) and Test-Driven Design (TDD) approaches, database refactoring, database encapsulation strategies, and tools that support evolutionary techniques Agile software developers often use object and relational database (RDB) technology together and as a result must overcome the impedance mismatch The author covers techniques for mapping objects to RDBs and for implementing concurrency

control, referential integrity, shared business logic, security access control, reports, and XML. An agile foundation describes fundamental skills that all agile software developers require, particularly Agile DBAs. Includes object modeling, UML data modeling, data normalization, class normalization, and how to deal with legacy databases. Scott W. Ambler is author of *Agile Modeling* (0471202827), a contributing editor with *Software Development* (www.sdmagazine.com), and a featured speaker at software conferences worldwide.

Scaling Lean & Agile Development - Craig Larman
2008-12-08

Lean Development and Agile Methods for Large-Scale Products: Key Thinking and Organizational Tools for Sustainable Competitive Success. Increasingly, large product-development organizations are turning to lean thinking, agile principles and practices, and large-scale Scrum to sustainably and quickly deliver value and

innovation. However, many groups have floundered in their practice-oriented adoptions. Why? Because without a deeper understanding of the thinking tools and profound organizational redesign needed, it is as though casting seeds on to an infertile field. Now, drawing on their long experience leading and guiding large-scale lean and agile adoptions for large, multisite, and offshore product development, and drawing on the best research for great team-based agile organizations, internationally recognized consultant and best-selling author Craig Larman and former leader of the agile transformation at Nokia Networks Bas Vodde share the key thinking and organizational tools needed to plant the seeds of product development success in a fertile lean and agile enterprise. Coverage includes Lean thinking and development combined with agile practices and methods. Systems thinking. Queuing theory and large-scale development processes. Moving

from single-function and component teams to stable cross-functional cross-component Scrum feature teams with end-to-end responsibility for features Organizational redesign to a lean and agile enterprise that delivers value fast Large-scale Scrum for multi-hundred-person product groups In a competitive environment that demands ever-faster cycle times and greater innovation, applied lean thinking and agile principles are becoming an urgent priority. *Scaling Lean & Agile Development* will help leaders create the foundation for their lean enterprise—and deliver on the significant benefits of agility. In addition to the foundation tools in this text, see the companion book *Practices for Scaling Lean & Agile Development: Large, Multisite, and Offshore Product Development with Large-Scale Scrum* for complementary action tools.

Head First Agile - Andrew Stellman 2017-09-18

Head First Agile is a complete guide to learning real-world

agile ideas, practices, principles. What will you learn from this book? In *Head First Agile*, you'll learn all about the ideas behind agile and the straightforward practices that drive it. You'll take deep dives into Scrum, XP, Lean, and Kanban, the most common real-world agile approaches today. You'll learn how to use agile to help your teams plan better, work better together, write better code, and improve as a team—because agile not only leads to great results, but agile teams say they also have a much better time at work. *Head First Agile* will help you get agile into your brain... and onto your team! Preparing for your PMI-ACP® certification? This book also has everything you need to get certified, with 100% coverage of the PMI-ACP® exam. Luckily, the most effective way to prepare for the exam is to get agile into your brain—so instead of cramming, you're learning. Why does this book look so different? Based on the latest research in cognitive science and learning theory, *Head First Agile* uses a

visually rich format to engage your mind, rather than a text-heavy approach that puts you to sleep. Why waste your time struggling with new concepts? This multi-sensory learning experience is designed for the way your brain really works.

Dependency Injection Principles, Practices, and Patterns - Mark Seemann
2019-03-06

Summary Dependency Injection Principles, Practices, and Patterns teaches you to use DI to reduce hard-coded dependencies between application components. You'll start by learning what DI is and what types of applications will benefit from it. Then, you'll work through concrete scenarios using C# and the .NET framework to implement DI in your own projects. As you dive into the thoroughly-explained examples, you'll develop a foundation you can apply to any of the many DI libraries for .NET and .NET Core. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

About the Technology
Dependency Injection (DI) is a great way to reduce tight coupling between software components. Instead of hard-coding dependencies, such as specifying a database driver, you make those connections through a third party. Central to application frameworks like ASP.NET Core, DI enables you to better manage changes and other complexity in your software. About the Book
Dependency Injection Principles, Practices, and Patterns is a revised and expanded edition of the bestselling classic Dependency Injection in .NET. It teaches you DI from the ground up, featuring relevant examples, patterns, and anti-patterns for creating loosely coupled, well-structured applications. The well-annotated code and diagrams use C# examples to illustrate principles that work flawlessly with modern object-oriented languages and DI libraries. What's Inside
Refactoring existing code into loosely coupled code DI techniques that work with

statically typed OO languages
Integration with common .NET
frameworks Updated examples
illustrating DI in .NET Core
About the Reader For
intermediate OO developers.
About the Authors Mark
Seemann is a programmer,
software architect, and speaker
who has been working with
software since 1995, including
six years with Microsoft.
Steven van Deursen is a
seasoned .NET developer and
architect, and the author and
maintainer of the Simple
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2018-11-27
Explore various dependency
injection methods in Go such as
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Key Features Learn to evaluate
Code UX and make it
better Explore SOLID principles
and understand how they
relate to dependency
injection Use Google's wire
framework to simplify
dependence management Book
Description *Hands-On
Dependency Injection in Go*
takes you on a journey,
teaching you about refactoring
existing code to adopt
dependency injection (DI)
using various methods
available in Go. Of the six
methods introduced in this
book, some are conventional,
such as constructor or method
injection, and some
unconventional, such as just-in-
time or config injection. Each
method is explained in detail,
focusing on their strengths and

weaknesses, and is followed with a step-by-step example of how to apply it. With plenty of examples, you will learn how to leverage DI to transform code into something simple and flexible. You will also discover how to generate and leverage the dependency graph to spot and eliminate issues.

Throughout the book, you will learn to leverage DI in combination with test stubs and mocks to test otherwise tricky or impossible scenarios. Hands-On Dependency Injection in Go takes a pragmatic approach and focuses heavily on the code, user experience, and how to achieve long-term benefits through incremental changes. By the end of this book, you will have produced clean code that's easy to test. What you will learn

Understand the benefits of DI

Explore SOLID design principles and how they relate to Go

Analyze various dependency injection patterns available in Go

Leverage DI to produce high-quality, loosely coupled Go code

Refactor existing Go code to adopt

DI

Discover tools to improve your code's testability and test coverage

Generate and interpret Go dependency graphs

Who this book is for

Hands-On Dependency Injection in Go is for programmers with a few years experience in any language and a basic understanding of Go. If you wish to produce clean, loosely coupled code that is inherently easier to test, this book is for you.

Clean Agile - Robert C. Martin
2019-09-12

Agile Values and Principles for a New Generation "In the journey to all things Agile, Uncle Bob has been there, done that, and has the both the t-shirt and the scars to show for it. This delightful book is part history, part personal stories, and all wisdom. If you want to understand what Agile is and how it came to be, this is the book for you." -Grady Booch "Bob's frustration colors every sentence of Clean Agile, but it's a justified frustration. What is in the world of Agile development is nothing compared to what could be.

This book is Bob's perspective on what to focus on to get to that 'what could be.' And he's been there, so it's worth listening." -Kent Beck "It's good to read Uncle Bob's take on Agile. Whether just beginning, or a seasoned Agilista, you would do well to read this book. I agree with almost all of it. It's just some of the parts make me realize my own shortcomings, dammit. It made me double-check our code coverage (85.09%)." -Jon Kern Nearly twenty years after the Agile Manifesto was first presented, the legendary Robert C. Martin ("Uncle Bob") reintroduces Agile values and principles for a new generation-programmers and nonprogrammers alike. Martin, author of Clean Code and other highly influential software development guides, was there at Agile's founding. Now, in Clean Agile: Back to Basics, he strips away misunderstandings and distractions that over the years have made it harder to use Agile than was originally intended. Martin describes what Agile is in no uncertain

terms: a small discipline that helps small teams manage small projects . . . with huge implications because every big project is comprised of many small projects. Drawing on his fifty years' experience with projects of every conceivable type, he shows how Agile can help you bring true professionalism to software development. Get back to the basics-what Agile is, was, and should always be Understand the origins, and proper practice, of SCRUM Master essential business-facing Agile practices, from small releases and acceptance tests to whole-team communication Explore Agile team members' relationships with each other, and with their product Rediscover indispensable Agile technical practices: TDD, refactoring, simple design, and pair programming Understand the central roles values and craftsmanship play in your Agile team's success If you want Agile's true benefits, there are no shortcuts: You need to do Agile right. Clean Agile: Back to Basics will show

you how, whether you're a developer, tester, manager, project manager, or customer. Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

Agile Technical Practices Distilled - Pedro M. Santos
2019-06-28

Delve deep into the various technical practices, principles, and values of Agile. Key Features Discover the essence of Agile software development and the key principles of software design Explore the fundamental practices of Agile working, including test-driven development (TDD), refactoring, pair programming, and continuous integration Learn and apply the four elements of simple design

Book Description The number of popular technical practices has grown exponentially in the last few years. Learning the common fundamental software development practices can help you become a better

programmer. This book uses the term Agile as a wide umbrella and covers Agile principles and practices, as well as most methodologies associated with it. You'll begin by discovering how driver-navigator, chess clock, and other techniques used in the pair programming approach introduce discipline while writing code. You'll then learn to safely change the design of your code using refactoring. While learning these techniques, you'll also explore various best practices to write efficient tests. The concluding chapters of the book delve deep into the SOLID principles - the five design principles that you can use to make your software more understandable, flexible and maintainable. By the end of the book, you will have discovered new ideas for improving your software design skills, the relationship within your team, and the way your business works. What you will learn Learn the red, green, refactor cycle of classic TDD and practice the best habits such as the rule of 3,

triangulation, object calisthenics, and more Refactor using parallel change and improve legacy code with characterization tests, approval tests, and Golden Master Use code smells as feedback to improve your design Learn the double cycle of ATDD and the outside-in mindset using mocks and stubs correctly in your tests Understand how Coupling, Cohesion, Connascence, SOLID principles, and code smells are all related Improve the understanding of your business domain using BDD and other principles for "doing the right thing, not only the thing right" Who this book is for This book is designed for software developers looking to improve their technical practices. Software coaches may also find it helpful as a teaching reference manual. This is not a beginner's book on how to program. You must be comfortable with at least one programming language and must be able to write unit tests using any unit testing framework.

Head First Software

Development - Dan Pilone
2008-12-26

Provides information on successful software development, covering such topics as customer requirements, task estimates, principles of good design, dealing with source code, system testing, and handling bugs.

Lean Architecture - James O. Coplien
2011-01-06

More and more Agile projects are seeking architectural roots as they struggle with complexity and scale - and they're seeking lightweight ways to do it Still seeking? In this book the authors help you to find your own path Taking cues from Lean development, they can help steer your project toward practices with longstanding track records Up-front architecture? Sure. You can deliver an architecture as code that compiles and that concretely guides development without bogging it down in a mass of documents and guesses about the implementation Documentation? Even a

whiteboard diagram, or a CRC card, is documentation: the goal isn't to avoid documentation, but to document just the right things in just the right amount Process? This all works within the frameworks of Scrum, XP, and other Agile approaches

Agile Software Development
- Thomas Stober 2009-10-03

Software Development is moving towards a more agile and more flexible approach. It turns out that the traditional "waterfall" model is not supportive in an environment where technical, financial and strategic constraints are changing almost every day. But what is agility? What are today's major approaches? And especially: What is the impact of agile development principles on the development teams, on project management and on software architects? How can large enterprises become more agile and improve their business processes, which have been existing since many, many years? What are the limitations of Agility? And what is the right balance between

reliable structures and flexibility? This book will give answers to these questions. A strong emphasis will be on real life project examples, which describe how development teams have moved from a waterfall model towards an Agile Software Development approach.

Code Complete - Steve McConnell 2004-06-09

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 - Paul Becker 1999 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.

Lean Software Development - Mary Poppendieck 2003-05-08 Lean Software Development: An Agile Toolkit Adapting agile practices to your development organization Uncovering and eradicating waste throughout the software development lifecycle Practical techniques for every development manager, project manager, and technical leader Lean software development: applying agile principles to your organization In *Lean Software Development*, Mary and Tom Poppendieck identify seven fundamental "lean" principles, adapt them for the world of software development, and show how they can serve as the foundation for agile development approaches that work. Along the way, they introduce 22 "thinking tools" that can help you customize the right agile practices for any environment. Better, cheaper, faster software development. You can have all three—if you adopt the same lean principles that have already

revolutionized manufacturing, logistics and product development. Iterating towards excellence: software development as an exercise in discovery Managing uncertainty: "decide as late as possible" by building change into the system. Compressing the value stream: rapid development, feedback, and improvement Empowering teams and individuals without compromising coordination Software with integrity: promoting coherence, usability, fitness, maintainability, and adaptability How to "see the whole"-even when your developers are scattered across multiple locations and contractors Simply put, Lean Software Development helps you refocus development on value, flow, and people-so you can achieve breakthrough quality, savings, speed, and business alignment.

Agile Software Development: Principles, Patterns, and Practices - Robert C. Martin 2013-07-17
For courses in Object-Oriented Design, C++ Intermediate

Programming, and Object-Oriented Programming. Written for software engineers in the trenches, this text focuses on the technology-the principles, patterns, and process-that help software engineers effectively manage increasingly complex operating systems and applications. There is also a strong emphasis on the people behind the technology. This text will prepare students for a career in software engineering and serve as an on-going education for software engineers.

Practices of an Agile Developer - Venkat Subramaniam
2006-04-04

These are the proven, effective agile practices that will make you a better developer. You'll learn pragmatic ways of approaching the development process and your personal coding techniques. You'll learn about your own attitudes, issues with working on a team, and how to best manage your learning, all in an iterative, incremental, agile style. You'll see how to apply each practice, and what benefits you can

expect. Bottom line: This book will make you a better developer.

Touch of Class - Bertrand Meyer 2009-08-28

This text combines a practical, hands-on approach to programming with the introduction of sound theoretical support focused on teaching the construction of high-quality software. A major feature of the book is the use of Design by Contract.

Beyond Legacy Code - David Scott Bernstein 2015-08-03

We're losing tens of billions of dollars a year on broken software, and great new ideas such as agile development and Scrum don't always pay off. But there's hope. The nine software development practices in *Beyond Legacy Code* are designed to solve the problems facing our industry. Discover why these practices work, not just how they work, and dramatically increase the quality and maintainability of any software project. These nine practices could save the software industry. *Beyond Legacy Code* is filled with

practical, hands-on advice and a common-sense exploration of why technical practices such as refactoring and test-first development are critical to building maintainable software. Discover how to avoid the pitfalls teams encounter when adopting these practices, and how to dramatically reduce the risk associated with building software--realizing significant savings in both the short and long term. With a deeper understanding of the principles behind the practices, you'll build software that's easier and less costly to maintain and extend. By adopting these nine key technical practices, you'll learn to say what, why, and for whom before how; build in small batches; integrate continuously; collaborate; create CLEAN code; write the test first; specify behaviors with tests; implement the design last; and refactor legacy code. Software developers will find hands-on, pragmatic advice for writing higher quality, more maintainable, and bug-free code. Managers, customers, and product owners

will gain deeper insight into vital processes. By moving beyond the old-fashioned procedural thinking of the Industrial Revolution, and working together to embrace standards and practices that will advance software development, we can turn the legacy code crisis into a true Information Revolution.

Clean Code - Robert C. Martin
2009

Looks at the principles and clean code, includes case studies showcasing the practices of writing clean code, and contains a list of heuristics and "smells" accumulated from the process of writing clean code.

Debugging - David J. AGANS
2002-09-23

When the pressure is on to resolve an elusive software or hardware glitch, what's needed is a cool head courtesy of a set of rules guaranteed to work on any system, in any circumstance. Written in a frank but engaging style, this book provides simple, foolproof principles guaranteed to help find any bug quickly.

Recognized tech expert and author David Agans changes the way you think about debugging, making those pesky problems suddenly much easier to find and fix. Agans identifies nine simple, practical rules that are applicable to any software application or hardware system, which can help detect any bug, no matter how tricky or obscure.

Illustrating the rules with real-life bug-detection war stories, Debugging shows you how to: Understand the system: how perceiving the "roadmap" can hasten your journey Quit thinking and look: when hands-on investigation can't be avoided Isolate critical factors: why changing one element at a time can be an essential tool Keep an audit trail: how keeping a record of the debugging process can win the day Whether the system or program you're working on has been designed wrong, built wrong, or used wrong, Debugging helps you think correctly about bugs, so the problems virtually reveal themselves.