

Clean Code A Handbook Of Agile Software Craftsmanship

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.

Practical Software Architecture Solutions from the Legendary Robert C. Martin (“Uncle Bob”) By applying universal rules of software architecture, you can dramatically improve developer productivity throughout the life of any software system. Now, building upon the success of his best-selling books *Clean Code* and *The Clean Coder*, legendary software craftsman Robert C. Martin (“Uncle Bob”) reveals those rules and helps you apply them. Martin's *Clean Architecture* doesn't merely present options. Drawing on over a half-century of experience in software environments of every imaginable type, Martin tells you what choices to make and why they are critical to your success. As you've come to expect from Uncle Bob, this book is packed with direct, no-nonsense solutions for the real challenges you'll face—the ones that will make or break your projects. Learn what software architects need to achieve—and core disciplines and practices for achieving it Master essential software design principles for addressing function, component separation, and data management See how programming paradigms impose discipline by restricting what developers can do Understand what's critically important and what's merely a “detail” Implement optimal, high-level structures for web, database, thick-client, console, and embedded applications Define appropriate boundaries and layers, and organize components and services See why designs and architectures go wrong, and how to prevent (or fix) these failures *Clean Architecture* is essential reading for every current or aspiring software architect, systems analyst, system designer, and software manager—and for every programmer who must execute someone else's designs. Register your product for convenient access to downloads, updates, and/or corrections as they become available.

The Second Edition of Johnny Saldaña's international bestseller provides an in-depth guide to the multiple approaches available for coding qualitative data. Fully up to date, it includes new chapters, more coding techniques and an additional glossary. Clear, practical and authoritative, the book: -describes how coding initiates qualitative data analysis -demonstrates the writing of analytic memos -discusses available analytic software -suggests how best to use *The Coding Manual for Qualitative Researchers* for particular studies. In total, 32 coding methods are profiled that can be applied to a range of research genres from grounded theory to phenomenology to narrative inquiry. For each approach, Saldaña discusses the method's origins, a description of the method, practical applications, and a clearly illustrated example with analytic follow-up. A unique and invaluable reference for students, teachers, and practitioners of qualitative inquiry, this book is essential reading across the social sciences.

The latest title in Addison Wesley's world-renowned Robert C. Martin Series on better software development, *Code That Fits in Your Head* offers indispensable practical advice for writing code at a sustainable pace, and controlling the complexity that causes too many software projects to spin out of control. Reflecting decades of experience consulting on software projects and helping development teams succeed, Mark Seemann shares proven practices and heuristics, supported by realistic advice. His guidance ranges from checklists to teamwork, encapsulation to decomposition, API design to unit testing and troubleshooting. Throughout, Seemann illuminates his insights with up-to-date code examples drawn from a start to finish sample project. Seemann's examples are written in C#, and designed to be clear and useful to every object-oriented enterprise developer, whether they use C#, Java, or another language. *Code That Fits in Your Head* is accompanied by the complete code base for this sample application, organized in a Git repository to facilitate further exploration of details that don't fit in the text.

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.

What others in the trenches say about *The Pragmatic Programmer*... “The cool thing about this book is that it's great for keeping the programming process fresh. The book helps you to continue to grow and clearly comes from people who have been there.” —Kent Beck, author of *Extreme Programming Explained: Embrace Change* “I found this book to be a great mix of solid advice and wonderful analogies!” —Martin Fowler, author of *Refactoring* and *UML Distilled* “I would buy a copy, read it twice, then tell all my colleagues to run out and grab a copy. This is a book I would never loan because I would worry about it being lost.” —Kevin Ruland, Management Science, MSG-Logistics “The wisdom and practical experience of the authors is obvious. The topics presented are relevant and useful... By far its greatest strength for me has been the outstanding analogies—tracer bullets, broken windows, and the fabulous helicopter-based explanation of the need for orthogonality, especially in a crisis situation. I have little doubt that this book will eventually become an excellent source of useful information for journeymen programmers and expert mentors alike.” —John Lakos, author of *Large-Scale C++ Software Design* “This is the sort of book I will buy a dozen copies of when it comes out so I can give it to my clients.” —Eric Vought, Software Engineer “Most modern books on software development

fail to cover the basics of what makes a great software developer, instead spending their time on syntax or technology where in reality the greatest leverage possible for any software team is in having talented developers who really know their craft well. An excellent book.” —Pete McBreen, Independent Consultant “Since reading this book, I have implemented many of the practical suggestions and tips it contains. Across the board, they have saved my company time and money while helping me get my job done quicker! This should be a desktop reference for everyone who works with code for a living.” —Jared Richardson, Senior Software Developer, iRenaissance, Inc. “I would like to see this issued to every new employee at my company....” —Chris Cleeland, Senior Software Engineer, Object Computing, Inc. “If I’m putting together a project, it’s the authors of this book that I want. . . . And failing that I’d settle for people who’ve read their book.” —Ward Cunningham Straight from the programming trenches, *The Pragmatic Programmer* cuts through the increasing specialization and technicalities of modern software development to examine the core process--taking a requirement and producing working, maintainable code that delights its users. It covers topics ranging from personal responsibility and career development to architectural techniques for keeping your code flexible and easy to adapt and reuse. Read this book, and you'll learn how to Fight software rot; Avoid the trap of duplicating knowledge; Write flexible, dynamic, and adaptable code; Avoid programming by coincidence; Bullet-proof your code with contracts, assertions, and exceptions; Capture real requirements; Test ruthlessly and effectively; Delight your users; Build teams of pragmatic programmers; and Make your developments more precise with automation. Written as a series of self-contained sections and filled with entertaining anecdotes, thoughtful examples, and interesting analogies, *The Pragmatic Programmer* illustrates the best practices and major pitfalls of many different aspects of software development. Whether you're a new coder, an experienced programmer, or a manager responsible for software projects, use these lessons daily, and you'll quickly see improvements in personal productivity, accuracy, and job satisfaction. You'll learn skills and develop habits and attitudes that form the foundation for long-term success in your career. You'll become a Pragmatic Programmer.

In a futuristic military adventure a recruit goes through the roughest boot camp in the universe and into battle with the Terran Mobile Infantry in what historians would come to call the First Interstellar War

As programmers, we’ve all seen source code that’s so ugly and buggy it makes our brain ache. Over the past five years, authors Dustin Boswell and Trevor Foucher have analyzed hundreds of examples of "bad code" (much of it their own) to determine why they’re bad and how they could be improved. Their conclusion? You need to write code that minimizes the time it would take someone else to understand it—even if that someone else is you. This book focuses on basic principles and practical techniques you can apply every time you write code. Using easy-to-digest code examples from different languages, each chapter dives into a different aspect of coding, and demonstrates how you can make your code easy to understand. Simplify naming, commenting, and formatting with tips that apply to every line of code Refine your program’s loops, logic, and variables to reduce complexity and confusion Attack problems at the function level, such as reorganizing blocks of code to do one task at a time Write effective test code that is thorough and concise—as well as readable "Being aware of how the code you create affects those who look at it later is an important part of developing software. The authors did a great job in taking you through the different aspects of this challenge, explaining the details with instructive examples." —Michael Hunger, passionate Software Developer

"After many decades - and even more methodologies - software projects are still failing. Why? Managers see software development as a production line. Companies don't know how to manage software projects and hire good developers. Many developers still behave like factory workers, providing terrible service to their employers and clients. Agile was a big step forward, but not enough. What's missing? The right mindset - for both developers and their employers. As developers worldwide are recognizing, the right mindset is craftsmanship ... Mancuso explains what craftsmanship means to the developer and his or her organization, and shows how to live it every day in your real-world development environment. Mancuso shows how software craftsmanship fits with and helps you improve upon best-practice technical disciplines such as agile and lean, taking all your development projects to the next level. You'll learn how to change the disastrous perception that software developers are the same as factory workers, and that software projects can be run like factories. By placing greater professionalism, technical excellence, and customer satisfaction at the heart of what you do, you won't just deliver more value to everyone involved: you'll be happier and more fulfilled doing it"--Publisher's description.

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.

In *Clean Craftsmanship*, the legendary Robert C. Martin ("Uncle Bob") has written every programmer's definitive guide to working well. Martin brings together the disciplines, standards, and ethics you need to deliver robust, effective code quickly and productively, and be proud of all the software you write -- every single day. Martin, the best-selling author of *The Clean Coder*, begins with a pragmatic, technical, and prescriptive guide to five foundational disciplines of software craftsmanship: test-driven development, refactoring, simple design, collaborative programming (pairing), and acceptance tests. Next, he moves up to standards -- outlining the baseline expectations the world has of software developers, illuminating how those often differ from their own perspectives, and helping you repair the mismatch. Finally, he turns to the ethics of the programming profession, describing ten fundamental promises all software developers should make to their colleagues, their users, and above all, themselves. With Martin's guidance and advice, you can consistently write code that builds trust instead of undermining it -- trust among your users

and throughout a society that depends on software for its very survival.

Develop your programming skills by exploring essential topics such as code reviews, implementing TDD and BDD, and designing APIs to overcome code inefficiency, redundancy, and other problems arising from bad code. Key Features Write code that cleanly integrates with other systems while maintaining well-defined software boundaries Understand how coding principles and standards enhance software quality Learn how to avoid common errors while implementing concurrency or threading Book Description Traditionally associated with developing Windows desktop applications and games, C# is now used in a wide variety of domains, such as web and cloud apps, and has become increasingly popular for mobile development. Despite its extensive coding features, professionals experience problems related to efficiency, scalability, and maintainability because of bad code. Clean Code in C# will help you identify these problems and solve them using coding best practices. The book starts with a comparison of good and bad code, helping you understand the importance of coding standards, principles, and methodologies. You'll then get to grips with code reviews and their role in improving your code while ensuring that you adhere to industry-recognized coding standards. This C# book covers unit testing, delves into test-driven development, and addresses cross-cutting concerns. You'll explore good programming practices for objects, data structures, exception handling, and other aspects of writing C# computer programs. Once you've studied API design and discovered tools for improving code quality, you'll look at examples of bad code and understand which coding practices you should avoid. By the end of this clean code book, you'll have the developed skills you need in order to apply industry-approved coding practices to write clean, readable, extendable, and maintainable C# code. What you will learn Write code that allows software to be modified and adapted over time Implement the fail-pass-refactor methodology using a sample C# console application Address cross-cutting concerns with the help of software design patterns Write custom C# exceptions that provide meaningful information Identify poor quality C# code that needs to be refactored Secure APIs with API keys and protect data using Azure Key Vault Improve your code's performance by using tools for profiling and refactoring Who this book is for This coding book is for C# developers, team leads, senior software engineers, and software architects who want to improve the efficiency of their legacy systems. A strong understanding of C# programming is required.

Threads are a fundamental part of the Java platform. As multicore processors become the norm, using concurrency effectively becomes essential for building high-performance applications. Java SE 5 and 6 are a huge step forward for the development of concurrent applications, with improvements to the Java Virtual Machine to support high-performance, highly scalable concurrent classes and a rich set of new concurrency building blocks. In *Java Concurrency in Practice*, the creators of these new facilities explain not only how they work and how to use them, but also the motivation and design patterns behind them. However, developing, testing, and debugging multithreaded programs can still be very difficult; it is all too easy to create concurrent programs that appear to work, but fail when it matters most: in production, under heavy load. *Java Concurrency in Practice* arms readers with both the theoretical underpinnings and concrete techniques for building reliable, scalable, maintainable concurrent applications. Rather than simply offering an inventory of concurrency APIs and mechanisms, it provides design rules, patterns, and mental models that make it easier to build concurrent programs that are both correct and performant. This book covers: Basic concepts of concurrency and thread safety Techniques for building and composing thread-safe classes Using the concurrency building blocks in `java.util.concurrent` Performance optimization dos and don'ts Testing concurrent programs Advanced topics such as atomic variables, nonblocking algorithms, and the Java Memory Model

This undergraduate textbook examines how formal and informal tests are created, scored, and interpreted by mental health professionals when evaluating clients, and surveys the various techniques commonly used for assessing educational ability, intelligence, career and occupational aptitude, and clinical issues.

What's the best approach for developing an application with JavaScript? This book helps you answer that question with numerous JavaScript coding patterns and best practices. If you're an experienced developer looking to solve problems related to objects, functions, inheritance, and other language-specific categories, the abstractions and code templates in this guide are ideal—whether you're using JavaScript to write a client-side, server-side, or desktop application. Written by JavaScript expert Stoyan Stefanov—Senior Yahoo! Technical and architect of YSlow 2.0, the web page performance optimization tool—*JavaScript Patterns* includes practical advice for implementing each pattern discussed, along with several hands-on examples. You'll also learn about anti-patterns: common programming approaches that cause more problems than they solve. Explore useful habits for writing high-quality JavaScript code, such as avoiding globals, using single var declarations, and more Learn why literal notation patterns are simpler alternatives to constructor functions Discover different ways to define a function in JavaScript Create objects that go beyond the basic patterns of using object literals and constructor functions Learn the options available for code reuse and inheritance in JavaScript Study sample JavaScript approaches to common design patterns such as Singleton, Factory, Decorator, and more Examine patterns that apply specifically to the client-side browser environment

Users can dramatically improve the design, performance, and manageability of object-oriented code without altering its interfaces or behavior. "Refactoring" shows users exactly how to spot the best opportunities for refactoring and exactly how to do it, step by step.

We all live in a digital world of information technology. In this technology-driven world, computer software and applications are everywhere around us. Have you ever wondered how different applications and software work together efficiently? This book will be a comprehensive guide to make users understand how coding practices work in a few different computer programs and software. This book provides details about programming concepts, the history of programming, the importance of programming in daily life, how programming concepts are evolving in our daily life, and the best practices of using programming languages. We also discuss the best programming languages available in the world, different components of a program, how programs are improved in their efficiency, learning programming for a bright career choice and the future of programming. The programming is involved everywhere around us, even though many people are not aware of it. People work on digital platforms all the time, and they are using different kinds of programs. They do not have a deep understanding of programming concepts. This book is a comprehensive guide to help you understand how different programming concepts work together, and how different applications are made by using effective programming strategies, this book will be a comprehensive guide to understand all these concepts. This book will depict all the concepts of the programming languages from beginning to end. It will be a comprehensive and complete guide to understand the use of the best available sources to make an application that will work effectively and efficiently on the intended platform. Writing clean code is a skill that all computer programmers will want to master.

Getting the most out of Python to improve your codebase Key Features Save maintenance costs by learning to fix your legacy

codebase Learn the principles and techniques of refactoring Apply microservices to your legacy systems by implementing practical techniques Book Description Python is currently used in many different areas such as software construction, systems administration, and data processing. In all of these areas, experienced professionals can find examples of inefficiency, problems, and other perils, as a result of bad code. After reading this book, readers will understand these problems, and more importantly, how to correct them. The book begins by describing the basic elements of writing clean code and how it plays an important role in Python programming. You will learn about writing efficient and readable code using the Python standard library and best practices for software design. You will learn to implement the SOLID principles in Python and use decorators to improve your code. The book delves more deeply into object oriented programming in Python and shows you how to use objects with descriptors and generators. It will also show you the design principles of software testing and how to resolve software problems by implementing design patterns in your code. In the final chapter we break down a monolithic application to a microservice one, starting from the code as the basis for a solid platform. By the end of the book, you will be proficient in applying industry approved coding practices to design clean, sustainable and readable Python code. What you will learn Set up tools to effectively work in a development environment Explore how the magic methods of Python can help us write better code Examine the traits of Python to create advanced object-oriented design Understand removal of duplicated code using decorators and descriptors Effectively refactor code with the help of unit tests Learn to implement the SOLID principles in Python Who this book is for This book will appeal to team leads, software architects and senior software engineers who would like to work on their legacy systems to save cost and improve efficiency. A strong understanding of Programming is assumed.

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.

"One of the most significant books in my life." –Obie Fernandez, Author, The Rails Way "Twenty years ago, the first edition of The Pragmatic Programmer completely changed the trajectory of my career. This new edition could do the same for yours." –Mike Cohn, Author of Succeeding with Agile, Agile Estimating and Planning, and User Stories Applied ". . . filled with practical advice, both technical and professional, that will serve you and your projects well for years to come." –Andrea Goulet, CEO, Corgibytes, Founder, LegacyCode.Rocks ". . . lightning does strike twice, and this book is proof." –VM (Vicky) Brasseur, Director of Open Source Strategy, Juniper Networks The Pragmatic Programmer is one of those rare tech books you'll read, re-read, and read again over the years. Whether you're new to the field or an experienced practitioner, you'll come away with fresh insights each and every time. Dave Thomas and Andy Hunt wrote the first edition of this influential book in 1999 to help their clients create better software and rediscover the joy of coding. These lessons have helped a generation of programmers examine the very essence of software development, independent of any particular language, framework, or methodology, and the Pragmatic philosophy has spawned hundreds of books, screencasts, and audio books, as well as thousands of careers and success stories. Now, twenty years later, this new edition re-examines what it means to be a modern programmer. Topics range from personal responsibility and career development to architectural techniques for keeping your code flexible and easy to adapt and reuse. Read this book, and you'll learn how to: Fight software rot Learn continuously Avoid the trap of duplicating knowledge Write flexible, dynamic, and adaptable code Harness the power of basic tools Avoid programming by coincidence Learn real requirements Solve the underlying problems of concurrent code Guard against security vulnerabilities Build teams of Pragmatic Programmers Take responsibility for your work and career Test ruthlessly and effectively, including property-based testing Implement the Pragmatic Starter Kit Delight your users Written as a series of self-contained sections and filled with classic and fresh anecdotes, thoughtful examples, and interesting analogies, The Pragmatic Programmer illustrates the best approaches and major pitfalls of many different aspects of software development. Whether you're a new coder, an experienced programmer, or a manager responsible for software projects, use these lessons daily, and you'll quickly see improvements in personal productivity, accuracy, and job satisfaction. You'll learn skills and develop habits and attitudes that form the foundation for long-term success in your career. You'll become a Pragmatic Programmer. Register your book for convenient access to downloads, updates, and/or corrections as they become available. See inside book for details.

Learn proven patterns, techniques, and tricks to take full advantage of the Node.js platform. Master well-known design principles to create applications that are readable, extensible, and that can grow big. Key Features Learn how to create solid server-side applications by leveraging the full power of Node.js 14 Understand how Node.js works and learn how to take full advantage of its core components as well as the solutions offered by its ecosystem Avoid common mistakes and use proven patterns to create production grade Node.js applications Book Description In this book, we will show you how to implement a series of best practices and design patterns to help you create efficient and robust Node.js applications with ease. We kick off by exploring the basics of Node.js, analyzing its asynchronous event driven architecture and its fundamental design patterns. We then show you how to build asynchronous control flow patterns with callbacks, promises and async/await. Next, we dive into Node.js streams, unveiling their power and showing you how to use them at their full capacity. Following streams is an analysis of different creational, structural, and behavioral design patterns that take full advantage of JavaScript and Node.js. Lastly, the book dives into more advanced concepts such as Universal JavaScript, scalability and messaging patterns to help you build enterprise-grade distributed applications. Throughout the book, you'll see Node.js in action with the help of several real-life examples leveraging technologies such as LevelDB, Redis, RabbitMQ, ZeroMQ, and many others. They will be used to demonstrate a pattern or technique, but they will also give you a great introduction to the Node.js ecosystem and its set of solutions. What you will learn Become comfortable with writing asynchronous code by leveraging callbacks, promises, and the async/await syntax Leverage Node.js streams to create data-driven asynchronous processing pipelines Implement well-known software design patterns to create production grade applications Share code between Node.js and the browser and take advantage of full-stack JavaScript Build and scale microservices and distributed systems powered by Node.js Use Node.js in conjunction with other powerful technologies such as Redis, RabbitMQ, ZeroMQ, and LevelDB Who this book is for This book is for developers and software architects who have some prior basic knowledge of JavaScript and Node.js and now want to get the most out of these technologies in terms of productivity, design quality, and scalability. Software professionals with intermediate experience in Node.js and JavaScript will also find valuable the more advanced patterns and techniques presented in this book. This book assumes that you have an intermediate understanding of web application development, databases, and software design principles.

From the number-one bestselling author of The Nightingale and The Great Alone comes a powerful American epic about love and heroism and hope, set during the Great Depression, a time when the country was in crisis and at war with itself, when millions

were out of work and even the land seemed to have turned against them. “My land tells its story if you listen. The story of our family.” Texas, 1921. A time of abundance. The Great War is over, the bounty of the land is plentiful, and America is on the brink of a new and optimistic era. But for Elsa Wolcott, deemed too old to marry in a time when marriage is a woman’s only option, the future seems bleak. Until the night she meets Rafe Martinelli and decides to change the direction of her life. With her reputation in ruin, there is only one respectable choice: marriage to a man she barely knows. By 1934, the world has changed; millions are out of work and drought has devastated the Great Plains. Farmers are fighting to keep their land and their livelihoods as crops fail and water dries up and the earth cracks open. Dust storms roll relentlessly across the plains. Everything on the Martinelli farm is dying, including Elsa’s tenuous marriage; each day is a desperate battle against nature and a fight to keep her children alive. In this uncertain and perilous time, Elsa—like so many of her neighbors—must make an agonizing choice: fight for the land she loves or leave it behind and go west, to California, in search of a better life for her family. The Four Winds is a rich, sweeping novel that stunningly brings to life the Great Depression and the people who lived through it—the harsh realities that divided us as a nation and the enduring battle between the haves and the have-nots. A testament to hope, resilience, and the strength of the human spirit to survive adversity, The Four Winds is an indelible portrait of America and the American dream, as seen through the eyes of one indomitable woman whose courage and sacrifice will come to define a generation.

Clean Code A Handbook of Agile Software Craftsmanship Pearson Education

Even bad code can function. But if code isn’t clean, it can bring a development organization to its knees. Every year, countless hours and significant resources are lost because of poorly written code. But it doesn’t have to be that way. Noted software expert Robert C. Martin presents a revolutionary paradigm with Clean Code: A Handbook of Agile Software Craftsmanship . 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. What kind of work will you be doing? You’ll be reading code—lots of code. And you will be challenged to think about what’s right about that code, and what’s wrong with it. More importantly, you will be challenged to reassess your professional values and your commitment to your craft. Clean Code is divided into three parts. The first describes the principles, patterns, and practices of writing clean code. The second part consists of several case studies of increasing complexity. Each case study is an exercise in cleaning up code—of transforming a code base that has some problems into one that is sound and efficient. The third part is the payoff: a single chapter containing a list of heuristics and “smells” gathered while creating the case studies. The result is a knowledge base that describes the way we think when we write, read, and clean code. Readers will come away from this book 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 This book is a must for any developer, software engineer, project manager, team lead, or systems analyst with an interest in producing better code.

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.

From the creator of the popular website Ask a Manager and New York’s work-advice columnist comes a witty, practical guide to 200 difficult professional conversations—featuring all-new advice! There’s a reason Alison Green has been called “the Dear Abby of the work world.” Ten years as a workplace-advice columnist have taught her that people avoid awkward conversations in the office because they simply don’t know what to say. Thankfully, Green does—and in this incredibly helpful book, she tackles the tough discussions you may need to have during your career. You’ll learn what to say when • coworkers push their work on you—then take credit for it • you accidentally trash-talk someone in an email then hit “reply all” • you’re being micromanaged—or not being managed at all • you catch a colleague in a lie • your boss seems unhappy with your work • your cubemate’s loud speakerphone is making you homicidal • you got drunk at the holiday party Praise for Ask a Manager “A must-read for anyone who works . . . [Alison Green’s] advice boils down to the idea that you should be professional (even when others are not) and that communicating in a straightforward manner with candor and kindness will get you far, no matter where you work.”—Booklist (starred review) “The author’s friendly, warm, no-nonsense writing is a pleasure to read, and her advice can be widely applied to relationships in all areas of readers’ lives. Ideal for anyone new to the job market or new to management, or anyone hoping to improve their work experience.”—Library Journal (starred review) “I am a huge fan of Alison Green’s Ask a Manager column. This book is even better. It teaches us how to deal with many of the most vexing big and little problems in our workplaces—and to do so with grace, confidence, and a sense of humor.”—Robert Sutton, Stanford professor and author of The No Asshole Rule and The Asshole Survival Guide “Ask a Manager is the ultimate playbook for navigating the traditional workforce in a diplomatic but firm way.”—Erin Lowry, author of Broke Millennial: Stop Scraping By and Get Your Financial Life Together

The Java Virtual Machine (JVM) is the underlying technology behind Java’s most distinctive features including size, security and cross-platform delivery. This guide shows programmers how to write programs for the Java Virtual Machine.

ABAP developers, are you looking to clean up your code? Then pick up this official companion to the Clean ABAP GitHub repository. This book is brimming with best practices, straight from the experts, to help you write effective ABAP code. Start by learning when to apply each clean ABAP practice. Then, dive into detailed code examples and explanations for using classes, methods, names, variables, internal tables, and more. From writing code to troubleshooting and testing, this is your complete style guide! In this book, you’ll learn about: a. Clean ABAP Concepts What is clean ABAP and why is it important to write clean code? Understand clean ABAP concepts with insight from the experts, including special considerations for legacy code and performance. b. Best Practices Walk through the what, why, and how behind clean ABAP best practices. Learn to improve your code, including using classes and interfaces appropriately, handling method design and control flow, designing and running unit tests, and much more. c. Practical Examples See clean ABAP practices in action! Improve your understanding of how to write effective code. Use detailed examples for each best practice that demonstrate the difference between clean and messy code. Highlights include: 1) Classes and interfaces 2) Methods 3) Names 4) Variables and literals 5) Internal tables 6) Control flow 7) Comments 8) Formatting 9) Error handling 10) Unit testing 11) Packages

Python is currently used in many different areas. In all of these areas, experienced professionals can find examples of inefficiency, problems, and other perils, as a result of bad code. After reading this book, readers will understand these problems, and more importantly, understand how to correct them.

This comprehensive, pragmatic tutorial on Agile Development and eXtreme programming, written by one of the founding fathers of Agile Development: Teaches software developers and project managers how to get projects done on time, and on budget using the power of Agile Development; Uses real-world case studies to show how to plan, test, refactor, and pair program using eXtreme programming; Contains a wealth of reusable C++ and Java code; Focuses on solving customer oriented systems problems using UML and Design Patterns.

Systems programming provides the foundation for the world's computation. Writing performance-sensitive code requires a programming language that puts programmers in control of how memory, processor time, and other system resources are used. The Rust systems programming language combines that control with a modern type system that catches broad classes of common mistakes, from memory management errors to data races between threads. With this practical guide, experienced systems programmers will learn how to successfully bridge the gap between performance and safety using Rust. Jim Blandy, Jason Orendorff, and Leonora Tindall demonstrate how Rust's features put programmers in control over memory consumption and processor use by combining predictable performance with memory safety and trustworthy concurrency. You'll learn: Rust's fundamental data types and the core concepts of ownership and borrowing How to write flexible, efficient code with traits and generics How to write fast, multithreaded code without data races Rust's key power tools: closures, iterators, and asynchronous programming Collections, strings and text, input and output, macros, unsafe code, and foreign function interfaces This revised, updated edition covers the Rust 2021 Edition.

The Robert C. Martin Clean Code Collection consists of two bestselling eBooks: Clean Code: A Handbook of Agile Software Craftsmanship 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

A revised and updated edition offers comprehensive coverage of ECMAScript 5 (the new JavaScript language standard) and also the new APIs introduced in HTML5, with chapters on functions and classes completely rewritten and updated to match current best practices and a new chapter on language extensions and subsets. Original.

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

Get the most out of JavaScript for building web applications through a series of patterns, techniques, and case studies for clean coding Key Features Write maintainable JS code using internal abstraction, well-written tests, and well-documented code Understand the agents of clean coding like SOLID principles, OOP, and functional programming Explore solutions to tackle common JavaScript challenges in building UIs, managing APIs, and writing states Book Description Building robust apps starts with creating clean code. In this book, you’ll explore techniques for doing this by learning everything from the basics of JavaScript through to the practices of clean code. You’ll write functional, intuitive, and maintainable code while also understanding how your code affects the end user and the wider community. The book starts with popular clean-coding principles such as SOLID, and the Law of Demeter (LoD), along with highlighting the enemies of writing clean code such as cargo culting and over-management. You’ll then delve into JavaScript, understanding the more complex aspects of the language. Next, you’ll create meaningful abstractions using design patterns, such as the Class Pattern and the Revealing Module Pattern. You’ll explore real-world challenges such as DOM reconciliation, state management, dependency management, and security, both within browser and server environments. Later, you’ll cover tooling and testing methodologies and the importance of documenting code. Finally, the book will focus on advocacy and good communication for improving code cleanliness within teams or workplaces, along with covering a case study for clean coding. By the end of this book, you’ll be well-versed with JavaScript and have learned how to create clean abstractions, test them, and communicate about them via documentation. What you will learn Understand the true purpose of code and the problems it solves for your end-users and colleagues Discover the tenets and enemies of clean code considering the effects of cultural and syntactic conventions Use modern JavaScript syntax and design patterns to craft intuitive abstractions Maintain code quality within your team via wise adoption of tooling and advocating best practices Learn the modern ecosystem of JavaScript and its challenges like DOM reconciliation and state management Express the behavior of your code both within tests and via various forms of documentation Who this book is for This book is for anyone who writes JavaScript,

professionally or otherwise. As this book does not relate specifically to any particular framework or environment, no prior experience of any JavaScript web framework is required. Some knowledge of programming is assumed to understand the concepts covered in the book more effectively.

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.

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 Complete Coding Interview Guide in Java is an all-inclusive solution guide with meticulously crafted questions and answers that will help you crack any Java Developer job. This book will help you build a strong foundation and the skill-set required to confidently appear in the toughest coding interviews.

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.

This Python coding book will help you understand the problems that arise due to inefficient code, demonstrating to you how to correct them.

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