

The Clean Coder A Code Of Conduct For Professional Programmers Robert C Martin

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 documentationWho 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. 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.

Peter Seibel interviews 15 of the most interesting computer programmers alive today in Coders at Work, offering a companion volume to Apress's highly acclaimed best-seller Founders at Work by Jessica Livingston. As the words "at work" suggest, Peter Seibel focuses on how his interviewees tackle the day-to-day work of programming, while revealing much more, like how they became great programmers, how they recognize programming talent in others, and what kinds of problems they find most interesting. Hundreds of people have suggested names of programmers to interview on the Coders at Work web site: www.codersatwork.com. The complete list was 284 names. Having digested everyone's feedback, we selected 15 folks who've been kind enough to agree to be interviewed: Frances Allen: Pioneer in optimizing compilers, first woman to win the Turing Award (2006) and first female IBM fellow Joe Armstrong: Inventor of Erlang Joshua Bloch: Author of the Java collections framework, now at Google Bernie Cosell: One of the main software guys behind the original ARPANET IMPs and a master debugger Douglas Crockford: JSON founder, JavaScript architect at Yahoo! L. Peter Deutsch: Author of Ghostscript, implementer of Smalltalk-80 at Xerox PARC and Lisp 1.5 on PDP-1 Brendan Eich: Inventor of JavaScript, CTO of the Mozilla Corporation Brad Fitzpatrick: Writer of LiveJournal, OpenID, memcached, and Perlbal Dan Ingalls: Smalltalk implementor and designer Simon Peyton Jones: Coinventor of Haskell and lead designer of Glasgow Haskell Compiler Donald Knuth: Author of The Art of Computer Programming and creator of TeX Peter Norvig: Director of Research at Google and author of the standard text on AI Guy Steele:

Coinventor of Scheme and part of the Common Lisp Gang of Five, currently working on Fortress Ken Thompson: Inventor of UNIX Jamie Zawinski: Author of XEmacs and early Netscape/Mozilla hacker

Elevate your Ruby skills to an advanced level by deepening your understanding of the design principles, best practices, and trade-offs involved in implementation approaches to future-proof your Ruby applications Key Features Learn Ruby web application design principles and strategies for databases, security, and testing from a Ruby committer Understand the design principles behind polished Ruby code and trade-offs between implementation approaches Use metaprogramming and DSLs to reduce the amount of code needed without decreasing maintainability Book Description Anyone striving to become an expert Ruby programmer needs to be able to write maintainable applications. Polished Ruby Programming will help you get better at designing scalable and robust Ruby programs, so that no matter how big the codebase grows, maintaining it will be a breeze. This book takes you on a journey through implementation approaches for many common programming situations, the trade-offs inherent in each approach, and why you may choose to use different approaches in different situations. You'll start by refreshing Ruby fundamentals, such as correctly using core classes, class and method design, variable usage, error handling, and code formatting. Then you'll move on to higher-level programming principles, such as library design, use of metaprogramming and domain-specific languages, and refactoring. Finally, you'll learn principles specific to web application development, such as how to choose a database and web framework, and how to use advanced security features. By the end of this Ruby programming book, you'll be a well rounded web developer with a deep understanding of Ruby. While most code examples and principles discussed in the book apply to all Ruby versions, some examples and principles are specific to Ruby 3.0, the latest release at the time of publication. What you will learn Use Ruby's core classes and design custom classes effectively Explore the principles behind variable usage and method argument choice Implement advanced error handling approaches such as exponential backoff Design extensible libraries and plugin systems in Ruby Use metaprogramming and DSLs to avoid code redundancy Implement different

approaches to testing and understand their trade-offs Discover design patterns, refactoring, and optimization with Ruby Explore database design principles and advanced web app security Who this book is for This book is for Ruby programmers who are comfortable in coding with Ruby but want to advance their skills by mastering the deeper principles and best practices behind writing maintainable, scalable, optimized, and well-structured Ruby code. This book won't teach you the basics of Ruby - you'll need intermediate knowledge and practical experience before you can dive in.

40 Algorithms Every Programmer Should Know

Implementation Patterns

A Style Guide for Developers

More C++ Gems

AGILE PRIN PATTS PRACTS C#_1

Professionalism, Pragmatism, Pride

Reflections on the Craft of Programming

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.

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.

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

Duration 10+ Hours of Video Overview Get ready for something very different. This ain't no screen cast. This ain't no talkin' head lecture. This is an Uncle Bob Video! This is like watching Uncle Bob on stage, but more so. This is high content education that will hold your attention and stimulate your thoughts with its impactful and energetic style. The Clean Coder Video Series contains Uncle Bob's Clean Code: The Clean Coder series from CleanCoders.com . Related Content: The Clean Coder [Book] Robert C. Martin reveals the disciplines, techniques, tools, and practices that separate software craftsmen from mere "9-to-5" programmers One of the world's most respected programmers takes software craftsmanship to ... - Selection from *The Clean Coder Clean Code* [Book] 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 ... - Selection from *Clean Code* [Book] *Clean Code* (Video Series) About Robert "Uncle Bob" Martin Robert Martin (Uncle Bob) ([unclebobmartin](http://unclebobmartin.com)) has been a programmer since 1970. He is the Master Craftsman at 8th Light inc, co-founder of the on-line video training company: cleancoders.com , and founder of Uncle Bob Consulting LLC. He is an acclaimed speaker at conferences worldwide, and the author of many books including: *The Clean Coder*, *Clean Code*, *Agile Software Development: Principles, Patterns, and Practices*, and *UML for Java Programmers*. He is a prolific writer and has published hundreds of articles, papers, and blogs. He served as the Editor-in-chief of the C++ Report, and as the first chairman of the Agile Alliance. He is the creator of the acclaimed educational video series at cleancoders.com . About Clean Coders Clean Coders is the leading producer of instructional videos for software professionals, taught in a way that both educates and entertains developers. Founded in 2010 by Robert "Uncle Bob" Martin and Micah Martin, Clean Coders has expanded to include a myriad of authors teaching an ever-increasing array of subject matters pertaining to clean code. Our training videos have inspired countless viewers to become the best developers they can be. cleancoders.com...

Back to Basics

Build better software with more intuitive, maintainable, scalable, and high-performance Ruby code

Clean Architecture

Framework for Integrated Tests

Refactor your legacy code base

Code Complete

Clean Agile

Master Java 5.0 and TDD Together: Build More Robust, Professional Software Master Java 5.0, object-oriented design, and Test-Driven Development (TDD) by learning them together. Agile Java weaves all three into a single coherent approach to building professional, robust software systems. Jeff Langr shows exactly how Java and TDD integrate throughout the entire development lifecycle, helping you leverage today's fastest, most efficient development techniques from the very outset. Langr writes for every programmer, even those with little or no experience with Java, object-oriented development, or agile methods. He shows how to translate oral requirements into practical tests, and then how to use those tests to create reliable, high-performance Java code that solves real problems. Agile Java doesn't just teach the core features of the Java language: it presents coded test examples for each of them. This TDD-centered approach doesn't just lead to better code: it provides powerful feedback that will help you learn Java far more rapidly. The use of TDD as a learning mechanism is a landmark departure from conventional teaching techniques. Presents an expert overview of TDD and agile programming techniques from the Java developer's perspective Brings together practical best practices for Java, TDD, and OO design Walks through setting up Java 5.0 and writing your first program Covers all the basics, including strings, packages, and more Simplifies object-oriented concepts, including classes, interfaces, polymorphism, and inheritance Contains detailed chapters on exceptions and logging, math, I/O, reflection, multithreading, and Swing Offers seamlessly-integrated explanations of Java 5.0's key innovations, from generics to annotations Shows how TDD impacts system design, and vice versa Complements any agile or traditional methodology, including Extreme Programming (XP) The Clean Coder A Code of Conduct for Professional Programmers Pearson Education

Have you ever felt frustrated working with someone else's code? Difficult-to-maintain source code is a big problem in software development today, leading to costly delays and defects. Be part of the solution. With this practical book, you'll learn 10 easy-to-follow guidelines for delivering Java software that's easy to maintain and adapt. These guidelines have been derived from analyzing hundreds of real-world systems. Written by consultants from the Software Improvement Group (SIG), this book provides clear and concise explanations, with advice for turning the guidelines into practice. Examples for this edition are written in Java, while our companion C# book provides workable examples in that language. Write short units of code: limit the length of methods and constructors Write simple units of code: limit the number of branch points per method Write code once, rather than risk copying buggy code Keep unit interfaces small by extracting parameters into objects Separate concerns to avoid building large classes Couple architecture components loosely Balance the number and size of top-level components in your code Keep your codebase as small as possible Automate tests for your codebase Write clean code, avoiding "code smells" that indicate deeper problems

The Fit open source testing framework brings unprecedented agility to the entire development process. Fit for Developing Software shows you how to use Fit to clarify business rules, express them with concrete examples, and organize the examples into test tables that drive testing throughout the software lifecycle. Using a realistic case study, Rick Mugridge and Ward Cunningham--the creator of Fit--introduce each of Fit's underlying concepts and techniques, and explain how you can put Fit to work incrementally, with the lowest possible risk. Highlights include Integrating Fit into your development processes Using Fit to promote effective communication between businesspeople, testers, and developers Expressing business rules that define calculations, decisions, and business processes Connecting Fit tables to the system with "fixtures" that check whether tests are actually satisfied Constructing tests for code evolution, restructuring, and other changes to legacy

systems Managing the quality and evolution of tests A companion Web site (<http://fit.c2.com/>) that offers additional resources and source code

The Pragmatic Programmer

A Handbook of Agile Software Craftsmanship

A Philosophy of Software Design

Max Kanat-Alexander on simplicity, coding, and how to suck less as a programmer

Understanding Software

Java Concurrency in Practice

Elegant Coding in Python

Software legend Max Kanat-Alexander shows you how to succeed as a developer by embracing simplicity, with forty-three essays that will help you really understand the software you work with. About This Book Read and enjoy the superlative writing and insights of the legendary Max Kanat-Alexander Learn and reflect with Max on how to bring simplicity to your software design principles Discover the secrets of rockstar programmers and how to also just suck less as a programmer Who This Book Is For Understanding Software is for every programmer, or anyone who works with programmers. If life is feeling more complex than it should be, and you need to touch base with some clear thinking again, this book is for you. If you need some inspiration and a reminder of how to approach your work as a programmer by embracing some simplicity in your work again, this book is for you. If you're one of Max's followers already, this book is a collection of Max's thoughts selected and curated for you to enjoy and reflect on. If you're new to Max's work, and ready to connect with the power of simplicity again, this book is for you! What You Will Learn See how to bring simplicity and success to your programming world Clues to complexity - and how to build excellent software Simplicity and software design Principles for programmers The secrets of rockstar programmers Max's views and interpretation of the Software industry Why Programmers suck and how to suck less as a programmer Software design in two sentences What is a bug? Go deep into debugging In Detail In Understanding Software, Max Kanat-Alexander, Technical Lead for Code Health at Google, shows you how to bring simplicity back to computer programming. Max explains to you why programmers suck, and how to suck less as a programmer. There's just too much complex stuff in the world. Complex stuff can't be used, and it breaks too easily. Complexity is stupid. Simplicity is smart. Understanding Software covers many areas of programming, from how to write simple code to profound insights into programming, and then how to suck less at what you do! You'll discover the problems with software complexity, the root of its causes, and how to use simplicity to create great software. You'll examine debugging like you've never done before, and how to get a handle on being happy while working in teams. Max brings a selection of carefully crafted essays, thoughts, and advice about working and succeeding in the software industry, from his legendary blog Code Simplicity. Max has crafted forty-three essays which have the power to help you avoid complexity and embrace simplicity, so you can be a happier and more successful developer. Max's technical knowledge, insight, and kindness, has earned him code guru status, and his ideas will inspire you and help refresh your approach to the challenges of being a developer. Style and approach Understanding

Software is a new selection of carefully chosen and crafted essays from Max Kanat-Alexander's legendary blog call Code Simplicity. Max's writing and thoughts are great to sit and read cover to cover, or if you prefer you can drop in and see what you discover new every single time!

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.

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.

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.

The Clean Coder

Lean Architecture

Agile Java™

Develop reliable, maintainable, and robust JavaScript

Agile Software Development

Ten Guidelines for Future-Proof Code

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

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.

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 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!

Develop maintainable and efficient code

for Agile Software Development

Clean ABAP

The Robert C. Martin Clean Code Collection (Collection)

Clean Code in JavaScript

Clean Code in Python

Building Maintainable Software, Java Edition

Tackle inefficiencies and errors the Pythonic way Key FeaturesEnhance your coding skills using the new features introduced in Python

3.9Implement the refactoring techniques and SOLID principles in PythonApply microservices to your legacy systems by implementing practical

techniquesBook Description Experienced professionals in every field face several instances of disorganization, poor readability, and testability due to unstructured code. With updated code and revised content aligned to the new features of Python 3.9, this second edition of Clean Code in Python will provide you with all the tools you need to overcome these obstacles and manage your projects successfully. The book begins by describing the basic elements of writing clean code and how it plays a key role in Python programming. You will learn about writing efficient and readable code using the Python standard library and best practices for software design. The book discusses 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 problems by implementing software design patterns in your code. In the concluding chapter, we break down a monolithic application into a microservices-based one starting from the code as the basis for a solid platform. By the end of this clean code book, you will be proficient in applying industry-approved coding practices to design clean, sustainable, and readable real-world Python code. What you will learnSet up a productive development environment by leveraging automatic toolsLeverage the magic methods in Python to write better code, abstracting complexity away and encapsulating detailsCreate advanced object-oriented designs using unique features of Python, such as descriptorsEliminate duplicated code by creating powerful abstractions using software engineering principles of object-oriented designCreate Python-specific solutions using decorators and descriptorsRefactor code effectively with the help of unit testsBuild the foundations for solid architecture with a clean code base as its cornerstoneWho this book is for This book is designed to benefit new as well as experienced programmers. It will appeal to team leads, software architects and senior software engineers who would like to write Pythonic code to save on costs and improve efficiency. The book assumes that you have a strong understanding of programming

"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.
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Escaping monolithic hell
Decomposition strategies
Interprocess communication in a microservice architecture
Managing transactions with sagas
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External API patterns
Testing microservices: part 1
Testing microservices: part 2
Developing production-ready services
Deploying microservices
Refactoring to microservices

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.

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.

Microservices Patterns

From Journeyman to Master

Clean Craftsmanship

Fit for Developing Software

Agile Principles, Patterns, and Practices in C#

Polished Ruby Programming

The Phoenix Project

Learn algorithms for solving classic computer science problems with this concise guide covering everything from fundamental algorithms, such as sorting and searching, to modern algorithms used in machine learning and cryptography Key Features *Learn the techniques you need to know to design algorithms for solving complex problems* Become familiar with neural networks and deep learning techniques *Explore different types of algorithms and choose the right data structures for their optimal implementation* Book Description *Algorithms have always played an important role in both the science and practice of computing. Beyond*

traditional computing, the ability to use algorithms to solve real-world problems is an important skill that any developer or programmer must have. This book will help you not only to develop the skills to select and use an algorithm to solve real-world problems but also to understand how it works. You'll start with an introduction to algorithms and discover various algorithm design techniques, before exploring how to implement different types of algorithms, such as searching and sorting, with the help of practical examples. As you advance to a more complex set of algorithms, you'll learn about linear programming, page ranking, and graphs, and even work with machine learning algorithms, understanding the math and logic behind them. Further on, case studies such as weather prediction, tweet clustering, and movie recommendation engines will show you how to apply these algorithms optimally. Finally, you'll become well versed in techniques that enable parallel processing, giving you the ability to use these algorithms for compute-intensive tasks. By the end of this book, you'll have become adept at solving real-world computational problems by using a wide range of algorithms. What you will learn

- Explore existing data structures and algorithms found in Python libraries
- Implement graph algorithms for fraud detection using network analysis
- Work with machine learning algorithms to cluster similar tweets and process Twitter data in real time
- Predict the weather using supervised learning algorithms
- Use neural networks for object detection
- Create a recommendation engine that suggests relevant movies to subscribers
- Implement foolproof security using symmetric and asymmetric encryption on Google Cloud Platform (GCP)

Who this book is for This book is for programmers or developers who want to understand the use of algorithms for problem-solving and writing efficient code. Whether you are a beginner looking to learn the most commonly used algorithms in a clear and concise way or an experienced programmer looking to explore cutting-edge algorithms in data science, machine learning, and cryptography, you'll find this book useful. Although Python programming experience is a must, knowledge of data science will be helpful but not necessary.

This title focuses on the most critical aspects of software development: building robust, bug free systems, meeting deadlines, and coming in under budget. It includes artifacts,

anecdotes, and actual code from an enterprise-class XP project.

It's easy to write correct Ruby code, but to gain the fluency needed to write great Ruby code, you must go beyond syntax and absorb the "Ruby way" of thinking and problem solving. In *Eloquent Ruby*, Russ Olsen helps you write Ruby like true Rubyists do—so you can leverage its immense, surprising power. Olsen draws on years of experience internalizing the Ruby culture and teaching Ruby to other programmers. He guides you to the "Ah Ha!" moments when it suddenly becomes clear why Ruby works the way it does, and how you can take advantage of this language's elegance and expressiveness. *Eloquent Ruby* starts small, answering tactical questions focused on a single statement, method, test, or bug. You'll learn how to write code that actually looks like Ruby (not Java or C#); why Ruby has so many control structures; how to use strings, expressions, and symbols; and what dynamic typing is really good for. Next, the book addresses bigger questions related to building methods and classes. You'll discover why Ruby classes contain so many tiny methods, when to use operator overloading, and when to avoid it. Olsen explains how to write Ruby code that writes its own code—and why you'll want to. He concludes with powerful project-level features and techniques ranging from gems to Domain Specific Languages. A part of the renowned Addison-Wesley Professional Ruby Series, *Eloquent Ruby* will help you "put on your Ruby-colored glasses" and get results that make you a true believer.

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:

- 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.
- 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

Coders at Work

Crafting Code with Test-Driven Development

your journey to mastery, 20th Anniversary Edition

A hands-on guide to creating clean web applications with code examples in Java

Refactoring

Clean Code

A Novel about IT, DevOps, and Helping Your Business Win

Gain insight into how hexagonal architecture can help to keep the cost of development low over the complete lifetime of an application Key Features Explore ways to make your software flexible, extensible, and adaptable Learn new concepts that you can easily blend with your own software development style Develop the mindset of building maintainable solutions instead of taking shortcuts Book Description We would all like to build software architecture that yields adaptable and flexible software with low development costs. But, unreasonable deadlines and shortcuts make it very hard to create such an architecture. Get Your Hands Dirty on Clean Architecture starts with a discussion about the conventional layered architecture style and its disadvantages. It also talks about the advantages of the domain-centric architecture styles of Robert C. Martin's Clean Architecture and Alistair Cockburn's Hexagonal Architecture. Then, the book dives into hands-on chapters that show you how to manifest a hexagonal architecture in actual code. You'll learn in detail about different mapping strategies between the layers of a hexagonal architecture and see how to assemble the architecture elements into an application. The later chapters demonstrate how to enforce architecture boundaries. You'll also learn what shortcuts produce what types of technical debt and how, sometimes, it is a good idea to willingly take on those debts. After reading this book, you'll have all the knowledge you need to create applications using the hexagonal architecture style of web development. What you will learn Identify potential shortcomings of using a layered architecture Apply methods to enforce architecture boundaries Find out how potential shortcuts can affect the software architecture Produce arguments for when to use which style of architecture Structure your code according to the architecture Apply various types of tests that will cover each element of the architecture Who this book is for This book is for you if you care about the

architecture of the software you are building. To get the most out of this book, you must have some experience with web development. The code examples in this book are in Java. If you are not a Java programmer but can read object-oriented code in other languages, you will be fine. In the few places where Java or framework specifics are needed, they are thoroughly explained. Bill has 90 days to fix a behind-schedule IT project, or his entire department will be outsourced. Fortunately, he has the help of a prospective board member, whose "Three Ways" philosophy might just save the day.

Discover the right way to code in Python. This book provides the tips and techniques you need to produce cleaner, error-free, and eloquent Python projects. Your journey to better code starts with understanding the importance of formatting and documenting your code for maximum readability, utilizing built-in data structures and Python dictionary for improved maintainability, and working with modules and meta-classes to effectively organize your code. You will then dive deep into the new features of the Python language and learn how to effectively utilize them. Next, you will decode key concepts such as asynchronous programming, Python data types, type hinting, and path handling. Learn tips to debug and conduct unit and integration tests in your Python code to ensure your code is ready for production. The final leg of your learning journey equips you with essential tools for version management, managing live code, and intelligent code completion. After reading and using this book, you will be proficient in writing clean Python code and successfully apply these principles to your own Python projects. What You'll Learn Use the right expressions and statements in your Python code Create and assess Python Dictionary Work with advanced data structures in Python Write better modules, classes, functions, and metaclasses Start writing asynchronous Python immediately Discover new features in Python Who This Book Is For Readers with a basic Python programming knowledge who want to improve their Python programming skills by learning right way to code in Python.

"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.

How Google Tests Software

Eloquent Ruby

How to Navigate Clueless Colleagues, Lunch-Stealing Bosses, and the Rest of Your Life at Work

The Software Craftsman

With examples in Java

A Craftsman's Guide to Software Structure and Design

Hone your problem-solving skills by learning different algorithms and their implementation in Python

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 of 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.

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

"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.

A Code of Conduct for Professional Programmers

UML for Java Programmers

Get Your Hands Dirty on Clean Architecture

Clean Code Applied (Clean Coders Video Series)

Ask a Manager

Disciplines, Standards, and Ethics

Improving the Design of Existing Code

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.

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.

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

Principles, Patterns, and Practices

Clean Python

Building a Java Web Application with Software Craftsmanship

Extreme Programming in Practice