

More About Software Requirements Thorny Issues And Practical Advice

Now in its third edition, this classic guide to software requirements engineering has been fully updated with new topics, examples, and guidance. Two leaders in the requirements community have teamed up to deliver a contemporary set of practices covering the full range of requirements development and management activities on software projects. Describes practical, effective, field-tested techniques for managing the requirements engineering process from end to end. Provides examples demonstrating how requirements "good practices" can lead to fewer change requests, higher customer satisfaction, and lower development costs.

Fully updated with contemporary examples and many new practices and techniques. Describes how to apply effective requirements practices to agile projects and numerous other special project situations. Targeted to business analysts, developers, project managers, and other software project stakeholders who have a general understanding of the software development process. Shares the insights gleaned from the authors' extensive experience delivering hundreds of software-requirements training courses, presentations, and webinars. New chapters are included on specifying data requirements, writing high-quality functional requirements, and requirements reuse. Considerable depth has been added on business requirements, elicitation techniques, and nonfunctional requirements. In addition, new chapters recommend effective requirements practices for various special project situations, including enhancement and replacement, packaged solutions, outsourced, business process automation, analytics and reporting, and embedded and other real-time systems projects.

Drawing on 20+ years helping software teams succeed in nearly 150 organizations, Karl Wieggers presents 60 concise lessons and practical recommendations students can apply to all kinds of projects, regardless of application domain, technology, development lifecycle, or platform infrastructure. Embodying both wisdom for deeper understanding and guidance for practical use, this book represent an invaluable complement to the technical nuts and bolts software developers usually study. Software Development Pearls covers multiple crucial domains of project success: requirements, design, project management, culture and teamwork, quality, and process improvement. Each chapter suggests several first steps and next steps to help you begin immediately applying the author's hard-won lessons--and writing code that is more successful in every way that matters.

Demonstrates how to develop user-centered design practices and explains a methodology for institutionalizing user experience engineering.

Software development consultant Wieggers describes various formal and informal methods for conducting a peer review program, such as pair programming, team reviews, the "walkthrough," and the ad hoc review. The main part of the text is devoted to the various stages of the technique of inspection. Coverage extends to the social issues involved in critiquing the work of others and overcoming resistance to reviews. c. Book News Inc.

A comprehensive reference for developing and managing precise software requirements shares guidelines for fostering communications between business and technical teams to maximize accuracy at the request and developmental levels.

More about Software RequirementsThorny Issues and Practical Advice

Members of AVIEN (the Anti-Virus Information Exchange Network) have been setting agendas in malware management for several years: they led the way on generic filtering at the gateway, and in the sharing of information about new threats at a speed that even anti-virus companies were hard-pressed to match. AVIEN members represent the best-protected large organizations in the world, and millions of users. When they talk, security vendors listen: so should you. AVIEN's sister organization AVIEWS is an invaluable meeting ground between the security vendors and researchers who know most about malicious code and anti-malware technology, and the top security administrators of AVIEN who use those technologies in real life. This new book uniquely combines the knowledge of these two groups of experts. Anyone who is responsible for the security of business information systems should be aware of this major addition to security literature. * "Customer Power" takes up the theme of the sometimes stormy relationship between the antivirus industry and its customers, and tries to dispel some common myths. It then considers the roles of the independent researcher, the vendor-employed specialist, and the corporate security specialist. * "Stalkers on Your Desktop" considers the thorny issue of malware nomenclature and then takes a brief historical look at how we got here, before expanding on some of the malware-related problems we face today. * "A Tangled Web" discusses threats and countermeasures in the context of the World Wide Web. * "Big Bad Bots" tackles bots and botnets, arguably Public Cyber-Enemy Number One. * "Crème de la CyberCrime" takes readers into the underworld of old-school virus writing, criminal business models, and predicting future malware hotspots. * "Defense in Depth" takes a broad look at DiD in the enterprise, and looks at some specific tools and technologies. * "Perilous Outsorcery" offers sound advice on how to avoid the perils and pitfalls of outsourcing, incorporating a few horrible examples of how not to do it. * "Education in Education" offers some insights into user education from an educationalist's perspective, and looks at various aspects of security in schools and other educational establishments. * "DIY Malware Analysis" is a hands-on, hands-dirty approach to security management, considering malware analysis and forensics techniques and tools. * "Antivirus Evaluation & Testing" continues the D-I-Y theme, discussing at length some of the thorny issues around the evaluation and testing of antimalware software. * "AVIEN & AVIEWS: the Future" looks at future developments in AVIEN and AVIEWS. * Unique, knowledgeable, unbiased and hype-free commentary. * Written by members of the anti-malware community; most malware books are written by outsiders. * Combines the expertise of truly knowledgeable systems administrators and managers, with that of the researchers who are most experienced in the analysis of malicious code, and the development and maintenance of defensive programs.

Project managers, technical leads, and Windows programmers throughout the industry share an important concern--how to get their development schedules under control. Rapid Development addresses that concern head-on with philosophy, techniques, and tools that help shrink and control development schedules and keep projects moving. The style is friendly and conversational--and the content is impressive.

This concise and highly accessible textbook outlines the principles and techniques of storytelling. It is intended as a high-school and college-level introduction to the central concepts of narrative theory – concepts that will aid students in developing their competence not only in analysing and interpreting short stories and novels, but also in writing them. This textbook prioritises clarity over intricacy of theory, equipping its readers with the necessary tools to embark on further study of literature, literary theory and creative writing. Building on a 'semiotic model of narrative,' it is structured around the key elements of narratological theory, with chapters on plot, setting, characterisation, and narration, as well as on language and theme – elements which are underrepresented in existing textbooks on narrative theory. The chapter on language constitutes essential reading for those

students unfamiliar with rhetoric, while the chapter on theme draws together significant perspectives from contemporary critical theory (including feminism and postcolonialism). This textbook is engaging and easily navigable, with key concepts highlighted and clearly explained, both in the text and in a full glossary located at the end of the book. Throughout the textbook the reader is aided by diagrams, images, quotes from prominent theorists, and instructive examples from classical and popular short stories and novels (such as Jane Austen's *Pride and Prejudice*, Franz Kafka's 'The Metamorphosis,' J. K. Rowling's *Harry Potter*, or Dostoyevsky's *The Brothers Karamazov*, amongst many others). *Prose Fiction: An Introduction to the Semiotics of Narrative* can either be incorporated as the main textbook into a wider syllabus on narrative theory and creative writing, or it can be used as a supplementary reference book for readers interested in narrative fiction. The textbook is a must-read for beginning students of narratology, especially those with no or limited prior experience in this area. It is of especial relevance to English and Humanities major students in Asia, for whom it was conceived and written.

For those who believe that there must be a more agile and efficient way for people to get things done, here is a brilliantly discursive, thought-provoking book about the leadership and management process that is changing the way we live. In the future, historians may look back on human progress and draw a sharp line designating "before Scrum" and "after Scrum." Scrum is that ground-breaking. It already drives most of the world's top technology companies. And now it's starting to spread to every domain where leaders wrestle with complex projects. If you've ever been startled by how fast the world is changing, Scrum is one of the reasons why. Productivity gains of as much as 1200% have been recorded, and there's no more lucid – or compelling – explainer of Scrum and its bright promise than Jeff Sutherland, the man who put together the first Scrum team more than twenty years ago. The thorny problem Jeff began tackling back then boils down to this: people are spectacularly bad at doing things with agility and efficiency. Best laid plans go up in smoke. Teams often work at cross purposes to each other. And when the pressure rises, unhappiness soars. Drawing on his experience as a West Point-educated fighter pilot, biometrics expert, early innovator of ATM technology, and V.P. of engineering or CTO at eleven different technology companies, Jeff began challenging those dysfunctional realities, looking for solutions that would have global impact. In this book you'll journey to Scrum's front lines where Jeff's system of deep accountability, team interaction, and constant iterative improvement is, among other feats, bringing the FBI into the 21st century, perfecting the design of an affordable 140 mile per hour/100 mile per gallon car, helping NPR report fast-moving action in the Middle East, changing the way pharmacists interact with patients, reducing poverty in the Third World, and even helping people plan their weddings and accomplish weekend chores. Woven with insights from martial arts, judicial decision making, advanced aerial combat, robotics, and many other disciplines, Scrum is consistently riveting. But the most important reason to read this book is that it may just help you achieve what others consider unachievable – whether it be inventing a trailblazing technology, devising a new system of education, pioneering a way to feed the hungry, or, closer to home, a building a foundation for your family to thrive and prosper.

Summary The best programming techniques are often the shortest and simplest—the hacks. In this compact and infinitely useful book, Android expert Carlos Sessa delivers 50 hacks that will save you time, stretch your skills, and maybe even make you smile. About this Book Hacks. Clever programming techniques to solve thorny little problems. Ten lines of code that save you two days of work. The little gems you learn from the old guy in the next cube or from the geniuses on Stack Overflow. That's just what you'll find in this compact and useful book. The name *50 Android Hacks* says it all. Ranging from the mundane to the spectacular, each self-contained, fully illustrated hack is just a couple of pages long and includes annotated source code. These practical techniques are organized into twelve collections covering layout, animations, patterns, and more. What's Inside Hack 3 Creating a custom ViewGroup Hack 8 Slideshow using the Ken Burns effect Hack 20 The Model-View-Presenter pattern Hack 23 The SyncAdapter pattern Hack 31 Aspect-oriented programming in Android Hack 34 Using Scala inside Android Hack 43 Batching database operations Plus 43 more hacks! Most hacks work with Android 2.x and greater. Version-specific hacks are clearly marked. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Author Carlos Sessa is a passionate professional Android developer. He's active on Stack Overflow and is an avid hack collector. Table of Contents Working your way around layouts Creating cool animations View tips and tricks Tools Patterns Working with lists and adapters Useful libraries Interacting with other languages Ready-to-use snippets Beyond database basics Avoiding fragmentation Building tools

Have you ever delivered software that satisfied all of the project specifications, but failed to meet any of the customers' expectations? Without formal, verifiable requirements--and a system for managing them--the result is often a gap between what developers think they're supposed to build and what customers think they're going to get. Too often, lessons about software requirements engineering processes are formal or academic, and not of value to real-world, professional development teams. In *MORE ABOUT SOFTWARE REQUIREMENTS: THORNY ISSUES AND PRACTICAL ADVICE*, the author of *Software Requirements, Second Edition*, describes even more practical techniques for gathering and managing the software requirements that help you meet project specifications and customer expectations. A leading speaker and consultant in the field of requirements engineering, Karl Wiegers takes questions raised by other professional software developers and analysts as a basis for the practical solutions and best practices offered in this guide. Succinct and immediately useful, this book is a must-have for developers and analysts.

This is the digital version of the printed book (Copyright © 1996). Written in a remarkably clear style, *Creating a Software Engineering Culture* presents a comprehensive approach to improving the quality and effectiveness of the software development process. In twenty chapters spread over six parts, Wiegers promotes the tactical changes required to support process improvement and high-quality software development. Throughout the text, Wiegers identifies scores of culture builders and culture killers, and he offers a wealth of references to resources for the software engineer, including seminars, conferences, publications, videos, and on-line information. With case studies on process improvement and software metrics programs and an entire part on action planning (called "What to Do on Monday"), this practical book guides the reader in applying the concepts to real life. Topics include software culture concepts, team behaviors, the five dimensions of a software project, recognizing achievements, optimizing customer involvement, the project champion model, tools for sharing the vision, requirements traceability matrices, the capability maturity model, action planning, testing, inspections, metrics-based project estimation, the cost of quality, and much more! Principles from Part 1 Never let your boss or your customer talk you into doing a bad job. People need to feel the work they do is appreciated. Ongoing education is every team member's responsibility. Customer involvement is the most critical factor in software quality. Your greatest challenge is sharing the vision of the final product with the customer. Continual improvement of your software development process is both possible and essential. Written software development procedures can help build a shared culture of best practices. Quality is the top priority; long-term productivity is a natural consequence of high quality. Strive to have a peer, rather than a customer, find a defect. A key to software quality is to iterate many times on all development steps except coding: Do this once. Managing bug reports and change requests is essential to controlling quality and maintenance. If you measure what you do, you can learn to do it better. You can't change everything at once. Identify those changes that will yield the greatest benefits, and begin to implement them next Monday. Do what makes sense; don't resort to dogma.

"I spend much time helping organizations capture requirements and even more time helping them recover from not capturing requirements. Many of them have gone through some motions regarding requirements as if they were sleepworking. It's time to wake up and do it right-and this book is going to be their alarm clock." -Jerry Weinberg, author of numerous books on productivity enhancement "In today's complex, fast-

paced software development environment, collaboration—the intense peer-to-peer conversations that result in products, decisions, and knowledge sharing—is absolutely essential to success. But all too often, attempts to collaborate degenerate into agonizing meetings or ineffectual bull sessions. Ellen's wonderful book will help you bridge the gap—turning the agony of meetings into the ecstasy of effective collaboration." -Jim Highsmith, a pioneer in adaptive software development methods "Requirements by Collaboration presents a wealth of practical tools and techniques for facilitating requirements development workshops. It is suitable—no, essential reading—for requirements workshop facilitators. It will help both technical people and customer representatives participate in these critical contributions to software success." -Karl Wieggers, Principal Consultant, Process Impact, author of Software Requirements "The need for this particular book, at this particular time, is crystal clear. We have entered a new age where software development must be viewed as a form of business problem solving. That means direct user participation in developing "requirements," or more accurately, in jointly working the business problem. That, in turn, means facilitated sessions. In this book, Ellen Gottesdiener provides a wealth of practical ideas for ensuring that you have exactly the right stuff for this all-important area of professional art." -Ronald G. Ross, Principal, Business Rule Solutions, LLC, Executive Editor, www.BRCommunity.com "Gottesdiener's years of software development experience coupled with her straight-forward writing style make her book a perfect choice for either a senior developer or a midlevel project manager. In addition to her technical experience, her knowledge of group dynamics balance the book by educating the reader on how to manage conflict and personality differences within a requirements team—something that is missing from most requirements textbooks...It is a required "handbook" that will be referred to again and again." -Kay Christian, ebusiness Consultant, Conifer, Colorado "Requirements by Collaboration is a "must read" for any system stakeholder. End users and system analysts will learn the significant value they can add to the systems development process. Management will learn the tremendous return they may receive from making a modest time/people investment in facilitated sessions. Facilitators will discover ways to glean an amazing amount of high-quality information in a relatively brief time." -Russ Schwartz, Computer System Quality Consultant, Global Biotechnology Firm "In addition to showing how requirements are identified, evaluated, and confirmed, Ellen provides important guidance based on her own real-world experience for creating and managing the workshop environment in which requirements are generated. This book is an engaging and invaluable resource for project teams and sponsors, both business and IT, who are committed to achieving results in the most productive manner possible." -Hal Thilmony, Senior Manager, Business Process Improvement (Finance), CiscoSystems, Inc. "Project managers should read this book for assistance with planning the requirements process. Experienced facilitators will enrich their knowledge. New facilitators can use this book to get them up to speed and become more effective in less time." -Rob Stroober, Competence Development Manager and Project Manager, Deloitte & Touche Consultdata, The Netherlands "While many books discuss the details of software requirement artifacts (for example, use cases), Ellen's new book zeros in on effective workshop techniques and tools used to gather the content of these artifacts. As a pioneer in requirements workshops, she shares her real-life experiences in a comprehensive and easy-to-read book with many helpful examples and diagrams." -Bill Bird, Aera Energy LLC "Requirements by Collaboration is absolutely full of guidance on the most effective ways to use workshops in requirements capture. This book will help workshop owners and facilitators to determine and gain agreement on a sound set of requirements, which will form a solid foundation for the development work that is to follow." -Jennifer Stapleton, Software Process Consultant and author of DSDM: The Method in Practice "This book provides an array of techniques within a clear, structured process, along with excellent examples of how and when to use them. It's an excellent, practical, and really useful handbook written by a very experienced author!" -Jean-Anne Kirk, Director DSDM Consortium and IAF Professional Development "Ellen has written a detailed, comprehensive, and practical handbook for facilitating groups in gathering requirements. The processes she outlines give the facilitator tools to bring together very different perspectives from stakeholders elegantly and with practical, useable results." -Jo Nelson, Principal, ICA Associates, Inc., Chair, IAF (2001-2002) Requirements by Collaboration: Workshops for Defining Needs focuses on the human side of software development—how well we work with our customers and teammates. Experience shows that the quality and degree of participation, communication, respect, and trust among all the stakeholders in a project can strongly influence its success or failure. Ellen Gottesdiener points out that such qualities are especially important when defining user requirements and she shows in this book exactly what to do about that fact. Gottesdiener shows specifically how to plan and conduct requirements workshops. These carefully organized and facilitated meetings bring business managers, technical staff, customers, and users into a setting where, together, they can discover, evolve, validate, verify, and agree upon their product needs. Not only are their requirements more effectively defined through this collaboration, but the foundation is laid for good teamwork throughout the entire project. Other books focus on how to build the product right. Requirements by Collaboration focuses instead on what must come first—the right product to build.

The sole survivor on a desperate, last-chance mission to save both humanity and the earth, Ryland Grace is hurtled into the depths of space when he must conquer an extinction-level threat to our species.

Successfully Implement High-Value Configuration Management Processes in Any Development Environment As IT systems have grown increasingly complex and mission-critical, effective configuration management (CM) has become critical to an organization's success. Using CM best practices, IT professionals can systematically manage change, avoiding unexpected problems introduced by changes to hardware, software, or networks. Now, today's best CM practices have been gathered in one indispensable resource showing you how to implement them throughout any agile or traditional development organization. Configuration Management Best Practices is practical, easy to understand and apply, and fully reflects the day-to-day realities faced by practitioners. Bob Aiello and Leslie Sachs thoroughly address all six "pillars" of CM: source code management, build engineering, environment configuration, change control, release engineering, and deployment. They demonstrate how to implement CM in ways that support software and systems development, meet compliance rules such as SOX and SAS-70, anticipate emerging standards such as IEEE/ISO 12207, and integrate with modern frameworks such as ITIL, COBIT, and CMMI. Coverage includes Using CM to meet business objectives, contractual requirements, and compliance rules Enhancing quality and productivity through lean processes and "just-in-time" process improvement Getting off to a good start in organizations without effective CM Implementing a Core CM Best Practices Framework that supports the entire development lifecycle Mastering the "people" side of CM: rightsizing processes, overcoming resistance, and understanding workplace psychology Architecting applications to take full advantage of CM best practices Establishing effective IT controls and compliance Managing tradeoffs and costs and avoiding expensive pitfalls Configuration Management Best Practices is the essential resource for everyone concerned with CM: from CTOs and CIOs to development, QA, and project managers and software engineers to analysts, testers, and compliance professionals.

This book shows you how to build object information models that resolve complex, subtle and conflicting application requirements; lead to simplified state and process models; and can be translated into a reliable implementation. Plus practical advice on how to write useful model descriptions; how to get the most out of binary, reflexive, associative and supertype relationships; and how to compare different model solutions of the same problem and pick the best one.

This is the digital version of the printed book (Copyright © 2000). Derek Hatley and Imtiaz Pirbhai—authors of Strategies for Real-Time System Specification—join with influential consultant Peter Hruschka to present a much anticipated update to their widely implemented Hatley/Pirbhai methods. Process for System Architecture and Requirements Engineering introduces a new approach that is particularly useful for multidisciplinary system development: It applies equally well to all technologies and thereby provides a common language for developers in widely differing disciplines. The Hatley-Pirbhai-Hruschka approach (H/H/P) has another important feature: the coexistence of the requirements and architecture methods and of the corresponding models they produce. These two models are kept separate, but the

approach fully records their ongoing and changing interrelationships. This feature is missing from virtually all other system and software development methods and from CASE tools that only automate the requirements model. System managers, system architects, system engineers, and managers and engineers in all of the diverse engineering technologies will benefit from this comprehensive, pragmatic text. In addition to its models of requirements and architecture and of the development process itself, the book uses in-depth case studies of a hospital monitoring system and of a multidisciplinary groundwater analysis system to illustrate the principles. Compatibility Between the H/H/P Methods and the UML: The Hatley/Pirbhai architecture and requirements methods—described in *Strategies for Real-Time System Specification*—have been widely used for almost two decades in system and software development. Now known as the Hatley/Hruschka/Pirbhai (H/H/P) methods, they have always been compatible with object-oriented software techniques, such as the UML, by defining architectural elements as classes, objects, messages, inheritance relationships, and so on. In *Process for System Architecture and Requirements Engineering*, that compatibility is made more specific through the addition of message diagrams, inheritance diagrams, and new notations that go with them. In addition, state charts, while never excluded, are now specifically included as a representation of sequential machines. These additions make definition of the system/software boundary even more straightforward, while retaining the clear separation of requirements and design at the system levels that is a hallmark of the H/H/P methods—not shared by most OO techniques. Once the transition to software is made, the developer is free to continue using the H/H/P methods, or to use the UML or any other software-specific technique.

The First Expert Guide to Static Analysis for Software Security! Creating secure code requires more than just good intentions. Programmers need to know that their code will be safe in an almost infinite number of scenarios and configurations. Static source code analysis gives users the ability to review their work with a fine-toothed comb and uncover the kinds of errors that lead directly to security vulnerabilities. Now, there's a complete guide to static analysis: how it works, how to integrate it into the software development processes, and how to make the most of it during security code review. Static analysis experts Brian Chess and Jacob West look at the most common types of security defects that occur today. They illustrate main points using Java and C code examples taken from real-world security incidents, showing how coding errors are exploited, how they could have been prevented, and how static analysis can rapidly uncover similar mistakes. This book is for everyone concerned with building more secure software: developers, security engineers, analysts, and testers.

A classic treatise that defined the field of applied demand analysis, *Consumer Demand in the United States: Prices, Income, and Consumption Behavior* is now fully updated and expanded for a new generation. Consumption expenditures by households in the United States account for about 70% of America's GDP. The primary focus in this book is on how households adjust these expenditures in response to changes in price and income. Econometric estimates of price and income elasticities are obtained for an exhaustive array of goods and services using data from surveys conducted by the Bureau of Labor Statistics, providing a better understanding of consumer demand. Practical models for forecasting future price and income elasticities are also demonstrated. Fully revised with over a dozen new chapters and appendices, the book revisits the original Taylor-Houthakker models while examining new material as well, such as the use of quantile regression and the stationarity of consumer preference. It also explores the emerging connection between neuroscience and consumer behavior, integrating the economic literature on demand theory with psychology literature. The most comprehensive treatment of the topic to date, this volume will be an essential resource for any researcher, student or professional economist working on consumer behavior or demand theory, as well as investors and policymakers concerned with the impact of economic fluctuations.

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

Provides solutions to a variety of problems associated with the software development process.

Written by the inventor of the Bassett Frame Technology, this authoritative volume explains how cost-effectiveness of large I.S. departments can be improved 50-fold by implementing highly effective software engineering techniques. It identifies those techniques that work well together, and explains why they do.

Pioneering software engineer Capers Jones has written the first and only definitive history of the entire software engineering industry. Drawing on his extraordinary vantage point as a leading practitioner for several decades, Jones reviews the entire history of IT and software engineering, assesses its impact on society, and previews its future. One decade at a time, Jones assesses emerging trends and companies, winners and losers, new technologies, methods, tools, languages, productivity/quality benchmarks, challenges, risks, professional societies, and more. He quantifies both beneficial and harmful software inventions; accurately estimates the size of both the US and global software industries; and takes on "unexplained mysteries" such as why and how programming languages gain and lose popularity.

No matter how much instruction you've had on managing software requirements, there's no substitute for experience. Too often, lessons about requirements engineering processes lack the no-nonsense guidance that supports real-world solutions.

Complementing the best practices presented in his book, *Software Requirements, Second Edition*, requirements engineering authority Karl Wiegers tackles even more of the real issues head-on in this book. With straightforward, professional advice and practical solutions based on actual project experiences, this book answers many of the tough questions raised by industry professionals. From strategies for estimating and working with customers to the nuts and bolts of documenting requirements, this essential companion gives developers, analysts, and managers the cosmic truths that apply to virtually every software development project. Discover how to:

- Make the business case for investing in better requirements practices
- Generate estimates using three specific techniques
- Conduct inquiries to elicit meaningful business and user requirements
- Clearly document project scope
- Implement use cases, scenarios, and user stories effectively
- Improve inspections and peer reviews
- Write requirements that avoid ambiguity

Data is getting bigger and more complex by the day, and so are your choices in handling it. Explore some of the most cutting-edge databases available - from a traditional relational database to newer NoSQL approaches - and make informed decisions about challenging data storage problems. This is the only comprehensive guide to the world of NoSQL databases, with in-depth practical and conceptual introductions to seven different technologies: Redis, Neo4J, CouchDB, MongoDB, HBase, Postgres, and DynamoDB. This second edition includes a new chapter on DynamoDB and updated content for each chapter. While relational databases such as MySQL remain as relevant as ever, the alternative, NoSQL paradigm has opened up new horizons in performance and scalability and changed the way we approach data-centric problems. This book presents the essential concepts behind each database alongside hands-on examples that make each technology come alive. With each database, tackle a real-world problem that highlights the concepts and features that make it shine. Along the way, explore five database models - relational, key/value, columnar, document, and graph - from the perspective of challenges faced by real applications. Learn how MongoDB and CouchDB are strikingly different, make your applications faster with Redis and more connected with Neo4J, build a cluster of HBase servers using cloud services such as Amazon's Elastic MapReduce, and more. This new edition brings a brand new chapter on DynamoDB, updated code samples and exercises, and a more up-to-date account of each database's feature set. Whether you're a programmer building the next big thing, a data scientist seeking solutions to thorny problems, or a technology enthusiast venturing into new territory, you will find something to inspire you in this book. What You Need: You'll need a *nix shell (Mac OS or Linux preferred, Windows users will need Cygwin), Java 6 (or greater), and Ruby 1.8.7 (or greater). Each chapter will list the downloads required for that database.

Often referred to as the "black art" because of its complexity and uncertainty, software estimation is not as difficult or puzzling as people think. In fact, generating accurate estimates is straightforward—once you understand the art of creating them. In his highly anticipated book, acclaimed author Steve McConnell unravels the mystery to successful software estimation—distilling academic information and real-world experience into a practical guide for working software professionals. Instead of arcane treatises and rigid modeling techniques, this guide highlights a proven set of procedures, understandable formulas, and heuristics that individuals and development teams can apply to their projects to help achieve estimation proficiency. Discover how to: Estimate schedule and cost—or estimate the functionality that can be delivered within a given time frame Avoid common software estimation mistakes Learn estimation techniques for you, your team, and your organization * Estimate specific project activities—including development, management, and defect correction Apply estimation approaches to any type of project—small or large, agile or traditional Navigate the shark-infested political waters that surround project estimates When many corporate software projects are failing, McConnell shows you what works for successful software estimation.

"Mastering the Requirements Process: Getting Requirements Right" sets out an industry-proven process for gathering and verifying requirements, regardless of whether you work in a traditional or agile development environment. In this sweeping update of the bestselling guide, the authors show how to discover precisely what the customer wants and needs, in the most efficient manner possible.

Have you ever noticed how many products appear to be designed by someone who has never used a product of that kind before? Nearly everyone has encountered websites, software apps, cars, appliances, and other products that made them wonder what the designers were thinking. The Thoughtless Design of Everyday Things presents more than 150 examples of products that violate nine fundamental design principles, along with suggestions for improving many of the flawed user interfaces and other design problems. These examples of thoughtless design reveal 70 specific lessons that designers ought to heed as they craft the user experience. This book describes numerous specific practices for enhancing product usability through usage-centered design strategies. You'll also see more than 40 products that exhibit particularly thoughtful designs, the kinds of products that surprise and delight users. Whether you're a designer, a product development manager, or a thoughtful and curious consumer, you'll find The Thoughtless Design of Everyday Things engaging, informative, and insightful.

THE INSTANT NEW YORK TIMES BESTSELLER SHORTLISTED FOR THE FT & MCKINSEY BUSINESS BOOK OF THE YEAR AWARD 2021 'An intricately detailed, deeply sourced and reported history of the origins and growth of the cyberweapons market . . . Hot, propulsive . . . Sets out from the start to scare us out of our complacency' New York Times 'A terrifying exposé' The Times 'Part John le Carré and more parts Michael Crichton . . . Spellbinding' New Yorker Zero day: a software bug that allows a hacker to break in and scamper through the world's computer networks invisibly until discovered. One of the most coveted tools in a spy's arsenal, a zero day has the power to tap into any iPhone, dismantle safety controls at a chemical plant and shut down the power in an entire nation – just ask the Ukraine. Zero days are the blood diamonds of the security trade, pursued by nation states, defense contractors, cybercriminals, and security defenders alike. In this market, governments aren't regulators; they are clients – paying huge sums to hackers willing to turn over gaps in the Internet, and stay silent about them. This Is How They Tell Me the World Ends is cybersecurity reporter Nicole Perlroth's discovery, unpacked. A intrepid journalist unravels an opaque, code-driven market from the outside in – encountering spies, hackers, arms dealers, mercenaries and a few unsung heroes along the way. As the stakes get higher and higher in the rush to push the world's critical infrastructure online, This Is How They Tell Me the World Ends is the urgent and alarming discovery of one of the world's most extreme threats.

Since its inception in 1968, software engineering has undergone numerous changes. In the early years, software development was organized using the waterfall model, where the focus of requirements engineering was on a frozen requirements document, which formed the basis of the subsequent design and implementation process. Since then, a lot has changed: software has to be developed faster, in larger and distributed teams, for pervasive as well as large-scale applications, with more flexibility, and with ongoing maintenance and quick release cycles. What do these ongoing developments and changes imply for the future of requirements engineering and software design? Now is the time to rethink the role of requirements and design for software intensive systems in transportation, life sciences, banking, e-government and other areas. Past assumptions need to be questioned, research and education need to be rethought. This book is based on the Design Requirements Workshop, held June 3-6, 2007, in Cleveland, OH, USA, where leading researchers met to assess the current state of affairs and define new directions. The papers included were carefully reviewed and selected to give an overview of the current state of the art as well as an outlook on probable future challenges and priorities. After a general introduction to the workshop and the related NSF-funded project, the contributions are organized in topical sections on fundamental concepts of design; evolution and the fluidity of design; quality and value-based requirements; requirements intertwining; and adapting requirements practices in different domains.

It may surprise you to learn that Microsoft employs as many software testers as developers. Less surprising is the emphasis the

company places on the testing discipline—and its role in managing quality across a diverse, 150+ product portfolio. This book—written by three of Microsoft’s most prominent test professionals—shares the best practices, tools, and systems used by the company’s 9,000-strong corps of testers. Learn how your colleagues at Microsoft design and manage testing, their approach to training and career development, and what challenges they see ahead. Most important, you’ll get practical insights you can apply for better results in your organization. Discover how to: Design effective tests and run them throughout the product lifecycle Minimize cost and risk with functional tests, and know when to apply structural techniques Measure code complexity to identify bugs and potential maintenance issues Use models to generate test cases, surface unexpected application behavior, and manage risk Know when to employ automated tests, design them for long-term use, and plug into an automation infrastructure Review the hallmarks of great testers—and the tools they use to run tests, probe systems, and track progress efficiently Explore the challenges of testing services vs. shrink-wrapped software

Organizations continue to experience project issues associated with poor performance on requirements-related activities. This guide will give you the tools you need to excel in requirements development and management — components of the larger field of business analysis and a critical competence for project, program and portfolio management. Requirements Management: A Practice Guide is a bridge between A Guide to the Project Management Body of Knowledge (PMBOK® Guide), which speaks to requirements development and management from a high-level perspective, and Business Analysis for Practitioners: A Practice Guide, which describes requirements development and management at a detailed and practical level. This practice guide is the middle ground, offering project managers, program managers, teams members and stakeholders the opportunity to learn more about the requirements process

Apply best practices for capturing, analyzing, and implementing software requirements through visual models—and deliver better results for your business. The authors—experts in eliciting and visualizing requirements—walk you through a simple but comprehensive language of visual models that has been used on hundreds of real-world, large-scale projects. Build your fluency with core concepts—and gain essential, scenario-based context and implementation advice—as you progress through each chapter. Transcend the limitations of text-based requirements data using visual models that more rigorously identify, capture, and validate requirements Get real-world guidance on best ways to use visual models—how and when, and ways to combine them for best project outcomes Practice the book’s concepts as you work through chapters Change your focus from writing a good requirement to ensuring a complete system

Zero in on key project-initiation tasks—and build a solid foundation for successful software development. In this concise guide, critically-acclaimed author Karl E. Wieggers fills a void in project management literature by focusing on the activities that are essential—but often overlooked—for launching any project. Drawing on his extensive experience, Karl shares lessons learned, proven practices, and tools for getting your project off to the right start—and steering it to ultimate success. Lay a foundation for project success—discover how to: Effectively charter a project Define meaningful criteria for project success and product releases Negotiate achievable commitments for project teams and stakeholders Identify and document potential barriers to success—and manage project risks Apply the Wideband Delphi method for more accurate estimation Measure project performance and avoid common metrics traps Systematically apply lessons learned to future projects Companion Web site includes: Worksheets from inside the book Project document templates Resources for project initiation and process improvement

Looks at a successful software project and provides details for software development for clients using object-oriented design and programming.

This book constitutes the proceedings of the 25th International Working Conference on Requirements Engineering - Foundation for Software Quality, REFSQ 2019, held in Essen, Germany, in March 2019. The 13 full papers and 9 short papers in this volume were carefully reviewed and selected from 66 submissions. The papers were organized in topical sections named: Automated Analysis; Making Sense of Requirements; Tracelink Quality; Requirements Management (Research Previews); From Vision to Specification; Automated Analysis (Research Previews); Requirements Monitoring; Open Source; Managing Requirements Knowledge at a Large Scale; in Situ/Walkthroughs (Research previews).

Automated testing is a cornerstone of agile development. An effective testing strategy will deliver new functionality more aggressively, accelerate user feedback, and improve quality. However, for many developers, creating effective automated tests is a unique and unfamiliar challenge. xUnit Test Patterns is the definitive guide to writing automated tests using xUnit, the most popular unit testing framework in use today. Agile coach and test automation expert Gerard Meszaros describes 68 proven patterns for making tests easier to write, understand, and maintain. He then shows you how to make them more robust and repeatable--and far more cost-effective. Loaded with information, this book feels like three books in one. The first part is a detailed tutorial on test automation that covers everything from test strategy to in-depth test coding. The second part, a catalog of 18 frequently encountered "test smells," provides trouble-shooting guidelines to help you determine the root cause of problems and the most applicable patterns. The third part contains detailed descriptions of each pattern, including refactoring instructions illustrated by extensive code samples in multiple programming languages.

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.

Learn proven, real-world techniques for specifying software requirements with this practical reference. It details 30 requirement “patterns” offering realistic examples for situation-specific guidance for building effective software requirements. Each pattern explains what a requirement needs to convey, offers potential questions to ask, points out potential pitfalls, suggests extra requirements, and other advice. This book also provides guidance on how to write other kinds of information that belong in a requirements specification, such as assumptions,

a glossary, and document history and references, and how to structure a requirements specification. A disturbing proportion of computer systems are judged to be inadequate; many are not even delivered; more are late or over budget. Studies consistently show one of the single biggest causes is poorly defined requirements: not properly defining what a system is for and what it's supposed to do. Even a modest contribution to improving requirements offers the prospect of saving businesses part of a large sum of wasted investment. This guide emphasizes this important requirement need—determining what a software system needs to do before spending time on development. Expertly written, this book details solutions that have worked in the past, with guidance for modifying patterns to fit individual needs—giving developers the valuable advice they need for building effective software requirements

Publisher Fact Sheet A concise, hands-on approach to managing & improving the critical requirements process in software development.

[Copyright: 5e48eb702b5b7998741cd1085aba5228](#)