# Specification By Example

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Fifty Quick Ideas to Improve Your User Stories



## HOWARD JACK

**Exploring Requirements** Addison-Wesley Professional
Crispin and Gregory define agile testing and illustrate the tester's role with examples from real agile teams. They teach you how to use the agile testing quadrants to identify what testing is needed, who should do it, and what tools might help. The book chronicles an agile software development iteration from the viewpoint of a tester and explains the seven key success factors of agile testing.
**Living Documentation** Neuri Consulting Llp
Summary BDD in Action teaches you the Behavior-Driven Development model and shows you how to integrate it into your existing development process. First you'll learn how to apply BDD to requirements analysis to define features that focus your development efforts on underlying business goals. Then, you'll discover how to automate acceptance criteria and use tests to guide and report on the development process. Along the way, you'll apply BDD principles at the coding level to write more maintainable and better documented code. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology You can't write good software if you don't understand what it's supposed to do. Behavior-Driven Development (BDD) encourages teams to use conversation and concrete examples to build up a shared understanding of how an application should work and which features really matter. With an emerging body of best practices and sophisticated new tools that assist in requirement analysis

and test automation, BDD has become a hot, mainstream practice. About the Book BDD in Action teaches you BDD principles and practices and shows you how to integrate them into your existing development process, no matter what language you use. First, you'll apply BDD to requirements analysis so you can focus your development efforts on underlying business goals. Then, you'll discover how to automate acceptance criteria and use tests to guide and report on the development process. Along the way, you'll apply BDD principles at the coding level to write more maintainable and better documented code. No prior experience with BDD is required. What's Inside BDD theory and practice How BDD will affect your team BDD for acceptance, integration, and unit testing Examples in Java, .NET, JavaScript, and more Reporting and living documentation About the Author John Ferguson Smart is a specialist in BDD, automated testing, and software lifecycle development optimization. Table of Contents PART 1: FIRST STEPS Building software that makes a difference BDD—the whirlwind tour PART 2: WHAT DO I WANT? DEFINING REQUIREMENTS USING BDD Understanding the business goals: Feature Injection and related techniques Defining and illustrating features From examples to executable specifications Automating the scenarios PART 3: HOW DO I BUILD IT? CODING THE BDD WAY From executable specifications to rock-solid automated acceptance tests Automating acceptance criteria for the UI layer Automating acceptance criteria for non-UI requirements BDD and unit testing PART 4: TAKING BDD FURTHER Living Documentation: reporting and project management BDD in the build process

*Specification by Example* "O'Reilly Media, Inc."

Building software often seems harder than it ought to be. It takes longer than expected, the software's functionality and performance are not as wonderful as hoped, and the software is not particularly malleable or easy to maintain. It does not have to be that way. This book is about programming, and the role that formal specifications can play in making programming easier and programs better. The intended audience is practicing programmers and students in undergraduate or basic graduate courses in software engineering or formal methods. To make the book accessible to such an audience, we have not presumed that the reader has formal training in mathematics or computer science. We have, however, presumed some programming experience. The roles of fonnal specifications Designing software is largely a matter of combining, inventing, and planning the implementation of abstractions. The goal of design is to describe a set of modules that interact with one another in simple, well defined ways. If this is achieved, people will be able to work independently on different modules, and yet the modules will fit together to accomplish the larger purpose. In addition, during program maintenance it will be possible to modify a module without affecting many others. Abstractions are intangible. But they must somehow be captured and communicated. That is what specifications are for. Specification gives us a way to say what an abstraction is, independent of any of its implementations.

**Assessing Speaking** Addison-Wesley Professional

CUDA is a computing architecture designed to facilitate the development of parallel programs. In conjunction with a comprehensive software platform, the CUDA Architecture enables

programmers to draw on the immense power of graphics processing units (GPUs) when building high-performance applications. GPUs, of course, have long been available for demanding graphics and game applications. CUDA now brings this valuable resource to programmers working on applications in other domains, including science, engineering, and finance. No knowledge of graphics programming is required—just the ability to program in a modestly extended version of C. CUDA by Example, written by two senior members of the CUDA software platform team, shows programmers how to employ this new technology. The authors introduce each area of CUDA development through working examples. After a concise introduction to the CUDA platform and architecture, as well as a quick-start guide to CUDA C, the book details the techniques and trade-offs associated with each key CUDA feature. You'll discover when to use each CUDA C extension and how to write CUDA software that delivers truly outstanding performance. Major topics covered include Parallel programming Thread cooperation Constant memory and events Texture memory Graphics interoperability Atomics Streams CUDA C on multiple GPUs Advanced atomics Additional CUDA resources All the CUDA software tools you'll need are freely available for download from NVIDIA. http://developer.nvidia.com/object/cuda-by-example.html
Foundations of Algebraic Specification and Formal Software Development Rockport Publishers
In this work, over 40 pioneering implementers share their experiences and best practices in 28 case studies. Drawing on their insights, you can avoid the pitfalls associated with test automation, and achieve powerful results on every metric you care about: quality, cost, time to market, usability, and value.
**Experiences of Test Automation** Addison-Wesley Professional
Summary Writing Great Specifications is an example-rich tutorial that teaches you how to write good Gherkin specification documents that take advantage of the benefits of specification by example. Foreword written by Gojko Adzic. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The clearest way to communicate a software specification is to provide examples of how it should work. Turning these story-based descriptions into a well-organized dev plan is another matter. Gherkin is a human-friendly, jargon-free language for documenting a suite of examples as an executable specification. It fosters efficient collaboration between business and dev teams, and it's an excellent foundation for the specification by example (SBE) process. About the Book Writing Great Specifications teaches you how to capture executable software designs in Gherkin following the SBE method. Written for both developers and non-technical team members, this practical book starts with collecting individual feature stories and organizing them into a full, testable spec. You'll learn to choose the best scenarios, write them in a way that anyone can understand, and ensure they can be easily updated by anyone.management. What's Inside Reading and writing Gherkin Designing story-based test cases Team Collaboration Managing a suite of Gherkin documents About the Reader Primarily written for developers and architects, this book is accessible to any member of a software design team. About the Author Kamil Nicieja is a seasoned engineer, architect, and project manager with deep expertise in Gherkin and SBE. Table of

contents Introduction to specification by example and Gherkin PART 1 - WRITING EXECUTABLE SPECIFICATIONS WITH EXAMPLES The specification layer and the automation layer Mastering the Given-When-Then template The basics of scenario outlines Choosing examples for scenario outlines The life cycle of executable specifications Living documentation PART 2 - MANAGING SPECIFICATION SUITES Organizing scenarios into a specification suite Refactoring features into abilities and business needs Building a domain-driven specification suite Managing large projects with bounded contexts

*Scrum for Hardware* Simon and Schuster

This book provides foundations for software specification and formal software development from the perspective of work on algebraic specification, concentrating on developing basic concepts and studying their fundamental properties. These foundations are built on a solid mathematical basis, using elements of universal algebra, category theory and logic, and this mathematical toolbox provides a convenient language for precisely formulating the concepts involved in software specification and development. Once formally defined, these notions become subject to mathematical investigation, and this interplay between mathematics and software engineering yields results that are mathematically interesting, conceptually revealing, and practically useful. The theory presented by the authors has its origins in work on algebraic specifications that started in the early 1970s, and their treatment is comprehensive. This book contains five kinds of material: the requisite mathematical foundations; traditional algebraic specifications; elements of the theory of institutions; formal specification and development; and proof methods. While the book is self-contained, mathematical maturity and familiarity with the problems of software engineering is required; and in the examples that directly relate to programming, the authors assume acquaintance with the concepts of functional programming. The book will be of value to researchers and advanced graduate students in the areas of programming and theoretical computer science.

Natural Language Annotation for Machine Learning Springer Science & Business Media

Summary Specification by Example is an emerging practice for creating software based on realistic examples, bridging the communication gap between business stakeholders and the dev teams building the software. In this book, author Gojko Adzic distills interviews with successful teams worldwide, sharing how they specify, develop, and deliver software, without defects, in short iterative delivery cycles. About the Technology Specification by Example is a collaborative method for specifying requirements and tests. Seven patterns, fully explored in this book, are key to making the method effective. The method has four main benefits: it produces living, reliable documentation; it defines expectations clearly and makes validation efficient; it reduces rework; and, above all, it assures delivery teams and business stakeholders that the software that's built is right for its purpose. About the Book This book distills from the experience of leading teams worldwide effective ways to specify, test, and deliver software in short, iterative delivery cycles. Case studies in this book range from small web startups to large financial institutions, working in many processes including XP, Scrum, and Kanban. This book is

written for developers, testers, analysts, and business people working together to build great software. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. What's Inside Common process patterns How to avoid bad practices Fitting SBE in your process 50+ case studies ========== ======== Table of Contents Part 1 Getting started Part 2 Key process patterns Part 3 Case studies Key benefits Key process patterns Living documentation Initiating the changes Deriving scope from goals Specifying collaboratively Illustrating using examples Refining the specification Automating validation without changing specifications Validating frequently Evolving a documentation system uSwitch RainStor Iowa Student Loan Sabre Airline Solutions ePlan Services Songkick Concluding thoughts

**User-Centred Requirements Engineering** Boom Koninklijke Uitgevers

Test Driven .NET Development with FitNesse takes you on a journey through the wonderful world of FitNesse, a great web-based tool for software acceptance testing. FitNesse enables software developers and business people to build a shared understanding of the domain and helps produce software that is genuinely fit for purpose.

*Effective Unit Testing* Addison-Wesley Professional

Your customers want rock-solid, bug-free software that does exactly what they expect it to do. Yet they can't always articulate their ideas clearly enough for you to turn them into code. You need Cucumber: a testing, communication, and requirements tool-all rolled into one. All the code in this book is updated for Cucumber 2.4, Rails 5, and RSpec 3.5. Express your customers' wild ideas as a set of clear, executable specifications that everyone on the team can read. Feed those examples into Cucumber and let it guide your development. Build just the right code to keep your customers happy. You can use Cucumber to test almost any system or any platform. Get started by using the core features of Cucumber and working with Cucumber's Gherkin DSL to describe-in plain language-the behavior your customers want from the system. Then write Ruby code that interprets those plain-language specifications and checks them against your application. Next, consolidate the knowledge you've gained with a worked example, where you'll learn more advanced Cucumber techniques, test asynchronous systems, and test systems that use a database. Recipes highlight some of the most difficult and commonly seen situations the authors have helped teams solve. With these patterns and techniques, test Ajax-heavy web applications with Capybara and Selenium, REST web services, Ruby on Rails applications, command-line applications, legacy applications, and more. Written by the creator of Cucumber and the co-founders of Cucumber Ltd., this authoritative guide will give you and your team all the knowledge you need to start using Cucumber with confidence. What You Need: Windows, Mac OS X (with XCode) or Linux, Ruby 1.9.2 and upwards, Cucumber 2.4, Rails 5, and RSpec 3.5

*JUnit Recipes* SAGE Publications

Property-based testing helps you create better, more solid tests with little code. By using the PropEr framework in both Erlang and Elixir, this book teaches you how to automatically generate test cases, test stateful programs, and change how you design your

software for more principled and reliable approaches. You will be able to better explore the problem space, validate the assumptions you make when coming up with program behavior, and expose unexpected weaknesses in your design. PropEr will even show you how to reproduce the bugs it found. With this book, you will be writing efficient property-based tests in no time. Most tests only demonstrate that the code behaves how the developer expected it to behave, and therefore carry the same blind spots as their authors when special conditions or edge cases show up. Learn how to see things differently with property tests written in PropEr. Start with the basics of property tests, such as writing stateless properties, and using the default generators to generate test cases automatically. More importantly, learn how to think in properties. Improve your properties, write custom data generators, and discover what your code can or cannot do. Learn when to use property tests and when to stick with example tests with real-world sample projects. Explore various testing approaches to find the one that's best for your code. Shrink failing test cases to their simpler expression to highlight exactly what breaks in your code, and generate highly relevant data through targeted properties. Uncover the trickiest bugs you can think of with nearly no code at all with two special types of properties based on state transitions and finite state machines. Write Erlang and Elixir properties that generate the most effective tests you'll see, whether they are unit tests or complex integration and system tests. What You Need Basic knowledge of Erlang, optionally ElixirFor Erlang tests: Erlang/OTP >= 20.0, with Rebar >= 3.4.0For Elixir tests: Erlang/OTP >= 20.0, Elixir >= 1.5.0

**The Rust Programming Language (Covers Rust 2018)**
Prentice Hall
The official book on the Rust programming language, written by the Rust development team at the Mozilla Foundation, fully updated for Rust 2018. The Rust Programming Language is the official book on Rust: an open source systems programming language that helps you write faster, more reliable software. Rust offers control over low-level details (such as memory usage) in combination with high-level ergonomics, eliminating the hassle traditionally associated with low-level languages. The authors of The Rust Programming Language, members of the Rust Core Team, share their knowledge and experience to show you how to take full advantage of Rust's features--from installation to creating robust and scalable programs. You'll begin with basics like creating functions, choosing data types, and binding variables and then move on to more advanced concepts, such as: Ownership and borrowing, lifetimes, and traits Using Rust's memory safety guarantees to build fast, safe programs Testing, error handling, and effective refactoring Generics, smart pointers, multithreading, trait objects, and advanced pattern matching Using Cargo, Rust's built-in package manager, to build, test, and document your code and manage dependencies How best to use Rust's advanced compiler with compiler-led programming techniques You'll find plenty of code examples throughout the book, as well as three chapters dedicated to building complete projects to test your learning: a number guessing game, a Rust implementation of a command line tool, and a multithreaded server. New to this edition: An extended section on Rust macros, an expanded chapter on modules, and appendixes on Rust

development tools and editions.

**Writing Great Specifications** No Starch Press

An essential primer for students and first-stop reference for professionals, The Fashion Design Reference & Specification Booktakes the fashion designer through the entire design process, from conceiving a garment to marketing it. This valuable handbook contains the information and ideas essential to planning and executing fashion projects of every scale and distills them in an easy-to-use format that is compact enough to slip into a tote. Linking six central phases in the cycle of fashion—research, editing, design, construction, connection, and evolution—The Fashion Design Reference & Specification Book helps designers develop effective strategies for building a cohesive collection and communicating their vision. The Reference & Specification Book series from Rockport Publishers offers students and practicing professionals in a range of creative industries must-have information in their area of specialty in an up-to-date, concise handbook.

**User Stories Applied** Addison-Wesley Professional

The Go-To Resource for Large-Scale Organizations to Be Agile Rather than asking, “How can we do agile at scale in our big complex organization?” a different and deeper question is, “How can we have the same simple structure that Scrum offers for the organization, and be agile at scale rather than do agile?” This profound insight is at the heart of LeSS (Large-Scale Scrum). In Large-Scale Scrum: More with LeSS, Craig Larman and Bas Vodde have distilled over a decade of experience in large-scale LeSS adoptions towards a simpler organization that delivers more flexibility with less complexity, more value with less waste, and more purpose with less prescription. Targeted to anyone involved in large-scale development, Large-Scale Scrum: More with LeSS, offers straight-to-the-point guides for how to be agile at scale, with LeSS. It will clearly guide you to Adopt LeSS Structure a large development organization for customer value Clarify the role of management and Scrum Master Define what your product is, and why Be a great Product Owner Work with multiple whole-product focused feature teams in one Sprint that produces a shippable product Coordinate and integrate between teams Work with multi-site teams

**Property-Based Testing with PropEr, Erlang, and Elixir** Pragmatic Bookshelf

This book takes teachers and language testers through the research on the assessment of speaking.

*Agile Testing* Simon and Schuster

Each model is described and guidelines are given for generating these models from executable specifications. Finally, the Spec C methodology is demonstrated on an industrial-size example. The design community is now entering the system level of abstraction era and Spec C is the enabling element to achieve a paradigm shift in design culture needed for system/product design and manufacturing.".

**Impact Mapping** Cambridge University Press

Summary Effective Unit Testing is written to show how to write good tests—tests that are concise and to the point, expressive, useful, and maintainable. Inspired by Roy Osherove's bestselling The Art of Unit Testing, this book focuses on tools and practices specific to the Java world. It introduces you to emerging techniques like behavior-driven development and specification by

example, and shows you how to add robust practices into your toolkit. About Testing Test the components before you assemble them into a full application, and you'll get better software. For Java developers, there's now a decade of experience with well-crafted tests that anticipate problems, identify known and unknown dependencies in the code, and allow you to test components both in isolation and in the context of a full application. About this Book Effective Unit Testing teaches Java developers how to write unit tests that are concise, expressive, useful, and maintainable. Offering crisp explanations and easy-to-absorb examples, it introduces emerging techniques like behavior-driven development and specification by example. Programmers who are already unit testing will learn the current state of the art. Those who are new to the game will learn practices that will serve them well for the rest of their career. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. About the Author Lasse Koskela is a coach, trainer, consultant, and programmer. He hacks on open source projects, helps companies improve their productivity, and speaks frequently at conferences around the world. Lasse is the author of Test Driven, also published by Manning. What's Inside A thorough introduction to unit testing Choosing best-of-breed tools Writing tests using dynamic languages Efficient test automation Table of Contents PART 1 FOUNDATIONS The promise of good tests In search of good Test doubles PART 2 CATALOG Readability Maintainability Trustworthiness PART 3 DIVERSIONS Testable design Writing tests in other JVM languages Speeding up test execution

**The Fashion Design Reference & Specification Book**

Provoking Thoughts

Thoroughly reviewed and eagerly anticipated by the agile community, User Stories Applied offers a requirements process that saves time, eliminates rework, and leads directly to better software. The best way to build software that meets users' needs is to begin with "user stories": simple, clear, brief descriptions of functionality that will be valuable to real users. In User Stories Applied, Mike Cohn provides you with a front-to-back blueprint for writing these user stories and weaving them into your development lifecycle. You'll learn what makes a great user story, and what makes a bad one. You'll discover practical ways to gather user stories, even when you can't speak with your users. Then, once you've compiled your user stories, Cohn shows how to organize them, prioritize them, and use them for planning, management, and testing. User role modeling: understanding what users have in common, and where they differ Gathering stories: user interviewing, questionnaires, observation, and workshops Working with managers, trainers, salespeople and other "proxies" Writing user stories for acceptance testing Using stories to prioritize, set schedules, and estimate release costs Includes end-of-chapter practice questions and exercises User Stories Applied will be invaluable to every software developer, tester, analyst, and manager working with any agile method: XP, Scrum... or even your own home-grown approach.

*Running Serverless* Springer Science & Business Media

Master BDD to deliver higher-value software more quickly To develop high-value products quickly, software development teams need better ways to collaborate. Agile methods like Scrum

and Kanban are helpful, but they’re not enough. Teams need better ways to work inside each sprint or work item. Behavior-driven development (BDD) adds just enough structure for product experts, testers, and developers to collaborate more effectively. Drawing on extensive experience helping teams adopt BDD, Richard Lawrence and Paul Rayner show how to explore changes in system behavior with examples through conversations, how to capture your examples in expressive language, and how to flow the results into effective automated testing with Cucumber. Where most BDD resources focus on test automation, this guide goes deep into how BDD changes team collaboration and what that collaboration looks like day to day. Concrete examples and practical advice will prepare you to succeed with BDD, whatever your context or role. · Learn how to collaborate better by using concrete examples of system behavior · Identify your project’s meaningful increment of value so you’re always working on something important · Begin experimenting with BDD slowly and at low risk · Move smoothly from informal examples to automated tests in Cucumber · Use BDD to deliver more frequently with greater visibility · Make Cucumber scenarios more expressive to ensure you’re building the right thing · Grow a Cucumber suite that acts as high-value living documentation · Sustainably work with complex scenario data · Get beyond the “mini-waterfalls” that often arise on Scrum teams

*Test Driven .NET Development with FitNesse* Simon and Schuster With Acceptance Test-Driven Development (ATDD), business customers, testers, and developers can collaborate to produce testable requirements that help them build higher quality software more rapidly. However, ATDD is still widely misunderstood by many practitioners. ATDD by Example is the first practical, entry-level, hands-on guide to implementing and successfully applying it. ATDD pioneer Markus Gärtner walks readers step by step through deriving the right systems from business users, and then implementing fully automated, functional tests that accurately reflect business requirements, are intelligible to stakeholders, and promote more effective development. Through two end-to-end case studies, Gärtner demonstrates how ATDD can be applied using diverse frameworks and languages. Each case study is accompanied by an extensive set of artifacts, including test automation classes, step definitions, and full sample implementations. These realistic examples illuminate ATDD's fundamental principles, show how ATDD fits into the broader development process, highlight tips from Gärtner's extensive experience, and identify crucial pitfalls to avoid. Readers will learn to Master the thought processes associated with successful ATDD implementation Use ATDD with Cucumber to describe software in ways businesspeople can understand Test web pages using ATDD tools Bring ATDD to Java with the FitNesse wiki-based acceptance test framework Use examples more effectively in Behavior-Driven Development (BDD) Specify software collaboratively through innovative workshops Implement more user-friendly and collaborative test automation Test more cleanly, listen to test results, and refactor tests for greater value If you're a tester, analyst, developer, or project manager, this book offers a concrete foundation for achieving real benefits with ATDD now-and it will help you reap even more value as you gain experience.

Best Sellers - Books :
• My Butt Is So Christmassy! By Dawn Mcmillan
• Our Class Is A Family (our Class Is A Family & Our School Is A Family)
• Twisted Hate (twisted, 3)
• A Letter From Your Teacher: On The First Day Of School
• Twisted Hate (twisted, 3) By Ana Huang
• The Courage To Be Free: Florida's Blueprint For America's Revival
• Rich Dad Poor Dad: What The Rich Teach Their Kids About Money That The Poor And Middle Class Do Not! By Robert T. Kiyosaki
• The 5 Love Languages: The Secret To Love That Lasts By Gary Chapman
• Love You Forever By Robert Munsch
• A Court Of Thorns And Roses Paperback Box Set (5 Books)