

# WORKING EFFECTIVELY WITH UNIT TESTS



Jay Fields

foreword by Michael Feathers

# **Working Effectively With Unit Tests**

Jason Porter, Alex Soto, Andrew Gumbrecht

### **Working Effectively With Unit Tests:**

Working Effectively with Unit Tests Jay Fields, 2014-12-09 This book details Jay Fields strong opinions on the best way to test while acknowledging alternative styles and various contexts in which tests are written Whether you prefer Jay Fields style or not this book will help you write better Unit Tests From the Preface Over a dozen years ago I read Refactoring for the first time it immediately became my bible While Refactoring isn t about testing it explicitly states If you want to refactor the essential precondition is having solid tests At that time if Refactoring deemed it necessary I unquestionably complied That was the beginning of my quest to create productive unit tests Throughout the 12 years that followed reading Refactoring I made many mistakes learned countless lessons and developed a set of guidelines that I believe make unit testing a productive use of programmer time This book provides a single place to examine those mistakes pass on the lessons learned and provide direction for those that want to test in a way that I ve found to be the most productive The book does touch on some theory and definition but the main purpose is to show you how to take tests that are causing you pain and turn them into tests that you re happy to work with Working Effectively with Legacy Code Michael Feathers, 2004-09-22 Get more out of your legacy systems more performance functionality reliability and manageability Is your code easy to change Can you get nearly instantaneous feedback when you do change it Do you understand it If the answer to any of these questions is no you have legacy code and it is draining time and money away from your development efforts In this book Michael Feathers offers start to finish strategies for working more effectively with large untested legacy code bases This book draws on material Michael created for his renowned Object Mentor seminars techniques Michael has used in mentoring to help hundreds of developers technical managers and testers bring their legacy systems under control The topics covered include Understanding the mechanics of software change adding features fixing bugs improving design optimizing performance Getting legacy code into a test harness Writing tests that protect you against introducing new problems Techniques that can be used with any language or platform with examples in Java C C and C Accurately identifying where code changes need to be made Coping with legacy systems that aren t object oriented Handling applications that don t seem to have any structure This book also includes a catalog of twenty four dependency breaking techniques that help you work with program elements in isolation and Testing Java Microservices Jason Porter, Alex Soto, Andrew Gumbrecht, 2018-08-03 Summary make safer changes Testing Java Microservices teaches you to implement unit and integration tests for microservice systems running on the JVM You ll work with a microservice environment built using Java EE WildFly Swarm and Docker You ll learn how to increase your test coverage and productivity and gain confidence that your system will work as you expect Purchase of the print book includes a free eBook in PDF Kindle and ePub formats from Manning Publications About the Technology Microservice applications present special testing challenges Even simple services need to handle unpredictable loads and distributed message based designs pose unique security and performance concerns These challenges increase when you throw in

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Software Engineering Made Easy Marco Gähler, 2025-07-04 Learn how to write good code for humans This user friendly book is a comprehensive guide to writing clear and bug free code It integrates established programming principles and

outlines expert driven rules to prevent you from over complicating your code You ll take a practical approach to programming applicable to any programming language and explore useful advice and concrete examples in a concise and compact form Sections on Single Responsibility Principle naming levels of abstraction testing logic if else interfaces and more reinforce how to effectively write low complexity code While many of the principles addressed in this book are well established it offers you a single resource Software Engineering Made Easy modernizes classic software programming principles with quick tips relevant to real world applications Most importantly it is written with a keen awareness of how humans think The end result is human readable code that improves maintenance collaboration and debugging critical for software engineers working together to make purposeful impacts in the world What You Will Learn Understand the essence of software engineering Simplify your code using expert techniques across multiple languages See how to structure classes Manage the complexity of your code by using level abstractions Review test functions and explore various types of testing Who This Book Is For Intermediate programmers who have a basic understanding of coding but are relatively new to the workforce Applicable to any programming language but proficiency in C or Python is preferred Advanced programmers may also benefit from learning how to deprogram bad habits and de complicate their code The Art of Agile Development James Shore, Shane Warden, 2021-10-12 Most companies developing software employ something they call Agile But there s widespread misunderstanding of what Agile is and how to use it If you want to improve your software development team s agility this comprehensive guidebook s clear concrete and detailed guidance explains what to do and why and when to make trade offs In this thorough update of the classic Agile how to guide James Shore provides no nonsense advice on Agile adoption planning development delivery and management taken from over two decades of Agile experience He brings the latest ideas from Extreme Programming Scrum Lean DevOps and more into a cohesive whole Learn how to successfully bring Agile development to your team and organization or discover why Agile might not be for you This book explains how to Improve agility create the conditions necessary for Agile to succeed and scale in your organization Focus on value work as a team understand priorities provide visibility and improve continuously Deliver software reliably share ownership decrease development costs evolve designs and deploy continuously Optimize value take ownership of product plans budgets and experiments and produce market leading software Clean C++ Stephan Roth, 2017-09-27 Write maintainable extensible and durable software with modern C This book is a must for every developer software architect or team leader who is interested in good C code and thus also wants to save development costs If you want to teach yourself about writing clean C Clean C is exactly what you need It is written to help C developers of all skill levels and shows by example how to write understandable flexible maintainable and efficient C code Even if you are a seasoned C developer there are nuggets and data points in this book that you will find useful in your work If you don't take care with your code you can produce a large messy and unmaintainable beast in any programming language However C projects in particular are prone to be messy and tend to

slip into bad habits Lots of C code that is written today looks as if it was written in the 1980s It seems that C developers have been forgotten by those who preach Software Craftsmanship and Clean Code principles The Web is full of bad but apparently very fast and highly optimized C code examples with cruel syntax that completely ignores elementary principles of good design and well written code This book will explain how to avoid this scenario and how to get the most out of your C code You ll find your coding becomes more efficient and importantly more fun What You ll Learn Gain sound principles and rules for clean coding in C Carry out test driven development TDD Discover C design patterns and idioms Apply these design patterns Who This Book Is For Any C developer and software engineer with an interest in producing better code <u>Testing</u>, <u>Third Edition</u> Roy Osherove, Vladimir Khorikov, 2024-03-26 The art of unit testing is more than just learning the right collection of tools and practices It's about understanding what makes great tests tick finding the right strategy for each unique situation and knowing what to do when the testing process gets messy This book delivers insights and advice that will transform the way you test your software The art of unit testing third edition shows you how to create readable and maintainable tests It goes well beyond basic test creation into organization wide test strategies troubleshooting working with legacy code and merciless refactoring You ll love the practical examples and familiar scenarios that make testing come alive as you read This third edition has been updated with techniques specific to object oriented functional and modular coding The Problem with Software Adam Barr, 2018-10-23 An industry insider explains why styles The examples use JavaScript there is so much bad software and why academia doesn t teach programmers what industry wants them to know Why is software so prone to bugs So vulnerable to viruses Why are software products so often delayed or even canceled Is software development really hard or are software developers just not that good at it In The Problem with Software Adam Barr examines the proliferation of bad software explains what causes it and offers some suggestions on how to improve the situation For one thing Barr points out academia doesn t teach programmers what they actually need to know to do their jobs how to work in a team to create code that works reliably and can be maintained by somebody other than the original authors As the size and complexity of commercial software have grown the gap between academic computer science and industry has widened It's an open secret that there is little engineering in software engineering which continues to rely not on codified scientific knowledge but on intuition and experience Barr who worked as a programmer for more than twenty years describes how the industry has evolved from the era of mainframes and Fortran to today s embrace of the cloud He explains bugs and why software has so many of them and why today s interconnected computers offer fertile ground for viruses and worms The difference between good and bad software can be a single line of code and Barr includes code to illustrate the consequences of seemingly inconsequential choices by programmers Looking to the future Barr writes that the best prospect for improving software engineering is the move to the cloud When software is a service and not a product companies will have more incentive to make it good rather than good enough to ship Theory and Engineering of Dependable

Computer Systems and Networks Wojciech Zamojski, Jacek Mazurkiewicz, Jarosław Sugier, Tomasz Walkowiak, Janusz Kacprzyk, 2021-05-26 This book contains papers on selected aspects of dependability analysis in computer systems and networks which were chosen for discussion during the 16th DepCoS RELCOMEX conference held in Wroc aw Poland from June 28 to July 2 2021 Their collection will be a valuable source material for scientists researchers practitioners and students who are dealing with design analysis and engineering of computer systems and networks and must ensure their dependable operation Being probably the most complex technical systems ever engineered by man and also the most dynamically evolving ones organization of contemporary computer systems cannot be interpreted only as structures built on the basis of unreliable technical resources Their evaluation must take into account a specific blend of interacting people their needs and behaviours networks together with mobile properties cloud organization Internet of Everything etc and a large number of users dispersed geographically and constantly producing an unconceivable number of applications Ever growing number of research methods being continuously developed for dependability analyses apply the newest techniques of artificial and computational intelligence Selection of papers in these proceedings illustrates diversity of multi disciplinary topics which are considered in present day dependability explorations

# Decoding Working Effectively With Unit Tests: Revealing the Captivating Potential of Verbal Expression

In a time characterized by interconnectedness and an insatiable thirst for knowledge, the captivating potential of verbal expression has emerged as a formidable force. Its capability to evoke sentiments, stimulate introspection, and incite profound transformations is genuinely awe-inspiring. Within the pages of "Working Effectively With Unit Tests," a mesmerizing literary creation penned by a celebrated wordsmith, readers embark on an enlightening odyssey, unraveling the intricate significance of language and its enduring effect on our lives. In this appraisal, we shall explore the book is central themes, evaluate its distinctive writing style, and gauge its pervasive influence on the hearts and minds of its readership.

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