How Google Tests Software

NOVAK DESTINEY

Software Testing Foundations Pragmatic Bookshelf
This classroom-tested new edition features expanded coverage of the basics and test automation frameworks, with new exercises and examples.
Python Unit Test Automation Springer
Now that we're moving from a product economy to a digital service economy, software is becoming critical for navigating our everyday lives. The quality of your service depends on how well it helps customers accomplish goals and satisfy needs. Service quality is not about designing capabilities, but about making—and keeping—promises to customers. To help you improve customer satisfaction and create positive brand experiences, this pragmatic book introduces a transdisciplinary approach to digital service delivery. Designing a resilient service today requires a unified effort across front-office and back-office functions and technical and business perspectives. You'll learn how make IT a full partner in the ongoing conversations you have with your customers. Take a unique customer-centered approach to the entire service delivery lifecycle Apply this perspective across development, operations, QA, design, project management, and marketing Implement a specific quality assurance methodology that unifies those disciplines Use the methodology to achieve true resilience, not just stability

Hands-On Mobile App Testing Springer
Plenty of software testing books tell you how to test well; this one tells you how to do it while decreasing your testing budget. A series of essays written by some of the leading minds in software testing, How to Reduce the Cost of Software Testing provides tips, tactics, and techniques to help readers accelerate the testing process, improve the performance of the test teams, and lower costs. The distinguished team of contributors—that includes corporate test leaders, best paper authors, and keynote speakers from leading software testing conferences—supply concrete suggestions on how to find cost savings without sacrificing outcome. Detailing strategies that testers can immediately put to use to reduce costs, the book explains how to make testing nimble, how to remove bottlenecks in the testing process, and how to locate and track defects efficiently and effectively. Written in language accessible to non-technical executives, as well as those doing the testing, the book considers the latest advances in test automation, ideology, and technology. Rather than present the perspective of one or two experts in software testing, it supplies the wide-ranging perspectives of a team of experts to help ensure your team can deliver a completed test cycle in less time, with more confidence, and reduced costs.
Handbook of Automated Scoring Morgan Kaufmann
This book explains the steps necessary to write manual accessibility tests and convert them into automated selenium-based accessibility tests to run part of regression test packs. If you are searching a topic on Google or buying a product online, web accessibility is a basic need. If a web page is easier to access when using a mouse and complex to navigate with keyboard, this is extremely difficult for users with disabilities. Web Accessibility

Testing is a most important testing practice for customers facing web applications. This book explains the steps necessary to write manual accessibility tests and convert them into automated selenium-based accessibility tests to run part of regression test packs. WCAG and Section 508 guidelines are considered across the book while explaining the test design steps. Software testers with accessibility testing knowledge are in high demand at large organizations since the need to do manual and automated accessibility testing is growing rapidly. This book illustrates the types of accessibility testing with test cases and code examples.

App Quality Addison-Wesley Professional

CD-ROM contains: Canned HEAT v.2.0 -- Holodeck Lite v. 1.0.

Reduce Risk and Increase Confidence with Exploratory Testing John Wiley & Sons

Uncover surprises, risks, and potentially serious bugs with exploratory testing. Rather than designing all tests in advance, explorers design and execute small, rapid experiments, using what they learned from the last little experiment to inform the next. Learn essential skills of a master explorer, including how to analyze software to discover key points of vulnerability, how to design experiments on the fly, how to hone your observation skills, and how to focus your efforts. Software is full of surprises. No matter how careful or skilled you are, when you create software it can behave differently than you intended. Exploratory testing mitigates those risks. Part 1 introduces the core, essential skills of a master explorer. You'll learn to craft charters to guide your exploration, to observe what's really happening (hint: it's harder than it sounds), to identify interesting variations, and to determine what expected behavior should be when exercising software in unexpected ways. Part 2 builds on that foundation. You'll learn how to explore by varying interactions, sequences, data, timing, and configurations. Along the way you'll see how to incorporate analysis techniques like state modeling, data modeling, and defining context diagrams into your explorer's arsenal. Part 3 brings the techniques back into the context of a software project. You'll apply the skills and techniques in a variety of contexts and integrate exploration into the development cycle from the very beginning. You can apply the techniques in this book to any kind of software. Whether you work on embedded systems, Web applications, desktop applications, APIs, or something else, you'll find this book contains a wealth of concrete and practical advice about exploring your software to discover its capabilities, limitations, and risks.

Lessons Learned from Programming Over Time Jason Arbon

Software testing is indispensable and is one of the most discussed topics in software development today. Many companies address this issue by assigning a dedicated software testing phase towards the end of their development cycle. However, quality cannot be tested into a buggy application. Early and continuous unit testing has been shown to be crucial for high quality software and low defect rates. Yet current books on testing ignore the developer's point of view and give little guidance on how to bring the overwhelming amount of testing theory into practice. Unit Testing in Java represents a practical introduction to unit testing for software developers. It introduces the basic test-first approach and then discusses a large number of special issues and problem cases. The book instructs developers through each step and motivates them to explore further. Shows how the discovery and avoidance of software errors is a demanding and creative activity in its own right and can build confidence early in a project. Demonstrates how automated tests can detect the unwanted effects of small changes in code within the entire system. Discusses how testing works with persistency, concurrency, distribution, and web applications. Includes a discussion of testing with C++ and Smalltalk.

Intelligent Systems and Applications Pearson Education

Software testing can be regarded as an art, a craft, and a science. The practical, step-by-step approach presented in this book provides a bridge between these different viewpoints. A single worked example runs throughout, with consistent use of test automation. Each testing technique is introduced in the context of this example, helping students see its strengths and weaknesses. The technique is then explained in more detail, providing a deeper understanding of underlying principles. Finally the limitations of each technique are demonstrated by inserting faults, giving learners concrete examples of when each technique succeeds or fails in finding faults. Coverage includes black-box testing, white-box testing, random testing, unit testing, object-oriented testing, and application testing. The authors also emphasise the process of applying the techniques, covering the steps of analysis, test design, test implementation, and interpretation of results. The book's web site has programming exercises and Java source code for all examples.

How to Reduce the Cost of Software Testing Pearson

This book presents Proceedings of the 2021 Intelligent Systems Conference which is a remarkable collection of chapters covering a wider range of topics in areas of intelligent systems and artificial intelligence and their applications to the real world. The conference attracted a total of 496 submissions from many academic pioneering researchers, scientists, industrial engineers, and students from all around the world. These submissions underwent a double-blind peer-review process. Of the total submissions, 180 submissions have been selected to be included in these proceedings. As we witness exponential growth of computational intelligence in several directions and use of intelligent systems in everyday applications, this book is an ideal resource for reporting latest innovations and future of AI. The chapters include theory and application on all aspects of artificial intelligence, from classical to intelligent scope. We hope that readers find the book interesting and valuable; it provides the state-of-the-art intelligent methods and techniques for solving real-world problems along with a vision of the future research.

Introduction to Software Engineering Addison-Wesley Professional

This handbook provides a unique and in-depth survey of the current state-of-the-art in software engineering, covering its major topics, the conceptual genealogy of each subfield, and discussing future research directions. Subjects include foundational areas of software engineering (e.g. software processes, requirements engineering, software architecture, software testing, formal methods, software maintenance) as well as emerging areas (e.g., self-adaptive systems, software engineering in the cloud, coordination technology). Each chapter includes an introduction to central concepts and principles, a guided tour of seminal papers and key contributions, and promising future research directions. The authors of the individual chapters are all acknowledged experts in their field and include many who have pioneered the techniques and technologies discussed. Readers will find an authoritative and concise review of each subject, and will also learn how software engineering technologies have evolved and are likely to develop in the years to come. This book will be especially useful for researchers who are new to software engineering, and for practitioners seeking to enhance their skills and knowledge.

How Google Tests Software How Google Tests Software

How Google Tests SoftwareAddison-Wesley Professional

The Software Test Engineer's Handbook Business Expert Press

Today, software engineers need to know not only how to program effectively but also how to develop proper engineering practices to make their codebase sustainable and healthy. This book emphasizes this difference between programming and software engineering. How can software engineers manage a living codebase that evolves and responds to changing requirements and demands over the length of its life? Based on their experience at Google, software engineers Titus Winters and Hyrum Wright, along with technical writer Tom Manshreck, present a candid and insightful look at how some of the world's leading practitioners construct and maintain software. This book covers Google's unique engineering culture, processes, and tools and how these aspects contribute to the effectiveness of an engineering organization. You'll explore three fundamental principles that software organizations should keep in mind when designing, architecting, writing, and maintaining code: How time affects the sustainability of software and how to make your code resilient over time How scale affects the viability of software practices within an engineering organization What trade-offs a typical engineer needs to make when evaluating design and development decisions

Software Engineering at Google Addison-Wesley

Looks at the process, tools, and systems used by Microsoft's software testers.

Lessons Learned from Programming Over Time Trafford Publishing

The First Complete Guide to Mobile App Testing and Quality Assurance: Start-to-Finish Testing Solutions for Both Android and iOS Today, mobile apps must meet rigorous standards of reliability, usability, security, and performance. However, many mobile developers have limited testing experience, and mobile platforms raise new challenges even for long-time testers. Now, Hands-On Mobile App Testing provides the solution: an end-to-end blueprint for thoroughly testing any iOS or Android mobile app. Reflecting his extensive real-life experience, Daniel Knott offers practical guidance on everything from mobile test planning to automation. He provides expert insights on mobile-centric issues, such as testing sensor inputs, battery usage, and hybrid apps, as well as advice on coping with device and platform fragmentation, and more. If you want top-quality apps as much as your users do, this guide will help you deliver them. You'll find it invaluable–whether you're part of a large development team or you are the team. Learn how to Establish your optimal mobile test and launch strategy Create tests that reflect your customers, data networks, devices, and business models Choose and implement the best Android and iOS testing tools Automate testing while ensuring comprehensive coverage Master both functional and nonfunctional approaches to testing Address mobile's rapid release cycles Test on emulators, simulators, and actual devices Test native, hybrid, and Web mobile apps Gain value from crowd and cloud testing (and understand their limitations) Test database access and local storage Drive value from testing throughout your app lifecycle Start testing wearables, connected homes/cars, and Internet of Things devices

How Google Tests Software Cengage Learning

"Automated scoring engines [...] require a careful balancing of the contributions of technology, NLP, psychometrics, artificial intelligence, and the learning sciences. The present handbook is evidence that the theories, methodologies, and underlying technology that surround automated scoring have reached maturity, and that there is a growing acceptance of these technologies among experts and the public." From the Foreword by Alina von Davier, ACTNext Senior Vice President Handbook of Automated Scoring: Theory into Practice provides a scientifically grounded overview of the key research efforts required to move automated scoring systems into operational practice. It examines the field of automated scoring from the viewpoint of related scientific fields serving as its foundation, the latest developments of computational methodologies utilized in automated scoring, and several large-scale real-world applications of automated scoring for complex learning and assessment systems. The book is organized into three parts that cover (1) theoretical foundations, (2) operational methodologies, and (3) practical illustrations, each with a commentary. In addition, the handbook includes an introduction and synthesis chapter as well as a cross-chapter glossary.

The Automated Testing Handbook Addison-Wesley Professional

DevOps for Developers delivers a practical, thorough introduction to approaches, processes and tools to foster collaboration between software development and operations. Efforts of Agile software development often end at the transition phase from development to operations. This book covers the delivery of software, this means "the last mile", with lean practices for shipping the software to production and making it available to the end users, together with the integration of operations with earlier project phases (elaboration, construction, transition). DevOps for Developers describes how to streamline the software delivery process and improve the cycle time (that is the time from inception to delivery). It will enable you to deliver software faster, in better quality and more aligned with individual requirements and basic conditions. And above all, work that is aligned with the "DevOps" approach makes even more fun! Provides patterns and toolchains to integrate software development and operations Delivers an one-stop shop for kick-starting with DevOps Provides guidance how to streamline the software delivery process

15th International Conference, XP 2014, Rome, Italy, May 26-30, 2014, Proceedings Momentum Press

This book contains the refereed proceedings of the 15th International Conference on Agile Software Development, XP 2014, held in Rome, Italy, in May 2014. Because of the wide application of agile approaches in industry, the need for collaboration between academics and practitioners has increased in order to develop the body of knowledge available to support managers, system engineers, and software engineers in their managerial/economic and architectural/project/technical decisions. Year after year, the XP conference has facilitated such improvements and provided evidence on the advantages of agile methodologies by examining the latest theories, practical applications, and implications of agile and lean methods. The 15 full papers, seven short papers, and four experience reports accepted for XP 2014 were selected from 59 submissions and are organized in sections on: agile development, agile challenges and contracting, lessons learned and agile maturity, how to evolve software engineering teaching, methods and metrics, and lean development.

Unit Testing in Java Educreation Publishing

To build high-quality software, you need to write testable code. That's harder than it seems: It requires insights drawn from arenas ranging from

software craftsmanship to unit testing, refactoring to test-driven development. Most programming books either discuss testing only briefly, or drill down on just one or two techniques, with little guidance on how to systematically verify code. Most testing books, on the other hand, focus on a specific testing process, without showing how to write software that can be easily and systematically tested. In " Developer Testing, " leading software engineering consultant Alexander Tarlinder strikes an optimal balance, integrating insights from multiple disciplines to help frustrated practitioners get better results. Drawing on his extensive experience as a mentor and trainer, he offers insights that help you accelerate through the typical software assurance learning curve, so you can progress far more rapidly. Tarlinder organizes his insights into "chunks" to help you quickly absorb key concepts, and focuses on technology-agnostic approaches you can keep using with any new language, platform, or toolset. Along the way, he answers many questions development teams often ask about testing, including: What makes code testable? What makes it hard to test? When have I done enough testing on a piece of code? How many unit tests do I need to write? Exactly what should my test verify? How do I transform monolithic legacy code into manageable pieces I can test? What's the best way to structure my tests? The first guide to cover testing mindset, techniques, and applications from the developer's perspective, "Developer Testing" will help developers get what they really want: better code."

Developer Testing Springer Nature

Janet Gregory and Lisa Crispin pioneered the agile testing discipline with their previous work, Agile Testing. Now, in More Agile Testing, they reflect on all they've learned since. They address crucial emerging issues, share evolved agile practices, and cover key issues agile testers have asked to learn more about. Packed with new examples from real teams, this insightful guide offers detailed information about adapting agile testing for your environment; learning from experience and continually improving your test processes; scaling agile testing across teams; and overcoming the pitfalls of automated testing. You'll find brand-new coverage of agile testing for the enterprise, distributed teams, mobile/embedded systems, regulated environments, data warehouse/BI systems, and DevOps practices. You'll come away understanding • How to clarify testing activities within the team • Ways to collaborate with business experts to identify valuable features and deliver the right capabilities • How to design automated tests for superior reliability and easier maintenance • How agile team members can improve and expand their testing skills • How to plan “just enough,” balancing small increments with larger feature sets and the entire system • How to use testing to identify and mitigate risks associated with your current agile processes and to prevent defects • How to address challenges within your product or organizational context • How to perform exploratory testing using “personas” and “tours” • Exploratory testing approaches that engage the whole team, using test charters with session- and thread-based techniques • How to bring new agile testers up to speed quickly–without overwhelming them Janet Gregory is founder of DragonFire Inc., an agile quality process consultancy and training firm. Her passion is helping teams build quality systems. For almost fifteen years, she has worked as a coach and tester, introducing agile practices into companies of all sizes and helping users and testers understand their agile roles. She is a frequent speaker at agile and testing software conferences, and is a major contributor to the agile testing community. Lisa Crispin, an experienced agile testing practitioner and coach, regularly leads conference workshops on agile testing and contributes frequently to agile software publications. She enjoys collaborating as part of an awesome agile team to produce quality software. Since 1982, she has worked in a variety of roles on software teams, in a wide range of industries. She joined her first agile team in 2000 and continually learns from other teams and practitioners.

The Art of Software Testing Cambridge University Press

Fundamental knowledge and basic experience – brought through practical examples Thoroughly revised and updated 5th edition, following upon the success of four previous editions Updated according to the most recent ISTQB® Syllabus for the Certified Tester Foundations Level (2018) Authors are among the founders of the Certified Tester Syllabus Professional testing of software is an essential task that requires a profound knowledge of testing techniques. The International Software Testing Qualifications Board (ISTQB®) has developed a universally accepted, international qualification scheme aimed at software and system testing professionals, and has created the Syllabi and Tests for the Certified Tester. Today about 673,000 people have taken the ISTQB® certification exams. The authors of Software Testing Foundations, 5th Edition, are among the creators of the Certified Tester Syllabus and are currently active in the ISTQB®. This thoroughly revised and updated fifth edition covers the Foundation Level (entry level) and teaches the most important methods of software testing. It is designed for self-study and provides the information necessary to pass the Certified Tester-Foundations Level exam, version 2018, as defined by the ISTQB®. Topics covered: - Fundamentals of Testing - Testing and the Software Lifecycle - Static and Dynamic Testing Techniques - Test Management - Test Tools