



before. Agile software development is a unique phenomenon from several perspectives.

Enterprise Java developers must achieve broader, deeper test coverage, going beyond unit testing to implement functional and integration testing with systematic acceptance. Next Generation Java™ Testing introduces breakthrough Java testing techniques and TestNG, a powerful open source Java testing platform. Cédric Beust, TestNG's creator, and leading Java developer Hani Suleiman, present powerful, flexible testing patterns that will work with virtually any testing tool, framework, or language. They show how to leverage key Java platform improvements designed to facilitate effective testing, such as dependency injection and mock objects. They also thoroughly introduce TestNG, demonstrating how it overcomes the limitations of older frameworks and enables new techniques, making it far easier to test today's complex software systems. Pragmatic and results-focused, Next Generation Java™ Testing will help Java developers build more robust code for today's mission-critical environments. This book illuminates the tradeoffs associated with testing, so you can make better decisions about what and how to test. Introduces TestNG, explains its goals and features, and shows how to apply them in real-world environments Shows how to integrate TestNG with your existing code, development frameworks, and software libraries Demonstrates how to test crucial code features, such as encapsulation, state sharing, scopes, and thread safety Shows how to test application elements, including JavaEE APIs, databases, Web pages, and XML files Presents advanced techniques: testing partial failures, factories, dependent testing, remote invocation, cluster-based test farms, and more Walks through installing and using TestNG plug-ins for Eclipse, and IDEA Contains extensive code examples Whether you use TestNG, JUnit, or another testing framework, the testing design patterns presented in this book will show you how to improve your tests by giving you concrete advice on how to make your code and your design more testable.

ETAPS 2009 was the 12th instance of the European Joint Conferences on Theory and Practice of Software. ETAPS is an annual federated conference that was established in 1998 by combining a number of existing and new conferences. This year it comprised 7 conferences (CC, ESOP, FASE, FOSSACS, TACAS), 22 satellite workshops (ACCAT, ARSPA-WITS, Bytecode, COCV, COMPASS, FESCA, FInCo, FORMED, GaLoP, GT-VMT, HFL, LDTA, MBT, MLQA, OpenCert, PLACES, QAPL, RC, SafeCert, TAASN, TERMGRAPH, and WING), four tutorials, and seven invited lectures (excluding those that were specific to the satellite events). The 7 main conferences received this year 532 submissions (including 30 tool demonstration papers), 141 of which were accepted (10 tool demos), giving an overall acceptance rate of about 26%, with most of the conferences at around 25%. Congratulations therefore to all the authors who made it to the final programme! I hope that most of the other authors will still have found a way of participating in this exciting event, and that you will all continue submitting to ETAPS and contributing towards making it the best conference on software science and engineering. The events that comprise ETAPS address various aspects of the system development process, including specification, design, implementation, analysis and improvement. The languages, methodologies and tools which support these activities are all well within its scope. Different blends of theory and practice are represented, with an inclination towards theory with a practical motivation on the one hand and soundly based practice on the other.

Step-by-step guide to understand key concepts for Selenium Automation using examples to shine in your interview for test automation roles Key Features a- Acquire Selenium skills to do independent test automation projects a- Learn the basics of Selenium Web Driver for test automation using Selenium a- Understand Page Object Model, including how and when they're used in test automation a- Understand the approach for building a test automation framework a- Build Selenium test automation scripts using various languages - Java, Python, JavaScript/Node JS and Ruby a- Learn how to report and integrate with CI tools for test automation a- Get some professional tips for handling interviews and test automation approach a- Implement cross-browser testing scenarios using Selenium Grid and commercial tools and services Description Software Engineering has taken massive strides with a multitude of technology innovations. With several changes being introduced - development of products and their integration into the market - understanding of mobile devices and user interface channels across a plethora of platforms is getting complex day by day. In addition, since the process or procedures of software testing for products and applications can become an act of boiling the ocean, the role of test automation is crucial while dealing with such challenges. The book starts with a brief introduction to the world of automation and why it is important, succinctly covering the history of Selenium and the capabilities it offers. In this book, you will learn how to do simple Selenium-based automation with examples and understand the progressive complexity of some key features. Before diving deep into advanced concepts such as Page Object Models, Test Automation Framework and Cross Browser testing, you will grasp comprehensive knowledge of several concepts related to Java, Python, JavaScript and Ruby programming languages. What will you learn By the end of the book, you will find several examples to help ignite your understanding and usage of Selenium across a myriad of languages and frameworks. With this, you'll be able to put your knowledge to practice and solve real-life test automation challenges such as testing a web site, mobile application and leveraging tools available for fast-tracking your test automation approach.

Who this book is for The book is intended for anyone looking to make a career in test automation using Selenium, all aspiring manual testers who want to learn the most powerful test automation framework - Selenium and associated programming languages - or working professionals who want to switch their career to testing. Table of Contents 1. Introduction to Test Automation 2. Introduction to Selenium 3. Understanding Selenium Architecture 4. Understanding Selenium Tools 5. Understanding Web UI 6. Web UI Automation with Selenium Using Java & Python 7. Selenium Coding with Other Languages - Ruby & JavaScript 6. Building a Test Automation Framework with Selenium 8. Advanced Features of Selenium Using Java & Python 9. Cross-Browser Test Automation 10. Tips and Tricks for Test Automation 11. Interview Tips About the Author Kalilur Rahman has a Master's Degree in Business Administration preceded by an Engineering Degree in Computer Science and over 2 decades of experience in software development, testing and management consultancy. Kalilur has been a developer, designer, technical architect, test program manager, delivery unit head, IT

Services and Factory Services Head of varying complexity across telecommunications, life sciences, retail and healthcare industries. His LinkedIn Profile: <https://www.linkedin.com/in/kalilurrahman/>

This book presents the thoroughly refereed post-conference proceedings of the International Conference on Formal Verification of Object-Oriented Software, FoVeOOS 2010, held in Paris, France, in June 2010 - organised by COST Action IC0701. The 11 revised full papers presented together with 2 invited talks were carefully reviewed and selected from 21 submissions. Formal software verification has outgrown the area of academic case studies, and industry is showing serious interest. The logical next goal is the verification of industrial software products. Most programming languages used in industrial practice are object-oriented, e.g. Java, C++, or C#. FoVeOOS 2010 aimed to foster collaboration and interactions among researchers in this area.

This ebook discusses 100 plus real problems and their solutions for microservices architecture based on Spring Boot, Spring Cloud, Cloud Native Applications. It covers core concepts of microservices architecture, various design patterns, interview questions & answers, security in microservices, testing strategies and best practices in distributed system design. Table of Contents: 1. Core concepts related Spring powered microservices architecture 2. Introduction to Spring Boot, Spring Cloud, Cloud Native Applications, Netflix OSS 3. Design Patterns in microservices architecture - API Gateway, Hystrix, etc. 4. 100 plus Interview Questions 5. Security - OAuth2 and JWT 6. Testing Strategies in microservices architecture 7. Best Practices and common pitfalls

If you build your Scala application through Test-Driven Development, you'll quickly see the advantages of testing before you write production code. This hands-on book shows you how to create tests with ScalaTest and the Specs2—two of the best testing frameworks available—and how to run your tests in the Simple Build Tool (SBT) designed specifically for Scala projects. By building a sample digital jukebox application, you'll discover how to isolate your tests from large subsystems and networks with mocking code, and how to use the ScalaCheck library for automated specification-based testing. If you're familiar with Scala, Ruby, or Python, this book is for you. Get an overview of Test-Driven Development Start a simple project with SBT and create tests before you write code Dive into SBT's basic commands, interactive mode, packaging, and history Use ScalaTest both in the command line and with SBT, and learn how to incorporate JUnit and TestNG Work with the Specs2 framework, including Specification styles, matchers DSLs, and Data Tables Understand mocking by using Java frameworks EasyMock and Mockito, and the Scala-only framework ScalaMock Automate testing by using ScalaCheck to generate fake data

Softwaretests bekommen bei immer komplexer werdenden Programmen eine immer größere Bedeutung für den Projekterfolg. Obwohl Testkonzepte etabliert sind, werden sie häufig nur in geringem Maße in Unternehmen genutzt, da sie angeblich zu aufwändig und zu teuer sind. Neben einer intuitiven Einführung in Testtechniken zeigt dieses Buch den einfachen Einstieg in das Testen von Java-Programmen mit Hilfe von einfach nutzbaren Open-Source-Werkzeugen. Dabei werden neben klassischen Programmen auch Vorgehensweisen und Werkzeuge für Client-Server-Systeme, Web-Applikationen und Systeme mit Datenbankintegration betrachtet. Die Werkzeuge decken dabei funktionale Tests, Testüberdeckungen, Tests von Oberflächen, Performance- und Lasttests, sowie die Automatisierung von Testausführungen ab. Alle Beispiele stehen als Download zur Verfügung.

An easy-to-understand guide that will get you acquainted with the core concepts of Selenium WebDriver Key Featuresa- Understand and work with the core concepts of Selenium WebDriver 3.0a- Learn how to design a Keyword driven framework with Database a- Find how to use Build triggers in Jenkins to automate tests DescriptionThe book starts by introducing the Selenium WebDriver 3 and Selenium Server by covering each aspect of it in detail. You will learn different concepts like instances and how instances relate to browser sessions. You will further explore the new features in Java 8 with the help of easy to follow examples. Moving on, you will create a Singleton class for fetching WebDriver instances and then explore the different kinds of waits in Selenium. You will then delve into the advanced WebDriver interactions using the Actions class and the JavascriptExecutor. You will then understand the various database operations which will help you with using the MySQL database to store our framework. Next, you will go through the TestNG framework, followed by parallel execution. Further, you will use Maven as a build tool and Jenkins as a build automation tool. You will go through the working of Selenium Grid along with Mobile automation. Lastly, you will be taken through Selenium 4 and it's AI integrated features.What will you learna- Learn the process of building a Selenium Framework a- Understand the Keyword Driven Framework concept a- Work with Document Object Model to access page elementsa- Integrate Maven and Jenkins with Selenium WebDrivera- Use Selenium Grid to run multiple tests across Who this book is forThis book has been designed for Automation developers who would like to build a Keyword Driven framework that fetches keywords from Database. It is also intended for audiences who are interested in understanding Selenium and designing a framework.Table of Contents1. First look at Selenium WebDriver and Web Elements 2. Looking at the various WebDrivers3. A brief look at Java 84. Deep dive into Selenium WebDriver5. Actions class and the JavascriptExecutor6. WebDriver Events7. Database Operations8. Introduction to TestNG framework9. Parallel Execution10. Understanding Maven11. Jenkins Introduction and Scheduling12. Selenium grid and executing in the cloud13. Mobile test automation using Appium14. A look at Selenium-4About the AuthorPinakin Chaubal, a BE (Computer Science) with 19+ years of experience in the IT area. He has done PMP, ISTQB, HP0-M47 (QTP 11.0 Functional testing expert), and INS-21(General Insurance). He is working as an Automation Architect at Intellect Design Arena Ltd. (Previously Polaris Consulting). Previously he has worked with companies like Patni, Accenture, ACS International (USA), L&T Infotech(USA & India), Polaris Financial Technology, and SQS. He carries six years of onsite experience in the US and eight months in Hong Kong & China, working closely with the client and getting involved in senior management and stakeholder meetings. The clients that he has worked for are YES Bank, HSBC, Travelers Insurance, Harleysville Insurance, Albertsons retail chain, Bellsouth Telecommunications GE-Fleet Services, and GE-Supply. He is the creator of Youtube

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