

# Selenium WebDriver Recipes In C

## Selenium WebDriver Recipes in C#

Solve your Selenium WebDriver problems with this quick guide to automated testing of web applications with Selenium WebDriver in C#. Selenium WebDriver Recipes in C#, Second Edition contains hundreds of solutions to real-world problems, with clear explanations and ready-to-run Selenium test scripts that you can use in your own projects. You'll learn: How to locate web elements and test functions for hyperlinks, buttons, TextFields and TextAreas, radio buttons, CheckBoxes, and more How to use Selenium WebDriver for select lists, navigation, assertions, frames, file upload and pop-up dialogs How to debug test scripts and test data How to manage and deal with browser profiles and capabilities“/li\u003e How to manage tests for advanced user interactions and experiences (UX) How to work with and manage tests and testing using Selenium Remote Control and Selenium Server AudienceThis book is for experienced .NET and C# Windows application programmers/developers.

## Selenium Testing Tools Cookbook

This is a cookbook packed with code examples and step-by-step instructions to ease your learning curve. This book is intended for software quality assurance/testing professionals, software project managers, or software developers with prior experience in using Selenium and Java for testing web-based applications. This book also provides examples for C#, Python, and Ruby users.

## Python Testing with Selenium

Implement different testing techniques using Selenium WebDriver with the Python programming language. This quick reference provides simple functional test cases with a syntax-based approach for Selenium WebDriver. You'll begin by reviewing the basics of Selenium WebDriver and its architectural design history and then move on to the configuration and installation of Selenium library for different web browsers, including the basic commands needed to start test scripts in various browsers. You'll review action commands of keyboard and mouse for testing user interactions in a web page and see how hyperlinks are tested. The book also examines various web elements using eight different locators provided by Selenium to help you choose the one best suited to your needs. All Python scripts are ready to test real examples, all of which are explained thoroughly with problem statements. You'll use different Python design patterns to automate test scripts that can be incorporated with Selenium. In the end, Python Testing with Selenium will provide you with the expertise to write your own test cases in future. What You'll Learn Install and configure Selenium WebDriver with Python for different web-browsers Review basic commands of Selenium Locate web elements Work with UI based web elements Assert web elements and handle exceptions Write test scripts in Page Object Model Write test cases with Unittest framework Who This Book Is For Python developers/testers who want to test their web applications

## Selenium WebDriver Quick Start Guide

Get writing tests and learn to design your own testing framework with Selenium WebDriver API Key FeaturesLearn Selenium from the ground upDesign your own testing frameworkCreate reusable functionality in your frameworkBook Description Selenium WebDriver is a platform-independent API for automating the testing of both browser and mobile applications. It is also a core technology in many other browser automation tools, APIs, and frameworks. This book will guide you through the WebDriver APIs that are used in automation tests. Chapter by chapter, we will construct the building blocks of a page object model

framework as you learn about the required Java and Selenium methods and terminology. The book starts with an introduction to the same-origin policy, cross-site scripting dangers, and the Document Object Model (DOM). Moving ahead, we'll learn about XPath, which allows us to select items on a page, and how to design a customized XPath. After that, we will be creating singleton patterns and drivers. Then you will learn about synchronization and handling pop-up windows. You will see how to create a factory for browsers and understand command design patterns applicable to this area. At the end of the book, we tie all this together by creating a framework and implementing multi-browser testing with Selenium Grid. What you will learn

Understand what an XPath is and how to design a customized XPath  
Learn how to create a Maven project and build  
Create a Singleton driver  
Get to grips with Jenkins integration  
Create a factory for browsers  
Implement multi-browser testing with Selenium Grid  
Create a sample pop-up window and JavaScript alert  
Report using Extent Reports

Who this book is for  
This book is for software testers or developers.

## **Selenium WebDriver Recipes in C#**

A quick problem-solving guide to automated testing web applications with Selenium WebDriver in C#. It contains hundreds of solutions to real-world problems, with clear explanations and ready-to-run Selenium test scripts that you can use in your own projects.

## **Boost.Asio C++ Network Programming Cookbook**

Over 25 hands-on recipes to create robust and highly-efficient cross-platform distributed applications with the Boost.Asio library

About This Book  
Build highly efficient distributed applications with ease  
Enhance your cross-platform network programming skills with one of the most reputable C++ libraries  
Find solutions to real-world problems related to network programming with ready-to-use recipes using this detailed and practical handbook  
Who This Book Is For  
If you want to enhance your C++ network programming skills using the Boost.Asio library and understand the theory behind development of distributed applications, this book is just what you need. The prerequisite for this book is experience with general C++11. To get the most from the book and comprehend advanced topics, you will need some background experience in multithreading.

What You Will Learn  
Boost your working knowledge of one of the most reputable C++ networking libraries—Boost.Asio  
Familiarize yourself with the basics of TCP and UDP protocols  
Create scalable and highly-efficient client and server applications  
Understand the theory behind development of distributed applications  
Increase the security of your distributed applications by adding SSL support  
Implement a HTTP client easily  
Use iostreams, scatter-gather buffers, and timers

In Detail  
Starting with recipes demonstrating the execution of basic Boost.Asio operations, the book goes on to provide ready-to-use implementations of client and server applications from simple synchronous ones to powerful multithreaded scalable solutions. Finally, you are presented with advanced topics such as implementing a chat application, implementing an HTTP client, and adding SSL support. All the samples presented in the book are ready to be used in real projects just out of the box. As well as excellent practical examples, the book also includes extended supportive theoretical material on distributed application design and construction.

Style and approach  
This book is a set of recipes, each containing the statement and description of a particular practical problem followed by code sample providing the solution to the problem and detailed step-by-step explanation. Recipes are grouped by topic into chapters and ordered by the level of complexity from basic to advanced.

## **Selenium WebDriver 3 Practical Guide**

Selenium WebDriver 3 is the latest version used by many professionals for automated testing. The book will guide you through various Selenium WebDriver APIs and provide solutions to the common challenges faced while using Selenium WebDriver. You will learn to use remote WebDriver to run tests on remote machines for cross-browser testing and ...

## **Appium Essentials**

This book is intended for automation testers and developers who want to enhance their skills from web-based automation to mobile application automation using Appium. Basic knowledge of mobile application testing, Selenium WebDriver, and programming is assumed.

## **Selenium 2 Testing Tools**

This book is written in Beginner's Guide style which emphasizes the concept of learning by doing. The book is packed with examples and code so that you can get the best out of this book. If you are a Software Quality Assurance professional, Software Project Manager, or a Software Developer interested in automated testing using Selenium, this book is for you. Web-based application developers will also benefit from this book.

## **Complete Guide to Test Automation**

Rely on this robust and thorough guide to build and maintain successful test automation. As the software industry shifts from traditional waterfall paradigms into more agile ones, test automation becomes a highly important tool that allows your development teams to deliver software at an ever-increasing pace without compromising quality. Even though it may seem trivial to automate the repetitive tester's work, using test automation efficiently and properly is not trivial. Many test automation endeavors end up in the "graveyard" of software projects. There are many things that affect the value of test automation, and also its costs. This book aims to cover all of these aspects in great detail so you can make decisions to create the best test automation solution that will not only help your test automation project to succeed, but also allow the entire software project to thrive. One of the most important details that affects the success of the test automation is how easy it is to maintain the automated tests. Complete Guide to Test Automation provides a detailed hands-on guide for writing highly maintainable test code. What You'll Learn Know the real value to be expected from test automation Discover the key traits that will make your test automation project succeed Be aware of the different considerations to take into account when planning automated tests vs. manual tests Determine who should implement the tests and the implications of this decision Architect the test project and fit it to the architecture of the tested application Design and implement highly reliable automated tests Begin gaining value from test automation earlier Integrate test automation into the business processes of the development team Leverage test automation to improve your organization's performance and quality, even without formal authority Understand how different types of automated tests will fit into your testing strategy, including unit testing, load and performance testing, visual testing, and more Who This Book Is For Those involved with software development such as test automation leads, QA managers, test automation developers, and development managers. Some parts of the book assume hands-on experience in writing code in an object-oriented language (mainly C# or Java), although most of the content is also relevant for nonprogrammers.

## **Next Generation Java Testing**

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.

## Learn Selenium

Learn end-to-end automation testing techniques for web and mobile browsers using Selenium WebDriver, AppiumDriver, Java, and TestNG Key FeaturesExplore the Selenium grid architecture and build your own grid for browser and mobile devicesUse ExtentReports for processing results and SauceLabs for cloud-based test servicesUnlock the full potential of Selenium to test your web applications.Book Description Selenium WebDriver 3.x is an open source API for testing both browser and mobile applications. With the help of this book, you can build a solid foundation and can easily perform end-to-end testing on web and mobile browsers.You'll begin by being introduced to the Selenium Page Object Model for software development. You'll architect your own framework with a scalable driver class, Java utility classes, and support for third-party tools and plugins. You'll design and build a Selenium grid from scratch to enable the framework to scale and support different browsers, mobile devices, and platforms.You'll strategize and handle a rich web UI using the advanced WebDriver API and learn techniques to handle real-time challenges in WebDriver. You'll perform different types of testing, such as cross-browser testing, load testing, and mobile testing. Finally, you will also be introduced to data-driven testing, using TestNG to create your own automation framework.By the end of this Learning Path, you'll be able to design your own automation testing framework and perform data-driven testing with Selenium WebDriver. This Learning Path includes content from the following Packt products: Selenium WebDriver 3 Practical Guide - Second Edition by Unmesh GundechaSelenium Framework Design in Data-Driven Testing by Carl CocchiaroWhat you will learnUse different mobile and desktop browser platforms with Selenium 3Use the Actions API for performing various keyboard and mouse actionsDesign the Selenium Driver Class for local, remote, and third-party grid supportBuild page object classes with the Selenium Page Object ModelDevelop data-driven test classes using the TestNG frameworkEncapsulate data using the JSON protocolBuild a Selenium Grid for RemoteWebDriver testingBuild and use utility classes in synchronization, file I/O, reporting and test listener classesWho this book is for This Learning Path is ideal for software quality assurance/testing professionals, software project managers, or software developers interested in using Selenium for testing their applications. Professionals responsible for designing and building enterprise-based testing frameworks will also find this Learning Path useful. Prior programming experience in Java and TestNG is necessary.

## Java Data Science Cookbook

Recipes to help you overcome your data science hurdles using Java About This Book This book provides modern recipes in small steps to help an apprentice cook become a master chef in data science Use these recipes to obtain, clean, analyze, and learn from your data Learn how to get your data science applications to production and enterprise environments effortlessly Who This Book Is For This book is for Java developers who are familiar with the fundamentals of data science and want to improve their skills to become a pro. What You Will Learn Find out how to clean and make datasets ready so you can acquire actual insights by removing noise and outliers Develop the skills to use modern machine learning techniques to retrieve information and transform data to knowledge. retrieve information from large amount of data in text format. Familiarize yourself with cutting-edge techniques to store and search large volumes of data and retrieve information from large amounts of data in text format Develop basic skills to apply big data and deep learning technologies on large volumes of data Evolve your data visualization skills and gain valuable

insights from your data Get to know a step-by-step formula to develop an industry-standard, large-scale, real-life data product Gain the skills to visualize data and interact with users through data insights In Detail If you are looking to build data science models that are good for production, Java has come to the rescue. With the aid of strong libraries such as MLlib, Weka, DL4j, and more, you can efficiently perform all the data science tasks you need to. This unique book provides modern recipes to solve your common and not-so-common data science-related problems. We start with recipes to help you obtain, clean, index, and search data. Then you will learn a variety of techniques to analyze, learn from, and retrieve information from data. You will also understand how to handle big data, learn deeply from data, and visualize data. Finally, you will work through unique recipes that solve your problems while taking data science to production, writing distributed data science applications, and much more—things that will come in handy at work. Style and approach This book contains short yet very effective recipes to solve most common problems. Some recipes cater to very specific, rare pain points. The recipes cover different data sets and work very closely to real production environments

## **The Cucumber Book**

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

## **Web Scraping with Python**

Learn web scraping and crawling techniques to access data from any web source in any format. Teaches basic web scraping mechanics, but also delves into more advanced topics, such as analyzing raw data or using scrapers for frontend website testing.

## **Practical Web Test Automation**

While few people deny the benefits of test automation, comprehensive automated testing via UI (browser for web applications) is rarely implemented in software projects. Common reasons for projects' failed attempts on test automation are: Difficult to learn - test scripts are complex and testing tools are not easy to use Hard to maintain - UI tests are vulnerable to application changes Long feedback loop - automated tests take too long to run To succeed in automated testing via UI, software projects need to overcome all these 3 challenges. This book presents a practical approach to implementing test automation for web applications. Topics include: Developing easy to read and maintain Watir/Selenium tests using next-generation functional testing tool Page object model Functional Testing Refactorings Cross-browser testing against IE, Firefox and Chrome Setting up continuous testing server to manage execution of a large number of automated UI tests Requirement traceability matrix Strategies on team collaboration and test automation adoption in projects and organizations

## **Selenium Webdriver Recipes in Python**

A quick problem-solving guide to automated testing web applications with Selenium WebDriver in Python. It contains hundreds of solutions to real-world problems, with clear explanations and ready-to-run Selenium test scripts that you can use in your own projects.

## **Selenium WebDriver Recipes in Ruby**

The Selenium Recipes book is a quick problem-solving guide to automated testing web applications with Selenium WebDriver. It contains hundreds of solutions to real-world problems, with clear explanations and ready-to-run test scripts you can use in your own projects.

## **New Frontiers in Artificial Intelligence**

This book constitutes extended, revised and selected papers from the 11th International Symposium of Artificial Intelligence supported by the Japanese Society for Artificial Intelligence, JSAI-isAI 2019. It was held in November 2019 in Yokohama, Japan. The 26 papers were carefully selected from 46 submissions and deal with topics of AI research and are organized into 4 sections, according to the 4 workshops: JURISIN 2019, AI-Biz 2019, LENLS 16, and Kansei-AI 2019.

## **Selenium WebDriver Recipes in Java**

A quick problem-solving guide to automated testing web applications with Selenium WebDriver in Java. It contains hundreds of solutions to real-world problems, with clear explanations and ready-to-run Selenium test scripts that you can use in your own projects.

## **Developer Testing**

How do successful agile teams deliver bug-free, maintainable software—iteration after iteration? The answer is: By seamlessly combining development and testing. On such teams, the developers write testable code that enables them to verify it using various types of automated tests. This approach keeps regressions at bay and prevents “testing crunches”—which otherwise may occur near the end of an iteration—from ever happening. Writing testable code, however, is often difficult, because it requires knowledge and skills that cut across multiple disciplines. In *Developer Testing*, leading test expert and mentor Alexander Tarlinder presents concise, focused guidance for making new and legacy code far more testable. Tarlinder helps you answer questions like: When have I tested this enough? How many tests do I need to write? What should my tests verify? You’ll learn how to design for testability and utilize techniques like refactoring, dependency breaking, unit testing, data-driven testing, and test-driven development to achieve the highest possible confidence in your software. Through practical examples in Java, C#, Groovy, and Ruby, you’ll discover what works—and what doesn’t. You can quickly begin using Tarlinder’s technology-agnostic insights with most languages and toolsets while not getting buried in specialist details. The author helps you adapt your current programming style for testability, make a testing mindset “second nature,” improve your code, and enrich your day-to-day experience as a software professional. With this guide, you will Understand the discipline and vocabulary of testing from the developer’s standpoint Base developer tests on well-established testing techniques and best practices Recognize code constructs that impact testability Effectively name, organize, and execute unit tests Master the essentials of classic and “mockist-style” TDD Leverage test doubles with or without mocking frameworks Capture the benefits of programming by contract, even without runtime support for contracts Take control of dependencies between classes, components, layers, and tiers Handle combinatorial explosions of test cases, or scenarios requiring many similar tests Manage code duplication when it can’t be eliminated Actively maintain and improve your test suites Perform more advanced tests at the integration, system, and end-to-end levels Develop an understanding for how the

organizational context influences quality assurance Establish well-balanced and effective testing strategies suitable for agile teams

## **Practical Continuous Testing**

The trend of software development is moving towards frequent releases backed up by automated functional testing. Continuous Testing (CT), a key process of DevOps, executes automated end-to-end (UI) as regression testing, frequently on new builds. If all tests pass, the software is ready for a production release. If there are test failures, the team must act quickly on the feedback. This book presents a practical approach to implementing real Continuous Testing. Topics include: Why do traditional CI servers, e.g. Jenkins, always fail to manage UI test executions? Set up a BuildWise (free, open-source) CT server to run Selenium tests in minutes Sequential Build, run selected tests on the CT server machine Custom test executions with Rake ParallelBuild, distribute tests to build agents to run them in parallel CT best practices, such as Dynamic Ordering, Auto-Retry, Manual-Retry, ..., etc. Advice on setting up a parallel testing lab

## **Selenium Testing Tools Cookbook**

Over 90 recipes to help you build and run automated tests for your web applications with Selenium WebDriver About This Book Learn to leverage the power of Selenium WebDriver with simple examples that illustrate real-world problems and their workarounds Explains the testing of mobile applications with Appium for mobile platforms such as iOS and Android A pragmatic manual with engaging recipes and attractive screenshots to test your web applications efficiently Who This Book Is For This book is intended for software quality assurance/testing professionals, software project managers, or software developers with prior experience in using Selenium and Java to test web-based applications. This book also provides examples for C#, Python and Ruby users. What You Will Learn Understand how the locators work and use various locator methods to build reliable tests Build reliable and maintainable tests with the Selenium WebDriver API Use the PageFactory pattern to build a robust and easy to maintain test framework Build data-driven tests and extend Selenium API to implement custom steps and checks Integrate and use ATDD/BDD tools such as Cucumber, SpecFlow, Capybara, and Behave with the Selenium WebDriver API Set up iPhone/iPad and Android simulators and devices to test your mobile web application with Appium Set up Selenium Grid for faster and parallel running of tests, increasing test coverage and reducing test execution time for cross-browser testing Build extended Selenium WebDriver tests for additional coverage In Detail This book is an incremental guide that will help you learn and use the advanced features of the Selenium toolset including the WebDriver API in various situations to build a reliable test automation. You start off by setting up the test development environment and gain tips on the advanced locator strategy and the effective use of the Selenium WebDriver API. After that, the use of design patterns such as data - driven tests and PageFactory are demonstrated. You will then be familiarised with extending Selenium WebDriver API by implementing custom tasks and setting up your own distributed environment to run tests in parallel for cross-browser testing. Finally, we give you some tips on integrating Selenium WebDriver with other popular tools and testing mobile applications. By the end of this book, you will have learned enough to solve complex testing issues on your own. Style and approach This recipe-based guide covers real-life scenarios of testing your web apps with Selenium. Each recipe begins with a short introduction and key concepts along with illustrated examples of use cases, and ends with detailed but informative descriptions of the inner workings of the example.

## **Test Automation Using Selenium Webdriver 3.0 with C#**

About the Book Test Automation using Selenium WebDriver with C#, is the latest book released on Selenium 3.0 using C# as a programming language. This Selenium book has been designed with the objectives of simplicity and ease of understanding. After the huge success of author Vaibhav Mittal and Navneesh Garg's Test Automation books on Selenium with Java, UFT and Microsoft CodedUI this book follows a similar step by step approach to Install, configure and design automation framework using

Selenium WebDriver using Visual Studio 2017 and its components. Who is this book for? This book is recommended both for those who are beginning to learn test automation (using Selenium WebDriver) and for advanced automation users. It follows a unique training based approach instead of a regular textbook approach. Using a step by step approach, it guides the students through the exercises using pictorial snapshots. It includes many practical examples and issues which most of the automation testers encounter in day-to-day automation. These experiences will give you an insight into what challenges you could face with automation in the real world. Practical examples cover how to use most of the features within Selenium WebDriver using Visual Studio 2017. No Programming Background? A major fear amongst functional testers who want to learn Selenium is of programming language and coding. As a part of this, we will cover just enough basics of C# programming language that will give the readers the confidence to use Selenium WebDriver. Integrations Covered This book covers Selenium Webdriver integration with independent components to be installed like Microsoft Visual Studio 2017, Katalon, Extent Report, VSTS (Continuous Integration tool) and Specflow (Behaviour Driven Development). We will cover step by step installation, configuration and use of each of these components. Those want to know about Cross Browser testing, it covers how to use Selenium WebDriver to run on IE, Firefox and Chrome browsers. It also covers aspects of Continuous Integration tool from Microsoft (VSTS) so that Selenium WebDriver scripts can be integrated with the development environment and run on nightly builds.

## **Extreme Programming Explained**

Accountability. Transparency. Responsibility. These are not words that are often applied to software development. In this completely revised introduction to Extreme Programming (XP), Kent Beck describes how to improve your software development by integrating these highly desirable concepts into your daily development process. The first edition of Extreme Programming Explained is a classic. It won awards for its then-radical ideas for improving small-team development, such as having developers write automated tests for their own code and having the whole team plan weekly. Much has changed in five years. This completely rewritten second edition expands the scope of XP to teams of any size by suggesting a program of continuous improvement based on: Five core values consistent with excellence in software development Eleven principles for putting those values into action Thirteen primary and eleven corollary practices to help you push development past its current business and technical limitations Whether you have a small team that is already closely aligned with your customers or a large team in a gigantic or multinational organization, you will find in these pages a wealth of ideas to challenge, inspire, and encourage you and your team members to substantially improve your software development. You will discover how to: Involve the whole team—XP style Increase technical collaboration through pair programming and continuous integration Reduce defects through developer testing Align business and technical decisions through weekly and quarterly planning Improve teamwork by setting up an informative, shared workspace You will also find many other concrete ideas for improvement, all based on a philosophy that emphasizes simultaneously increasing the humanity and effectiveness of software development. Every team can improve. Every team can begin improving today. Improvement is possible—beyond what we can currently imagine. Extreme Programming Explained, Second Edition, offers ideas to fuel your improvement for years to come.

## **Docker in Practice, Second Edition**

Summary Docker in Practice, Second Edition presents over 100 practical techniques, hand-picked to help you get the most out of Docker. Following a Problem/Solution/Discussion format, you'll walk through specific examples that you can use immediately, and you'll get expert guidance on techniques that you can apply to a whole range of scenarios. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Docker's simple idea—wrapping an application and its dependencies into a single deployable container—created a buzz in the software industry. Now, containers are essential to enterprise infrastructure, and Docker is the undisputed industry standard. So what do you do after you've mastered the basics? To really streamline your applications and transform your dev process, you need relevant examples and experts who can walk you through them. You need this book. About the Book Docker

in Practice, Second Edition teaches you rock-solid, tested Docker techniques, such as replacing VMs, enabling microservices architecture, efficient network modeling, offline productivity, and establishing a container-driven continuous delivery process. Following a cookbook-style problem/solution format, you'll explore real-world use cases and learn how to apply the lessons to your own dev projects. What's inside

Continuous integration and delivery The Kubernetes orchestration tool Streamlining your cloud workflow Docker in swarm mode Emerging best practices and techniques About the Reader Written for developers and engineers using Docker in production. About the Author Ian Miell and Aidan Hobson Sayers are seasoned infrastructure architects working in the UK. Together, they used Docker to transform DevOps at one of the UK's largest gaming companies. Table of Contents

PART 1 - DOCKER FUNDAMENTALS Discovering Docker Understanding Docker: Inside the engine room

PART 2 - DOCKER AND DEVELOPMENT Using Docker as a lightweight virtual machine Building images Running containers Day-to-day Docker Configuration management: Getting your house in order

PART 3 - DOCKER AND DEVOPS Continuous integration: Speeding up your development pipeline Continuous delivery: A perfect fit for Docker principles Network simulation: Realistic environment testing without the pain

PART 4 - ORCHESTRATION FROM A SINGLE MACHINE TO THE CLOUD A primer on container orchestration The data center as an OS with Docker Docker platforms

PART 5 - DOCKER IN PRODUCTION Docker and security Plain sailing: Running Docker in production Docker in production: Dealing with challenges

## **Test Automation Using Selenium Webdriver with Java**

Test Automation using Selenium with Java - This book teaches how to automate using Selenium.

## **High Performance Python**

Your Python code may run correctly, but you need it to run faster. Updated for Python 3, this expanded edition shows you how to locate performance bottlenecks and significantly speed up your code in high-data-volume programs. By exploring the fundamental theory behind design choices, High Performance Python helps you gain a deeper understanding of Python's implementation. How do you take advantage of multicore architectures or clusters? Or build a system that scales up and down without losing reliability? Experienced Python programmers will learn concrete solutions to many issues, along with war stories from companies that use high-performance Python for social media analytics, productionized machine learning, and more. Get a better grasp of NumPy, Cython, and profilers Learn how Python abstracts the underlying computer architecture Use profiling to find bottlenecks in CPU time and memory usage Write efficient programs by choosing appropriate data structures Speed up matrix and vector computations Use tools to compile Python down to machine code Manage multiple I/O and computational operations concurrently Convert multiprocessing code to run on local or remote clusters Deploy code faster using tools like Docker

## **97 Things Every Java Programmer Should Know**

If you want to push your Java skills to the next level, this book provides expert advice from Java leaders and practitioners. You'll be encouraged to look at problems in new ways, take broader responsibility for your work, stretch yourself by learning new techniques, and become as good at the entire craft of development as you possibly can. Edited by Kevlin Henney and Trisha Gee, 97 Things Every Java Programmer Should Know reflects lifetimes of experience writing Java software and living with the process of software development. Great programmers share their collected wisdom to help you rethink Java practices, whether working with legacy code or incorporating changes since Java 8. A few of the 97 things you should know: "Behavior Is Easy, State Is Hard"—Edson Yanaga "Learn Java Idioms and Cache in Your Brain"—Jeanne Boyarsky "Java Programming from a JVM Performance Perspective"—Monica Beckwith "Garbage Collection Is Your Friend"—Holly K Cummins "Java's Unspeakable Types"—Ben Evans "The Rebirth of Java"—Sander Mak "Do You Know What Time It Is?"—Christin Gorman

## **.NET Design Patterns**

Explore the world of .NET design patterns and bring the benefits that the right patterns can offer to your toolkit today About This Book Dive into the powerful fundamentals of .NET framework for software development The code is explained piece by piece and the application of the pattern is also showcased. This fast-paced guide shows you how to implement the patterns into your existing applications Who This Book Is For This book is for those with familiarity with .NET development who would like to take their skills to the next level and be in the driver's seat when it comes to modern development techniques. Basic object-oriented C# programming experience and an elementary familiarity with the .NET framework library is required. What You Will Learn Put patterns and pattern catalogs into the right perspective Apply patterns for software development under C#/.NET Use GoF and other patterns in real-life development scenarios Be able to enrich your design vocabulary and well articulate your design thoughts Leverage object/functional programming by mixing OOP and FP Understand the reactive programming model using Rx and RxJs Writing compositional code using C# LINQ constructs Be able to implement concurrent/parallel programming techniques using idioms under .NET Avoiding pitfalls when creating compositional, readable, and maintainable code using imperative, functional, and reactive code. In Detail Knowing about design patterns enables developers to improve their code base, promoting code reuse and making their design more robust. This book focuses on the practical aspects of programming in .NET. You will learn about some of the relevant design patterns (and their application) that are most widely used. We start with classic object-oriented programming (OOP) techniques, evaluate parallel programming and concurrency models, enhance implementations by mixing OOP and functional programming, and finally to the reactive programming model where functional programming and OOP are used in synergy to write better code. Throughout this book, we'll show you how to deal with architecture/design techniques, GoF patterns, relevant patterns from other catalogs, functional programming, and reactive programming techniques. After reading this book, you will be able to convincingly leverage these design patterns (factory pattern, builder pattern, prototype pattern, adapter pattern, facade pattern, decorator pattern, observer pattern and so on) for your programs. You will also be able to write fluid functional code in .NET that would leverage concurrency and parallelism! Style and approach This tutorial-based book takes a step-by-step approach. It covers the major patterns and explains them in a detailed manner along with code examples.

## **Lessons Learned in Software Testing**

Softwaretests stellen eine kritische Phase in der Softwareentwicklung dar. Jetzt zeigt sich, ob das Programm die entsprechenden Anforderungen erfüllt und sich auch keine Programmierungsfehler eingeschlichen haben. Doch wie bei allen Phasen im Software-Entwicklungsprozess gibt es auch hier eine Reihe möglicher Fallstricke, die die Entdeckung von Programmfehlern vereiteln können. Deshalb brauchen Softwaretester ein Handbuch, das alle Tipps, Tricks und die häufigsten Fehlerquellen genau auflistet und erläutert, damit mögliche Testfehler von vornherein vermieden werden können. Ein solches Handbuch ersetzt gut und gerne jahr(zehnt)elange Erfahrung und erspart dem Tester frustrierende und langwierige Trial-und-Error-Prozeduren. Chem Kaner und James Bach sind zwei der international führenden Experten auf dem Gebiet des Software Testing. Sie schöpfen hier aus ihrer insgesamt 30-jährigen Erfahrung. Die einzelnen Lektionen sind nach Themenbereichen gegliedert, wie z.B. Testdesign, Test Management, Teststrategien und Fehleranalyse. Jede Lektion enthält eine Behauptung und eine Erklärung sowie ein Beispiel des entsprechenden Testproblems. \"Lessons Learned in Software Testing\" ist ein unverzichtbarer Begleiter für jeden Software Tester.

## **IoT and Analytics for Agriculture**

This book presents recent findings on virtually every aspect of wireless IoT and analytics for agriculture. It discusses IoT-based monitoring systems for analyzing the crop environment, and methods for improving the efficiency of decision-making based on the analysis of harvest statistics. In turn, it addresses the latest innovations, trends, and concerns, as well as practical challenges encountered and solutions adopted in the fields of IoT and analytics for agriculture. In closing, it explores a range of applications, including: intelligent

field monitoring, intelligent data processing and sensor technologies, predictive analysis systems, crop monitoring, and weather data-enabled analysis in IoT agro-systems.

## **How We Test Software at Microsoft**

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

## **Bug Bounty Automation With Python**

This book demonstrates the hands-on automation using python for each topic mentioned in the table of contents. This book gives you a basic idea of how to automate something to reduce the repetitive tasks and perform automated ways of OSINT and Reconnaissance. This book also gives you the overview of the python programming in the python crash course section, And explains how author made more than \$25000 in bug bounty using automation. This book is the first part of bug bounty automation series.

## **Python Testing with Pytest**

Do less work when testing your Python code, but be just as expressive, just as elegant, and just as readable. The pytest testing framework helps you write tests quickly and keep them readable and maintainable - with no boilerplate code. Using a robust yet simple fixture model, it's just as easy to write small tests with pytest as it is to scale up to complex functional testing for applications, packages, and libraries. This book shows you how. For Python-based projects, pytest is the undeniable choice to test your code if you're looking for a full-featured, API-independent, flexible, and extensible testing framework. With a full-bodied fixture model that is unmatched in any other tool, the pytest framework gives you powerful features such as assert rewriting and plug-in capability - with no boilerplate code. With simple step-by-step instructions and sample code, this book gets you up to speed quickly on this easy-to-learn and robust tool. Write short, maintainable tests that elegantly express what you're testing. Add powerful testing features and still speed up test times by distributing tests across multiple processors and running tests in parallel. Use the built-in assert statements to reduce false test failures by separating setup and test failures. Test error conditions and corner cases with expected exception testing, and use one test to run many test cases with parameterized testing. Extend pytest with plugins, connect it to continuous integration systems, and use it in tandem with tox, mock, coverage, unittest, and doctest. Write simple, maintainable tests that elegantly express what you're testing and why. What You Need: The examples in this book are written using Python 3.6 and pytest 3.0. However, pytest 3.0 supports Python 2.6, 2.7, and Python 3.3-3.6.

## **Cucumber Recipes**

You can test just about anything with Cucumber. We certainly have, and in Cucumber Recipes we'll show you how to apply our hard-won field experience to your own projects. Once you've mastered the basics, this book will show you how to get the most out of Cucumber—from specific situations to advanced test-writing

advice. With over forty practical recipes, you'll test desktop, web, mobile, and server applications across a variety of platforms. This book gives you tools that you can use today to automate any system that you encounter, and do it well. The Cucumber Book showed you how your team can work together to write executable specifications--documents that tell a clear story and also happen to be working test code. We'll arm you with ready-rolled solutions to real-world problems: your tests will run faster, read more clearly, and work in any environment. Our first tips will help you fit Cucumber into your workflow. Powerful filters will tame tables full of test data, transforming them into the format your application needs. IPS output formatters will generate reports for any occasion. Continuous Integration servers will run your Cucumber tests every time the code changes. Next, you'll find recipes tailored to the platform you're running on. Ever wanted to know how to test a Grails app from Cucumber? Need to put a Windows program through its paces? How about a mobile app running on Android or iOS? We'll show you how to do all of these. Throughout the book, you'll see how to make Cucumber sing as you interoperate with different platforms, languages, and environments. From embedded circuits to Python and PHP web apps, Cucumber has something for you. What You Need: You'll need basic working knowledge of Cucumber and Ruby. Individual recipes may have additional requirements; for example, a recipe on Windows automation might pull in an open source GUI driver. We've written the recipes for compatibility with Ruby 1.9.3 and 1.8.7, plus Cucumber 1.1.4. Other versions may work as well, but these are the ones we test with.

## **Design Patterns for High-Quality Automated Tests**

About This Book Achieving high-quality test automation that brings value- you need to understand core programming concepts such as SOLID and the usage of design patterns. After you master them, the usual career transition is into more architecture roles, such as choosing the best possible approaches for solving particular test automation challenges. You will get an access to more than 20000+ lines of real-world code examples. Who This Book Is For The book is NOT a getting started guide! If you don't have any prior programming experience in writing automated tests through WebDriver, I suggest you to first start with some book about basic programming and basic WebDriver usage. I believe it might be invaluable for the readers that have a couple of years of experience and whose job is to create/maintain test automation frameworks, or to write high-quality reliable automated tests. The book is written in C#. However, I think that you can use the approaches and practices in every OOP language. If you have a Java background (or similar), you will get everything you need, don't worry. Even if you don't get all the concepts from the first read, try to use and incorporate some of them, later you can return and reread them. I believe with the accumulation of experience using high-quality practices- you will become a hard-core test automation ninja! What You Will Learn Learn how to optimize and stabilize your flaky tests. Learn how to handle asynchronous web pages in your tests. Automatically deal with AJAX and jQuery. Improve Test Readability, Maintainability, Reusability, Extensibility by incorporating 10+ design patterns: Page Object Model, Facade, Decorator, Observer, Strategy, Singleton, Fluent Interface, Template Method, Abstract Factory, Factory Method, Repository, Lazy Load. Learn what are the SOLID principles and how they can improve your test code. We will also discuss other essential programming principles such as composition, DRY, KISS and others. Learn how to asses and choose the best possible design for your framework or library. Learn how the benchmarking your code can help you to speed up your tests. Learn how to design and build your framework to handle test data and different test environments. Learn about high quality code practices and naming convention so that your code get much more understandable.

## **React Cookbook**

React helps you create and work on an app in just a few minutes. But learning how to put all the pieces together is hard. How do you validate a form? Or implement a complex multistep user action without writing messy code? How do you test your code? Make it reusable? Wire it to a backend? Keep it easy to understand? The React Cookbook delivers answers fast. Many books teach you how to get started, understand the framework, or use a component library with React, but very few provide examples to help you solve particular problems. This easy-to-use cookbook includes the example code developers need to unravel

the most common problems when using React, categorized by topic area and problem. You'll learn how to:

- Build a single-page application in React using a rich UI
- Create progressive web applications that users can install and work with offline
- Integrate with backend services such as REST and GraphQL
- Automatically test for accessibility problems in your application
- Secure applications with fingerprints and security tokens using WebAuthn
- Deal with bugs and avoid common functional and performance problems

## DevOps Automation Cookbook

Automate, scale, and secure your DevOps workflows like a pro

**KEY FEATURES**

- Master automation tools like Terraform, Ansible, Git, Jenkins, and more.
- Practical recipes for CI/CD pipelines, IaC, testing, and security.
- Leverage best practices to optimize and scale your DevOps processes.

**DESCRIPTION**

In the fast-paced world of software development, embracing DevOps practices is key to achieving rapid, reliable deployments. The DevOps Automation Cookbook equips you with a comprehensive toolkit to automate and streamline your workflows, from infrastructure provisioning to continuous integration and deployment. This book teaches readers how to automate infrastructure setup and deployment using IaC tools like Terraform and Ansible. It covers essential DevOps practices such as version control with Git, continuous integration with Jenkins or Travis, and automated testing with Selenium. The book also explains containerization with Docker and orchestration with Kubernetes for efficient app deployment. It highlights DevSecOps, focusing on security with Puppet, and explores using TeamCity for enforcing compliance policies in the DevOps workflow. Whether you are a seasoned DevOps practitioner or just starting your journey, the DevOps Automation Cookbook provides the insights and hands-on skills you need to take your automation game to the next level. Discover how to optimize your processes, scale your infrastructure, and deliver high-quality software faster than ever before.

**WHAT YOU WILL LEARN**

- Automate infrastructure provisioning with Terraform and Ansible.
- Implement version control and collaboration with Git.
- Set up efficient CI/CD pipelines using Jenkins.
- Leverage containers with Docker and orchestrate with Kubernetes.
- Integrate automated testing and security into DevOps workflows.
- Apply configuration management using Puppet and Chef.

**WHO THIS BOOK IS FOR**

This book is for DevOps engineers, system administrators, and software developers seeking to automate infrastructure provisioning, deployment, and security within their workflows.

**TABLE OF CONTENTS**

1. Introduction
2. Understanding Infrastructure as Code
3. Provisioning with Terraform
4. Version Control with Git
5. Introduction to Continuous Integration with Jenkins and Travis
6. Automated Testing in DevOps
7. Test Automation with Selenium
8. Understanding Containers and Orchestration
9. Deployment with Docker and Kubernetes
10. Introduction to Security in DevOps
11. Puppet and Security
12. Configuration Management with Chef
13. Ensuring Compliance with TeamCity
14. Implications and Future Directions

## Python Web Scraping Cookbook

Untangle your web scraping complexities and access web data with ease using Python scripts

**Key Features**

- Hands-on recipes for advancing your web scraping skills to expert level
- One-stop solution guide to address complex and challenging web scraping tasks using Python
- Understand web page structures and collect data from a website with ease

**Book Description**

Python Web Scraping Cookbook is a solution-focused book that will teach you techniques to develop high-performance Scrapers, and deal with cookies, hidden form fields, Ajax-based sites and proxies. You'll explore a number of real-world scenarios where every part of the development or product life cycle will be fully covered. You will not only develop the skills to design reliable, high-performing data flows, but also deploy your codebase to Amazon Web Services (AWS). If you are involved in software engineering, product development, or data mining or in building data-driven products, you will find this book useful as each recipe has a clear purpose and objective. Right from extracting data from websites to writing a sophisticated web crawler, the book's independent recipes will be extremely helpful while on the job. This book covers Python libraries, requests, and BeautifulSoup. You will learn about crawling, web spidering, working with AJAX websites, and paginated items. You will also understand to tackle problems such as 403 errors, working with proxy, scraping images, and LXML. By the end of this book, you will be able to scrape websites more efficiently and deploy and operate your scraper in

the cloud. What you will learn Use a variety of tools to scrape any website and data, including Scrapy and Selenium Master expression languages, such as XPath and CSS, and regular expressions to extract web data Deal with scraping traps such as hidden form fields, throttling, pagination, and different status codes Build robust scraping pipelines with SQS and RabbitMQ Scrape assets like image media and learn what to do when Scraper fails to run Explore ETL techniques of building a customized crawler, parser, and convert structured and unstructured data from websites Deploy and run your scraper as a service in AWS Elastic Container Service Who this book is for This book is ideal for Python programmers, web administrators, security professionals, and anyone who wants to perform web analytics. Familiarity with Python and basic understanding of web scraping will be useful to make the best of this book.

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