[MOBI] Mastering Java 9 Write Reactive Modular Concurrent And Secure Code

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Mastering Java 9-Dr. Edward Lavieri 2017-10-06 Your road to becoming a Java Ninja begins here! About This Book This book will teach you to build highly scalable, fast, and secure applications It covers major concepts introduced with the new version of Java 9, which includes modular programming, HTTP 2.0, API changes, and more It will guide you with tools, techniques and best practices to enhance application development Who This Book Is For This book is for enterprise developers and existing Java developers. Basic knowledge of Java would help. What You Will Learn Write modular Java applications in terms of the newly introduced module system Migrate existing Java applications to modular ones Understand how to use the G1 garbage collector in order to leverage the performance of your applications Leverage the possibilities provided the newly introduced Java shell Test your application's effectiveness with the JVM harness See how Java 9 provides support for the http 2.0 standard Use the new process API Discover additional enhancements and features provided by Java 9 In Detail Java 9 and its new features add to the richness of the language, one of the languages most used by developers to build robust software applications. Java 9 comes with a special emphasis on modularity with its integration with Jigsaw. This would be your one-stop guide to mastering the language. You'll be provided with an overview and explanation of the new features introduced in Java 9 and the importance of the new APIs and enhancements. Some of the new features of Java 9 are ground-breaking and if you are an experienced programmer, you will be able to make your enterprise application leaner by learning these new features. You'll be provided with practical guidance in applying the newly acquired knowledge in regards to Java 9 and further information on future developments of the Java platform. This book will improve your productivity, making your application faster. By learning the best practices in Java, you'll become the “go-to” person in your organization. By the end of the book, you'll not only know the important concepts of Java 9, but you'll also have a nuanced understanding of the important aspects of programming with this great language. Style and approach Concepts and new terminology are explained in simple step-by-step manner. We cover a lot of real-world examples and case studies that will improve your Java productivity. This book covers new features on Java 9 and the much talked about Jigsaw integration.

Reactive Programming With Java 9-Tejaswini Mandar Jog 2017-09-21 This book will teach you how to build robust asynchronous and event-driven applications with ease. About This Book Learn about Java 9's Flow API, Reactive programming along with Kafka and Mockito, and how these aspects are utilized by RxJava Build fast and concurrent applications with ease, without the complexity of Java's concurrent API and shared states, with the help of Spring Explore a wide variety of code examples to easily get used to all the features and tools provided by RxJava Who This Book Is For This book targets existing Java developers who want to understand Reactive programming and build responsive and resilient asynchronous applications using Reactive stream implementations. What You Will Learn Understand the Reactive Manifesto Grasp the Reactive Streams types introduced in Java 9 in the form of the Flow API Use RxJava, a Reactive Streams implementation, to build

asynchronous applications Build responsiveness and resilience into applications using RxJava operators Demonstrate the usage of Hystrix, a latency and fault tolerance library from Netfl ix that uses RxJava Implement Reactive web applications using Spring Framework 5 and RxJava In Detail Reactive programming is an asynchronous programming model that helps you tackle the essential complexity that comes with writing such applications. Using Reactive programming to start building applications is not immediately intuitive to a developer who has been writing programs in the imperative paradigm. To tackle the essential complexity, Reactive programming uses declarative and functional paradigms to build programs. This book sets out to make the paradigm shift easy. This book begins by explaining what Reactive programming is, the Reactive manifesto, and the Reactive Streams specifi cation. It uses Java 9 to introduce the declarative and functional paradigm, which is necessary to write programs in the Reactive style. It explains Java 9's Flow API, an adoption of the Reactive Streams specifi cation. From this point on, it focuses on RxJava 2.0, covering topics such as creating, transforming,fi ltering, combining, and testing Observables. It discusses how to use Java's popular framework, Spring, to build event-driven, Reactive applications. You will also learn how to implement resiliency patterns using Hystrix. By the end, you will be fully equipped with the tools and techniques needed to implement robust, event-driven, Reactive applications. Style and approach This book is a tutorial about Reactive programming in Java using APIs as well as the RxJava library. Packed with a lot of well-described examples, it explains Reactive programming concepts in plain and readable language.

Learning Reactive Programming with Java 8-Nickolay Tsvetinov 2015-06-24 Whether you are a Java expert or at a beginner level, you'll benefit from this book, because it will teach you a brand new way of coding and thinking. The book starts with an explanation of what reactive programming is, why it is so appealing, and how we can integrate it in to Java. It continues by introducing the new Java 8 syntax features, such as lambdas and function references, and some functional programming basics. From this point on, the book focuses on RxJava in depth. It goes through creating Observables, transforming, filtering, and combining them, and concurrency and testing to finish with extending the library itself. This book is a definite tutorial in RxJava filled with a lot of well-described examples. It explains reactive programming concepts in plain and readable language, without scientific formulas and terms.

Java 9 Concurrency Cookbook-Javier Fernández Gonzalez 2017-04-25 Master the art of fast, effective Java development with the power of concurrent and parallel programming About This Book Get detailed coverage of important recipes on multi-threading and parallel programming This book takes a close look at the Java 9 APIs and their impact on concurrency See practical examples on thread safety, high-performance classes, safe sharing, and a whole lot more Who This Book Is For The book is for Java developers and programmers at an intermediate to advanced level. It will be especially useful for developers who want to take advantage of task-based recipes using Java 9's concurrent API to program thread-safe solutions. What You Will Learn Find out to manage the basic components of the Java Concurrency API Use synchronization mechanisms to avoid data race conditions and other problems of concurrent applications Separate the thread management from the rest of the application with the Executor framework Solve problems using a parallelized version of the divide and conquer paradigm with the Fork / Join framework Process massive data sets in an optimized way using streams and reactive streams See which data structures we can use in concurrent applications and how to use them Practice efficient techniques to test concurrent applications Get to know tips and tricks to design concurrent applications In Detail Writing concurrent and parallel programming applications is an integral skill for any Java programmer. Java 9 comes with a host of fantastic features, including significant performance improvements and new APIs. This book will take you through all the new APIs, showing you how to build parallel and multi-threaded applications. The book covers all the elements of the Java Concurrency API, with essential recipes that will help you take advantage of the exciting new capabilities. You will learn how to use parallel and reactive streams to process massive data sets. Next, you will move on to create streams and use all their intermediate and terminal operations to process big collections of data in a parallel and functional way. Further, you'll discover a whole range of

recipes for almost everything, such as thread management, synchronization, executors, parallel and reactive streams, and many more. At the end of the book, you will learn how to obtain information about the status of some of the most useful components of the Java Concurrency API and how to test concurrent applications using different tools. Style and approach This recipe-based book will allow you to explore the exciting capabilities of concurrency in Java. After reading this book, you will be able to comfortably build parallel applications in Java 9.

Mastering Concurrency Programming with Java 9-Javier Fernandez Gonzalez 2017-07-17 Master the principles to make applications robust, scalable and responsive About This Book Implement concurrent applications using the Java 9 Concurrency API and its new components Improve the performance of your applications and process more data at the same time, taking advantage of all of your resources Construct real-world examples related to machine learning, data mining, natural language processing, and more Who This Book Is For This book is for competent Java developers who have basic understanding of concurrency, but knowledge of effective implementation of concurrent programs or usage of streams for making processes more efficient is not required What You Will Learn Master the principles that every concurrent application must follow See how to parallelize a sequential algorithm to obtain better performance without data inconsistencies and deadlocks Get the most from the Java Concurrency API components Separate the thread management from the rest of the application with the Executor component Execute phased-based tasks in an efficient way with the Phaser components Solve problems using a parallelized version of the divide and conquer paradigm with the Fork / Join framework Find out how to use parallel Streams and Reactive Streams Implement the “map and reduce” and “map and collect” programming models Control the concurrent data structures and synchronization mechanisms provided by the Java Concurrency API Implement efficient solutions for some actual problems such as data mining, machine learning, and more In Detail Concurrency programming allows several large tasks to be divided into smaller sub-tasks, which are further processed as individual tasks that run in parallel. Java 9 includes a comprehensive API with lots of ready-to-use components for easily implementing powerful concurrency applications, but with high flexibility so you can adapt these components to your needs. The book starts with a full description of the design principles of concurrent applications and explains how to parallelize a sequential algorithm. You will then be introduced to Threads and Runnables, which are an integral part of Java 9's concurrency API. You will see how to use all the components of the Java concurrency API, from the basics to the most advanced techniques, and will implement them in powerful real-world concurrency applications. The book ends with a detailed description of the tools and techniques you can use to test a concurrent Java application, along with a brief insight into other concurrency mechanisms in JVM. Style and approach This is a complete guide that implements real-world examples of algorithms related to machine learning, data mining, and natural language processing in client/server environments. All the examples are explained using a step-by-step approach.

Reactive Programming with Java 9-Tejaswini Mandar Jog 2017-09-20 This book will teach you how to build robust asynchronous and event-driven applications with ease.About This Book* Learn about Java 9's Flow API, Reactive programming along with Kafka and Mockito, and how these aspects are utilized by RxJava* Build fast and concurrent applications with ease, without the complexity of Java's concurrent API and shared states, with the help of Spring* Explore a wide variety of code examples to easily get used to all the features and tools provided by RxJavaWho This Book Is ForThis book targets existing Java developers who want to understand Reactive programming and build responsive and resilient asynchronous applications using Reactive stream implementations.What You Will Learn* Understand the Reactive Manifesto* Grasp the Reactive Streams types introduced in Java 9 in the form of the Flow API* Use RxJava, a Reactive Streams implementation, to build asynchronous applications* Build responsiveness and resilience into applications using RxJava operators* Demonstrate the usage of Hystrix, a latency and fault tolerance library from Netfl ix that uses RxJava* Implement Reactive web applications using Spring Framework 5 and RxJavaIn DetailReactive programming is an asynchronous programming model that helps you tackle the essential complexity that comes with writing such applications.Using Reactive programming to start building applications is not

immediately intuitive to a developer who has been writing programs in the imperative paradigm. To tackle the essential complexity, Reactive programming uses declarative and functional paradigms to build programs. This book sets out to make the paradigm shift easy.This book begins by explaining what Reactive programming is, the Reactive manifesto, and the Reactive Streams specifi cation. It uses Java 9 to introduce the declarative and functional paradigm, which is necessary to write programs in the Reactive style. It explains Java 9's Flow API, an adoption of the Reactive Streams specifi cation. From this point on, it focuses on RxJava 2.0, covering topics such as creating, transforming,fi ltering, combining, and testing Observables. It discusses how to use Java's popular framework, Spring, to build event-driven, Reactive applications. You will also learn how to implement resiliency patterns using Hystrix. By the end, you will be fully equipped with the tools and techniques needed to implement robust, event-driven, Reactive applications.Style and approachThis book is a tutorial about Reactive programming in Java using APIs as well as the RxJava library. Packed with a lot of well-described examples, it explains Reactive programming concepts in plain and readable language.

Mastering Java 11-Dr. Edward Lavieri 2018-09-27 Update your Java knowledge with the latest features of Java 11, such as the low-Overhead Garbage Collector, Local-Variable Syntax for Lambda Parameters, and Dynamic Class-File Constants Key Features Explore the latest features in Java 9,Java 10, and Java 11 Enhance your Java application development and migration approaches Full coverage of modular Java applications, G1 Garbage Collector, JMH Book Description Java 11 is a long-term release and its new features add to the richness of the language. It emphasizes variable-type inference, performance improvements, along with simplified multithreading. The Java platform has a special emphasis on modularity, making this the programming platform of choice for millions of developers. The modern Java platform can be used to build robust software applications, including enterprise-level and mobile applications. Fully updated for Java 11, this book stands to help any Java developer enjoy the richness of the Java programming language. Mastering Java 11 is your one-stop guide to fully understanding recent Java platform updates. It contains detailed explanations of the recent features introduced in Java 9, Java 10, and Java 11 along with obtaining practical guidance on how to apply the new features. As you make your way through the chapters, you'll discover further information on the developments of the Java platform and learn about the changes introduced by the variable handles and Project Coin, along with several enhancements in relation to import statements processing. In the concluding chapters, you'll learn to improve your development productivity, making your applications more efficient. You'll also be able to get to grips with the command-line flags with respect to various utilities and the command-line utility changes featured in the current Java platform. By the end of the book, you'll have obtained an advanced level understanding of the Java platform and its recent changes. What you will learn Write modular Java applications Migrate existing Java applications to modular ones Understand how the default G1 garbage collector works Leverage the possibilities provided by the newly introduced Java Shell Performance test your application effectively with the JVM harness Learn how Java supports the HTTP 2.0 standard Find out how to use the new Process API Explore the additional enhancements and features of Java 9, 10, and 11 Who this book is for Mastering Java 11 is for experienced Java developers with a solid understanding of the Java language and want to progress to an advanced level.

Java 9 High Performance-Mayur Ramgir 2017-11-01 Best practices to adapt and bottlenecks to avoid About This Book Tackle all kinds of performance-related issues and streamline your development Master the new features and new APIs of Java 9 to implement highly efficient and reliable codes Gain an in-depth knowledge of Java application performance and obtain best results from performance testing Who This Book Is For This book is for Java developers who would like to build reliable and high-performance applications. Prior Java programming knowledge is assumed. What You Will Learn Work with JIT compilers Understand the usage of profiling tools Generate JSON with code examples Leverage the command-line tools to speed up application development Build microservices in Java 9 Explore the use of APIs to improve application code Speed up your application with reactive programming and concurrency In Detail Finally, a book that focuses

on the practicalities rather than theory of Java application performance tuning. This book will be your one-stop guide to optimize the performance of your Java applications. We will begin by understanding the new features and APIs of Java 9. You will then be taught the practicalities of Java application performance tuning, how to make the best use of garbage collector, and find out how to optimize code with microbenchmarking. Moving ahead, you will be introduced to multithreading and learning about concurrent programming with Java 9 to build highly concurrent and efficient applications. You will learn how to fine tune your Java code for best results. You will discover techniques on how to benchmark performance and reduce various bottlenecks in your applications. We'll also cover best practices of Java programming that will help you improve the quality of your codebase. By the end of the book, you will be armed with the knowledge to build and deploy efficient, scalable, and concurrent applications in Java. Style and approach This step-by-step guide provides real-world examples to give you a hands-on experience.

Mastering Microservices with Java 9-Sourabh Sharma 2017-12-07 Master the art of implementing scalable microservices in your production environment with ease About This Book Use domain-driven design to build microservices Use Spring Cloud to use Service Discovery and Registeration Use Kafka, Avro and Spring Streams for implementing event based microservices Who This Book Is For This book is for Java developers who are familiar with the microservices architecture and now wants to take a deeper dive into effectively implementing microservices at an enterprise level. A reasonable knowledge level and understanding of core microservice elements and applications is expected. What You Will Learn Use domain-driven design to design and implement microservices Secure microservices using Spring Security Learn to develop REST service development Deploy and test microservices Troubleshoot and debug the issues faced during development Learning best practices and common principals about microservices In Detail Microservices are the next big thing in designing scalable, easy-to-maintain applications. It not only makes app development easier, but also offers great flexibility to utilize various resources optimally. If you want to build an enterprise-ready implementation of the microservices architecture, then this is the book for you! Starting off by understanding the core concepts and framework, you will then focus on the high-level design of large software projects. You will gradually move on to setting up the development environment and configuring it before implementing continuous integration to deploy your microservice architecture. Using Spring security, you will secure microservices and test them effectively using REST Java clients and other tools like RxJava 2.0. We'll show you the best patterns, practices and common principals of microservice design and you'll learn to troubleshoot and debug the issues faced during development. We'll show you how to design and implement reactive microservices. Finally, we'll show you how to migrate a monolithic application to microservices based application. By the end of the book, you will know how to build smaller, lighter, and faster services that can be implemented easily in a production environment. Style and approach This book starts from the basics, including environment setup and provides easy-to-follow steps to implement the sample project using microservices.

Exploring Java 9-Fu Cheng 2017-12-01 Discover all the new features and changes in Java 9, including module systems—JPMS or Project Jigsaw. This book covers the whole Java application development life cycle. You'll review all the important concepts, including module descriptor, unnamed module, automatic module, and command line tools. Exploring Java 9 also serves as a practical guide for migration to module systems. Code samples from real-world scenarios solidify a foundation for learning and development and allow you to apply best practices in actual development. Additionally, you'll learn about concurrency, ECMAScript 6 features in Nashorn and Parser API, stack-walking API, Stream and Optional, utilities classes, and I/O. And it’s now possible to build modularized applications in Java. You'll see how JPMS affects not only the JDK itself, but also applications that are developed upon it. What You'll Learn • Build modularized applications in Java • Migrate to module systems • Master enhanced method handles Who This Book Is ForJava developers with basic development skills

Reactive Java Programming-Andrea Maglie 2016-11-02 Learn reactive programming using Java and its functional aspects, sometimes called

RxJava. This book shows you how to solve "callback hell" with RxJava and shows you how to write thread-safe code without hanging onto state variables which comes in handy for cloud computing software-as-a-service issues, especially when dealing with big data processes through streaming. Reactive Java Programming includes unique coverage of reactive Android programming, growing more and more popular in mobile development with the Cloud. After reading this guide to reactive programming, you'll be able to apply it to your own big data cloud applications that use Java. What You'll Learn Use and map observables Filter and combine events Employ subjects, schedulers, and backpressure Handle reactive patterns Test your RxJava code Write your own operators Carry out reactive Android programming Who This Book Is For Experienced Java programmers new to reactive programming and those who may have some experience with reactive programming new to Java.

Learning Spring 5.0-Tejaswini Mandar Jog 2017-06-29 Build, test, and secure robust enterprise-grade applications using the Spring Framework About This Book Build an enterprise application throughout the book that communicates with a microservice Define and inject dependencies into your objects using the IoC container Make use of Spring's reactive features including tools and implement a reactive Spring MVC application Who This Book Is For This book is for Java developers who want to make use of the Spring framework to simplify their programming needs. What You Will Learn Get to know the basics of Spring development and gain fundamental knowledge about why and where to use Spring Framework Explore the power of Beans using Dependency Injection, wiring, and Spring Expression Language Implement and integrate a persistent layer in your application and also integrate an ORM such as Hibernate Understand how to manage cross-cutting with logging mechanism, transaction management, and more using Aspect-oriented programming Explore Spring MVC and know how to handle requesting data and presenting the response back to the user Get to grips with the integration of RESTful APIs and Messaging with WebSocket and STOMP Master Reactive Programming using Spring MVC to handle non-blocking streams In Detail Spring is the most widely used framework for Java programming and with its latest update to 5.0, the framework is undergoing massive changes. Built to work with both Java 8 and Java 9, Spring 5.0 promises to simplify the way developers write code, while still being able to create robust, enterprise applications. If you want to learn how to get around the Spring framework and use it to build your own amazing applications, then this book is for you. Beginning with an introduction to Spring and setting up the environment, the book will teach you in detail about the Bean life cycle and help you discover the power of wiring for dependency injection. Gradually, you will learn the core elements of Aspect-Oriented Programming and how to work with Spring MVC and then understand how to link to the database and persist data configuring ORM, using Hibernate. You will then learn how to secure and test your applications using the Spring-test and Spring-Security modules. At the end, you will enhance your development skills by getting to grips with the integration of RESTful APIs, building microservices, and doing reactive programming using Spring, as well as messaging with WebSocket and STOMP. Style and approach Filled with examples, this tutorial-based book will help you gain all the knowledge you need to start producing enterprise-grade applications with Spring.

Learning RxJava-Thomas Nield 2017-06-20 Reactive Programming with Java and ReactiveX About This Book Explore the essential tools and operators RxJava provides, and know which situations to use them in Delve into Observables and Subscribers, the core components of RxJava used for building scalable and performant reactive applications Delve into the practical implementation of tools to effectively take on complex tasks such as concurrency and backpressure Who This Book Is For The primary audience for this book is developers with at least a fundamental mastery of Java. Some readers will likely be interested in RxJava to make programs more resilient, concurrent, and scalable. Others may be checking out reactive programming just to see what it is all about, and to judge whether it can solve any problems they may have. What You Will Learn Learn the features of RxJava 2 that bring about many significant changes, including new reactive types such as Flowable, Single, Maybe, and Completable Understand how reactive programming works and the mindset to "think reactively" Demystify the Observable and how it quickly expresses data and events as sequences Learn the various Rx operators that

transform, filter, and combine data and event sequences Leverage multicasting to push data to multiple destinations, and cache and replay them Discover how concurrency and parallelization work in RxJava, and how it makes these traditionally complex tasks trivial to implement Apply RxJava and Retrolambda to the Android domain to create responsive Android apps with better user experiences Use RxJava with the Kotlin language to express RxJava more idiomatically with extension functions, data classes, and other Kotlin features In Detail RxJava is a library for composing asynchronous and event-based programs using Observable sequences for the JVM, allowing developers to build robust applications in less time. Learning RxJava addresses all the fundamentals of reactive programming to help readers write reactive code, as well as teach them an effective approach to designing and implementing reactive libraries and applications. Starting with a brief introduction to reactive programming concepts, there is an overview of Observables and Observers, the core components of RxJava, and how to combine different streams of data and events together. You will also learn simpler ways to achieve concurrency and remain highly performant, with no need for synchronization. Later on, we will leverage backpressure and other strategies to cope with rapidly-producing sources to prevent bottlenecks in your application. After covering custom operators, testing, and debugging, the book dives into hands-on examples using RxJava on Android as well as Kotlin. Style and approach This book will be different from other Rx books, taking an approach that comprehensively covers Rx concepts and practical applications.

Java 9 Programming By Example-Peter Verhas 2017-04-26 Get the steps you need to discover the world of Java 9 programming using real-world examples About This Book We bridge the gap between “learning” and “doing” by providing real-world examples that will improve your software development Our example-based approach will get you started quickly with software programming, get you up-to-speed with Java 9, and improve your Java skills This book will show you the best practices of Java coding and improve your productivity Who This Book Is For This book is for anyone who wants to learn the Java programming language. You are expected to have some prior programming experience with another language, such as JavaScript or Python, but no knowledge of earlier versions of Java is assumed. What You Will Learn Compile, package and run a trivial program using a build management tool Get to know the principles of test-driven development and dependency management Separate the wiring of multiple modules from the application logic into an application using dependency injection Benchmark Java execution using Java 9 microbenchmarking See the workings of the Spring framework and use Java annotations for the configuration Master the scripting API built into the Java language and use the built-in JavaScript interpreter Understand static versus dynamic implementation of code and high-order reactive programming in Java In Detail This book gets you started with essential software development easily and quickly, guiding you through Java's different facets. By adopting this approach, you can bridge the gap between learning and doing immediately. You will learn the new features of Java 9 quickly and experience a simple and powerful approach to software development. You will be able to use the Java runtime tools, understand the Java environment, and create Java programs. We then cover more simple examples to build your foundation before diving to some complex data structure problems that will solidify your Java 9 skills. With a special focus on modularity and HTTP 2.0, this book will guide you to get employed as a top notch Java developer. By the end of the book, you will have a firm foundation to continue your journey towards becoming a professional Java developer. Style and approach Throughout this book, our aim is to build Java programs. We will be building multiple applications ranging from simpler ones to more complex ones. Learning by doing has its advantages as you will immediately see the concepts explained in action.

Reactive Programming with RxJava-Tomasz Nurkiewicz 2016-10-06 In today’s app-driven era, when programs are asynchronous and responsiveness is so vital, reactive programming can help you write code that’s more reliable, easier to scale, and better-performing. With this practical book, Java developers will first learn how to view problems in the reactive way, and then build programs that leverage the best features of this exciting new programming paradigm. Authors Tomasz Nurkiewicz and Ben Christensen include concrete examples that use the RxJava library to solve real-world performance issues on Android devices as well as

the server. You'll learn how RxJava leverages parallelism and concurrency to help you solve today's problems. This book also provides a preview of the upcoming 2.0 release. Write programs that react to multiple asynchronous sources of input without descending into "callback hell" Get to that aha! moment when you understand how to solve problems in the reactive way Cope with Observables that produce data too quickly to be consumed Explore strategies to debug and to test programs written in the reactive style Efficiently exploit parallelism and concurrency in your programs Learn about the transition to RxJava version 2

Reactive Streams in Java-Adam L. Davis 2018-11-29 Get an easy introduction to reactive streams in Java to handle concurrency, data streams, and the propagation of change in today's applications. This compact book includes in-depth introductions to RxJava, Akka Streams, and Reactor, and integrates the latest related features from Java 9 and 11, as well as reactive streams programming with the Android SDK. Reactive Streams in Java explains how to manage the exchange of stream data across an asynchronous boundary—passing elements on to another thread or thread-pool—while ensuring that the receiving side is not forced to buffer arbitrary amounts of data which can reduce application efficiency. After reading and using this book, you'll be proficient in programming reactive streams for Java in order to optimize application performance, and improve memory management and data exchanges. What You Will Learn Discover reactive streams and how to use them Work with the latest features in Java 9 and Java 11 Apply reactive streams using RxJava Program using Akka Streams Carry out reactive streams programming in Android Who This Book Is For Experienced Java programmers.

Java 9 Modularity-Sander Mak 2017-09-07 The upcoming Java 9 module system will affect existing applications and offer new ways of creating modular and maintainable applications. With this hands-on book, Java developers will learn not only about the joys of modularity, but also about the patterns needed to create truly modular and reliable applications. Authors Sander Mak and Paul Bakker teach you the concepts behind the Java 9 module system, along with the new tools it offers. You'll also gain learn how to modularize existing code and how to build new Java applications in a modular way. Understand Java 9 module system concepts Master the patterns and practices for building truly modular applications Migrate existing applications and libraries to Java 9 modules Use JDK 9 tools for modular development and migration

Mastering Kotlin-Nate Ebel 2019-10-11 Explore popular language features, Java to Kotlin interoperability, advanced topics, and practical applications by building a variety of sample projects Key Features Understand and leverage the syntax, tools, and patterns by writing code in Kotlin Explore practical topics such as Java interop, concurrency with coroutines, and functional programming Discover how to use Kotlin for build targets like Android, iOS, JavaScript, and backend service Book Description Using Kotlin without taking advantage of its power and interoperability is like owning a sports car and never taking it out of the garage. While documentation and introductory resources can help you learn the basics of Kotlin, the fact that it's a new language means that there are limited learning resources and code bases available in comparison to Java and other established languages. This Kotlin book will show you how to leverage software designs and concepts that have made Java the most dominant enterprise programming language. You'll understand how Kotlin is a modern approach to object-oriented programming (OOP). This book will take you through the vast array of features that Kotlin provides over other languages. These features include seamless interoperability with Java, efficient syntax, built-in functional programming constructs, and support for creating your own DSL. Finally, you will gain an understanding of implementing practical design patterns and best practices to help you master the Kotlin language. By the end of the book, you'll have obtained an advanced understanding of Kotlin in order to be able to build production-grade applications. What you will learn Model data using interfaces, classes, and data classes Grapple with practical interoperability challenges and solutions with Java Build parallel apps using concurrency solutions such as coroutines Explore functional, reactive, and imperative programming to build flexible apps Discover how to build your own domain-specific language Embrace functional programming using the standard library and Arrow Delve into the use of Kotlin for frontend JavaScript development Build server-side

services using Kotlin and Ktor Who this book is for If you're a Kotlin developer looking to further their skills or a professional Java developer looking for better or professional resources in order to make a switch to Kotlin, this book is for you. Familiarity with Kotlin programming will assist with understanding key concepts covered in the book.

Learning Spring Boot 2.0-Greg L. Turnquist 2017-11-03 Use Spring Boot to build lightning-fast apps About This Book Get up to date with the defining characteristics of Spring Boot 2.0 in Spring Framework 5 Learn to perform Reactive programming with SpringBoot Learn about developer tools, AMQP messaging, WebSockets, security, MongoDB data access, REST, and more Who This Book Is For This book is designed for both novices and experienced Spring developers. It will teach you how to override Spring Boot's opinions and frees you from the need to define complicated configurations. What You Will Learn Create powerful, production-grade applications and services with minimal fuss Support multiple environments with one artifact, and add production-grade support with features Find out how to tweak your apps through different properties Use custom metrics to track the number of messages published and consumed Enhance the security model of your apps Make use of reactive programming in Spring Boot Build anything from lightweight unit tests to fully running embedded web container integration tests In Detail Spring Boot provides a variety of features that address today's business needs along with today's scalable requirements. In this book, you will learn how to leverage powerful databases and Spring Boot's state-of-the-art WebFlux framework. This practical guide will help you get up and running with all the latest features of Spring Boot, especially the new Reactor-based toolkit. The book starts off by helping you build a simple app, then shows you how to bundle and deploy it to the cloud. From here, we take you through reactive programming, showing you how to interact with controllers and templates and handle data access. Once you're done, you can start writing unit tests, slice tests, embedded container tests, and even autoconfiguration tests. We go into detail about developer tools, AMQP messaging, WebSockets, security, and deployment. You will learn how to secure your application using both routes and method-based rules. By the end of the book, you'll have built a social media platform from which to apply the lessons you have learned to any problem. If you want a good understanding of building scalable applications using the core functionality of Spring Boot, this is the book for you. Style and approach This book takes a tutorial-based approach to teach you all you need to know to get up and running with the latest version of Spring Boot. Filled with examples, you will gain hands-on experience of every area that Spring tackles.

Learn Java 12 Programming-Nick Samoylov 2019-04-30 A comprehensive guide to get started with Java and gain insights into major concepts such as object-oriented, functional, and reactive programming Key Features Strengthen your knowledge of important programming concepts and the latest features in Java Explore core programming topics including GUI programming, concurrency, and error handling Learn the idioms and best practices for writing high-quality Java code Book Description Java is one of the preferred languages among developers, used in everything right from smartphones, and game consoles to even supercomputers, and its new features simply add to the richness of the language. This book on Java programming begins by helping you learn how to install the Java Development Kit. You will then focus on understanding object-oriented programming (OOP), with exclusive insights into concepts like abstraction, encapsulation, inheritance, and polymorphism, which will help you when programming for real-world apps. Next, you'll cover fundamental programming structures of Java such as data structures and algorithms that will serve as the building blocks for your apps. You will also delve into core programming topics that will assist you with error handling, debugging, and testing your apps. As you progress, you'll move on to advanced topics such as Java libraries, database management, and network programming, which will hone your skills in building professional-grade apps. Further on, you'll understand how to create a graphic user interface using JavaFX and learn to build scalable apps by taking advantage of reactive and functional programming. By the end of this book, you'll not only be well versed with Java 10, 11, and 12, but also gain a perspective into the future of this language and software development in general. What you will learn Learn and apply object-oriented principles Gain insights into data structures and understand how they are used in Java Explore multithreaded,

asynchronous, functional, and reactive programming Add a user-friendly graphic interface to your application Find out what streams are and how they can help in data processing Discover the importance of microservices and use them to make your apps robust and scalable Explore Java design patterns and best practices to solve everyday problems Learn techniques and idioms for writing high-quality Java code Who this book is for Students, software developers, or anyone looking to learn new skills or even a language will find this book useful. Although this book is for beginners, professional programmers can benefit from it too. Previous knowledge of Java or any programming language is not required.

Java 9 Programming Blueprints-Jason Lee 2017-07-27 Build a variety of real-world applications by taking advantage of the newest features of Java 9 About This Book See some of the new features of Java 9 and be introduced to parts of the Java SDK This book provides a set of diverse, interesting projects that range in complexity from fairly simple to advanced and cover HTTP 2.0 Take advantage of Java's new modularity features to write real-world applications that solve a variety of problems Who This Book Is For This book is for Java developers who are already familiar with the language. Familiarity with more advanced topics, such as network programming and threads, would be helpful, but is not assumed. What You Will Learn Learn how to package Java applications as modules by using the Java Platform Module System Implement process management in Java by using the all-new process handling API Integrate your applications with third-party services in the cloud Interact with mail servers using JavaMail to build an application that filters spam messages Learn to use JavaFX to build rich GUI based applications, which are an essential element of application development Write microservices in Java using platform libraries and third-party frameworks Integrate a Java application with MongoDB to build a cloud-based note taking application In Detail Java is a powerful language that has applications in a wide variety of fields. From playing games on your computer to performing banking transactions, Java is at the heart of everything. The book starts by unveiling the new features of Java 9 and quickly walks you through the building blocks that form the basis of writing applications. There are 10 comprehensive projects in the book that will showcase the various features of Java 9. You will learn to build an email filter that separates spam messages from all your inboxes, a social media aggregator app that will help you efficiently track various feeds, and a microservice for a client/server note application, to name a few. The book covers various libraries and frameworks in these projects, and also introduces a few more frameworks that complement and extend the Java SDK. Through the course of building applications, this book will not only help you get to grips with the various features of Java 9, but will also teach you how to design and prototype professional-grade applications with performance and security considerations. Style and approach This is a learn-as-you-build practical guide to building full-fledged applications using Java 9. With a project-based approach, we'll improve your Java skills. You will experience a variety of solutions to problems with Java.

Reactive Programming in Kotlin-Rivu Chakraborty 2017-12-05 Learn how to implement Reactive Programming paradigms with Kotlin, and apply them to web programming with Spring Framework 5.0 and in Android Application Development. About This Book Learn how to solve blocking user experience with Reactive Programming and get deep insights into RxKotlin Integrate Reactive Kotlin with Spring and build fantastic Android Apps with RxKotlin and RxAndroid Build reactive architectures that reduce complexity throughout the development process and make your apps(web and Android) scalable Who This Book Is For This book is for Kotlin developers who would like to build fault-tolerant, scalable, and distributed systems. A basic knowledge of Kotlin is required, but no prior knowledge of reactive programming. What You Will Learn Learn about reactive programming paradigms and how reactive programming can improve your existing projects Gain in-depth knowledge in RxKotlin 2.0 and the ReactiveX Framework Use RxKotlin with Android Create your own custom operators in RxKotlin Use Spring Framework 5.0 with Kotlin Use the reactor-kotlin extension Build Rest APIs with Spring,Hibernate, and RxKotlin Use testSubscriber to test RxKotlin applications Use backpressure management and Flowables In Detail In today's app-driven era, when programs are asynchronous, and responsiveness is so vital, reactive programming can help you write code that's more reliable, easier to scale, and better-

performing. Reactive programming is revolutionary. With this practical book, Kotlin developers will first learn how to view problems in the reactive way, and then build programs that leverage the best features of this exciting new programming paradigm. You will begin with the general concepts of Reactive programming and then gradually move on to working with asynchronous data streams. You will dive into advanced techniques such as manipulating time in data-flow, customizing operators and provider and how to Use the concurrency model to control asynchronicity of code and process event handlers effectively. You will then be introduced to functional reactive programming and will learn to apply FRP in practical use cases in Kotlin. This book will also take you one step forward by introducing you to spring 5 and spring boot 2 using Kotlin. By the end of the book, you will be able to build real-world applications with reactive user interfaces as well as you'll learn to implement reactive programming paradigms in Android. Style and Approach Loaded with numerous code examples and real-life projects, this book helps you delve into Reactive Programming with Kotlin, and apply it to real-world Spring-web and Android projects, thus making all your apps reactive.

Java 9 Data Structures and Algorithms-Debasish Ray Chawdhuri 2017-04-28 Gain a deep understanding of the complexity of data structures and algorithms and discover the right way to write more efficient code About This Book This book provides complete coverage of reactive and functional data structures Based on the latest version of Java 9, this book illustrates the impact of new features on data structures Gain exposure to important concepts such as Big-O Notation and Dynamic Programming Who This Book Is For This book is for Java developers who want to learn about data structures and algorithms. Basic knowledge of Java is assumed. What You Will Learn Understand the fundamentals of algorithms, data structures, and measurement of complexity Find out what general purpose data structures are, including arrays, linked lists, double ended linked lists, and circular lists Get a grasp on the basics of abstract data types—stack, queue, and double ended queue See how to use recursive functions and immutability while understanding and in terms of recursion Handle reactive programming and its related data structures Use binary search, sorting, and efficient sorting—quicksort and merge sort Work with the important concept of trees and list all nodes of the tree, traversal of tree, search trees, and balanced search trees Apply advanced general purpose data structures, priority queue-based sorting, and random access immutable linked lists Gain a better understanding of the concept of graphs, directed and undirected graphs, undirected trees, and much more In Detail Java 9 Data Structures and Algorithms covers classical, functional, and reactive data structures, giving you the ability to understand computational complexity, solve problems, and write efficient code. This book is based on the Zero Bug Bounce milestone of Java 9. We start off with the basics of algorithms and data structures, helping you understand the fundamentals and measure complexity. From here, we introduce you to concepts such as arrays, linked lists, as well as abstract data types such as stacks and queues. Next, we'll take you through the basics of functional programming while making sure you get used to thinking recursively. We provide plenty of examples along the way to help you understand each concept. You will get the also get a clear picture of reactive programming, binary searches, sorting, search trees, undirected graphs, and a whole lot more! Style and approach This book will teach you about all the major algorithms in a step-by-step manner. Special notes on the Big-O Notation and its impact on algorithms will give you fresh insights.

Mastering JavaScript Design Patterns-Simon Timms 2014-11-21 If you are a developer interested in creating easily maintainable applications that can grow and change with your needs, then this book is for you. Some experience with JavaScript (not necessarily with entire applications written in JavaScript) is required to follow the examples written in the book.

Java Projects-Peter Verhas 2018-08-31 Learn how to build scalable, resilient, and effective applications in Java that suit your software requirements. Key Features Explore advanced technologies that Java 11 delivers such as web programming and parallel computing Discover modern programming paradigms such as microservices, cloud computing and enterprise structures Build highly responsive applications with this practical introduction to Reactive programming Book Description Java is one of the most commonly used software languages by

programmers and developers. In this book, you'll learn the new features of Java 11 quickly and experience a simple and powerful approach to software development. You'll see how to use the Java runtime tools, understand the Java environment, and create a simple namesorting Java application. Further on, you'll learn about advanced technologies that Java delivers, such as web programming and parallel computing, and will develop a mastermind game. Moving on, we provide more simple examples, to build a foundation before diving into some complex data structure problems that will solidify your Java 11 skills. With a special focus on the features of new projects: Project Valhalla, Project Panama, Project Amber, and Project Loom, this book will help you get employed as a top-notch Java developer. By the end of the book, you'll have a firm foundation to continue your journey toward becoming a professional Java developer. What you will learn Compile, package, and run a program using a build management tool Get to know the principles of test-driven development Separate the wiring of multiple modules from application logic Use Java annotations for configuration Master the scripting API built into the Java language Understand static versus dynamic implementation of code Who this book is for This book is for anyone who wants to learn the Java programming language. No programming experience required. If you have prior experience, it will help you through the book more easily.

Getting Started with Unity 5-Dr. Edward Lavieri 2015-05-29 If you are a game developer interested in learning Unity 3D from scratch and becoming familiar with its core features, then this book is for you. No prior knowledge of Unity 3D is required.

Vert.x in Action-Julien Ponge 2020-12-01 As enterprise applications become larger and more distributed, new architectural approaches like reactive designs, microservices, and event streams are required knowledge. Vert.x in Action teaches you to build highly-scalable reactive enterprise applications using the mature, rock-solid Vert.x framework. Vert.x in Action gets you up to speed in the basics of asynchronous programming as you learn to design and code reactive applications. Using the Vert.x asynchronous APIs, you'll build services including web stack, messaging, authentication, and access control. You'll also dive into deployment of container-native components with Docker, Kubernetes, and OpenShift. Along the way, you'll check your app's health and learn to test its resilience to external service failures. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Mastering Akka-Christian Baxter 2016-10-21 Master the art of creating scalable, concurrent, and reactive applications using Akka About This Book This book will help you cure anemic models with domain-driven design We cover major Akka programming concepts such as concurrency, scalability, and reactivity You will learn concepts like Event Sourcing and CQRS via Akka Persistence, Akka Streams, Akka Http as well as Akka Clustering Who This Book Is For If you want to use the Lightbend platform to create highly performant reactive applications, then this book is for you. If you are a Scala developer looking for techniques to use all features of the new Akka release and want to incorporate these solutions in your current or new projects, then this book is for you. Expert Java developers who want to build scalable, concurrent, and reactive application will find this book helpful. What You Will Learn Use Akka actors to enable parallel execution Build out domain-driven design based components like entities and aggregates Respond to command requests on that aggregate root that affect the internal state Leverage Akka Persistence, protobuf and Cassandra to save the persistent state of you entities Build out complex processing graphs with the Graph Builder DSL Understand the dynamic push/pull nature of backpressure handling within Akka Streams Route HTTP requests to an actor and return a response Deploy actor instances across a set of nodes via ConductR for high availability In Detail For a programmer, writing multi-threaded applications is critical as it is important to break large tasks into smaller ones and run them simultaneously. Akka is a distributed computing toolkit that uses the abstraction of the Actor model, enabling developers to build correct, concurrent, and distributed applications using Java and Scala with ease. The book begins with a quick introduction that simplifies concurrent programming with actors. We then proceed to master all aspects of domain-driven design. We'll teach you how to scale out with Akka Remoting/Clustering. Finally, we introduce Conductr as a means to deploy to and manage

microservices across a cluster. Style and approach This comprehensive, fast-paced guide is packed with several real-world use cases that will help you understand concepts, issues, and resolutions while using Akka to create highly performant, scalable, and concurrency-proof reactive applications.

Akka Cookbook-Hector Veiga Ortiz 2017-05-26 Learn how to use the Akka framework to build effective applications in Scala About This Book Covers a discussion on Lagom—the newest launched Akka framework that is built to create complex microservices easily The recipe approach of the book allows the reader to know important and independent concepts of Scala and Akka in a seamless manner Provides a comprehensive understanding of the Akka actor model and implementing it to create reactive web applications Who This Book Is For If you are a Scala developer who wants to build scalable and concurrent applications, then this book is for you. Basic knowledge of Akka will help you take advantage of this book. What You Will Learn Control an actor using the ContolAware mailbox Test a fault-tolerant application using the Akka test kit Create a parallel application using futures and agents Package and deploy Akka application inside Docker Deploy remote actors programmatically on different nodes Integrate Streams with Akka actors Install Lagom and create a Lagom project In Detail Akka is an open source toolkit that simplifies the construction of distributed and concurrent applications on the JVM. This book will teach you how to develop reactive applications in Scala using the Akka framework. This book will show you how to build concurrent, scalable, and reactive applications in Akka. You will see how to create high performance applications, extend applications, build microservices with Lagom, and more. We will explore Akka's actor model and show you how to incorporate concurrency into your applications. The book puts a special emphasis on performance improvement and how to make an application available for users. We also make a special mention of message routing and construction. By the end of this book, you will be able to create a high-performing Scala application using the Akka framework. Style and approach This highly practical recipe-based approach will allow you to build scalable, robust, and reactive applications using the Akka framework.

Modern Java in Action-Raoul-Gabriel Urma 2018-09-30 "Modern applications take advantage of innovative designs, including microservices, reactive architectures, and streaming data. Modern Java features like lambdas, streams, and the long-awaited Java Module System make implementing these designs significantly easier. It's time to upgrade your skills and meet these challenges head on! Modern Java in action connects new features of the Java language with their practical applications. Using crystal-clear examples and careful attention to detail, this book respects your time. It will help you expand your existing knowledge of core Java as you master modern additions like the Streams API and the Java Module System, explore new approaches to concurrency, and learn how functional concepts can help you write code that's easier to read and maintain."--Page 4 de la couverture.

Learning Groovy-Adam L. Davis 2016-08-05 Start building powerful apps that take advantage of the dynamic scripting capabilities of the Groovy language. This book covers Groovy fundamentals, such as installing Groovy, using Groovy tools, and working with the Groovy Development Kit (GDK). You'll also learn more advanced aspects of Groovy, such as using Groovy design patterns, writing DSLs in Groovy, and taking advantage of Groovy's functional programming features. There is more to Groovy than the core language, so Learning Groovy covers the extended Groovy ecosystem. You'll see how to harness Gradle (Groovy's build system), Grails (Groovy's web application framework), Spock (Groovy's testing framework), and Ratpack (Groovy's reactive web library). What You'll Learn Grasp Groovy fundamentals, including the GDK or Groovy Development Kit Master advanced Groovy, such as writing Groovy DSLs Discover functional programming in Groovy Work with GPars, the built-in concurrency library Use Gradle, the build system Master Grails, the web application framework Work with Spock, the testing framework Harness Ratpack, the reactive web library Who This Book Is For Although this book is intended for those with a Java background, anyone with basic programming skills could benefit from it. This book is a data-filled, yet easy-to-digest tour of the Groovy language and ecosystem.

Java 9 Cookbook-Mohamed Sanaulla 2017-08-21 A definitive guide to learning the key concepts of modern application development in Java About This Book Learn the latest features of Java 9 Extend your Java knowledge and take your application to new levels by making it fast, secure, and scalable Delve into the intricacies of Modular programming in Java 9 Who This Book Is For The book is for intermediate to advanced Java programmers who want to make their applications fast, secure, and scalable. What You Will Learn Set up JDK and know the differences in the JDK 9 installation Implement OO designs using classes and interfaces Manage operating system processes Understand the new modular JDK and modular programming Create a modular application with clear dependencies Build graphical user interfaces using JavaFX Use the new HTTP Client API Learn about the new diagnostic features in Java 9 See how to use the new jShell REPL tool Execute ES6-compliant JavaScript code from your Java applications In Detail Java is an object-oriented programming language. It is one of the most widely accepted languages because of its design and programming features, particularly in its promise that you can write a program once and run it anywhere. This cookbook offers a range of software development examples in simple and straightforward Java 9 code, providing step-by-step resources and time-saving methods to help you solve data problems efficiently. Starting with the installation of Java, each recipe addresses a specific problem, with a discussion that explains the solution and offers insight into how it works. We cover major concepts such as Project Jigsaw and various tools that will enable you to modularize your applications. You will learn new features in the form of recipes that will make your applications modular, secure, and fast. Style and approach Each recipe in this book contains a series of complete instructions to perform a core task, plus an explanation of the purpose behind it. Similar methods or further refinements are included with each recipe to provide comprehensive guidance.

Java 11 Cookbook-Nick Samoylov 2018-09-29 Solutions for modular, functional, reactive, GUI, network, and multithreaded programming Key Features Explore the latest features of Java 11 to implement efficient and reliable code Develop memory-efficient applications, understanding new garbage collection in Java 11 Create restful webservices and microservices with Spring boot 2 and Docker Book Description For more than three decades, Java has been on the forefront of developing robust software that has helped versatile businesses meet their requirements. Being one of the most widely used programming languages in history, it’s imperative for Java developers to discover effective ways of using it in order to take full advantage of the power of the latest Java features. Java 11 Cookbook offers a range of software development solutions with simple and straightforward Java 11 code examples to help you build a modern software system. Starting with the installation of Java, each recipe addresses various problem by explaining the solution and offering insights into how it works. You’ll explore the new features added to Java 11 that will make your application modular, secure, and fast. The book contains recipes on functional programming, GUI programming, concurrent programming, and database programming in Java. You’ll also be taken through the new features introduced in JDK 18.3 and 18.9. By the end of this book, you’ll be equipped with the skills required to write robust, scalable, and optimal Java code effectively. What you will learn Set up JDK and understand what's new in the JDK 11 installation Implement object-oriented designs using classes and interfaces Manage operating system processes Create a modular application with clear dependencies Build graphical user interfaces using JavaFX Use the new HTTP Client API Explore the new diagnostic features in Java 11 Discover how to use the new JShell REPL tool Who this book is for The book is for intermediate-to-advanced Java programmers who want to make their applications fast, secure, and scalable.

Beginning Spring Boot 2-K. Siva Prasad Reddy 2017-09-27 Learn Spring Boot and how to build Java-based enterprise, web, and microservice applications with it. In this book, you'll see how to work with relational and NoSQL databases, build your first microservice, enterprise, or web application, and enhance that application with REST APIs. You'll also learn how to build reactive web applications using Spring Boot along with Spring Web Reactive. Then you’ll secure your Spring Boot-created application or service before testing and deploying it. After reading and learning with Beginning Spring Boot 2, you'll have the skills and techniques to start building your first Spring Boot applications and microservices with confidence to take the next

steps in your career journey. What You'll Learn Use Spring Boot autoconfiguration Work with relational and NoSQL databases Build web applications with Spring Boot Apply REST APIs using Spring Boot Create reactive web applications using Spring Web Reactive Secure your Spring Boot applications or web services Test and deploy your Spring Boot applications Who This Book Is For Experienced Java and Spring Framework developers who are new to the new Spring Boot micro-framework.

Reactive Programming with Angular and ngrx-Oren Farhi 2017-05-16 Manage your Angular development using Reactive programming. Growing in popularity and now an essential part of any professional web developer's toolkit, Reactive programming can enrich your development and make your code more efficient. Featuring a core application to explore and build yourself, this book shows you how to utilize ngrx/store as a state management with Redux pattern, and how to utilize ngrx/effects to define a better and more robust application architecture. Through working code examples, you will understand every aspect of Reactive programming with Angular so that you'll be able to develop maintainable, readable code. Reactive Programming with Angular and ngrx is ideal for developers already familiar with JavaScript, Angular, or other languages, and who are looking for more insight into their Angular projects. Use this book to start mastering Reactive programming today. What You'll Learnsee how="" the="" boilerplate="" and="" webpack="" work p/pulliConstruct components efficientlybr/liliUtilize ngrx extensions and RxJSbr/liliOrganize state management with reducers, actions and side effectsbr/li/ulp Who This Book Is For Developers who are already familiar with JavaScript and Angular and want to move onto more advanced development.

The Java Module System-Nicolai Parlog 2019-05-28 The Java Module System, aka "Project Jigsaw", gives Java developers the ability to define and enforce modularity without an outside framework. In The Java Module System, readers will learn how the module system improves reliability and maintainability and can be used to reduce tight coupling of system components. They then discover how to build, compile, and run their own fully modular applications with best practices and expert techniques. Along the way, readers will also explore Java 9's compatibility challenges and how to migrate their application to the module system. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Java 8 in Action-Raoul-Gabriel Urma 2014 "Java 8 in Action is a clearly written guide to the new features of Java 8. It begins with a practical introduction to lambdas, using real-world Java code. Next, it covers the new Streams API and shows how you can use it to make collection-based code radically easier to understand and maintain. It also explains other major Java 8 features including default methods, Optional, CompletableFuture, and the new Date and Time API ... This book/course is written for programmers familiar with Java and basic OO programming."-- Resource description page.

Hands-On Spring Security 5 for Reactive Applications-Tomcy John 2018-07-31 Secure your Java applications by integrating the Spring Security framework in your code Key Features Provide authentication, authorization and other security features for Java applications. Learn how to secure microservices, cloud, and serverless applications easily Understand the code behind the implementation of various security features Book Description Security is one of the most vital concerns for any organization. The complexity of an application is compounded when you need to integrate security with existing code, new technology, and other frameworks. This book will show you how to effectively write Java code that is robust and easy to maintain. Hands-On Spring Security 5 for Reactive Applications starts with the essential concepts of reactive programming, Spring Framework, and Spring Security. You will then learn about a variety of authentication mechanisms and how to integrate them easily with the Spring MVC application. You will also understand how to achieve authorization in a Spring WebFlux application using Spring Security.You will be able to explore the security confgurations required to achieve OAuth2 for securing REST APIs and integrate security in microservices and serverless applications. This book will guide you in integrating add-ons that will add value to any Spring Security module. By the end of the book, you will be proficient at integrating Spring Security in your Java applications What you will learn Understand how

Spring Framework and Reactive application programming are connected Implement easy security confgurations with Spring Security expressions Discover the relationship between OAuth2 and OpenID Connect Secure microservices and serverless applications with Spring Integrate add-ons, such as HDIV, Crypto Module, and CORS support Apply Spring Security 5 features to enhance your Java reactive applications Who this book is for If you are a Java developer who wants to improve application security, then this book is for you. A basic understanding of Spring, Spring Security framework, and reactive applications is required to make the most of the book.

Java 9 Dependency Injection-Nilang Patel 2018-04-26 Create clean code with Dependency Injection principles Key Features Use DI to make your code loosely coupled to manage and test your applications easily on Spring 5 and Google Guice Learn the best practices and methodologies to implement DI Write more maintainable Java code by decoupling your objects from their implementations Book Description Dependency Injection (DI) is a design pattern that allows us to remove the hard-coded dependencies and make our application loosely coupled, extendable, and maintainable. We can implement DI to move the dependency resolution from compile-time to runtime. This book will be your one stop guide to write loosely coupled code using the latest features of Java 9 with frameworks such as Spring 5 and Google Guice. We begin by explaining what DI is and teaching you about IoC containers. Then you'll learn about object compositions and their role in DI. You'll find out how to build a modular application and learn how to use DI to focus your efforts on the business logic unique to your application and let the framework handle the infrastructure work to put it all together. Moving on, you'll gain knowledge of Java 9's new features and modular framework and how DI works in Java 9. Next, we'll explore Spring and Guice, the popular frameworks for DI. You'll see how to define injection keys and configure them at the framework-specific level. After that, you'll find out about the different types of scopes available in both popular frameworks. You'll see how to manage dependency of cross-cutting concerns while writing applications through aspect-oriented programming. Towards the end, you'll learn to integrate any third-party library in your DI-enabled application and explore common pitfalls and recommendations to build a solid application with the help of best practices, patterns, and anti-patterns in DI. What you will learn Understand the benefits of DI and fo from a tightly coupled design to a cleaner design organized around dependencies See Java 9's new features and modular framework Set up Guice and Spring in an application so that it can be used for DI Write integration tests for DI applications Use scopes to handle complex application scenarios Integrate any third-party library in your DI-enabled application Implement Aspect-Oriented Programming to handle common cross-cutting concerns such as logging, authentication, and transactions Understand IoC patterns and anti-patterns in DI Who this book is for This book is for Java developers who would like to implement DI in their application. Prior knowledge of the Spring and Guice frameworks and Java programming is assumed.

Functional Reactive Programming-Stephen Blackheath 2016-06-28 Most software applications must handle user or system-generated events. The most widely-accepted event handling model is the Observer pattern, in which an object "listens" for changes in the application's state and then reacts by executing a unit of code the problems is that this approach is prone to bugs. Functional Reactive Programming (FRP) is an alternative to the Observer pattern. It's designed to deal with events as a stream of values over time rather than as a series of unique responses to discrete changes in state, keeping logic tidy and eliminating the bugs that plague event handling code with no loss of expressiveness. FRP is useful anywhere the Observer pattern is common, including user interfaces, video games, networking, and industrial applications. "Functional Reactive Programming" teaches the concepts and applications of FRP. It begins with a careful walk-through of the FRP core operations and introduces the concepts and techniques needed to use FRP in any language. Following easy-to-understand examples, readers will learn how to use FRP in greenfield applications and how to refactor existing applications. Along the way, the book introduces the basics of functional programming in a just-in-time style, so readers never learn anything before they need to use it. By the end of the book, readers will be able to use FRP to spend more time adding features and less time fixing problems. Purchase of the print book includes a free eBook in PDF, Kindle, and

ePub formats from Manning Publications."