

Spring Boot Cookbook Second Edition Ebook By Alex

Spring Boot 2.3 is the hottest ticket in town... ..when it comes to Java development. Learn the latest features that can scale your apps including: * Web and Data access * Developer tools and test support * Operational features * Docker container baking * Bottleneck discovery with BlockHound * Messaging * Security * More! Written cover-to-cover using Project Reactor, your apps will scale like never before. Grab your copy today and learn to build top-notch, scalable solutions with modern tactics. Greg L. Turnquist works on the Spring team as a principal developer at VMware. He is a committer to Spring HATEOAS, Spring Data, Spring Boot, R2DBC, and Spring Session for MongoDB. He also wrote Packt's best-selling title, Learning Spring Boot 2.0 2nd Edition. He co-founded the Nashville Java User Group in 2010 and hasn't met a Java app (yet) that he doesn't like. Follow him on Twitter @gregturn and subscribe for all his Spring Boot videos at YouTube.com/GregTurnquist.

Discover Android programming and web development by understanding the concepts of Kotlin Programming Key Features Practical solutions to your common programming problems with Kotlin 1.1 Leverage the functional power of Kotlin to ease your Android application development Learn to use Java code in conjunction with Kotlin Book Description The Android team has announced first-class support for Kotlin 1.1. This acts as an added boost to the language and more and more developers are now looking at Kotlin for their application development. This recipe-based book will be your guide to learning the Kotlin programming language. The recipes in this book build from simple language concepts to more complex applications of the language. After the fundamentals of the language, you will learn how to apply the object-oriented programming features of Kotlin 1.1. Programming with Lambdas will show you how to use the functional power of Kotlin. This book has recipes that will get you started with Android programming with Kotlin 1.1, providing quick solutions to common problems encountered during Android app development. You will also be taken through recipes that will teach you microservice and concurrent programming with Kotlin. Going forward, you will learn to test and secure your applications with Kotlin. Finally, this book supplies recipes that will help you migrate your Java code to Kotlin and will help ensure that it's interoperable with Java. What you will learn Understand the basics and object-oriented concepts of Kotlin Programming Explore the full potential of collection frameworks in Kotlin Work with SQLite databases in Android, make network calls, and fetch data over a network Use Kotlin's Anko library for efficient and quick Android development Uncover some of the best features of Kotlin: Lambdas and Delegates Set up web service development environments, write servlets, and build RESTful services with Kotlin Learn how to write unit tests, integration tests, and instrumentation/acceptance tests. Who this book is for This book will appeal to Kotlin developers keen to find solutions for their common programming problems. Java programming knowledge would be an added advantage.

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.

What separates the traditional enterprise from the likes of Amazon, Netflix, and Etsy? Those companies have refined the art of cloud native development to maintain their competitive edge and stay well ahead of the competition. This practical guide shows Java/JVM developers how to build better software, faster, using Spring Boot, Spring Cloud, and Cloud Foundry. Many organizations have already waded into cloud computing, test-driven development, microservices, and continuous integration and delivery. Authors Josh Long and Kenny Bastani fully immerse you in the tools and methodologies that will help you transform your legacy application into one that is genuinely cloud native. In four sections, this book takes you through: The Basics: learn the motivations behind cloud native thinking; configure and test a Spring Boot application; and move your legacy application to the cloud Web Services: build HTTP and RESTful services with Spring; route requests in your distributed system; and build edge services closer to the data Data Integration: manage your data with Spring Data, and integrate distributed services with Spring's support for event-driven, messaging-centric architectures Production: make your system observable; use service brokers to connect stateful services; and understand the big ideas behind continuous delivery

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 configurations 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 configurations 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.

This book is for both novice developers in general 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.

This book is a collection of developer code recipes and best practices for persisting data using Spring, particularly Spring Boot. The book is structured around practical recipes, where each recipe discusses a performance case or performance-related case, and almost every recipe has one or more applications. Mainly, when we try to accomplish something (e.g., read some data from the database), there are several approaches to do it, and, in order to choose the best way, you have to know the implied trades-off from a performance perspective. You'll see that in the end, all these penalties slow down the application. Besides presenting the arguments that favor a certain choice, the application is written in Spring Boot style which is quite different than plain Hibernate. Persistence is an important set of techniques and technologies for accessing and using data, and this book demonstrates that data is mobile regardless of specific applications and contexts. In Java development, persistence is a key factor in enterprise, ecommerce, cloud and other transaction-oriented applications. After reading and using this book, you'll have the fundamentals to apply these persistence solutions into your own mission-critical enterprise Java applications that you build using Spring. What You Will Learn: Shape *-to-many associations for best performances. Effectively exploit Spring Projections (DTO). Learn best practices for batching inserts, updates and deletes. Effectively fetch parent and association in a single SELECT. Learn how to inspect Persistent Context content. Dissect pagination techniques (offset and keyset). Handle queries, locking, schemas, Hibernate types, and more. Who This Book Is For: Any Spring and Spring Boot developer that wants to squeeze the persistence layer performances. Learn how to secure your Java applications from hackers using Spring Security 4.2. About This Book: Architect solutions that leverage the full power of Spring Security while remaining loosely coupled. Implement various scenarios such as supporting existing user stores, user sign up, authentication, and supporting AJAX requests. Integrate with popular Microservice and Cloud services such as Zookeeper, Eureka, and Consul, along with advanced techniques, including OAuth, JSON Web Token's (JWS), Hashing, and encryption algorithms. Who This Book Is For: This book is intended for Java Web and/or RESTful webservice developers and assumes a basic understanding of creating Java 8, Java Web and/or RESTful webservice applications, XML, and the Spring Framework. You are not expected to have any previous experience with Spring Security. What You Will Learn: Understand common security vulnerabilities and how to resolve them. Learn to perform initial penetration testing to uncover common security vulnerabilities. Implement authentication and authorization. Learn to utilize existing corporate infrastructure such as LDAP, Active Directory, Kerberos, CAS, OpenID, and OAuth. Integrate with popular frameworks such as Spring, Spring-Boot, Spring-Data, JSF, Vaaden, jQuery, and AngularJS. Gain deep understanding of the security challenges with RESTful webservices and microservice architectures. Integrate Spring with other security infrastructure components like LDAP, Apache Directory server and SAML. In Detail: Knowing that experienced hackers are itching to test your skills makes security one of the most difficult and high-pressured concerns of creating an application. The complexity of properly securing an application is compounded when you must also integrate this factor with existing code, new technologies, and other frameworks. Use this book to easily secure your Java application with the tried and trusted Spring Security framework, a powerful and highly customizable authentication and access-control framework. The book starts by integrating a variety of authentication mechanisms. It then demonstrates how to properly restrict access to your application. It also covers tips on integrating with some of the more popular web frameworks. An example of how Spring Security defends against session fixation, moves into concurrency control, and how you can utilize session management for administrative functions is also included. It concludes with advanced security scenarios for RESTful webservices and microservices, detailing the issues surrounding stateless authentication, and demonstrates a concise, step-by-step approach to solving those issues. And, by the end of the book, readers can rest assured that integrating version 4.2 of Spring Security will be a seamless endeavor from start to finish. Style and approach: This practical step-by-step tutorial has plenty of example code coupled with the necessary screenshots and clear narration so that grasping content is made easier and quicker.

Operators are a way of packaging, deploying, and managing Kubernetes applications. A Kubernetes application doesn't just run on Kubernetes; it's composed and managed in Kubernetes terms. Operators add application-specific operational knowledge to a Kubernetes cluster, making it easier to automate complex, stateful applications and to augment the platform. Operators can coordinate application upgrades seamlessly, react to failures automatically, and streamline repetitive maintenance like backups. Think of Operators as site reliability engineers in software. They work by extending the Kubernetes control plane and API, helping systems integrators, cluster administrators, and application developers reliably deploy and manage key services and components. Using real-world examples, authors Jason Dobies and Joshua Wood demonstrate how to use Operators today and how to create Operators for your applications with the Operator Framework and SDK. Learn how to establish a Kubernetes cluster and deploy an Operator. Examine a range of Operators from usage to implementation. Explore the three pillars of the Operator Framework: the Operator SDK, the Operator Lifecycle Manager, and Operator Metering. Build Operators from the ground up using the Operator SDK. Build, package, and run an Operator in development, testing, and production phases. Learn how to distribute your Operator for installation on Kubernetes clusters.

You can choose several data access frameworks when building Java enterprise applications that work with relational databases. But what about big data? This hands-on introduction shows you how Spring Data makes it relatively easy to build applications across a wide range of new data access technologies such as NoSQL and Hadoop. Through several sample projects, you'll learn how Spring Data provides a consistent programming model that retains NoSQL-specific features and capabilities, and helps you develop Hadoop applications across a wide range of use-cases such as data analysis, event stream processing, and workflow. You'll also discover the features Spring Data adds to Spring's existing JPA and JDBC support for writing RDBMS-based data access layers. Learn about Spring's template helper classes to simplify the use of database-specific functionality. Explore Spring Data's repository abstraction and advanced query functionality. Use Spring Data with Redis (key/value store), HBase (column-

family), MongoDB (document database), and Neo4j (graph database) Discover the GemFire distributed data grid solution Export Spring Data JPA-managed entities to the Web as RESTful web services Simplify the development of HBase applications, using a lightweight object-mapping framework Build example big-data pipelines with Spring Batch and Spring Integration Learn to develop, test, and deploy your Spring Boot distributed application and explore various best practices. Key Features Build and deploy your microservices architecture in the cloud Build event-driven resilient systems using Hystrix and Turbine Explore API management tools such as KONG and API documentation tools such as Swagger Book Description Spring is one of the best frameworks on the market for developing web, enterprise, and cloud ready software. Spring Boot simplifies the building of complex software dramatically by reducing the amount of boilerplate code, and by providing production-ready features and a simple deployment model. This book will address the challenges related to power that come with Spring Boot's great configurability and flexibility. You will understand how Spring Boot configuration works under the hood, how to overwrite default configurations, and how to use advanced techniques to prepare Spring Boot applications to work in production. This book will also introduce readers to a relatively new topic in the Spring ecosystem – cloud native patterns, reactive programming, and applications. Get up to speed with microservices with Spring Boot and Spring Cloud. Each chapter aims to solve a specific problem or teach you a useful skillset. By the end of this book, you will be proficient in building and deploying your Spring Boot application. What you will learn Build logically structured and highly maintainable Spring Boot applications Configure RESTful microservices using Spring Boot Make the application production and operation-friendly with Spring Actuator Build modern, high-performance distributed applications using cloud patterns Manage and deploy your Spring Boot application to the cloud (AWS) Monitor distributed applications using log aggregation and ELK Who this book is for The book is targeted at experienced Spring and Java developers who have a basic knowledge of working with Spring Boot. The reader should be familiar with Spring Boot basics, and aware of its benefits over traditional Spring Framework-based applications.

Solve all your Spring 5 problems using complete and real-world code examples. When you start a new project, you'll be able to copy the code and configuration files from this book, and then modify them for your needs. This can save you a great deal of work over creating a project from scratch. The recipes in Spring 5 Recipes cover Spring fundamentals such as Spring IoC container, Spring AOP/ AspectJ, and more. Other recipes include Spring enterprise solutions for topics such as Spring Java EE integration, Spring Integration, Spring Batch, Spring Remoting, messaging, transactions, and working with big data and the cloud using Hadoop and MongoDB. Finally, Spring web recipes cover Spring MVC, other dynamic scripting, integration with the popular Grails Framework (and Groovy), REST/web services, and more. You'll also see recipes on new topics such as Spring Framework 5, reactive Spring, Spring 5 microservices, the functional web framework and much more. This book builds upon the best-selling success of the previous editions and focuses on the latest Spring Framework features for building enterprise Java applications. What You'll Learn Get re-usable code recipes and snippets for core Spring, annotations and other development tools Access Spring MVC for web development Work with Spring REST and microservices for web services development and integration into your enterprise Java applications Use Spring Batch, NoSQL and big data for building and integrating various cloud computing services and resources Integrate Java Enterprise Edition and other Java APIs for use in Spring Use Grails code and much more Who This Book Is For Experienced Java and Spring programmers.

Getting started with Spring Framework, Second Edition includes new chapters on Spring Web MVC, RESTful Web Services and Spring Security. This book is meant for Java developers with little or no knowledge of Spring Framework. All the examples shown in this book use Spring 4. You can download the examples (consisting of 60 sample projects) described in this book from the following Google Code project: <https://code.google.com/p/getting-started-with-spring-framework-2edition/> Chapter 1 – Introduction to Spring Framework Chapter 2 – Spring Framework basics Chapter 3 - Configuring beans Chapter 4 - Dependency injection Chapter 5 - Customizing beans and bean definitions Chapter 6 - Annotation-driven development with Spring Chapter 7 - Database interaction using Spring Chapter 8 - Messaging, emailing, asynchronous method execution, and caching using Spring Chapter 9 - Aspect-oriented programming Chapter 10 – Spring Web MVC basics Chapter 11 – Validation and data binding in Spring Web MVC Chapter 12 – Developing RESTful web services using Spring Web MVC Chapter 13 – More Spring Web MVC – internationalization, file upload and asynchronous request processing Chapter 14 – Securing applications using Spring Security This book covers:- Specifying configuration metadata using XML and annotations- Programmatically configuring Spring container and beans- Configuring different types of bean properties- Bean lifecycle interfaces- Customizing beans using BeanPostProcessors and BeanFactoryPostProcessors- Bean definition inheritance - JSR 250's and 330's annotations for dependency injection- Validation using JSR 303 (Bean Validation API) annotations and Spring's Validator interface - SpEL (Spring Expression Language) - Caching using Spring's cache abstraction- Sending and receiving JMS messages using Spring- Aspect-oriented programming support in Spring- Sending emails using Spring- Asynchronously executing methods using Spring- Task scheduling - Database interaction using JDBC and Hibernate- Programmatic and declarative transaction management- Developing web applications using Spring Web MVC- Data binding and validation in Spring Web MVC- Type conversion and formatting support in Spring- Spring's form tag library- Internationalization and file upload support- Asynchronous request processing- Developing RESTful Web Services using Spring Web MVC- Implementing web request security using Spring Security- Implementing method-level security using Spring Security- Implementing ACL-based security using Spring Security's ACL module The book shows a simple internet banking application that is developed incrementally in each chapter of the book and covers the topics mentioned above. You can post your feedback and questions to the authors in the following Google Groups forum: groups.google.com/forum/#!forum/getting-started-with-spring-framework

With over 75 million downloads per month, Spring Boot is the most widely used Java framework available. Its ease and power have revolutionized application development from monoliths to microservices. Yet Spring Boot's simplicity can also be confounding. How do developers learn enough to be productive immediately? This practical book shows you how to use this framework to write successful mission-critical applications. Mark Heckler from VMware, the company behind Spring, guides you through Spring Boot's architecture and approach, covering topics such as debugging, testing, and deployment. If you want to develop cloud native Java or Kotlin applications with Spring Boot rapidly and effectively--using reactive programming, building APIs, and creating database access of all kinds--this book is for you. Learn how Spring Boot simplifies cloud native application development and deployment Build reactive applications and extend communication across the network boundary to create distributed systems Understand how Spring Boot's architecture and approach increase developer productivity and application portability Deploy Spring Boot applications for production workloads rapidly and reliably Monitor application and system health for

optimal performance and reliability Debug, test, and secure cloud-based applications painlessly
Enterprise Integration Patterns provides an invaluable catalog of sixty-five patterns, with real-world solutions that demonstrate the formidable of messaging and help you to design effective messaging solutions for your enterprise. The authors also include examples covering a variety of different integration technologies, such as JMS, MSMQ, TIBCO ActiveEnterprise, Microsoft BizTalk, SOAP, and XSL. A case study describing a bond trading system illustrates the patterns in practice, and the book offers a look at emerging standards, as well as insights into what the future of enterprise integration might hold. This book provides a consistent vocabulary and visual notation framework to describe large-scale integration solutions across many technologies. It also explores in detail the advantages and limitations of asynchronous messaging architectures. The authors present practical advice on designing code that connects an application to a messaging system, and provide extensive information to help you determine when to send a message, how to route it to the proper destination, and how to monitor the health of a messaging system. If you want to know how to manage, monitor, and maintain a messaging system once it is in use, get this book.

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.

From lambda expressions and JavaFX 8 to new support for network programming and mobile development, Java 8 brings a wealth of changes. This cookbook helps you get up to speed right away with hundreds of hands-on recipes across a broad range of Java topics. You'll learn useful techniques for everything from debugging and data structures to GUI development and functional programming. Each recipe includes self-contained code solutions that you can freely use, along with a discussion of how and why they work. If you are familiar with Java basics, this cookbook will bolster your knowledge of the language in general and Java 8's main APIs in particular. Recipes include: Methods for compiling, running, and debugging Manipulating, comparing, and rearranging text Regular expressions for string- and pattern-matching Handling numbers, dates, and times Structuring data with collections, arrays, and other types Object-oriented and functional programming techniques Directory and filesystem operations Working with graphics, audio, and video GUI development, including JavaFX and handlers Network programming on both client and server Database access, using JPA, Hibernate, and JDBC Processing JSON and XML for data storage Multithreading and concurrency

Spring Boot 2.0 Cookbook Configure, test, extend, deploy, and monitor your Spring Boot application both outside and inside the cloud, 2nd Edition Packt Publishing Ltd

Take your application development skills to the next level by implementing Spring Boot features effectively
Key Features This collection of effective recipes serves as guidelines for Spring Boot application development Get up to date with features of the latest version of Spring Boot 2.0 Tips and tricks to improve your efficiency through the stages of software development
Book Description The Spring framework provides great flexibility for Java development, which also results in tedious configuration work. Spring Boot addresses the configuration difficulties of Spring and makes it easy to create standalone, production-grade Spring-based applications. This practical guide makes the existing development process more efficient. Spring Boot Cookbook 2.0 Second Edition smartly combines all the skills and expertise to efficiently develop, test, deploy, and monitor applications using Spring Boot on premise and in the cloud. We start with an overview of the important Spring Boot features you will learn to create a web application for a RESTful service. Learn to fine-tune the behavior of a web application by learning about custom routes and asset paths and how to modify routing patterns. Address the requirements of a complex enterprise application and cover the creation of custom Spring Boot starters. This book also includes examples of the new and improved facilities available to create various kinds of tests introduced in Spring Boot 1.4 and 2.0, and gain insights into Spring Boot DevTools. Explore the basics of Spring Boot Cloud modules and various Cloud starters to make applications in "Cloud Native" and take advantage of Service Discovery and Circuit Breakers. What you will learn Get to know Spring Boot Starters and create custom auto-configurations Work with custom annotations that enable bean activation Use DevTools to easily develop and debug applications Learn the effective testing techniques by integrating Cucumber and Spock Observe an eternal application configuration using Consul Move your existing Spring Boot applications to the cloud Use Hashicorp Consul and Netflix Eureka for dynamic Service Discovery Understand the various mechanisms that Spring Boot provides to examine an application's health Who this book is for This book is for Java Developers who have good knowledge and understanding of Spring and Java application development.

Take your application development skills to the next level by implementing Spring Boot features effectively
Key Features This collection of effective recipes serves as guidelines for Spring Boot application development Get up to date with features of the latest version of Spring Boot 2.0 Tips and tricks to improve your efficiency through the stages of software development
Book Description The Spring framework provides great flexibility for Java development, which also results in tedious configuration work. Spring Boot addresses the configuration difficulties of Spring and makes it easy to create standalone, production-grade Spring-based applications. This practical guide makes the

existing development process more efficient. Spring Boot Cookbook 2.0 Second Edition smartly combines all the skills and expertise to efficiently develop, test, deploy, and monitor applications using Spring Boot on premise and in the cloud. We start with an overview of the important Spring Boot features you will learn to create a web application for a RESTful service. Learn to fine-tune the behavior of a web application by learning about custom routes and asset paths and how to modify routing patterns. Address the requirements of a complex enterprise application and cover the creation of custom Spring Boot starters. This book also includes examples of the new and improved facilities available to create various kinds of tests introduced in Spring Boot 1.4 and 2.0, and gain insights into Spring Boot DevTools. Explore the basics of Spring Boot Cloud modules and various Cloud starters to make applications in "Cloud Native" and take advantage of Service Discovery and Circuit Breakers. What you will learn Get to know Spring Boot Starters and create custom auto-configurations Work with custom annotations that enable bean activation Use DevTools to easily develop and debug applications Learn the effective testing techniques by integrating Cucumber and Spock Observe an eternal application configuration using Consul Move your existing Spring Boot applications to the cloud Use Hashicorp Consul and Netflix Eureka for dynamic Service Discovery Understand the various mechanisms that Spring Boot provides to examine an application's health Who this book is for This book is for Java Developers who have good knowledge and understanding of Spring and Java application development.

An end-to-end software development guide for the Java eco-system using the most advanced frameworks: Spring and Spring Boot. Learn the complete workflow by building projects and solving problems. About This Book Learn reactive programming by implementing a reactive application with Spring WebFlux Create a robust and scalable messaging application with Spring messaging support Get up-to-date with the defining characteristics of Spring Boot 2.0 in Spring Framework 5 Learn about developer tools, AMQP messaging, WebSockets, security, MongoDB data access, REST, and more This collection of effective recipes serves as guidelines for Spring Boot application development Who This Book Is For Java developers wanting to build production-grade applications using the newest popular Spring tools for a rich end-to-end application development experience. What You Will Learn Get to know the Spring Boot and understand how it makes creating robust applications extremely simple Understand how Spring Data helps us add persistence in MongoDB and SQL databases Implement a websocket to add interactive behaviors in your applications Create powerful, production-grade applications and services with minimal fuss Use custom metrics to track the number of messages published and consumed Build anything from lightweight unit tests to fully running embedded web container integration tests Learn effective testing techniques by integrating Cucumber and Spock Use Hashicorp Consul and Netflix Eureka for dynamic Service Discovery In Detail Spring Framework has become the most popular framework for Java development. It not only simplifies software development but also improves developer productivity. This book covers effective ways to develop robust applications in Java using Spring. The course is up made of three modules, each one having a take-away relating to building end-to-end java applications. The first module takes the approach of learning Spring frameworks by building applications. You will learn to build APIs and integrate them with popular frameworks such as AngularJS, Spring WebFlux, and Spring Data. You will also learn to build microservices using Spring's support for Kotlin. You will learn about the Reactive paradigm in the Spring architecture using Project Reactor. In the second module, after getting hands-on with Spring, you will learn about the most popular tool in the Spring ecosystem-Spring Boot. You will learn to build applications with Spring Boot, bundle them, and deploy them on the cloud. After learning to build applications with Spring Boot, you will be able to use various tests that are an important part of application development. We also cover the important developer tools such as AMQP messaging, websockets, security, and more. This will give you a good functional understanding of scalable development in the Spring ecosystem with Spring Boot. In the third and final module, you will tackle the most important challenges in Java application development with Spring Boot using practical recipes. Including recipes for testing, deployment, monitoring, and securing your applications. This module will also address the functional and technical requirements for building enterprise applications. By the end of the course you will be comfortable with using Spring and Spring Boot to develop Java applications and will have mastered the intricacies of production-grade applications. Style and approach A simple step-by-step guide with practical examples to help you develop and deploy Spring and Spring Boot applications in the real-world.

Summary A developer-focused guide to writing applications using Spring Boot. You'll learn how to bypass the tedious configuration steps so that you can concentrate on your application's behavior. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The Spring Framework simplifies enterprise Java development, but it does require lots of tedious configuration work. Spring Boot radically streamlines spinning up a Spring application. You get automatic configuration and a model with established conventions for build-time and runtime dependencies. You also get a handy command-line interface you can use to write scripts in Groovy. Developers who use Spring Boot often say that they can't imagine going back to hand configuring their applications. About the Book Spring Boot in Action is a developer-focused guide to writing applications using Spring Boot. In it, you'll learn how to bypass configuration steps so you can focus on your application's behavior. Spring expert Craig Walls uses interesting and practical examples to teach you both how to use the default settings effectively and how to override and customize Spring Boot for your unique environment. Along the way, you'll pick up insights from Craig's years of Spring development experience. What's Inside Develop Spring apps more efficiently Minimal to no configuration Runtime metrics with the Actuator Covers Spring Boot 1.3 About the Reader Written for readers familiar with the Spring Framework. About the Author Craig Walls is a software developer, author of the popular book Spring in Action, Fourth Edition, and a frequent speaker at conferences. Table of Contents Bootstarting Spring Developing your first Spring Boot application Customizing configuration Testing with Spring Boot Getting Groovy with the Spring Boot CLI Applying Grails in Spring Boot Taking a peek inside with the Actuator Deploying Spring Boot applications APPENDIXES Spring Boot developer tools Spring Boot starters Configuration properties Spring Boot dependencies

Apply microservices patterns to build resilient and scalable distributed systems Key Features Understand the challenges of building large-scale microservice landscapes Build cloud-native production-ready microservices with this comprehensive guide Discover how to get the best out of Spring Cloud, Kubernetes, and Istio when used together Book Description Microservices architecture allows developers to build and maintain applications with ease, and enterprises are rapidly adopting it to build software using Spring Boot as their default framework. With this book, you'll learn how to efficiently build and deploy microservices using Spring Boot. This microservices book will take you through tried and tested approaches to building distributed systems and implementing microservices architecture in your organization. Starting with a set of simple cooperating microservices developed using Spring Boot, you'll learn how you can add functionalities such as persistence, make your microservices reactive, and describe their APIs using Swagger/OpenAPI. As you advance, you'll understand how to add different services from Spring Cloud to your microservice system. The book also demonstrates how to deploy your microservices using Kubernetes and manage them with Istio for improved security and traffic management. Finally, you'll explore centralized log management using the EFK stack and monitor microservices using Prometheus and Grafana. By the end of this book, you'll be able to build microservices that are scalable and robust using Spring Boot and Spring Cloud. What you will learn Build reactive microservices using Spring Boot Develop resilient and scalable microservices using Spring Cloud Use OAuth 2.0/OIDC and Spring Security to protect public APIs Implement Docker to bridge the gap between development, testing, and production Deploy and manage microservices using Kubernetes Apply Istio for improved security, observability, and traffic management Who this book is for This book is for Java and Spring developers and architects who want to learn how to break up their existing monoliths into microservices and deploy them either on-premises or in the cloud using Kubernetes as a container orchestrator and Istio as a service Mesh. No familiarity with microservices architecture is required to get started with this book.

Explains how to use Java's portable platforms to program and use threads effectively and efficiently while avoiding common mistakes Efficiently integrate OAuth 2.0 to protect your mobile, desktop, Cloud applications and APIs using Spring Security technologies. About This Book Interact with public OAuth 2.0 protected APIs such as Facebook, LinkedIn and Google. Use Spring Security and Spring Security OAuth2 to implement your own OAuth 2.0 provider Learn how to implement OAuth 2.0 native mobile clients for Android applications Who This Book Is For This book targets software engineers and security experts who are looking to develop their skills in API security and OAuth 2.0. Prior programming knowledge and a basic understanding of developing web applications are necessary. As this book's recipes mostly use Spring Security and Spring Security OAuth2, some prior experience with Spring Framework will be helpful. What You Will Learn Use Redis and relational databases to store issued access tokens and refresh tokens Access resources protected by the OAuth2 Provider using Spring Security Implement a web application that dynamically registers itself to the Authorization Server Improve the safety of your mobile client using dynamic client registration Protect your Android client with Proof Key for Code Exchange Protect the Authorization Server from COMPUTERS / Cloud Computing redirection In Detail OAuth 2.0 is a standard protocol for authorization and focuses on client development simplicity while providing specific authorization flows for web applications, desktop applications, mobile phones, and so on. This book also provides useful recipes for solving real-life problems using Spring Security and creating Android applications. The book starts by presenting you how to interact with some public OAuth 2.0 protected APIs such as Facebook, LinkedIn and Google. You will also be able to implement your own OAuth 2.0 provider with Spring Security OAuth2. Next, the book will cover practical scenarios regarding some important OAuth 2.0 profiles such as Dynamic Client Registration, Token Introspection and how to revoke issued access tokens. You will then be introduced to the usage of JWT, OpenID Connect, and how to safely implement native mobile OAuth 2.0 Clients. By the end of this book, you will be able to ensure that both the server and client are protected against common vulnerabilities. Style and approach With the help of real-world examples, this book provides step by step recipes for troubleshooting and extending your API security. The book also helps you with accessing and securing data on mobile, desktop, and cloud apps with OAuth 2.0.

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.

Build and deploy secure Spring Framework and Spring Boot-based enterprise Java applications with the Spring Security Framework. This book explores a comprehensive set of functionalities to implement industry-standard authentication and authorization mechanisms for Java applications. Pro Spring Security, Second Edition has been updated to incorporate the changes in Spring Framework 5 and Spring Boot 2. It is an advanced tutorial and reference that guides you through the implementation of the security features for a Java web application by presenting consistent examples built from the ground up. This book also provides you with a broader look into Spring security by including up-to-date use cases such as building a security layer for RESTful web services and Grails applications. What You Will Learn Explore the scope of security and how to use the Spring Security Framework Master Spring security architecture and design Secure the web tier in Spring Work with alternative authentication providers Take advantage of business objects and logic security Extend Spring security with other frameworks and languages Secure the service layer Who This Book Is For Experienced Spring and Java developers with prior experience in building Spring Framework or Boot-based applications.

Discover the real power of Spring Framework 5.0 and learn to create powerful applications in its newest version Key Features Learn reactive programming by implementing a reactive application with Spring Webflux Create a robust and scalable messaging application with Spring messaging support Apply your knowledge to build three real-world projects in Spring Book Description With growing demands, organizations are looking for systems that are robust and scalable. Therefore, the Spring Framework has become the most popular framework for Java development. It not only simplifies software development but also improves developer productivity. This book covers effective ways to develop robust applications in Java using Spring. The book has three parts, where each one covers the building of a comprehensive project in Java and Spring. In the first part, you will construct a CMS Portal using Spring's support for building REST APIs. You will also learn to integrate these APIs with AngularJS and later develop this application in a reactive fashion using Project Reactor, Spring WebFlux, and Spring Data. In the second part, you'll understand how to build a messaging application, which will consume the Twitter API and perform filtering and transformations. Here, you will also learn about server-sent events and explore Spring's support for Kotlin, which makes application development quick and efficient. In the last part, you will build a real microservice application using the most important techniques and patterns such as service discovery, circuit breakers, security, data streams, monitoring, and a lot more from this architectural style. By the end of the book, you will be confident about using Spring to build your applications. What you will learn Implement REST APIs with Spring REST support Introduce the Spring Boot and understand how it makes creating robust applications extremely simple Understand how Spring Data helps us add persistence in MongoDB and SQL databases Introduce Reactive Programming and use this with Spring Webflux Implement a Reactive REST client and learn how it can create asynchronous applications Create a robust, scalable, and fault tolerant application with Spring Messaging Implement a websocket to add interactive behaviors in your applications Introduce the Spring Cloud projects Who this book is for If you're a developer starting out with Spring, then this book will help you learn about the new Spring 5.0 framework concepts followed by their implementation in Java and Kotlin. The book will also help experienced Spring developers gain insights into the new features added in Spring 5.0.

The high-level language of R is recognized as one of the most powerful and flexible statistical software environments, and is rapidly becoming the standard setting for quantitative analysis, statistics and graphics. R provides free access to unrivalled coverage and cutting-edge applications, enabling the user to apply numerous statistical methods ranging from simple regression to time series or multivariate analysis. Building on the success of the author's bestselling *Statistics: An Introduction using R*, *The R Book* is packed with worked examples, providing an all inclusive guide to R, ideal for novice and more accomplished users alike. The book assumes no background in statistics or computing and introduces the advantages of the R environment, detailing its applications in a wide range of disciplines. Provides the first comprehensive reference manual for the R language, including practical guidance and full coverage of the graphics facilities. Introduces all the statistical models covered by R, beginning with simple classical tests such as chi-square and t-test. Proceeds to examine more advance methods, from regression and analysis of variance, through to generalized linear models, generalized mixed models, time series, spatial statistics, multivariate statistics and much more. The R Book is aimed at undergraduates, postgraduates and professionals in science, engineering and medicine. It is also ideal for students and professionals in statistics, economics, geography and the social sciences.

Spring Boot 2.4 is what everyone turns to build top-of-the line systems... ..when it comes to Java application development. Learn the latest features that can make your apps rock solid including: Web and Data access Developer tools and test support Operational features Docker container baking li>GraalVM production support Messaging Security More! Written cover-to-cover using Java's de facto toolkit, Spring, your apps will perform like never before. Grab your copy today and learn to build top notch, powerful solutions with modern tactics. Greg L. Turnquist works on the Spring team as a principal developer at VMware. He is a committer to Spring HATEOAS, Spring Data, Spring Boot, R2DBC, and Spring Session for MongoDB. He has written *Hacking with Spring Boot 2.3: Reactive Edition* as well as Packt's best-selling title, *Learning Spring Boot 2.0 2nd Edition*. He co-founded the Nashville Java User Group in 2010 and hasn't met a Java app (yet) that he doesn't like. Be sure to subscribe to Spring Boot Learning, the YouTube channel where you learn about Spring Boot and have fun doing it at [YouTube.com/GregTurnquis](https://www.youtube.com/GregTurnquis) Quickly and productively develop complex Spring applications and microservices out of the box, with minimal concern over things like configurations. This revised book will show you how to fully leverage the Spring Boot 2 technology and how to apply it to create enterprise ready applications that just work. It will also cover what's been added to the new Spring Boot 2 release, including Spring Framework 5 features like WebFlux, Security, Actuator and the new way to expose Metrics through Micrometer framework, and more. This book is your authoritative hands-on practical guide for increasing your enterprise Java and cloud application productivity while decreasing development time. It's a no nonsense guide with case studies of increasing complexity throughout the book. The author, a senior solutions architect and Principal Technical instructor with Pivotal, the company behind the Spring Framework, shares his experience, insights and first-hand knowledge about how Spring Boot technology works and best practices. Pro Spring Boot 2 is an essential book for your Spring learning and reference library. What You Will Learn Configure and use Spring Boot Use non-functional requirements with Spring Boot Actuator Carry out web development with Spring Boot Persistence with JDBC, JPA and NoSQL Databases Messaging with JMS, RabbitMQ and WebSockets Test and deploy with Spring Boot A quick look at the Spring Cloud projects Microservices and deployment to the Cloud Extend Spring Boot by creating your own Spring Boot Starter and @Enable feature Who This Book Is For Experienced Spring and Java developers seeking increased productivity gains and decreased complexity and development time in their applications and software services.

Summary Spring in Action, 5th Edition is the fully updated revision of Manning's bestselling *Spring in Action*. This new edition includes all Spring 5.0 updates, along with new examples on reactive programming, Spring WebFlux, and microservices. You'll also find the latest Spring best practices, including Spring Boot for application setup and configuration. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Spring Framework makes life easier for Java developers. New features in Spring 5 bring its productivity-focused approach to microservices, reactive development, and other modern application designs. With Spring Boot now fully integrated, you can start even complex projects with minimal configuration code. And the upgraded WebFlux framework supports reactive apps right out of the box! About the Book *Spring in Action*, 5th Edition guides you through Spring's core features, explained in Craig Walls' famously clear style. You'll roll up your sleeves and build a secure database-backed web app step by step. Along the way, you'll explore reactive programming, microservices, service discovery, RESTful APIs, deployment, and expert best practices. Whether you're just discovering Spring or leveling up to Spring 5.0, this Manning classic is your ticket! What's inside Building reactive applications Spring MVC for web apps and RESTful web services Securing applications with Spring Security Covers Spring 5.0 Over 100,000 copies sold! About the Reader For intermediate Java developers. About the Author Craig Walls is a principal software engineer at Pivotal, a popular author, an enthusiastic supporter of Spring Framework, and a frequent conference speaker. Table of Contents PART 1 - FOUNDATIONAL SPRING Getting started with Spring Developing web applications Working with data Securing Spring Working with configuration properties PART 2 - INTEGRATED SPRING Creating REST services Consuming REST services Sending messages asynchronously Integrating Spring PART 3 - REACTIVE SPRING Introducing Reactor Developing reactive APIs Persisting data reactively PART 4 CLOUD-NATIVE SPRING Discovering services Managing configuration Handling failure and latency PART 5 - DEPLOYED SPRING Working with Spring Boot Actuator Administering Spring Monitoring Spring with JMX Deploying Spring

An easy-to-use guide, full of hands-on recipes for manipulating spatial data in a PostGIS database. Each topic is explained and placed in context, and for the more inquisitive, there are more details of the concepts used. If you are a web developer or a software architect, especially in location-based companies, and want to expand the range of techniques you are using with PostGIS, then this book is for you. You should have some prior experience with PostgreSQL database and spatial concepts. Solve all your Spring Boot 2 problems using complete and real-world code examples. When you start a new project, you'll be able to copy the code and configuration files from this book, and then modify them for your needs. This can save you a great deal of work over creating a project from scratch. Using a problem-solution approach, *Spring Boot 2 Recipes* quickly introduces you to Pivotal's Spring Boot 2 micro-framework, then dives into code snippets on how to apply and integrate Spring Boot 2 with the Spring MVC web framework, Spring Web Sockets, and microservices. You'll also get solutions to common problems with persistence, integrating Spring Boot with batch processing, algorithmic programming via Spring Batch, and much more. Other recipes cover topics such as using and integrating Boot with Spring's enterprise services, Spring Integration, testing, monitoring and more. What You'll Learn Get reusable code recipes and snippets for the Spring Boot 2 micro-framework Discover how Spring Boot 2 integrates with other Spring APIs, tools, and frameworks Access Spring MVC and the new Spring Web Sockets for simpler

web development Work with microservices for web services development and integration with your Spring Boot applications Add persistence and a data tier seamlessly to make your Spring Boot web application do more Integrate enterprise services to create a more complex Java application using Spring Boot Who This Book Is For Experienced Java and Spring programmers.

Java is one of the most widely accepted languages because of its design and programming features. This book offers a range of software development examples in simple and straightforward Java 11 code, providing step-by-step resources and time-saving methods to help you solve data problems efficiently.

Develop diverse real-life projects including most aspects of Spring Boot Key Features Run production-grade based applications using the Spring WebFlux framework Learn to develop high performance, asynchronous applications with Spring Boot Create robust microservice-based applications with Kotlin using Spring Boot Book Description Spring is one of the best tools available on the market for developing web, enterprise, and cloud-ready software. The goal of Spring Boot is to provide a set of tools for quickly building Spring applications that are easy to configure, and that make it easy to create and run production-grade Spring-based applications. Spring Boot 2.0 Projects will get you acquainted with important features of the latest version of this application-building tool and will cover basic, as well as advanced topics. The book starts off by teaching you how to create a web application using Spring Boot, followed by creating a Spring Boot-based simple blog management system that uses Elasticsearch as the data store. As you make your way through the chapters, you'll build a RESTful web services application using Kotlin and the Spring WebFlux framework. Spring WebFlux is a new framework that helps in creating a reactive application in a functional way. Toward the end of the book, you will build a taxi-hailing API with reactive microservices using Spring Boot and a Twitter clone with a Spring Boot backend. Finally, you'll learn how to build an asynchronous email formatter. What you will learn Learn the fundamental features of Spring Boot 2.0 Customize Spring Boot 2.0 applications Build a basic web application Use Redis to build a taxi-hailing API Create a simple blog management system and a Twitter clone Develop a reactive RESTful web service with Kotlin using Spring Boot Who this book is for This book is for competent Spring developers who wish to understand how to develop complex yet scalable applications with Spring Boot. You must have a good knowledge of Java programming and be familiar with the basics of Spring.

Over 35 recipes to help you build, test, and run Spring applications using Spring Boot About This Book Learn to create different types of Spring Boot applications, configure behavior, and add custom components Become more efficient in testing, deploying, and monitoring Spring Boot based applications This is a practical guide that will help Spring developers to develop and deploy applications using Spring Boot Who This Book Is For If you are a Spring Developer who has good knowledge level and understanding of Spring Boot and application development and now want to learn efficient Spring Boot development techniques in order to make the existing development process more efficient, then this book is for you. What You Will Learn Create Spring Boot applications from scratch Configure and tune web applications and containers Create custom Spring Boot auto-configurations and starters Use Spring Boot Test framework with JUnit, Cucumber, and Spock Configure and tune web applications and containers Deploy Spring Boot as self-starting executables and Docker containers Monitor data using DropWizard, Graphite, and Dashing In Detail Spring Boot is Spring's convention-over-configuration solution. This feature makes it easy to create Spring applications and services with absolute minimum fuss. Spring Boot has the great ability to be customized and enhanced, and is specifically designed to simplify development of a new Spring application. This book will provide many detailed insights about the inner workings of Spring Boot, as well as tips and recipes to integrate the third-party frameworks and components needed to build complex enterprise-scale applications. The book starts with an overview of the important and useful Spring Boot starters that are included in the framework, and teaches you to create and add custom Servlet Filters, Interceptors, Converters, Formatters, and PropertyEditors to a Spring Boot web application. Next it will cover configuring custom routing rules and patterns, adding additional static asset paths, and adding and modifying servlet container connectors and other properties such as enabling SSL. Moving on, the book will teach you how to create custom Spring Boot Starters, and explore different techniques to test Spring Boot applications. Next, the book will show you examples of configuring your build to produce Docker images and self-executing binary files for Linux/OSX environments. Finally, the book will teach you how to create custom health indicators, and access monitoring data via HTTP and JMX. Style and approach This book is a cohesive collection of recipes that provide developers with a set of connected guidelines on how to build, configure, and customize their application, starting from the design and development stages, all the way through testing, deployment, and production monitoring.

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 Registration 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.

Take the guesswork out of using regular expressions. With more than 140 practical recipes, this cookbook provides everything you need to solve a wide range of real-world problems. Novices will learn basic skills and tools, and programmers and experienced users will find a wealth of detail. Each recipe provides samples you can use right away. This revised edition covers the regular

expression flavors used by C#, Java, JavaScript, Perl, PHP, Python, Ruby, and VB.NET. You'll learn powerful new tricks, avoid flavor-specific gotchas, and save valuable time with this huge library of practical solutions. Learn regular expressions basics through a detailed tutorial Use code listings to implement regular expressions with your language of choice Understand how regular expressions differ from language to language Handle common user input with recipes for validation and formatting Find and manipulate words, special characters, and lines of text Detect integers, floating-point numbers, and other numerical formats Parse source code and process log files Use regular expressions in URLs, paths, and IP addresses Manipulate HTML, XML, and data exchange formats Discover little-known regular expression tricks and techniques

The Spring framework is growing. It has always been about choice. Java EE focused on a few technologies, largely to the detriment of alternative, better solutions. When the Spring framework debuted, few would have agreed that Java EE represented the best-in-breed architectures of the day. Spring debuted to great fanfare, because it sought to simplify Java EE. Each release since marks the introduction of new features designed to both simplify and enable solutions. With version 2.0 and later, the Spring framework started targeting multiple platforms. The framework provided services on top of existing platforms, as always, but was decoupled from the underlying platform wherever possible. Java EE is still a major reference point, but it's not the only target. OSGi (a promising technology for modular architectures) has been a big part of the SpringSource strategy here. Additionally, the Spring framework runs on Google App Engine. With the introduction of annotation-centric frameworks and XML schemas, SpringSource has built frameworks that effectively model the domain of a specific problem, in effect creating domain-specific languages (DSLs). Frameworks built on top of the Spring framework have emerged supporting application integration, batch processing, Flex and Flash integration, GWT, OSGi, and much more.

Take your application development skills to the next level by implementing Spring Boot features effectively About This Book This collection of effective recipes serves as guidelines for Spring Boot application development Get up to date with features of the latest version of Spring Boot 2.0 Tips and tricks to improve your efficiency through the stages of software development Who This Book Is For This book is for Java Developers who have good knowledge and understanding of Spring and Java application development. What You Will Learn Get to know Spring Boot Starters and create custom auto-configurations Work with custom annotations that enable bean activation Use DevTools to easily develop and debug applications Learn the effective testing techniques by integrating Cucumber and Spock Observe an eternal application configuration using Consul Move your existing Spring Boot applications to the cloud Use Hashicorp Consul and Netflix Eureka for dynamic Service Discovery Understand the various mechanisms that Spring Boot provides to examine an application's health In Detail The Spring framework provides great flexibility for Java development, which also results in tedious configuration work. Spring Boot addresses the configuration difficulties of Spring and makes it easy to create standalone, production-grade Spring-based applications. This practical guide makes the existing development process more efficient. Spring Boot Cookbook 2.0 Second Edition smartly combines all the skills and expertise to efficiently develop, test, deploy, and monitor applications using Spring Boot on premise and in the cloud. We start with an overview of the important Spring Boot features you will learn to create a web application for a RESTful service. Learn to fine-tune the behavior of a web application by learning about custom routes and asset paths and how to modify routing patterns. Address the requirements of a complex enterprise application and cover the creation of custom Spring Boot starters. This book also includes examples of the new and improved facilities available to create various kinds of tests introduced in Spring Boot 1.4 and 2.0, and gain insights into Spring Boot DevTools. Explore the basics of Spring Boot Cloud modules and various Cloud starters to make applications in "Cloud Native" and take advantage of Service Discovery and Circuit Breakers. Style and approach This practical guide follows a recipe-based approach and provides extremely helpful guidelin ...

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