

## **Pro Jpa 2 Mastering The Javatm Persistence Api Experts Voice In Java Technology By Keith Mike Schincariol Merrick Keith Jeremy 2009 Paperback**

Summary Building on the bestselling first edition, EJB 3 in Action, Second Edition tackles EJB 3.2 head-on, through numerous code samples, real-life scenarios, and illustrations. This book is a fast-paced tutorial for Java EE 6 business component development using EJB 3.2, JPA 2, and CDI. Besides covering the basics of EJB 3.2, this book includes in-depth EJB 3.2 internal implementation details, best practices, design patterns, and performance tuning tips. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book The EJB 3 framework provides a standard way to capture business logic in manageable server-side modules, making it easier to write, maintain, and extend Java EE applications. EJB 3.2 provides more enhancements and intelligent defaults and integrates more fully with other Java technologies, such as CDI, to make development even easier. EJB 3 in Action, Second Edition is a fast-paced tutorial for Java EE business component developers using EJB 3.2, JPA, and CDI. It tackles EJB head-on through numerous code samples, real-life scenarios, and illustrations. Beyond the basics, this book includes internal implementation details, best practices, design patterns, performance tuning tips, and various means of access including Web Services, REST Services, and WebSockets. Readers need to know Java. No prior experience with EJB or Java EE is assumed. What's Inside Fully revised for EJB 3.2 POJO persistence with JPA 2.1 Dependency injection and bean management with CDI 1.1 Interactive application with WebSocket 1.0 About the Authors Debu Panda, Reza Rahman, Ryan Cuprak, and Michael Remijan are seasoned Java architects, developers, authors, and community leaders. Debu and Reza coauthored the first edition of EJB 3 in Action. Table of Contents PART 1 OVERVIEW OF THE EJB LANDSCAPE What's what in EJB 3 A first taste of EJB PART 2 WORKING WITH EJB COMPONENTS Building business logic with session beans Messaging and developing MDBs EJB runtime context, dependency injection, and crosscutting logic Transactions and security Scheduling and timers Exposing EJBs as web services PART 3 USING EJB WITH JPA AND CDI JPA entities Managing entities JPQL Using CDI with EJB 3 PART 4 PUTTING EJB INTO ACTION Packaging EJB 3 applications Using WebSockets with EJB 3 Testing and EJB Pro Spring updates the perennial bestseller with the latest that the Spring Framework 4 has to offer. Now in its fourth edition, this popular book is by far the most comprehensive and definitive treatment of Spring available. With Pro Spring, you'll learn Spring basics and core topics, and share the authors' insights and real-world experiences with remoting, Hibernate, and EJB. Beyond the basics, you'll learn how to leverage the Spring Framework to build the various tiers or parts of an enterprise Java application: transactions, web and presentation tiers, deployment, and much more. A full sample application allows you to apply many of the technologies and techniques covered in this book and see how they work together. The agile, lightweight, open-source Spring Framework continues to be the de facto leading enterprise Java application development framework for today's Java programmers and developers. It works with other leading open-source, agile, and lightweight Java technologies such as Hibernate, Groovy, MyBatis, and more. Spring now works with Java EE and JPA 2 as well. After reading this definitive book, you'll be armed with the power of Spring to build complex Spring applications, top to bottom.

Get up to speed on the principal technologies in the Java Platform, Enterprise Edition 7, and learn how the latest version embraces HTML5, focuses on higher productivity, and provides functionality to meet enterprise demands. Written by Arun Gupta, a key member of the Java EE team, this book provides a chapter-by-chapter survey of several Java EE 7 specifications, including WebSockets, Batch Processing, RESTful Web Services, and Java Message Service. You'll also get self-paced instructions for building an end-to-end application with many of the technologies described in the book, which will help you understand the design patterns vital to Java EE development. Understand the key components of the Java EE platform, with easy-to-understand explanations and extensive code samples Examine all the new components that have been added to Java EE 7 platform, such as WebSockets, JSON, Batch, and Concurrency Learn about RESTful Web Services, SOAP XML-based messaging protocol, and Java Message Service Explore Enterprise JavaBeans, Contexts and Dependency Injection, and the Java Persistence API Discover how different components were updated from Java EE 6 to Java EE 7 Business rules are everywhere. Every enterprise process, task, activity, or function is governed by rules. However, some of these rules are implicit and thus poorly enforced, others are written but not enforced, and still others are perhaps poorly written and obscurely enforced. The business rule approach looks for ways to elicit, communicate, and manage business rules in a way that all stakeholders can understand, and to enforce them within the IT infrastructure in a way that supports their traceability and facilitates their maintenance. Boyer and Mili will help you to adopt the business rules approach effectively. While most business rule development methodologies put a heavy emphasis on up-front business modeling and analysis, agile business rule development (ABRD) as introduced in this book is incremental, iterative, and test-driven. Rather than spending weeks discovering and analyzing rules for a complete business function, ABRD puts the emphasis on producing executable, tested rule sets early in the project without jeopardizing the quality, longevity, and maintainability of the end result. The authors' presentation covers all four aspects required for a successful application of the business rules approach: (1) foundations, to understand what business rules are (and are not) and what they can do for you; (2) methodology, to understand how to apply the business rules approach; (3) architecture, to understand how rule automation impacts your application; (4) implementation, to actually deliver the technical solution within the context of a particular business rule management system (BRMS). Throughout the book, the authors use an insurance case study that deals with claim processing. Boyer and Mili cater to different audiences: Project managers will find a pragmatic, proven methodology for delivering and maintaining business rule applications. Business analysts and rule authors will benefit from

guidelines and best practices for rule discovery and analysis. Application architects and software developers will appreciate an exploration of the design space for business rule applications, proven architectural and design patterns, and coding guidelines for using JRules.

Java continues to grow and evolve, and this cookbook continues to evolve in tandem. With this guide, you'll 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 string handling and functional programming to network communication. Each recipe includes self-contained code solutions that you can freely use, along with a discussion of how and why they work. If you're familiar with Java basics, this cookbook will bolster your knowledge of the language and its many recent changes, including how to apply them in your day-to-day development. This updated edition covers changes through Java 12 and parts of 13 and 14. Recipes include: Blade, Laravel's powerful custom templating tool Methods for compiling, running, and debugging Packaging Java classes and building applications 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 Input/output, directory, and filesystem operations Network programming on both client and server Processing JSON for data interchange Multithreading and concurrency Using Java in big data applications Interfacing Java with other languages

This book contains a selection of papers from the 2020 International Conference on Software Process Improvement (CIMPS 20), held between the 21st and 23rd of October in Mazatlan, Sinaloa, Mexico. The CIMPS 20 is a global forum for researchers and practitioners that present and discuss the most recent innovations, trends, results, experiences and concerns in the several perspectives of Software Engineering with clear relationship but not limited to software processes, Security in Information and Communication Technology and Big Data Field. The main topics covered are: Organizational Models, Standards and Methodologies, Software Process Improvement, Knowledge Management, Software Systems, Applications and Tools, Information and Communication Technologies and Processes in Non-software Domains (mining, automotive, aerospace, business, health care, manufacturing, etc.) with a demonstrated relationship to Software Engineering Challenges.

This analysis of emerging practices of collaboration in planning and public policy presents a new theory of collaborative rationality to overcome the challenges of complexity, fragmentation, uncertainty and global processes. This is insightful reading that will move both practice and scholarship to new levels.

Pro JPA 2, Second Edition introduces, explains, and demonstrates how to use the new Java Persistence API (JPA) 2.1 from the perspective of one of the specification creators. A one-of-a-kind resource, it provides both theoretical and extremely practical coverage of JPA usage for both beginning and advanced developers. Authors Mike Keith and Merrick Schincariol take a hands-on approach, based on their wealth of experience and expertise, by giving examples to illustrate each concept of the API and showing how it is used in practice. The examples use a common model from an overriding sample application, giving readers a context from which to start and helping them to understand the examples within an already familiar domain. After completing the book, you will have a full understanding of JPA and be able to successfully code applications using its annotations and APIs. The book also serves as an excellent reference guide during initial and later JPA application experiences. Hands-on examples for all aspects of the JPA specification Expert insight about various aspects of the API and when they are useful Portability hints to provide increased awareness of the potential for non-portable JPA code What you'll learn How to get started with enterprise applications using JPA 2.1 Simple and advanced object-relational mapping techniques How to use the complete Entity Manager API How to create queries using the query language (JP QL) and the Criteria API Locking, concurrency, and other advanced concepts How to use XML mapping files and descriptors How to package and deploy your Java Persistence applications How to test your Java Persistence applications Who this book is for The book generally targets enterprise and persistence developers who fall in one of three categories: Those who are new to persistence; we will offer an introduction to persistence and to the basic concepts so these readers can have solid base from which to become proficient at JPA. Those who know and/or use existing ORM persistence products such as Hibernate or TopLink/EclipseLink. Those who have already used JPA and want to learn about newer features introduced by JPA 2.1, or have a good reference book to consult when they develop JPA applications. In general, we assume that the reader is knowledgeable with Java, SQL, and JDBC, and has a little knowledge of Java EE. Table of Contents Introduction Getting Started Enterprise Applications Object Relational Mapping Collection Mapping Entity Manager Using Queries Java Persistence Query Language Criteria Advanced Object Relational Mapping Advanced Queries Advanced Topics XML Mapping Files Packaging and Deployment Testing

Hibernate continues to be the most popular out-of-the-box framework solution for Java Persistence and data/database accessibility techniques and patterns. It is used for e-commerce-based web applications as well as heavy-duty transactional systems for the enterprise. Gary Mak, the author of the best-selling Spring Recipes, now brings you Hibernate Recipes. This book contains a collection of code recipes and templates for learning and building Hibernate solutions for you and your clients. This book is your pragmatic day-to-day reference and guide for doing all things involving Hibernate. There are many books focused on learning Hibernate, but this book takes you further and shows how you can apply it practically in your daily work.

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

Spring REST is a practical guide for designing and developing RESTful APIs using the Spring Framework. This book walks you through the process of designing and building a REST application while taking a deep dive into design principles and best practices for versioning, security, documentation, error handling, paging, and sorting. This book provides a brief introduction to REST, HTTP, and web infrastructure. You will learn about several Spring projects such as Spring Boot, Spring MVC, Spring Data JPA, and Spring Security and the role they play in simplifying REST application development. You will learn how to build clients that consume REST services. Finally, you will learn how to use the Spring MVC test framework to unit test and integration test your REST API. After reading this book, you will come away with all the skills to build sophisticated REST applications using Spring technologies.

Learn and master the new features in the JSF 2.3 MVC web framework in this definitive guide written by two of the JavaServer Faces (JSF) specification leads. The authors take you through real-world examples that demonstrate how these new features are used with other APIs in Java EE 8. You'll see the new and exciting ways JSF applications can use to communicate between a client and a server, such as using WebSockets, invoking bean methods directly from Ajax, executing client-side JavaScript when Ajax calls complete, and more Along the way you'll broaden your knowledge of JSF components and web APIs best practices, and learn a great deal about the internals of JSF and the design decisions that have been made when building the JSF API. For example, you'll see what artefacts are now CDI injectable, how CDI changed JSF internally, and what some of the caveats are when working with the CDI versions of a JSF artefact. Furthermore, you'll build an example application from scratch. After reading The Definitive Guide to JSF in Java EE 8, you'll be ready to build your own efficient and secure web applications. What You Will Learn Leverage the new features in JSF 2.3 in your existing applications Integrate JSF and CDI Use the brand new Component Search Expression framework, which enables you to more easily locate components from your template Extend the Component Search Expression framework with your own search operators Work with the different ways of mapping requests to JSF, make your application use extensionless URLs, and programmatically inspect which resources are present in your application Master the best practices for web application development and see which are obsolete Who This Book Is For Existing JSF or Java developers who need to create a web UI. No prior knowledge of JSF is required, but the book does skew towards the more experienced developer. Concepts such as dependency injection and MVC are assumed to be known, as is a general knowledge about HTML, HTTP and other web standards.

Learn to use the Java Persistence API (JPA) and other related APIs as found in the Java EE 8 platform from the perspective of one of the specification creators. A one-of-a-kind resource, this in-depth book provides both theoretical and practical coverage of JPA usage for experienced Java developers. Authors Mike Keith, Merrick Schincariol and Massimo Nardone take a hands-on approach, based on their wealth of experience and expertise, by giving examples to illustrate each concept of the API and showing how it is used in practice. The examples use a common model from an overarching sample application, giving you a context from which to start and helping you to understand the examples within an already familiar domain. After completing Pro JPA 2 in Java EE 8, you will have a full understanding of JPA and be able to successfully code applications using its annotations and APIs. The book also serves as an excellent reference guide. What You Will Learn Use the JPA in the context of enterprise applications Work with object relational mappings (ORMs), collection mappings and more Build complex enterprise Java applications that persist data long after the process terminates Connect to and persist data with a variety of databases, file formats, and more Use queries, including the Java Persistence Query Language (JPQL) Carry out advanced ORM, queries and XML mappings Package, deploy and test your Java persistence-enabled enterprise applications Who This Book Is For Experienced Java programmers and developers with at least some prior experience with J2EE or Java EE platform APIs.

Explore data structures and algorithm concepts and their relation to everyday JavaScript development. A basic understanding of these ideas is essential to any JavaScript developer wishing to analyze and build great software solutions. You'll discover how to implement data structures such as hash tables, linked lists, stacks, queues, trees, and graphs. You'll also learn how a URL shortener, such as bit.ly, is developed and what is happening to the data as a PDF is uploaded to a webpage. This book covers the practical applications of data structures and algorithms to encryption, searching, sorting, and pattern matching. It is crucial for JavaScript developers to understand how data structures work and how to design algorithms. This book and the accompanying code provide that essential foundation for doing so. With JavaScript Data Structures and Algorithms you can start developing your knowledge and applying it to your JavaScript projects today. What You'll Learn Review core data structure fundamentals: arrays, linked-lists, trees, heaps, graphs, and hash-table Review core algorithm fundamentals: search, sort, recursion, breadth/depth first search, dynamic programming, bitwise operators Examine how the core data structure and algorithms knowledge fits into context of JavaScript explained using prototypical inheritance and native JavaScript objects/data types Take a high-level look at commonly used design patterns in JavaScript Who This Book Is For Existing web developers and software engineers seeking to develop or revisit their fundamental data structures knowledge; beginners and students studying JavaScript independently or via a course or coding bootcamp.

The comprehensive Wrox guide for creating Java web applications for the enterprise This guide shows Java software developers and software engineers how to build complex web applications in an enterprise environment. You'll begin with an introduction to the Java Enterprise Edition and the basic web application, then set up a development application server environment, learn about the tools used in the development process, and explore numerous Java technologies and practices. The book covers industry-standard tools and technologies, specific technologies, and underlying programming concepts. Java is an essential programming language used worldwide for both Android app development and enterprise-level corporate solutions As a step-by-step guide or a general reference, this book provides an all-in-one Java development solution Explains Java Enterprise Edition 7 and the basic web application, how to set up a development application server environment, which tools are needed during the development process, and how to apply various Java technologies Covers new language features in Java 8, such as Lambda Expressions, and the new Java 8 Date & Time API introduced as part of JSR 310, replacing the legacy Date and Calendar APIs Demonstrates the new, fully-duplex WebSocket web connection technology and its support in Java EE 7, allowing the reader to create rich, truly interactive web applications that can push updated data to the client automatically Instructs the reader in the configuration and use of Log4j 2.0, Spring Framework 4 (including Spring Web MVC), Hibernate Validator, RabbitMQ, Hibernate ORM, Spring Data, Hibernate Search, and Spring Security Covers application logging, JSR 340 Servlet API 3.1, JSR 245 JavaServer Pages (JSP) 2.3 (including custom tag libraries), JSR 341 Expression Language 3.0, JSR 356 WebSocket API 1.0, JSR 303/349 Bean Validation 1.1, JSR 317/338 Java Persistence API (JPA) 2.1, full-text searching with JPA, RESTful and SOAP web services, Advanced Message Queuing Protocol (AMQP), and OAuth Professional Java for Web Applications is the complete Wrox guide for software developers who are familiar with Java and who are ready to build high-level enterprise Java web applications.

Master Spring basics and core topics, and share the authors' insights and real-world experiences with remoting, Hibernate, and EJB. Beyond the basics, you'll learn how to leverage the Spring Framework to build the various tiers and parts of an enterprise Java application: transactions, web and presentation tiers, deployment, and much more. A full sample application allows you to apply many of the technologies and techniques covered in Pro Spring 5 and see how they work together. This book updates the perennial bestseller with the latest that the new Spring Framework 5 has to offer. Now in its fifth edition, this popular title is by far the most comprehensive and definitive treatment of Spring available. It covers the new functional web framework and interoperability with Java 9. After reading this definitive book, you'll be armed with the power of Spring to build complex Spring applications, top to bottom. The agile, lightweight, open-source Spring Framework continues to be the de facto leading enterprise Java application development framework for today's Java programmers and developers. It works with other leading open-source, agile, and lightweight Java technologies such as Hibernate, Groovy, MyBatis, and more. Spring now works with Java EE and JPA 2 as well. What You'll Learn Discover what's new in Spring Framework 5 Use the Spring Framework with Java 9 Master data access and transactions Work with the new functional web framework Create microservices and other web services Who This Book Is For Experienced Java and enterprise Java developers and programmers. Some experience with Spring highly recommended.

Use this guide to master the XML metalanguage and JSON data format along with significant Java APIs for parsing and creating XML and JSON documents from the Java language. New in this edition is coverage of Jackson (a JSON processor for Java) and Oracle's own Java API for JSON processing (JSON-P), which is a JSON processing API for Java EE that also can be used with Java SE. This new edition of Java XML and JSON also expands coverage of DOM and XSLT to include additional API content and useful examples. All examples in this book have been tested under Java 11. In some cases, source code has been simplified to use Java 11's var language feature. The first six chapters focus on XML along with the SAX, DOM, StAX, XPath, and XSLT APIs. The remaining six chapters focus on JSON along with the mJson, GSON, JsonPath, Jackson, and JSON-P APIs. Each chapter ends with select exercises designed to challenge your grasp of the chapter's content. An appendix provides the answers to these exercises. What You'll Learn Master the XML language Create, validate, parse, and transform XML documents Apply Java's SAX, DOM, StAX, XPath, and XSLT APIs Master the JSON format for serializing and transmitting data Code against third-party APIs such as Jackson, mJson, Gson, JsonPath Master Oracle's JSON-P API in a Java SE context Who This Book Is For Intermediate and advanced Java programmers who are developing applications that must access data stored in XML or JSON documents. The book also targets developers wanting to understand the XML language and JSON data format.

The agile, lightweight, open-source Spring Framework continues to be the de facto leading enterprise Java application development framework for today's Java programmers and developers. It works with other leading open-source, agile and lightweight Java technologies like Hibernate, Groovy, MyBatis, and more. Spring now also works with Java EE and JPA 2 as well. Pro Spring 3 updates the bestselling Pro Spring with the latest that the Spring Framework has to offer: version 3.1. At 1000 pages, this is by far the most comprehensive Spring book available, thoroughly exploring the power of Spring. With Pro Spring 3, you'll learn Spring basics and core topics, and gain access to the authors' insights and real-world experiences with remoting, Hibernate, and EJB. Beyond the basics, you'll learn how to leverage the Spring Framework to build various tiers or parts of an enterprise Java application like transactions, the web and presentations tiers, deployment, and much more. A full sample application allows you to apply many of the technologies and techniques covered in this book and see how they work together. After reading this definitive book, you'll be armed with the power of Spring to build complex Spring applications, top to bottom.

Learn JavaFX 8 shows you how to start developing rich-client desktop applications using your Java skills and provides comprehensive coverage of JavaFX 8's features. Each chapter starts with an introduction to the topic at hand, followed by a step-by-step discussion of the topic with small snippets of code. The book contains numerous figures aiding readers in visualizing the GUI that is built at every step in the discussion. The book starts with an introduction to JavaFX and its history. It lists the system requirements and the steps to start developing JavaFX applications. It shows you how to create a Hello World application in JavaFX, explaining every line of code in the process. Later in the book, author Kishori Sharan discusses advanced topics such as 2D and 3D graphics, charts, FXML, advanced controls, and printing. Some of the advanced controls such as TableView, TreeTableView and WebView are covered at length in separate chapters. This book provides complete and comprehensive coverage of JavaFX 8 features; uses an incremental approach to teach JavaFX, assuming no prior GUI knowledge; includes code snippets, complete programs, and pictures; covers MVC patterns using JavaFX; and covers advanced topics such as FXML, effects, transformations, charts, images, canvas, audio and video, DnD, and more. So, after reading and using this book, you'll come away with a comprehensive introduction to the JavaFX APIs as found in the new Java 8 platform.

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.

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.

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.

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.

Gain all the essentials you need to create scalable microservices, which will help you solve real challenges when deploying services into production. This book will take you through creating a scalable data layer with polygot persistence. You'll cover data access and query patterns in Spring and JPA in high-performance environments. As part of this topic, you'll see the advantages of multiple persistence frameworks in Java and especially the easy persistence offered by NoSQL databases and reactive web solutions. The last few chapters present advanced concepts that are useful for very high-performance real-time applications: you'll implement applications using Spring's good support for Web sockets in their raw form as well as for connecting to message brokers such as RabbitMQ. This can be useful for applications such as navigation systems and gaming platforms. What You Will Learn Build end-to-end modern applications using microservices, persistence essentials, reactive web, and other high-performance concepts Master Spring's configuration options Secure microservices efficiently Monitor your services post deployment Who This Book Is For Java developers and architects interested in microservices.

With Pro JavaScript Design Patterns, you'll start with the basics of object-oriented programming in JavaScript applicable to design patterns, including making JavaScript more expressive, inheritance, encapsulation, information hiding, and more. The book then details how to implement and take advantage of several design patterns in JavaScript. Each chapter is packed with real-world examples of how the design patterns are best used and expert advice on writing better code, as well as what to watch out for. Along the way you'll discover how to create your own libraries and APIs for even more efficient coding.

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.

Pro JPA 2 introduces, explains, and demonstrates how to use the new Java Persistence API (JPA). JPA provides Java developers with both the knowledge and insight needed to write Java applications that access relational databases through JPA. All of the examples use a common model from an overriding sample application, giving readers a context from which to start and helping them to understand the examples within an already familiar domain. After completing the book, you will have a full understanding and be able to successfully code applications using JPA. The book also serves as a reference guide during initial and later JPA application experiences.

Quickly and productively develop complex Spring applications and microservices - out of the box - with minimal fuss on things like configurations. This book will show you how to fully leverage the Spring Boot productivity suite of tools and how to apply them through the use of case studies. Pro Spring Boot is your authoritative hands-on practical guide for increasing your Spring Framework-based enterprise Java and cloud application productivity while decreasing development time using the Spring Boot productivity suite of tools. It's a no nonsense guide with case studies of increasing complexity throughout the book. This book is written by Felipe Gutierrez, a Spring expert consultant who works with Pivotal, the company behind the popular Spring Framework. What You Will Learn Write your first Spring Boot application Configure Spring Boot Use the Spring Boot Actuator Carry out web development with Spring Boot Build microservices with Spring Boot Handle databases and messaging with Spring Boot Test and deploy with Spring Boot Extend Spring Boot and its available plug-ins 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.

Applications are made up of business logic, interaction with other systems, user interfaces etc. and data. Most of the data that our applications manipulate have to be stored in datastores, retrieved, processed and analysed. If this datastore is a relational database and you use an object-oriented programming language such as Java, then you should have a look at JPA. JPA is an Object-Relational Mapping tool that maps Java objects to relational databases and allows query operations. In this fascicle, you will learn Java Persistence API, its annotations for mapping entities, as well as the Java Persistence Query Language and entity life cycle and a few advanced topics such as integrating JPA with other frameworks (Bean Validation, JTA, CDI, Spring).

Pro JPA 2 introduces, explains, and demonstrates how to use the Java Persistence API (JPA). JPA provides Java developers with both the knowledge and insight needed to write Java applications that access relational databases through JPA. Authors Mike Keith and Merrick Schincariol take a hands-on approach to teaching by giving examples to illustrate each concept of the API and showing how it is used in practice. All of the examples use a common model from an overriding sample application, giving readers a context from which to start and helping them to understand the examples within an already familiar domain. After completing the book, you will have a full understanding and be able to successfully code applications using JPA. The book also serves as a reference guide during initial and later JPA application experiences. Hands-on examples for all the

aspects of the JPA specification, based on the reference implementation of this specification A special section on migration to JPA Expert insight about various aspects of the API and when they are useful Portability hints to provide increased awareness of the potential for non-portable JPA code

First EJB 3.0 book on the market and a definitive guide to the major innovation in EJB: the new persistence API Offers unparalleled insight and expertise: lead authored by the co-lead on the EJB 3.0 spec (Mike Keith)

Summary Java Persistence with Hibernate, Second Edition explores Hibernate by developing an application that ties together hundreds of individual examples. In this revised edition, authors Christian Bauer, Gavin King, and Gary Gregory cover Hibernate 5 in detail with the Java Persistence 2.1 standard (JSR 338). All examples have been updated for the latest Hibernate and Java EE specification versions. About the Technology Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. Persistence—the ability of data to outlive an instance of a program—is central to modern applications. Hibernate, the most popular Java persistence tool, offers automatic and transparent object/relational mapping, making it a snap to work with SQL databases in Java applications. About the Book Java Persistence with Hibernate, Second Edition explores Hibernate by developing an application that ties together hundreds of individual examples. You'll immediately dig into the rich programming model of Hibernate, working through mappings, queries, fetching strategies, transactions, conversations, caching, and more. Along the way you'll find a well-illustrated discussion of best practices in database design and optimization techniques. In this revised edition, authors Christian Bauer, Gavin King, and Gary Gregory cover Hibernate 5 in detail with the Java Persistence 2.1 standard (JSR 338). All examples have been updated for the latest Hibernate and Java EE specification versions. What's Inside Object/relational mapping concepts Efficient database application design Comprehensive Hibernate and Java Persistence reference Integration of Java Persistence with EJB, CDI, JSF, and JAX-RS \* Unmatched breadth and depth About the Reader The book assumes a working knowledge of Java. About the Authors Christian Bauer is a member of the Hibernate developer team and a trainer and consultant. Gavin King is the founder of the Hibernate project and a member of the Java Persistence expert group (JSR 220). Gary Gregory is a principal software engineer working on application servers and legacy integration. Table of Contents PART 1 GETTING STARTED WITH ORM Understanding object/relational persistence Starting a project Domain models and metadata PART 2 MAPPING STRATEGIES Mapping persistent classes Mapping value types Mapping inheritance Mapping collections and entity associations Advanced entity association mappings Complex and legacy schemas PART 3 TRANSACTIONAL DATA PROCESSING Managing data Transactions and concurrency Fetch plans, strategies, and profiles Filtering data PART 4 WRITING QUERIES Creating and executing queries The query languages Advanced query options Customizing SQL

Looking to study up for the new J2EE 1.5 Sun Certified Web Component Developer (SCWCD) exam? This book will get you way up to speed on the technology you'll know it so well, in fact, that you can pass the brand new J2EE 1.5 exam. If that's what you want to do, that is. Maybe you don't care about the exam, but need to use servlets and JSPs in your next project. You're working on a deadline. You're over the legal limit for caffeine. You can't waste your time with a book that makes sense only AFTER you're an expert (or worse, one that puts you to sleep). Learn how to write servlets and JSPs, what makes a web container tick (and what ticks it off), how to use JSP's Expression Language (EL for short), and how to write deployment descriptors for your web applications. Master the c:out tag, and get a handle on exactly what's changed since the older J2EE 1.4 exam. You don't just pass the new J2EE 1.5 SCWCD exam, you'll understand this stuff and put it to work immediately. Head First Servlets and JSP doesn't just give you a bunch of facts to memorize; it drives knowledge straight into your brain. You'll interact with servlets and JSPs in ways that help you learn quickly and deeply. And when you're through with the book, you can take a brand-new mock exam, created specifically to simulate the real test-taking experience.

Build powerful back-end business logic and complex Enterprise JavaBeans (EJB)-based applications using Java EE 8, Eclipse Enterprise for Java (EE4J), Web Tools Project (WTP), and the Microprofile platform. Targeted at Java and Java EE developers, with or without prior EJB experience, this book is packed with practical insights, strategy tips, and code examples. As each chapter unfolds, you'll see how you can apply the new EJB spec to your own applications through specific examples. Beginning EJB in Java EE 8 serves not only as a reference, but also as a how-to guide and repository of practical examples to which you can refer as you build your own applications. It will help you harness the power of EJBs and take your Java EE 8 development to the next level. You'll gain the knowledge and skills you'll need to create the complex enterprise applications that run today's transactions and more. What You'll Learn Build applications with Enterprise JavaBeans (EJBs) in the new Java EE 8 platform Discover when to use EJBs over contexts and dependency injection Use message-driven beans to do tasks asynchronously Integrate EJBs with microservices using the new Eclipse Microprofile project Manage complex enterprise transactions and much more Who This Book Is For Java programmers new to enterprise development and for those who may have experience with EJBs but are new to Java EE 8, EE4J, and related Eclipse projects.

Threads are a fundamental part of the Java platform. As multicore processors become the norm, using concurrency effectively becomes essential for building high-performance applications. Java SE 5 and 6 are a huge step forward for the development of concurrent applications, with improvements to the Java Virtual Machine to support high-performance, highly scalable concurrent classes and a rich set of new concurrency building blocks. In Java Concurrency in Practice , the creators of these new facilities explain not only how they work and how to use them, but also the motivation and design patterns behind them. However, developing, testing, and debugging multithreaded programs can still be very difficult; it is all too easy to create concurrent programs that appear to work, but fail when it matters most: in production, under heavy load. Java Concurrency in

Practice arms readers with both the theoretical underpinnings and concrete techniques for building reliable, scalable, maintainable concurrent applications. Rather than simply offering an inventory of concurrency APIs and mechanisms, it provides design rules, patterns, and mental models that make it easier to build concurrent programs that are both correct and performant. This book covers: Basic concepts of concurrency and thread safety Techniques for building and composing thread-safe classes Using the concurrency building blocks in java.util.concurrent Performance optimization dos and don'ts Testing concurrent programs Advanced topics such as atomic variables, nonblocking algorithms, and the Java Memory Model

Develop Enterprise Java applications compliant with the latest version of the Java EE specification About This Book This book covers all of the major Java EE 8 APIs and includes new additions such as enhanced Security, JSON-B Processing, and more Learn additional Java EE APIs, such as the Java API for Websocket and the Java Message Service (JMS) Develop applications by taking advantage of the latest versions of CDI, Security, Servlets, and JSF and other Java EE specifications Who This Book Is For If you are a Java developer who wants to become proficient with Java EE 8, this book is ideal for you. You are expected to have some experience with Java and to have developed and deployed applications in the past, but you don't need any previous knowledge of Java EE. What You Will Learn Develop and deploy Java EE applications Embrace the latest additions to the Contexts and Dependency Injection (CDI) specification to develop Java EE applications Develop web-based applications by utilizing the latest version of JavaServer Faces, JSF 2.3. Understand the steps needed to process JSON data with JSON-P and the new JSON-B Java EE API Implement RESTful web services using the new JAX-RS 2.1 API, which also includes support for Server-Sent Events (SSE) and the new reactive client API In Detail Java EE is an Enterprise Java standard. Applications written to comply with the Java EE specification do not tie developers to a specific vendor; instead they can be deployed to any Java EE compliant application server. With this book, you'll get all the tools and techniques you need to build robust and scalable applications in Java EE 8. This book covers all the major Java EE 8 APIs including JSF 2.3, Enterprise JavaBeans (EJB) 3.2, Contexts and Dependency Injection (CDI) 2.0, the Java API for WebSockets, JAX-RS 2.1, Servlet 4.0, and more. The book begins by introducing you to Java EE 8 application development and goes on to cover all the major Java EE 8 APIs. It goes beyond the basics to develop Java EE applications that can be deployed to any Java EE 8 compliant application server. It also introduces advanced topics such as JSON-P and JSON-B, the Java APIs for JSON processing, and the Java API for JSON binding. These topics dive deep, explaining how the two APIs (the Model API and the Streaming API) are used to process JSON data. Moving on, we cover additional Java EE APIs, such as the Java API for Websocket and the Java Message Service (JMS), which allows loosely coupled, asynchronous communication. Further on, you'll discover ways to secure Java EE applications by taking advantage of the new Java EE Security API. Finally, you'll learn more about the RESTful web service development using the latest JAX-RS 2.1 specification. You'll also get to know techniques to develop cloud-ready microservices in Java EE. Style and approach The book takes a pragmatic approach, showing you various techniques to utilize new features of Java EE 8 specification. It is packed with clear, step-by-step instructions, practical examples, and straightforward explanations.

Java Enterprise Edition (Java EE) continues to be one of the leading Java technologies and platforms. Beginning Java EE 7 is the first tutorial book on Java EE 7. Step by step and easy to follow, this book describes many of the Java EE 7 specifications and reference implementations, and shows them in action using practical examples. This definitive book also uses the newest version of GlassFish to deploy and administer the code examples. Written by an expert member of the Java EE specification request and review board in the Java Community Process (JCP), this book contains the best information possible, from an expert's perspective on enterprise Java technologies. What you'll learn Get started with the latest version of the Java EE Platform. Explore and use the EJB and JPA APIs from entities to session beans to message driven beans, and more. Discover web tier development APIs including JSF, Facelets and Expression Language. Uncover SOAP web services, RESTful web services, and more available in this latest Java EE. Create dynamic user interfaces for your enterprise and transactional Java applications. Who this book is for This book is for Java or Spring programmers with some experience and those new to Java EE platform. Architects will also find information about how to layer their Java EE applications. Table of Contents Java EE 7 Environment Context and Dependency Injection Bean Validation Java Persistence API Object-Relational Mapping Managing Persistent Object Enterprise Java Beans Callbacks, Timer Service, and Authorization Interceptors and Transactions JavaServer Faces Processing and Navigation XML and JSON Messaging SOAP Web Services RESTful Web Service Beginning CSS3 teaches you how to style web pages using Cascading Style Sheets (CSS)—the language of web design. Starting from first principles, you'll learn through a series of practical exercises how to change the default look of HTML tags, adding color, backgrounds, and borders. The book demystifies core concepts, such as the CSS box model and selectors, giving you the confidence and knowledge to create innovative and flexible page layouts. You'll also learn how to create rounded corners, drop shadows, and gradients without the need for images, using the latest CSS3 techniques.

Learn how to use the core Hibernate APIs and tools as part of the Spring Framework. This book illustrates how these two frameworks can be best utilized. Other persistence solutions available in Spring are also shown including the Java Persistence API (JPA). Spring Persistence with Hibernate, Second Edition has been updated to cover Spring Framework version 4 and Hibernate version 5. 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. Persistence is an important set of techniques and technologies for accessing and using data, and ensuring that data is mobile regardless of specific applications and contexts. In Java development, persistence is a key factor in enterprise, e-commerce, and other transaction-oriented applications.

Today, the agile and open source Spring Framework is the leading out-of-the-box, open source solution for enterprise Java developers; in it, you can find a number of Java persistence solutions. What You'll Learn Use Spring Persistence, including using persistence tools in Spring as well as choosing the best Java persistence frameworks outside of Spring Take advantage of Spring Framework features such as Inversion of Control (IoC), aspect-oriented programming (AOP), and more Work with Spring JDBC, use declarative transactions with Spring, and reap the benefits of a lightweight persistence strategy Harness Hibernate and integrate it into your Spring-based enterprise Java applications for transactions, data processing, and more Integrate JPA for creating a well-layered persistence tier in your enterprise Java application Who This Book Is For This book is ideal for developers interested in learning more about persistence framework options on the Java platform, as well as fundamental Spring concepts. Because the book covers several persistence frameworks, it is suitable for anyone interested in learning more about Spring or any of the frameworks covered. Lastly, this book covers advanced topics related to persistence architecture and design patterns, and is ideal for beginning developers looking to learn more in these areas.

Mastering Drupal can lead to a mighty website - discover what Drupal 8 can really do with hidden techniques, best practices, and more! About This Book The most up-to-date advanced practical guide on Drupal 8 with an in-depth look at all the advanced new features such as authoring, HTML markup, built-in web services, and more If you are looking to dive deep into Drupal 8 and create industry-standard web apps, then this is the ideal book for you All the code and examples are explained in great detail to help you in the development process Who This Book Is For This book is ideally suited to web developers, designers, and web administrators who want to dive deep into Drupal. Previous experience with Drupal is a must to unleash the full potential of this book. What You Will Learn Discover how to better manage content using custom blocks and views Display content in multiple ways, taking advantage of display modes Create custom modules with YAML and Symfony 2 Easily translate content using the new multilingual capabilities Use RESTful services and JavaScript frameworks to build headless websites Manage Drupal configuration from one server to another easily In Detail Drupal is an open source content management system trusted by governments and organizations around the globe to run their websites. It brings with it extensive content authoring tools, reliable performance, and a proven track record of security. The community of more than 1,000,000 developers, designers, editors, and others have developed and maintained a wealth of modules, themes, and other add-ons to help you build a dynamic web experience. Drupal 8 is the latest release of the Drupal built on the Symfony2 framework. This is the largest change to the Drupal project in its history. The entire API of Drupal has been rebuilt using Symfony and everything from the administrative UI to themes to custom module development has been affected. This book will cover everything you need to plan and build a complete website using Drupal 8. It will provide a clear and concise walkthrough of the more than 200 new features and improvements introduced in Drupal core. In this book, you will learn advanced site building techniques, create and modify themes using Twig, create custom modules using the new Drupal API, explore the new REST and Multilingual functionality, import, and export Configuration, and learn how to migrate from earlier versions of Drupal. Style and approach This book takes a practical approach with equal emphasis on examples and illustrative screenshots.

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