
Read PDF Java Enterprise Edition Architecture

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GRQF45 - DEANDRE SHYANNE

Build Modern Web Apps with JakartaEE, Jmoordb, and Vaadins Key Features ● Learn about the Java Enterprise Edition/Jakarta Enterprise Edition specifications. ● Learn how to create applications with frameworks such as Java Server Faces, Eclipse krazo and Vaadin. ● Get familiar with NoSQL databases and learn how to create Java applications that interact using Jakarta NoSQL and Jmoordb. ● Learn how to test and secure your application. ● Learn about Microprofile and how to create microservices with java. Description For many years, Java EE has been an important platform for mission-critical enterprise applications. To accelerate the development of enterprise applications for a cloud-native world, leading software vendors collaborated to transfer Java EE technologies to the Eclipse Foundation, where they will evolve under the Jakarta EE brand. This book will be your comprehensive guide to creating Jakarta EE applications and microservices with Microprofile. The book begins with an introduction to Jakarta EE

and quickly goes on to teach you about the various databases and their advantages. After this, you will explore the JNoSQL and Jmoordb frameworks to understand how to build Jakarta EE applications with NoSQL databases. Moving forward, you'll explore Eclipse MicroProfile and see how it helps build microservices with Java. Also, you will learn about various development applications such as Java Server Faces, Eclipse Krazos, PrimeFaces, Vaadin, and understand how to integrate them with your backend. Towards the end, you will learn about security, testing, and understanding continuous integration. What will you learn ● Learn how to use the Jmoordb framework for Jakarta EE applications. ● Optimize Enterprise Java for microservices architecture using Eclipse MicroProfile. ● Create Web applications using Java Server Faces. ● Building a modern web application using Vaadin. ● Learn how to implement security using IdentityStore and JWT. ● Create CI/CD pipelines for Jakarta EE applications. Who this book is for This book is for developers with no previous experience in creating business applications with Java and for those who want to

know about APIs and new frameworks for the development of cloud-oriented applications. Table of Contents 1. Jakarta EE Platform 2. NoSQL 3. Jakarta NOSQL 4. Understanding JMoordb 5. Exploring Microprofile 6. Java Server Faces 7. Vaadin 8. Integration Vaadin, JMoordb and NoSQL 9. Eclipse Krazos and Security of Microservices 10. Testing and Continuous Integration

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.

Explains how to leverage Java's architecture and mechanisms to design enterprise applications and considers code modularity, nonduplication, network efficiency, maintainability, and reusability.

Helps readers understand the goals of system architecture, design patterns, identify the appropriate J2EE technologies and APIs, maximize security and scalability, and evaluate existing architectures.

The Best Fully Integrated Study System Available With hundreds of practice questions and hands-on exercises, Sun Certified Enterprise Architect for Java EE Study Guide covers what you need to know--and shows you how to prepare--for this challenging exam. 100% complete coverage of all official objectives for exam 310-051 Inside the Exam sections in every chapter highlight key exam topics covered Simulated exam questions match the format, tone, topics, and difficulty of the real exam Covers all the exam topics, including: Basic Principles of Enterprise Architectures * Object-Oriented Design Using UML * Applicability of JEE Technology * Design Patterns * Legacy Connectivity * EJB and Container Models * Messaging * Internationalization and Localization * Security CD-ROM includes: Complete MasterExam practice testing engine, featuring: One full practice exam: Detailed answers with explanations: Score Report performance assessment tool Electronic book for studying on the go With free online registration: Bonus downloadable MasterExam practice test

The Java EE 7 Tutorial: Volume 1, Fifth Edition, is a task-oriented, example-driven guide to developing enterprise applications for the Java Platform, Enterprise Edition 7 (Java EE 7). Written by

members of the Java EE documentation team at Oracle, this book provides new and intermediate Java programmers with a deep understanding of the platform. This guide includes descriptions of platform features and provides instructions for using the latest versions of NetBeans IDE and GlassFish Server Open Source Edition. The book introduces platform basics, including resource creation, resource injection, and packaging. It covers JavaServer Faces, Java Servlets, the Java API for WebSocket, the Java API for JSON Processing (JSON-P), internationalization and localization, Bean Validation, Contexts and Dependency Injection for Java EE (CDI), and web services (JAX-WS and JAX-RS).

This handbook is a concise guide to architecting, designing and building J2EE applications. This handbook will guide the technical architect through the entire J2EE project including identifying business requirements, performing use-case analysis, object and data modeling, and guiding a development team during construction. Whether you are about to architect your first J2EE application or are looking for ways to keep your projects on-time and on-budget, you will refer to this handbook again and again.

Build better web applications by learning how a servlet container actually works.

Serverless computing greatly simplifies software development. Your team can focus solely on your application while the cloud provider manages the servers you need. This practical guide shows you step-by-step how to build and deploy complex applications in a flexible multicloud, multilanguage environment using Apache OpenWhisk. You'll learn how this platform enables you to pursue a vendor-independent approach using preconfigured con-

tainers, microservices, and Kubernetes as your cloud operating system. Michele Sciabarrà demonstrates how to build a serverless application using classical design patterns and the programming language or languages that best fit your task. You'll start by building a simple serverless application hands-on before diving into the more complex aspects of the OpenWhisk platform. Examine how OpenWhisk's serverless architecture works, including the use of packages, actions, sequences, triggers, rules, and feeds Learn how OpenWhisk compares to existing architectures, such as Java Enterprise Edition Manipulate OpenWhisk features using the command-line interface or a JavaScript API Design applications using common Gang of Four design patterns Use architectural design patterns such as model-view-controller to combine several OpenWhisk actions Learn how to test and debug your code in a serverless environment

Find out how to craft effective, business-oriented Java EE 8 applications that target customer's demands in the age of Cloud platforms and container technology. About This Book Understand the principles of modern Java EE and how to realize effective architectures Gain knowledge of how to design enterprise software in the age of automation, Continuous Delivery and Cloud platforms Learn about the reasoning and motivations behind state-of-the-art enterprise Java technology, that focuses on business Who This Book Is For This book is for experienced Java EE developers who are aspiring to become the architects of enterprise-grade applications, or software architects who would like to leverage Java EE to create effective blueprints of applications. What You Will Learn What enterprise software engineers should focus on Implement applications, packages, and components in a modern way Design

and structure application architectures Discover how to realize technical and cross-cutting aspects Get to grips with containers and container orchestration technology Realize zero-dependency, 12-factor, and Cloud-native applications Implement automated, fast, reliable, and maintainable software tests Discover distributed system architectures and their requirements In Detail Java EE 8 brings with it a load of features, mainly targeting newer architectures such as microservices, modernized security APIs, and cloud deployments. This book will teach you to design and develop modern, business-oriented applications using Java EE 8. It shows how to structure systems and applications, and how design patterns and Domain Driven Design aspects are realized in the age of Java EE 8. You will learn about the concepts and principles behind Java EE applications, and how to effect communication, persistence, technical and cross-cutting concerns, and asynchronous behavior. This book covers Continuous Delivery, DevOps, infrastructure-as-code, containers, container orchestration technologies, such as Docker and Kubernetes, and why and especially how Java EE fits into this world. It also covers the requirements behind containerized, zero-dependency applications and how modern Java EE application servers support these approaches. You will also learn about automated, fast, and reliable software tests, in different test levels, scopes, and test technologies. This book covers the prerequisites and challenges of distributed systems that lead to microservice, shared-nothing architectures. The challenges and solutions of consistency versus scalability will further lead us to event sourcing, event-driven architectures, and the CQRS principle. This book also includes the nuts and bolts of application performance as well as how to realize resilience, log-

ging, monitoring and tracing in a modern enterprise world. Last but not least the demands of securing enterprise systems are covered. By the end, you will understand the ins and outs of Java EE so that you can make critical design decisions that not only live up to, but also surpass your clients' expectations. Style and approach This book focuses on solving business problems and meeting customer demands in the enterprise world. It covers how to create enterprise applications with reasonable technology choices, free of cargo-cult and over-engineering. The aspects shown in this book not only demonstrate how to realize a certain solution, but also explain its motivations and reasoning.

Following her widely acclaimed Autobiography of Red ("A spellbinding achievement" --Susan Sontag), a new collection of poetry and prose that displays Anne Carson's signature mixture of opposites--the classic and the modern, cinema and print, narrative and verse. In *Men in the Off Hours*, Carson reinvents figures as diverse as Oedipus, Emily Dickinson, and Audubon. She views the writings of Sappho, St. Augustine, and Catullus through a modern lens. She sets up startling juxtapositions (Lazarus among video paraphernalia; Virginia Woolf and Thucydides discussing war). And in a final prose poem, she meditates on the recent death of her mother. With its quiet, acute spirituality, its fearless wit and sensuality, and its joyful understanding that "the fact of the matter for humans is imperfection," *Men in the Off Hours* shows us "the most exciting poet writing in English today" (Michael Ondaatje) at her best. From the Hardcover edition.

Many bookstores offer numerous choices of books on Java Server Programming; however, most of these books are intricate and complex to grasp. So, what are your chances of picking up the

right one? If this question has been troubling you, be rest assured now! This book, *Java Server Programming: Java EE 5 (J2EE 1.5) Black Book, Platinum Edition*, is a one-time reference book that covers all aspects of Java EE in an easy-to-understand approach for example, how an application server runs; how GlassFish Application server deploys a Java application; a complete know-how of design patterns, best practices, and design strategies; working with Java related technologies such as NetBeans IDE 6.0, Hibernate, Spring, and Seam frameworks; and proven solutions using the key Java EE technologies, such as JDBC, Servlets, JSP, JSTL, RMI, JNDI, JavaMail, Web services, JCA, Struts, JSF, UML, and much more& All this, as the book explores these concepts with appropriate examples and executable applications no doubt, every aspect of the book is worth its price.

Develop Java enterprise applications to meet the emerging digital standards using Java EE 7

About This Book

- Build modern Java EE web applications that insert, update, retrieve, and delete customer data with up-to-date methodologies
- Delve into the essential JavaScript programming language and become proficient with front-end technologies that integrate with the Java platform
- Learn about JavaServer Faces, its lifecycle, and custom tags, and build exciting digital applications with the aid of handpicked, real-world examples

Who This Book Is For

If you are a professional Java engineer and want to develop well-rounded and strong Java Web Development skills, then this book is for you.

What You Will Learn

- Understand and apply updated JavaServer Faces key features including HTML5 support, resource library constructs, and pass through attributes
- Build web applications that conform to

digital standards and governance, and leverage the Java EE 7 web architecture

- Construct modern JSF Forms that apply validation, add AJAX for immediate validation, and write your own validators
- Augment a traditional web application with JSF 2.2 Flow Beans and Flow Scope Beans
- Program single page applications including AngularJS, and design Java RESTful back-end services for integration
- Utilize modern web frameworks such as Bootstrap and Foundation in your JSF applications
- Create your own JSF custom components that generate reusable content for your stakeholders and their businesses

In Detail

Digital Java EE 7 presents you with an opportunity to master writing great enterprise web software using the Java EE 7 platform with the modern approach to digital service standards. You will first learn about the lifecycle and phases of JavaServer Faces, become completely proficient with different validation models and schemes, and then find out exactly how to apply AJAX validations and requests. Next, you will touch base with JSF in order to understand how relevant CDI scopes work. Later, you'll discover how to add finesse and pizzazz to your digital work in order to improve the design of your e-commerce application. Finally, you will deep dive into AngularJS development in order to keep pace with other popular choices, such as Backbone and Ember JS. By the end of this thorough guide, you'll have polished your skills on the Digital Java EE 7 platform and be able to create exiting web application.

Style and approach

This book takes a step-by-step and detailed approach, coaching you through real-world scenarios. The book's style is designed for those who enjoy a thorough educational approach.

Real World Java EE Patterns - Rethinking Best Practices (<http://realworldpatterns.com>) discusses patterns and best practices in a

structured way, with code from real world projects. The rewritten and re-edited version of this book covers: an introduction into the core principles and APIs of Java EE 6, principles of transactions, isolation levels, CAP and BASE, remoting, pragmatic modularization and structure of Java EE applications, discussion of superfluous patterns and outdated best practices, patterns for domain driven and service oriented components, custom scopes, asynchronous processing and parallelization, real time HTTP events, schedulers, REST optimizations, plugins and monitoring tools, and fully functional JCA 1.6 implementation. Real World Java EE Patterns--Rethinking Best Practices will not only help experienced developers and architects to write concise code, but especially help you to shrink the codebase to unbelievably small sizes: -).

Master Java EE design pattern implementation to improve your design skills and your application's architecture Professional Java EE Design Patterns is the perfect companion for anyone who wants to work more effectively with JavaEE, and the only resource that covers both the theory and application of design patterns in solving real-world problems. The authors guide readers through both the fundamental and advanced features of Java EE 7, presenting patterns throughout, and demonstrating how they are used in day-to-day problem solving. As the most popular programming language in community-driven enterprise software, Java EE provides an API and runtime environment that is a superset of Java SE. Written for the junior and experienced Java EE developer seeking to improve design quality and effectiveness, the book covers areas including: Implementation and problem-solving with design patterns Connection between existing Java SE design patterns and new Java EE

concepts Harnessing the power of Java EE in design patterns Individually-based focus that fully explores each pattern Colorful war-stories showing how patterns were used in the field to solve real-life problems Unlike most Java EE books that simply offer descriptions or recipes, this book drives home the implementation of the pattern to real problems to ensure that the reader learns how the patterns should be used and to be aware of their pitfalls. For the programmer looking for a comprehensive guide that is actually useful in the everyday workflow, Professional Java EE Design Patterns is the definitive resource on the market.

A Complete Study System for OCM Exams 1Z0-807, 1Z0-865, and 1Z0-866 Prepare for the Oracle Certified Master Java EE 6 Enterprise Architect exams with this exclusive Oracle Press guide. The multiple-choice exam, the assignment, and the essay exam are covered. Chapters feature challenging exercises, a certification summary, a two-minute drill, and a self-test to reinforce the topics presented. This authoritative resource helps you pass these exams and also serves as an essential, on-the-job reference. Get complete coverage of all exam objectives, including: Application design concepts and principles Common architectures Integration and messaging Business-tier technologies Web-tier technologies Design patterns Security Electronic content includes: 120 multiple-choice practice exam questions Test engine that provides practice exams and customized quizzes by chapter

Annotation The seventh edition of the Enterprise Java platform is aimed at helping Java engineers take advantage of the advancements in HTML5 and web standards. Web Sockets, asynchronous input and output with Servlets, and strong type safety through

the CDI containers will ensure that Java EE 7 remains popular for server-side applications. If you are a user aiming to get acquainted with the Java EE 7 platform, this book is for you. "Java EE 7 Developer Handbook" provides a solid foundation of knowledge for developers to build business applications. Following the lead of Agile practices, there is a focus on writing tests to demonstrate test-driven development principles, using the embedded GlassFish 4.0 container examples and the Gradle build system. You will learn about CDI, EJB, JPA, JMS, MDB, Servlets, WebSocket, JAX-RS, Bean Validation, and so much more. "Java EE 7 Developer Handbook" is designed as a companion to the professional software developer who quickly needs to lookup some working code, understand the basics of the framework, and then go out and fulfill the business contract with the customer. Typically, engineers are under pressure to develop professional code that is of high quality and contains a low number of bugs. Java EE 7 Developer Handbook relies heavily on the Arquillian framework to illustrate how much easier it is to write Java EE tests, and together with the modern practice of writing containerless applications that actually embed an application container, developing agile Java EE suddenly becomes reasonable, smart, pragmatic, and achievable. You will start off with an overview of the Java EE platform: the containers, the design, and architecture. From there, you can follow the path of the CDI, the true gem of the framework, and then the server side end point, EJB. It is completely up to you when and if you want to learn about Java persistence. However, don't miss out on the highlights of Java EE 7 such as WebSocket, Bean Validation, and asynchronous Servlet API. "Java EE 7 Developer Handbook" is a vertical slice through standard Java enterprise architec-

ture. If you have been wondering why developers have invested so much time and effort into learning topics such as Enterprise Java Beans, you will quickly understand why when you find out the difference between stateful and stateless Beans. Best of all, this book covers the topic from the perspective of new API and new modern practices. For instance, you, the developer and designer, are expected to write applications with annotations in comparison with J2EE. Java EE 7 Developer Handbook incorporates helpful hints and tips to get the developer up to speed in a short amount of time on EJB, CDI, Persistence, Servlet, JMS, WebSocket, JAX-RS and Bean Validation, and much more. "Java EE 7 Developer Handbook" is the reference guide you need beside you at your desk. "The Java™ landscape is littered with libraries, tools, and specifications. What's been lacking is the expertise to fuse them into solutions to real-world problems. These patterns are the intellectual mortar for J2EE software construction." —John Vlissides, coauthor of Design Patterns: Elements of Reusable Object-Oriented Software Pro Java™ EE Spring Patterns focuses on enterprise patterns, best practices, design strategies, and proven solutions using key Java EE technologies including JavaServer Pages™, Servlets, Enterprise JavaBeans™, and Java Message Service APIs. This Java EE patterns resource, catalog, and guide, with its patterns and numerous strategies, documents and promotes best practices for these technologies, implemented in a very pragmatic way using the Spring Framework and its counters. This title Introduces Java EE application design and Spring framework fundamentals Describes a catalog of patterns used across the three tiers of a typical Java EE application Provides implementation details and analyses each pattern with benefits and concerns De-

scribes the application of these patterns in a practical application scenario

Explores options for using J2EE technologies in the creation of scalable software, providing a case study on a database and focusing on selecting leading-edge technologies and implementing the sample system.

A tutorial and reference to Java-based APIs for application software development covers RMI, IDL, JAXP, JNDI, Java Servlets, and J2EE 1.3.

A handbook for enterprise system developers guiding them through the intricacies and lessons learned in enterprise application development. Patterns are supported by code examples, in both Java and C#.

IBM® Rational® Application Developer for WebSphere® Software V8 is the full-function Eclipse 3.6 technology-based development platform for developing Java™ Platform, Standard Edition Version 6 (Java SE 6) and Java Platform, Enterprise Edition Version 6 (Java EE 6) applications. Beyond this function, Rational Application Developer provides development tools for technologies, such as OSGi, Service Component Architecture (SCA), Web 2.0, and XML. It has a focus on applications to be deployed to IBM WebSphere Application Server and IBM WebSphere Portal. Rational Application Developer provides integrated development tools for all development roles, including web developers, Java developers, business analysts, architects, and enterprise programmers. This IBM Redbooks® publication is a programming guide that highlights the features and tooling included with Rational Application Developer V8.0.1. Many of the chapters provide working exam-

ples that demonstrate how to use the tooling to develop applications and achieve the benefits of visual and rapid application development. This publication is an update of Rational Application Developer V7.5 Programming Guide, SG24-7672.

The practice of enterprise application development has benefited from the emergence of many new enabling technologies. Multi-tiered object-oriented platforms, such as Java and .NET, have become commonplace. These new tools and technologies are capable of building powerful applications, but they are not easily implemented. Common failures in enterprise applications often occur because their developers do not understand the architectural lessons that experienced object developers have learned. Patterns of Enterprise Application Architecture is written in direct response to the stiff challenges that face enterprise application developers. The author, noted object-oriented designer Martin Fowler, noticed that despite changes in technology--from Smalltalk to CORBA to Java to .NET--the same basic design ideas can be adapted and applied to solve common problems. With the help of an expert group of contributors, Martin distills over forty recurring solutions into patterns. The result is an indispensable handbook of solutions that are applicable to any enterprise application platform. This book is actually two books in one. The first section is a short tutorial on developing enterprise applications, which you can read from start to finish to understand the scope of the book's lessons. The next section, the bulk of the book, is a detailed reference to the patterns themselves. Each pattern provides usage and implementation information, as well as detailed code examples in Java or C#. The entire book is also richly illustrated with UML diagrams to further explain the concepts. Armed

with this book, you will have the knowledge necessary to make important architectural decisions about building an enterprise application and the proven patterns for use when building them. The topics covered include

- Dividing an enterprise application into layers
- The major approaches to organizing business logic
- An in-depth treatment of mapping between objects and relational databases
- Using Model-View-Controller to organize a Web presentation
- Handling concurrency for data that spans multiple transactions
- Designing distributed object interfaces

Enter the world of rapid web application development. This gentle introduction to Play covers all you need to know: it carefully introduces the background concepts before diving into examples, making learning Play 2 enjoyable (it includes the latest Play framework version 2.8). Introducing Play Framework is crisp, up-to-the-point, and full of valuable information. You will find chapters covering the basics of Play, the sbt build system, the Ebean ORM, web services using Play, production deployment, cache, and more with actual pragmatic code snippets for common tasks. After reading and using this book, you'll be able to build and deploy Java-based web applications with the Play framework. What You Will Learn

- Use the Play framework to do rapid Java-based web application development
- Work with Play controllers and Play views
- Create web services using JSON and XML
- Persist data and access databases
- Use Play modules
- Carry out asynch programming
- Cache, deploy, and work with code snippets in Play

Who This Book Is For Those with at least some prior experience with Java.

Oracle Certified Master, Java Enterprise Architect Java EE 7 Certification Guide is a practical hands on guide for those looking to

achieve the Master certification. It deals with the different technological aspects necessary to prop up the understanding of the aspirants and help them achieve a rich conceptual understanding of the latest Java Platform, Enterprise Edition. It enhances their exam readiness by focusing on the most important categories defined by certification program at Oracle. The contents cater to the following categories recommended by Oracle in detail with specific references to the different parts of the exams: Architectural fundamentals Web tier components Business tier components Web services Messaging and integration Security Architectural artifacts Design and architectural Patterns The book is replete with examples and references to functional and non-functional aspects of using enterprise Java platform for application development. Detailed information on each of the major aspects of the certification examination is covered , including conceptual explanations, examples, code snippets, comparisons with the alternative technologies, communications, protocols, etc. The book is accompanied by additional resources available on the source code site, which cover the most up-to-date information on all aspects of the certification examination, including FAQ, mock tests with answers, and some additional tests for preparation. What you'll learn

- Core aspects of technologies, specifications, communication protocols, libraries and APIs involved in Java EE technology.
- Selecting security technology at different layers of architecture.
- Understanding GOF and J2EE patterns and applying them given a situation

Who this book is for Java EE 7 certification aspirants, senior Java application developers, web application developers, and Java architects. The book also will help Java enthusiasts at various levels to understand technologies at conceptual as well as applica-

tion level. Students of computer science and information technology at the post-graduate level will also be able to understand and appreciate the technology of Java Enterprise Edition.

Jakarta EE 10 is the latest version of the Java Enterprise Edition (EE) platform, which is designed to help developers build modern, scalable, and secure enterprise applications. This book provides a comprehensive guide to using Jakarta EE 10, covering everything from its architecture and key technologies, to best practices and advanced topics. With this book, you will learn how to set up your development environment, create and deploy Jakarta EE applications, and use the latest features in the platform and improved cloud-native capabilities. Whether you are new to Jakarta EE or an experienced Java EE developer, this book will provide you with the knowledge and skills you need to build robust and efficient enterprise applications with Jakarta EE 10. The first part of the book covers everything from the foundation components (EJB, Servlets, CDI, JPA) to the new technology stack defined in Jakarta EE 10, including Batch API, JSON-P API, the Concurrency API, Web Sockets, the JMS API, the core Web services stack (Jakarta REST Services, Jakarta SOAP Services). The testing area with Arquillian framework and the Security API is also fully covered in this part. At the end of this part, you will be able to create and deploy Enterprise applications on the top of Jakarta EE 10 runtimes (WildFly 27 or newer) and migrate your existing Java EE applications. The second part of the book discusses how to integrate the Jakarta Enterprise API with the Microprofile specification, to provide essential services to develop robust microservices such as the Configuration API, the Health API, the Fault tolerance API, the OpenAPI and Tracing API, the Metrics API, JWT Authentication API and REST

Client API. Finally, the third part of the book covers how to build Microservices using WildFly Bootable jar technology and how to deploy them on the cloud with Red Hat OpenShift. What you will learn from this book: - Everything you need to know about Java EE, Jakarta EE 10 and MicroProfile API - How to set up your development environment to build Enterprise applications and Microservices on the top of WildFly. - Learn the best Maven plugins that you can use to simplify your project scaffolding - Learning the foundation components that constitute the backbone of your applications: EJB, CDI, JPA, JAX-RS, JAX-WS - How to build loosely coupled applications using the straightforward JMS API - How to test your applications with Arquillian in a managed environment, remote environment and even on the cloud! - Discover how to develop Concurrent and Compliant Enterprise applications using the Concurrency API and how to define Batch Jobs using WildFly's batch subsystem. - Secure all kinds of applications (Web/EJB) with standard and custom login modules. How to encrypt the communication of EJB applications and Web applications. - How to enhance your Jakarta EE stack with Microprofile API to build robust Microservices - How to turn your Jakarta EE applications in Microservices using WildFly Bootable jar technology

Get the deep insights you need to master efficient architectural design considerations and solve common design problems in your enterprise applications. Key Features The benefits and applicability of using different design patterns in JAVA EE Learn best practices to solve common design and architectural challenges Choose the right patterns to improve the efficiency of your programs Book Description Patterns are essential design tools for Java developers. Java EE Design Patterns and Best Practices helps

developers attain better code quality and progress to higher levels of architectural creativity by examining the purpose of each available pattern and demonstrating its implementation with various code examples. This book will take you through a number of patterns and their Java EE-specific implementations. In the beginning, you will learn the foundation for, and importance of, design patterns in Java EE, and then will move on to implement various patterns on the presentation tier, business tier, and integration tier. Further, you will explore the patterns involved in Aspect-Oriented Programming (AOP) and take a closer look at reactive patterns. Moving on, you will be introduced to modern architectural patterns involved in composing microservices and cloud-native applications. You will get acquainted with security patterns and operational patterns involved in scaling and monitoring, along with some patterns involved in deployment. By the end of the book, you will be able to efficiently address common problems faced when developing applications and will be comfortable working on scalable and maintainable projects of any size. What you will learn

- Implement presentation layers, such as the front controller pattern
- Understand the business tier and implement the business delegate pattern
- Master the implementation of AOP
- Get involved with asynchronous EJB methods and REST services
- Involve key patterns in the adoption of microservices architecture
- Manage performance and scalability for enterprise-level applications

Who this book is for Java developers who are comfortable with programming in Java and now want to learn how to implement design patterns to create robust, reusable and easily maintainable apps.

This book simplifies the creation of well-designed enterprise appli-

cations using Sun's newly upgraded Enterprise JavaBeans 2.0 platform. Experienced Java mentors Gail and Paul Anderson use detailed code examples to introduce every key skill involved in creating EJB components, standalone Java clients, and JSP Web-based clients. They also show how to apply today's most powerful EJB design guidelines and patterns -- and how to avoid critical errors in EJB application design. Using real-world business components, the authors illustrate these and other key EJB features: stateless and stateful session beans, entity beans with bean-managed persistence, entity beans with container-managed persistence, container-managed relationships, local and remote interfaces, the EJB query language, and message-driven beans. Each chapter includes a "Design Guidelines and Patterns" section that helps developers understand the key tradeoffs associated with their design decisions.

The Practitioner's Guide to Implementing SOA with Java EE Technologies This book brings together all the practical insight you need to successfully architect enterprise solutions and implement them using SOA and Java EE technologies. Writing for senior IT developers, strategists, and enterprise architects, the authors cover everything from concepts to implementation, requirements to tools. The authors first review the Java EE platform's essential elements in the context of SOA and web services deployment, and demonstrate how Java EE has evolved into the world's best open source solution for enterprise SOA. After discussing standards such as SOAP, WSDL, and UDDI, they walk through implementing each key aspect of SOA with Java EE. Step by step, you'll learn how to integrate service-oriented web and business components

of Java EE technologies with the help of process-oriented standards such as BPEL/CDL into a coherent, tiered enterprise architecture that can deliver a full spectrum of business services. Implementing SOA Using Java™ EE concludes with a section-length case study that walks through analyzing a company's requirements, creating an effective SOA architecture, and building a concise proof-of-concept prototype with NetBeans IDE. Coverage includes

- Using Java EE technologies to simplify SOA implementation
- Mastering messaging, service descriptions, registries, orchestration, choreography, and other essential SOA concepts
- Building an advanced web services infrastructure for implementing SOA
- Using Java Persistence API to provide for persistence
- Getting started with Java Business Integration (JBI), the new open specification for delivering SOA
- Implementing SOA at the web and business tiers
- Developing, configuring, and deploying SOA systems with NetBeans IDE
- Constructing SOA systems with NetBeans SOA Pack

The Java 2 Platform, Enterprise Edition (J2EE) defines a new standard in enterprise solutions through a simplified, component-based development model. By extending the write-once, run-anywhere benefits of the Java programming language to enterprise servers, J2EE adds the scalability, robustness, and security required for today's vital e-commerce and enterprise solutions. The Java 2 Platform, Enterprise Edition: Platform and Components Specifications defines the architecture for developing applications with J2EE. This volume includes: Java 2 Platform, Enterprise Edition Specification, version 1.2 This specification defines the initial release of the J2EE platform. It discusses application architecture using Java Servlets, JavaServer Pages, Enterprise JavaBeans, and

other technologies. It specifies application access to services such as JDBC, Java Transaction API, JavaMail, CORBA connectivity, and others. It also discusses J2EE policies regarding application deployment and security. Enterprise JavaBeans Specification, version 1.1 Enterprise JavaBeans technology provides the standard middle-tier components in the J2EE model. This technology provides simplified support for transaction

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

Build robust and scalable Java applications by learning how to implement every aspect of software architecture Key Features Understand the fundamentals of software architecture and build produc-

tion-grade applications in JavaMake smart architectural decisions with comprehensive coverage of various architectural approaches from SOA to microservicesGain an in-depth understanding of deployment considerations with cloud and CI/CD pipelinesBook Description Well-written software architecture is the core of an efficient and scalable enterprise application. Java, the most widespread technology in current enterprises, provides complete toolkits to support the implementation of a well-designed architecture. This book starts with the fundamentals of architecture and takes you through the basic components of application architecture. You'll cover the different types of software architectural patterns and application integration patterns and learn about their most widespread implementation in Java. You'll then explore cloud-native architectures and best practices for enhancing existing applications to better suit a cloud-enabled world. Later, the book highlights some cross-cutting concerns and the importance of monitoring and tracing for planning the evolution of the software, foreseeing predictable maintenance, and troubleshooting. The book concludes with an analysis of the current status of software architectures in Java programming and offers insights into transforming your architecture to reduce technical debt. By the end of this software architecture book, you'll have acquired some of the most valuable and in-demand software architect skills to progress in your career. What you will learnUnderstand the importance of requirements engineering, including functional versus non-functional requirementsExplore design techniques such as domain-driven design, test-driven development (TDD), and behavior-driven developmentDiscover the mantras of selecting the right architectural patterns for modern applicationsExplore different integration

patternsEnhance existing applications with essential cloud-native patterns and recommended practicesAddress cross-cutting considerations in enterprise applications regardless of architectural choices and application typeWho this book is for This book is for Java software engineers who want to become software architects and learn everything a modern software architect needs to know. The book is also for software architects, technical leaders, vice presidents of software engineering, and CTOs looking to extend their knowledge and stay up to date with the latest developments in the field of software architecture.

Leverage the power of Spring MVC, Spring Boot, Spring Cloud, and additional popular web frameworks. About This Book Discover key Spring Framework-related technology standards such as Spring core, Spring-AOP, Spring data access frameworks, and Spring testing to develop robust Java applications easily This course is packed with tips and tricks that demonstrate Industry best practices on developing a Spring-MVC-based application Learn how to efficiently build and implement microservices in Spring, and how to use Docker and Mesos to push the boundaries and explore new possibilities Who This Book Is For This course is intended for Java developers interested in building enterprise-level applications with Spring Framework. Prior knowledge of Java programming and web development concepts (and a basic knowledge of XML) is expected. What You Will Learn Understand the architecture of Spring Framework and how to set up the key components of the Spring Application Development Environment Configure Spring Container and manage Spring beans using XML and Annotation Practice Spring AOP concepts such as Aspect, Ad-

vice, Pointcut, and Introduction Integrate bean validation and custom validation Use error handling and exception resolving Get to grips with REST-based web service development and Ajax Use Spring Boot to develop microservices Find out how to avoid common pitfalls when developing microservices Get familiar with end-to-end microservices written in Spring Framework and Spring Boot In Detail This carefully designed course aims to get you started with Spring, the most widely adopted Java framework, and then goes on to more advanced topics such as building microservices using Spring Boot within Spring. With additional coverage of popular web frameworks such as Struts, WebWork, Java Server Faces, Tapestry, Docker, and Mesos, you'll have all the skills and expertise you need to build great applications. Starting with the Spring Framework architecture and setting up the key components of the Spring Application Development Environment, you will learn how to configure Spring Container and manage Spring beans using XML and Annotation. Next, you will delve into Spring MVC, which will help you build flexible and loosely coupled web applications. You'll also get to grips with testing applications for reliability. Moving on, this course will help you implement the microservice architecture in Spring Framework, Spring Boot, and Spring Cloud. Written to the latest specifications of Spring, this book will help you build modern, Internet-scale Java applications in no time. This Learning Path combines some of the best that Packt has to offer in one complete, curated package. It includes content from the following Packt products: Learning Spring Application Development by Ravi Kant Soni Spring MVC Beginner's Guide - Second Edition by Amuthan Ganeshan Spring Microservices by Rajesh RV Style and approach This is a step-by-step

guide for building a complete application and developing scalable microservices using Spring Framework, Spring Boot, and a set of Spring Cloud components

Discover how different software architectural models can help you solve problems, and learn best practices for the software development cycle Key Features Learn concepts related to software architecture and embrace them using the latest features of Spring 5 Discover architectural models and learn when to apply them Gain knowledge of architectural principles and how they can be used to provide accountability and rationale for architectural decisions Book Description Spring 5 and its ecosystem can be used to build robust architectures effectively. Software architecture is the underlying piece that helps us accomplish our business goals whilst supporting the features that a product demands. This book explains in detail how to choose the right architecture and apply best practices during your software development cycle to avoid technical debt and support every business requirement. Choosing the right architecture model to support your business requirements is one of the key decisions you need to take when a new product is being created from scratch or is being refactored to support new business demands. This book gives you insights into the most common architectural models and guides you when and where they can be used. During this journey, you'll see cutting-edge technologies surrounding the Spring products, and understand how to use agile techniques such as DevOps and continuous delivery to take your software to production effectively. By the end of this book, you'll not only know the ins and outs of Spring, but also be able to make critical design decisions that surpass your clients' expectations. What you will learn

Understand the key principles of software architecture Uncover the most common architectural models available Analyze scenarios where an architecture model should be used Implement agile techniques to take your software to production Secure the products you are working on Master tricks that will help you build high-performant applications Use cutting-edge technologies to build products Who this book is for If you're an experienced Spring developer aspiring to become an architect of enterprise-grade applications, this book is for you. It's also ideal for software architects who want to leverage Spring to create effective application blueprints.

Java Enterprise Edition (Java EE) continues to be one of the leading Java technologies and platforms from Oracle (previously Sun). Beginning Java EE 6 Platform with GlassFish 3, Second Edition is this first tutorial book on the final (RTM) version of the Java EE 6 Platform. Step by step and easy to follow, this book describes many of the Java EE 6 specifications and reference implementations, and shows them in action using practical examples. This book uses the new version of GlassFish 3 to deploy and administer the code examples. Written by an expert member of the Java EE 6 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.

Discover one of the most comprehensive introductions to information systems hardware and software in business today with Burd's SYSTEMS ARCHITECTURE, 7E. This new edition remains an indispensable tool for current and future IS (Information Systems) professionals with a managerial, broad systems perspective that provides a holistic approach to systems architecture. This edition

has been thoroughly updated to ensure all concepts, examples and applications reflects the latest in today's new and emerging technologies. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

This handbook on J2EE (Java 2 Enterprise Edition) platform connector architecture shows how to maximise J2EE applications within the application integration space. It includes a detailed look at connection pooling, transactions and managing security. IBM® Rational® Application Developer for WebSphere® Software v7.5 (Application Developer, for short) is the full function Eclipse 3.4 based development platform for developing Java™ Standard Edition Version 6 (Java SE 6) and Java Enterprise Edition Version 5 (Java EE 5) applications with a focus on applications to be deployed to IBM WebSphere Application Server and IBM WebSphere Portal. Rational Application Developer provides integrated development tools for all development roles, including Web developers, Java developers, business analysts, architects, and enterprise programmers. Rational Application Developer is part of the IBM Rational Software Delivery Platform (SDP), which contains products in four life cycle categories: - Architecture management, which includes integrated development environments - Change and release management - Process and portfolio management - Quality management This IBM Redbooks™ publication is a programming guide that highlights the features and tooling included with Rational Application Developer v7.5. Many of the chapters provide working examples that demonstrate how to use the tooling to develop applications, as well as achieve the benefits of visu-

al and rapid application development. This publication is an update of Rational Application Developer V7 Programming Guide, SG24-7501.

This book fills a gap between high-level overview texts that are often too general and low-level detail oriented technical handbooks that lose sight the "big picture". This book discusses SOA from the low-level perspective of middleware, various XML-based tech-

nologies, and basic service design. It also examines broader implications of SOA, particularly where it intersects with business process management and process modeling. Concrete overviews will be provided of the methodologies in those fields, so that students will have a hands-on grasp of how they may be used in the context of SOA.