Pro Java™ EE Spring Patterns

Best Practices and Design Strategies Implementing Java™ EE Patterns with the Spring Framework

Dhrubojyoti Kayal

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Pro Java™ EE Spring Patterns: Best Practices and Design Strategies Implementing Java™ EE Patterns with the Spring Framework

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To my parents and my wife.

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About the Author

DHRUBOJYOTI KAYAL is an agile developer architect with almost a decade of experience working with Java EE. During this time, he has actively contributed to the architecture, design, and development of products and applications using enterprise Java technologies. His areas of interest include the Spring Framework, JBoss SEAM, OSGi, refactoring and prefactoring, rich Internet applications, Scrum, and XP. He currently works with Capgemini Consulting, where he helps project teams with the architecture, design, and development of Java EE projects for leading vendors in the telecom, media, and entertainment sectors. Prior to Capgemini, Dhrubojyoti worked for TATA Consultancy Services, Oracle, and Cognizant Technology Solutions.

About the Technical Reviewer

PROSENJIT BHATTACHARYYA has been working with software ever since he was introduced to computers during his early school days. Starting with BASIC and Logo, he soon graduated to C, C++, and Java. Currently he concentrates on designing enterprise solutions based on the Java EE platform. An ardent supporter of open source, Prosenjit contributes to the community through his open source projects—JavaTrace and Dissect Framework—hosted on SourceForge. His enthusiasm about open source has earned him the sobriquet of "open source evangelist" amongst his acquaintances. Working for companies such as BEA Systems, Oracle Corporation, and IBM has enriched his experience and honed him into a thoroughbred software professional. Prosenjit's hobbies include playing the guitar and working on the pit crew of an amateur racing team. He hopes to have his own racing team in the near future. Prosenjit can be contacted at `prosenjit.bhattacharyya@gmail.com`.

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Introduction

This book combines the Java EE design patterns with the Spring Framework. The Java EE design pattern catalog provides an invaluable reference for any Java EE application design and architecture. The Spring Framework, on the other hand, is the de facto standard for Java EE. Spring, with its inherently simple programming model and emphasis on object design best practices, has helped revive and increase the adoption of the Java EE platform.

I have been using the Spring Framework in combination with design patterns to build Java EE applications for a long time now. This book is an effort to document a catalog of frequently used design strategies with the Spring Framework, which is relevant in the context of the latest Java 5 EE specifications. I am sure this book will be a reference for designers and developers who are interested in building enterprise applications with Java EE and the Spring Framework.

Who This Book Is For

This book is primarily meant for Java EE application designers and architects. Experienced developers with knowledge of the Java EE design patterns and the Spring Framework will also find this book immensely useful.

How This Book Is Structured

This book is structured in a very simple way. Chapter 1 starts with an introduction to the fundamental concepts in enterprise application architecture. It analyzes various architectural styles in distributed computing, and it introduces UML as the tool for the visual representation of application design.

Chapter 2 introduces the Spring Framework and its role in building enterprise Java applications. This chapter also highlights the design pattern template that will be used in the next four chapters. Chapter 3 explains the design problems in the presentation tier and presents solutions with the Spring MVC framework. Chapter 4 elaborates on the business tier design patterns. This chapter also shows Spring's support for simplifying EJB development.

Chapter 5 deals with the integration tier design patterns. Chapter 6 takes a look into the often-overlooked areas of security and transaction design strategies. Finally, in Chapter 7, all the concepts presented in earlier chapters are used to develop an order management system.

Prerequisites

This book assumes you are familiar with the Java EE design patterns, the Spring Framework, and the Eclipse IDE.

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