

## Java Enterprise Design Patterns

**Level:** advanced

**Length:** 35 - 40 hours

**Course Objective:** Participants will understand the utility of various Java Enterprise Design Patterns and practical ways to implement them. At the end of the course participants will be able to choose the patterns that favor the implementation and evolution of the enterprise applications.

### What You Will Learn

- Which are the main Java EE 7 Design Patterns
- The meaning and correct usage of patterns in large and very large enterprise applications
- Selecting the right patterns and avoid outdated choices
- Specific implementation of Java EE 7 Design Patterns
- Enhance soft skills: communication, team work, presentation, critical thinking, problem solving, decision making, risk mitigation and resources evaluation

### Who Can Attend

- Programmers who are familiar with Java EE technologies and want to write expandable and maintainable code
- Enterprise architects seeking to incorporate code design recommendations in their specifications
- Technical Managers, team leaders and programmers who want to improve the quality of code within Java EE applications

### Prerequisites

- Comfortable to using Windows or Linux OS
- Intermediate level for Java EE technologies usage
- Java Language specific Design Patterns

**Required Facilities:** projector, whiteboard, markers, Internet access, personal computer on which are installed the following applications: JDK 8 Eclipse for Java EE, WildFly 10 MySQL Community Server, DbVisualizer

### Bibliography:

Professional Java EE Design Patterns, Wrox, 1 edition (January 12, 2015), ISBN 978-1118843413.

Real World Java EE Patterns-Rethinking Best Practices, Adam Bien, September 5, 2012, ISBN 978-1300149316

There is no need for bibliography covering before attending this course.

### **Related Courses:**

#### **Before this course:**

- Java Programming Language
- Design Patterns in Java
- Java EE Fundamentals

#### **After this course:**

- Java EE: Architect Enterprise Applications

### **Description**

The intention of this course is to pragmatically respond to the next questions:

- Which are the design patterns that may favor the development of an enterprise project?
- From the list of available patterns, which are still making sense in the context of Java EE 7?
- Which are some real business examples where these templates add value?
- Which are the connections between specific object-oriented programming design patterns and Java EE design patterns?

The training will highlight the problems that occur in a typical Java Enterprise systems, options to resolve them with appropriate design patterns, their particular implementation. In addition, it will discuss best and bad practices in accordance with specific design pattern usage.

**Note:** topics covered and the practice will be adapted to the profile of participants, their expertise and experience on the intended objectives.

### **Contents**

1. Overview of Java Enterprise Design Patterns
2. Presentation Layer Design Patterns
3. Business Layer Design Patterns
4. Integration Layer Design Patterns
5. Outdated Design Patterns
6. Singleton
7. Factory
8. Dependency Injection
9. Decorator
10. Interceptors
11. Asynchronous
12. Scheduler
13. Observer
14. DAO
15. Business Object
16. Gateway
17. Fluid Logic
18. Configurator
19. Parallelizer
20. Transfer Object
21. Thread Tracker
22. Context Holder
23. Logger Injector
24. Late Starter