

Mastering J2EE Design Patterns

Duration: 5 days

Course Description

Geared for experienced J2EE developers, this hands-on training course explores the most common object-oriented design patterns (Gang of Four) as well as many other more sophisticated J2EE-oriented design patterns and how to use these patterns to develop solid, robust, and reusable J2EE applications.

Audience

This an **intermediate level** J2EE training course, designed for developers who need to identify, design, and lead the implementation of J2EE projects. It explores and the terminology, specification, processes, and technologies specific to J2EE. Attendees should be familiar with and have basic J2EE programming experience. This course is not recommended for developers new to J2EE.

Prerequisites: Students should have basic development skills and have basic J2EE programming experience, or have attended: Java Programming for OO Developers Building J2EE Web Applications.

Topics

DESIGN PATTERNS

- What is Architecture?
- How is an Architecture Represented?
- What is a Design Pattern?
- Why Choose a Design Pattern?
- Gang of Four Patterns
- Base Patterns
- Domain Logic Patterns
- Data Source Architecture Patterns
- Object-Relational Behavioral Patterns
- Distribution Patterns
- Web Presentation Patterns

GANG OF FOUR PATTERNS

- Gang of Four
- Factory Pattern
- Factory Pattern Example
- Singleton Pattern
- Singleton Pattern Example

- Façade Pattern
- Façade Pattern Example
- Iterator Pattern
- Iterator Pattern Example

BASE PATTERNS

- Gateway Pattern
- Gateway Pattern Example
- Separated Interface Pattern
- Separated Interface Example
- Registry Pattern
- Registry Pattern Example
- Special Case Pattern
- Special Case Pattern Example
- Special Case Example
- Special Case Pattern Example

DOMAIN LOGIC PATTERNS

- Transaction Script Pattern
- Transaction Script Pattern Example
- Transaction Script Pattern in J2EE

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- Transaction Script Pattern Example
- Domain Model Pattern
- Domain Model Pattern in J2EE
- Domain Model Pattern Example
- Table Module Pattern
- Which Do We Use?

DATA SOURCE ARCHITECTURE PATTERNS

- Table Data Gateway Pattern
- Table Data Gateway Pattern Example
- Row Data Gateway
- Row Data Gateway Example
- Row Data Gateway in J2EE
- Active Record
- Active Record Example

OBJECT-RELATIONAL BEHAVIORAL PATTERNS

- Identity Map Pattern
- Identity Map Example
- Lazy Load Pattern
- Lazy Load Example

DISTRIBUTION PATTERNS

- Remote Façade Pattern
- Remote Façade Pattern Example
- Data Transfer Object Pattern
- Data Transfer Object Pattern Example

WEB PRESENTATION PATTERNS

- Model View Controller Pattern
- Model View Controller Pattern in J2EE
- Model View Controller Pattern Example
- Front Controller Pattern
- Front Controller Pattern Example
- Template View Pattern
- Template View Pattern in J2EE
- Transform View Pattern
- Transform View Pattern in J2EE
- Combining Patterns

STRUCTURAL PATTERNS

- Overview of Structural Patterns
- Composite Pattern
- Adapter
- Proxy
- Bridge Pattern
- Façade Pattern
- Decorator
- Survey of Structural Patterns

BEHAVIORAL PATTERNS

- Observer
- Strategy
- Iterator
- Visitor
- Interpreter
- Chain of Responsibility
- Command
- Mediator
- State
- Comparison and Summary