4 Days

Java Design Patterns Course

The Java Design Patterns training focuses on the common and evolving patterns that are valuable to Java SDK and EE development platforms. Participants gain core knowledge of the evolution and development of pattern-based techniques in Java, holding major focus on Java EE 6 conventions.

Design patterns are well-proven and testified solutions that provide clarity to your system architecture and provide transparency to the design of an application. The documentations of design patterns facilitates smoother communication between development teams to share programming intentions and provides the right orientation for the entire Java development community.

Completion of this training course will enable candidates in:

- Differentiating between Java EE 5 and Java EE 6 pattern-based features.
- Implementing relevant patterns in each tier of the Java EE environment.
- Refactoring code to improve inter-tier communications.
- Relating pattern-based development to an implementation architecture.
- Applying object-oriented principles and design guidelines.
- Implementing well-known patterns to Java-specific code problems.

Course Details

Course Outline

1. Object-Oriented Principles in Java Review

- Describing how OO concepts apply to Java
- Describing how OO principles apply to Java
- Listing the goals of an OO language
- Interpreting Unified Modeling Language (UML) notation and create UML diagrams
- Identifying selected design patterns

2. Reviewing Gang of Four Patterns

- Listing key behavioral, creational and structural patterns
- Applying the Facade pattern
- Applying the Strategy pattern
- Applying the Observer pattern
- Applying the Composite pattern
- Reviewing the Model-View-Controller (MVC) patterns

3. Implementing Patterns in Java

- Using implementation patterns designed for Java
- Listing forces affecting class, state, and behavioral patterns
- Describing how patterns, idioms, and refactoring differ from each other

4. Exploring Changes in Java EE Technology

- Describing the design goals of the Java EE model
- Describing improvements in the Java EE 6 model

5. Implementing Integration Patterns

- Describing design patterns for the integration tier
- Reviewing Java EE integration changes that apply design patterns
- Identifying use cases for applying integration tier patterns

6. Implementing Patterns in Business Components

- Describing the role of an enterprise bean
- Describing design patterns for the business tier

7. Implementing Infrastructural Patterns in Java EE

- Describing the role of infrastructural Java EE patterns
- Describing the Service Starter pattern
- Describing the Singleton pattern
- Describing the Bean Locator pattern
- Describing the Resource Binder pattern

8. Implementing More Infrastructure Patterns

- Describing how Java EE interceptors work
- Describing the Dependency Injection Extender pattern
- Describing the Payload Extractor pattern
- Describing the Context Holder pattern

- Describing the Thread Tracker pattern

9. Exploring Anti-Patterns

- Describing the Law of Leaky Abstractions
- Defining AntiPatterns
- Describing Integration Tier AntiPatterns
- Describing Business Tier AntiPatterns
- Describing Presentation Tier AntiPatterns

10. Selecting Patterns for Architecture

- Defining the roles of architect, designer, and developer
- Describing the relationship between design patterns and architecture
- Listing guidelines for applying patterns to an architectural solution

Who Should Attend

This course is ideal for those working with the profiles of

- Application Developers
- Architect
- Java Developers
- J2EE Developer
- Java EE Developers

Pre Requisite

- Experience with Java SE and Java EE development
- Developing Applications for the Java EE 6 Platform

Date - Apr 27, 2024