Java Design Patterns

Duración: 3 días (24 hrs)

Descripción general

This Java Patterns course reviews common and emerging patterns specific to Java SDK and EE development. You'll learn the depth and evolution of pattern-based techniques in Java, with particular emphasis on Java EE 6 conventions.

Objetivos

- Identify key design principles of object-oriented development
- Apply Java-specific implementation techniques to well-known patterns
- Use patterns to complete a Java application design
- Use patterns to complete a web-tier application design
- Use patterns to complete a business-tier application design
- Use patterns to improve communication between Java EE tiers
- Identify and refactor anti-patterns in working code
- Using part of a sample architecture scheme, select design patterns for implementing the scheme

Prerrequisitos del curso

- Developing Applications for the Java EE 6 Platform Ed 2
- Experience with Java SE and Java EE development

Esquema del curso

Reviewing Object-Oriented Principles in Java

- Describe how OO concepts apply to Java
- Describe how OO principles apply to Java
- List the goals of an OO language
- Interpret Unified Modeling Language (UML) notation and create UML diagrams
- Identify selected design patterns

Reviewing Gang of Four Patterns

- List key behavioral, creational and structural patterns
- Apply the Facade pattern
- Apply the Strategy pattern
- Apply the Observer pattern
- Apply the Composite pattern
- Review the Model-View-Controller (MVC) patterns

Implementing Patterns in Java

- Use implementation patterns designed for Java
- List forces affecting class, state, and behavioral patterns
- Describe how patterns, idioms and refactoring differ from each other

Exploring Changes in Java EE Technology

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

Implementing Integration Patterns

- Describe design patterns for the integration tier
- Review Java EE integration changes that apply design patterns
- Identify use cases for applying integration tier patterns

Implementing Patterns in Business Components

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

Implementing Infrastructural Patterns in Java EE

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

Implementing More Infrastructure Patterns

- Describe how Java EE interceptors work
- Describe the Dependency Injection Extender pattern
- Describe the Payload Extractor pattern
- Describe the Context Holder pattern
- Describe the Thread Tracker pattern

Exploring Anti-Patterns

- Describe the Law of Leaky Abstractions
- Define AntiPatterns
- Describe Integration Tier AntiPatterns
- Describe Business Tier AntiPatterns
- Describe Presentation Tier AntiPatterns

Selecting Patterns for Architecture

- Define the roles of architect, designer, and developer
- Describe the relationship between design patterns and architecture
- List guidelines for applying patterns to an architectural solution