Java EE 5 Patterns

Duration: 4 Days

What you will learn

The design patterns described in this course help developers design more flexible, maintainable, reliable and efficient enterprise applications. Expert Oracle University instructors will walk you through the process, step-by-step.

Learn To:

Create effective software designs for Java EE technology applications through a series of lectures and exercises.
Describe the fundamental object-oriented design concepts.
Use Gang of Four Behavioral Patterns.
Compare architectural patterns to design patterns.
Describe basic characteristics of the Presentation Tier Java EE patterns.

Learn How to Avoid Costly Road Blocks

This course focuses on Java EE patterns, which were created by the Professional Services organization and the Java EE Blueprints group of Sun Microsystems, Inc. These patterns are based on these groups' many years of experience with a wide range of enterprise applications. Development teams can leverage this industry experience and avoid many costly and time-consuming project roadblocks by understanding and implementing these patterns.

Object-Oriented Design Patterns

This course also describes many of the Gang of Four object-oriented design patterns that provide the basis for the Java EE patterns and also provide the basis for good object-oriented design. Understanding these patterns is critical to the effective use of the Java EE patterns and valuable in the design of any object-oriented system.

Students Who Can Benefit from this Course:

Individuals responsible for the design of distributed software applications.
Java technology programmers
Java EE software developers * Enterprise architects

Live Virtual Class Format

A Live Virtual Class (LVC) is exclusively for registered students; unregistered individuals may not view an LVC at any time. Registered students must view the class from the country listed in the registration form. Unauthorized recording, copying, or transmission of LVC content may not be made.

Related Training

Required Prerequisites

Develop enterprise Java applications

Read and work with Object-Oriented modeling techniques, such as the Unified Markup Language (UML)

Explain the use of technologies within the Java EE platform

Work with the following Java technologies: Enterprise JavaBeans, JavaServer Pages, and servlets

Suggested Prerequisites
Business Component Development with EJB Technology, Java EE 5

Web Component Development with Servlets & JSPs, Java EE 5

Course Objectives

Apply a Gang of Four or Java EE pattern to an architecture and implementation.

Design and implement more effective Java EE applications.

Select an appropriate Gang of Four or Java EE pattern to solve a specific problem.

Course Topics

Exploring Object-Oriented Design Principles and Design Patterns
Describe the fundamental object-oriented design concepts
Describe the fundamental object-oriented design principles
Describe the characteristics of design patterns

Using Gang of Four Behavioral Patterns
Describe the basic characteristics of the Behavioral patterns
Apply the Strategy pattern
Apply the Command pattern
Apply the Iterator pattern
Apply the Observer pattern

Using Gang of Four Creational Patterns
Describe the basic characteristics of the Creational patterns
Apply the Factory Method pattern
Apply the Abstract Factory pattern
Apply the Singleton pattern

Using Gang of Four Structural Patterns
Describe the basic characteristics of the Structural patterns
Apply the Facade pattern
Apply the Proxy pattern
Apply the Adapter pattern

Apply the Composite pattern
Apply the Decorator pattern

Using Architectural Building Blocks
Compare architectural patterns to design patterns
Apply the Model View Controller pattern
Apply the Layers pattern
Explain tiers and layers in Java EE platform applications

Introducing Java EE Patterns
Describe the Java EE pattern philosophy
Describe the Java EE patterns and tiers in the Java EE pattern catalog

Using Integration Tier Patterns
List the features and purpose of the Integration Tier patterns
Apply the Service Activator pattern
Apply the Data Access Object (DAO) pattern
Apply the Domain Store pattern
Apply the Web Service Broker pattern

Using Presentation-to-Business Tier Patterns
Describe basic characteristics of the business tier Java EE patterns that facilitate communication with the presentation tie
Apply the Service Locator pattern
Apply the Session Facade pattern
Apply the Business Delegate pattern
Apply the Transfer Object pattern

Using Intra-Business Tier Patterns
Describe the basic characteristics of the Intra-Business Tier patterns
Apply the Application Service pattern
Apply the Business Object pattern
Apply the Transfer Object Assembler pattern
Apply the Composite Entity pattern
Apply the Value List Handler pattern

Using Presentation Tier Patterns
Describe basic characteristics of the Presentation Tier Java EE patterns
Describe the Model 2 Architecture and the Apache Struts Framework
Apply the Intercepting Filter pattern
Apply the Front Controller pattern
Apply the Application Controller pattern
Apply the Context Object pattern

More Presentation Tier Patterns
Apply the View Helper pattern
Apply the Composite View pattern
Apply the Dispatcher View pattern
Apply the Service to Worker pattern

Exploring AntiPatterns
Define AntiPatterns
Describe Integration Tier AntiPatterns

Describe Business Tier AntiPatterns
Describe Presentation Tier AntiPatterns

Applying Java EE BluePrints Design Guidelines
Describe the Java EE BluePrints design guidelines
Describe the Java Pet Store demo software
Describe the Java EE patterns used in the Java Pet Store demo software