

DEVELOPING ENTERPRISE JAVA APPLICATIONS WITH SPRING & HIBERNATE

Course number : 102

Overview

Increase productivity, accelerate development, and quickly build enterprise Java applications with the Spring and Hibernate frameworks. In this training course, you learn how to simplify development and reduce code complexity with Spring, and use Hibernate — a framework for persisting Java objects in a relational database — to minimize time spent on the low-level implementation of database storage.

What you'll learn

- Build scalable, high-performance applications while reducing development time
- Leverage Spring IOC to implement transaction-aware, flexible business objects
- Store and retrieve data objects with Hibernate
- Integrate Spring and Hibernate

Who should attend

Pre-requis

- Knowledge at the level of:
 - Course 103, Java Programming Introduction
- Three to six months of Java programming experience
- You should be able to:
 - Understand Java classes, the inheritance model, polymorphism, and encapsulation
 - Use fundamental standard edition Java APIs
 - Apply object-oriented analysis and design, including defining classes and creating objects

Outline

[Introducing the Spring Framework](#)

Spring architecture fundamentals

- Identifying Spring application components
- Defining the n-tier application architecture

Applying Inversion of Control (IoC) and Dependency Injection (DI)

- Delegating object creation to the Spring bean factory
- Controlling bean creation with scopes and methods

Constructing an Effective Data Access Tier with Spring

Simplifying data access with JDBC templates

- Streamlining runaway code with JDBC templates
- Structuring queries and callbacks for maintainability

Abstracting the Data Access Layer

- Supporting the Data Access Object (DAO) pattern
- Achieving implementation independence with platform agnostic exceptions

Managing transactions

- Analyzing Java EE transaction support
- Controlling transactions with Spring transaction manager
- Declaring transaction policies with XML and annotations

Building a Web Tier with Spring MVC

Processing web requests

- Analyzing Spring MVC architecture
- Mapping requests to controllers with annotations
- Processing commands, form submissions and wizards

Rendering the response

- Spring JSP support
- View technology alternatives with Velocity

Building Ajax controllers

- Establishing the requirements for Ajax controllers
- Implementing REST-style URLs

Persisting Objects with Hibernate

Integrating Hibernate

- Simplifying data access with O/R mapping
- Unraveling the Hibernate architecture
- Deploying and configuring Hibernate

Generating Hibernate applications

- Developing the persistent class
- Storing and retrieving Java objects

Handling Complex Object Relationships

The role of the Hibernate Session

- Establishing a thread-safe session object
- Defining object states: transient, persistent, detached

Mapping collections

- Persisting and retrieving collections
- Preserving collection order for data integrity

Strategies for building object associations

- Specifying one-to-many and many-to-many relationships
- Controlling the association life cycle

Effectively mapping inheritance relationships

- Applying class rules for inheritance
- Techniques for class-database mapping

Optimizing Data Access

Applying Hibernate Query Language (HQL)

- Improving structure with named queries
- Augmenting HQL with native SQL
- Maximizing Hibernate performance

Schedule

Location	Dates	Status
Cotonou	Jan 16, 2018 - Jan 21, 2018 08:00 AM - 05:00 PM	Available Register Now >>
Cotonou	Nov 10, 2017 - Nov 17, 2017 08:00 AM - 05:00 PM	Available Register Now >>

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