Developing Enterprise Java Applications With Spring & Hibernate

Course: **00003**
Filter: **Beginner**
Duration: **3 days**
Category:: **Java**
Price: **2800,00 €**

About Course

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

Pre-requisites

- Knowledge at the level of Java Programming Introduction
- Three to six months of Java programming experience
- 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

Curriculum

Module 1: Introducing the Spring Framework

- Identifying Spring application components
- Defining the n-tier application architecture
- Delegating object creation to the Spring bean factory
- Controlling bean creation with scopes and methods

Module 2: Constructing an Effective DataAccess Tier with Spring

- Streamlining runaway code with JDBC templates
- Structuring queries and callbacks for maintainability
- Supporting the Data Access Object (DAO) pattern
- Achieving implementation independence with platform agnostic exceptions
- Analyzing Java EE transaction support
- Controlling transactions with Spring transaction manager
- Declaring transaction policies with XML and annotations

Module 3: Building a Web Tier with Spring MVC

- Analyzing Spring MVC architecture
- Mapping requests to controllers with annotations
- Processing commands, form submissions and wizards
- Spring JSP support
- View technology alternatives with Velocity
- Establishing the requirements for Ajax controllers
- Implementing REST-style URLs

Module 4: Persisting Objects with Hibernate

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

- Storing and retrieving Java objects

Module 5: Handling Complex Object Relationships

- Establishing a thread-safe session object
- Defining object states: transient, persistent, detached
- Persisting and retrieving collections
- Preserving collection order for data integrity
- Specifying one-to-many and many-to-many relationships
- Controlling the association life cycle
- Applying class rules for inheritance
- Techniques for class-database mapping

Module 6: Optimizing Data Access

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