

JPA and Hibernate

Duration: 3 Days Course Code: HIBI

Overview:

English - Please note this course is only available in English.

Nederlands - Let op: deze training is alleen in het Engels beschikbaar.

Français - Veuillez noter que ce cours est uniquement disponible en anglais. JPA and Hibernate Course Overview

Hibernate is the primary JPA implementation and the most popular Java ORM framework. It dramatically reduces boilerplate code, eliminates vendor spe

Target Audience:

Who will the Course Benefit?

Objectives:

■ Course Objectives

■ This course aims to provide the delegate with the knowledge to be able to develop (or contribute to the development of) enterprise-level Java applications that use JPA and Hibernate to read from and write to relational databases.

Prerequisites:

■ Delegates attending this course should be competent Java developers who have a good understanding of OO principles and are able to build simple applications that exploit APIs including Collections, IO, and JDBC in particular. This knowledge can be obtained by attendance on the pre-requisite Java Programming 1 / Java Developer course.

Follow-on-Courses:

Further Learning

- Developing Applications with Java EE
 - Core Spring
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Content:

JPA and Hibernate Training Course Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: INTRODUCTION TO HIBERNATE

- The problems with JDBC
- About ORM
- The relationship between JPA and Hibernate
- Hibernate architecture
- Installing Hibernate
- Configuring the SessionFactory (XML and Java)
- Obtaining and using a Session (basic)

Session 2: BASIC ENTITY MAPPING

- About entity mapping
- XML mapping
- Annotation mapping
- Entity types
- Value types
- Embeddable types
- Collections
- Key generation

Session 3: THE HIBERNATE SESSION

- About the Hibernate Session
- Transient,persistent,and detached entity states
- Hibernate transactions
- Using the Session to perform basic CRUD operations JPA and Hibernate Training Course Course Contents - DAY 2

Session 4: COMPOSITE MAPPING

- About composite mapping
- One-to-one
- One-to-many
- Many-to-many
- Uni vs bi-directional associations
- Cascading
- Eager vs lazy fetching
- The n+1 problem

Session 5: INHERITANCE MAPPING

- About inheritance mapping
- Mapped superclass
- Single table
- Joined table
- Table per class
- Polymorphic queries JPA and Hibernate Training Course Course Contents - DAY 3

Session 6: HIBERNATE QUERY LANGUAGE (HQL)

- About Hibernate Query Language (HQL)
- Basic queries
- Querying for a subset of the class's fields
- Literal,ordinal,and named parameters
- Single result queries
- Functions
- Queries with joins
- Eager fetching
- Ordering
- Grouping
- Native queries
- Named queries
- An introduction to criteria queries

Session 7: THE JPA ENTITYMANAGER

- About the JPA EntityManager
- Configuring the EntityManagerFactory (XML and Java)
- Obtaining and using an EntityManager (basic)
- About the Persistence Context
- About the JPA Query Language (JPQL)
- JPA EntityManager vs Hibernate Session

Session 8: PERFORMANCE TUNING

- Discovering performance issues
- Choosing the right fetch type
- Query-specific fetching
- Using Sets,not Lists,for many-to-many associations
- Having the database do the heavy lifting
- First and second-level cache
- Performing bulk updates

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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www.globalknowledge.com/en-be/