



HIB3 - Version: 1

15 September 2021

JPA using hibernate



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 **2 days Course**

Description:

Hibernate is an open source tool that implement the JPA standard. This tool enables you to persist your application objects automatically. The hibernate course will teach you step by step to how to map your objects to relational databases, how to master the HQL language and many other advance issues.

Intended audience:

Software professionals in java - one year experience

Prerequisites:

Applicants should have knowledge of Java & JDBC

Objectives:

Graduates will be familiar with advanced Hibernate object-relational mapping technology and
Skilled with design & implementation of Hibernate-based complex solutions.

Topics:

Introduction to Hibernate

- Technology Overview & Benefits
- Architectural Overview
- JDBC
 - Introduction to JDBC 3.0
 - Types of JDBC drivers
 - Executing statements, prepared statements and callable statements

- Row sets
- JDBC Transactions
- Save points
- Isolation Levels
- The javax.sql package - Appendix

Mapping Techniques

- Understanding the Hibernate type system
- Understanding object identity
- Fine-grained object models
- Mapping class inheritance
- Working with compound keys
- Mapping collections of value types
- Mapping entity associations
- Mapping polymorphic associations

Retrieving Objects Efficiently

- Query features
- HQL, criteria, and native SQL queries
- Advanced, reporting, and dynamic queries
- Runtime fetching and query optimization
- Data filters

Transactions and Concurrency

- Transaction API Overview
- Understanding isolation levels
- Using optimistic and pessimistic locking
- Working with application transactions

Designing Hibernate Applications

- Designing layered applications

- Design Model layer
- Design DAO Layer
- Design Service Layer
- Events and Interceptors
- Logging and Monitoring