

Hibernate Development

(3 days hands-on)

Hibernate is a popular object-relational mapping framework for Java applications. Using Hibernate, you can implement enterprise applications based on objects, relying on Hibernate to map the objects to persistent storage in the database.

This course describes Hibernate ORM techniques, showing how to map complex data relations to object hierarchies and how to manage the lifetime and persistence of these objects. The course covers important issues such as transaction management and performance, and also describes how to integrate Hibernate into Spring Framework-based solutions.

Contents

- **Overview of Object Persistence:** O/R mismatch; Object Relational Mapping; Java ORM/Persistent Frameworks; A simple Hibernate application
- **A Closer Look at Hibernate Queries:** Overview of Hibernate Query Language (HQL); Fetching options; Hibernate queries; HQL parameters; Externalizing queries; Using the Criteria API
- **Working with Persistent Objects:** Using Hibernate with Spring; Entity lifecycle; Transient, persistent, and detached states; Persistent object updates
- **Mapping using Annotations:** Overview of Hibernate and JPA annotations; Class-to-table mappings; Property mapping; Identifiers, generators, and keys; Mapping an entity to multiple tables
- **Mapping Associations:** Fetching strategies; Many-to-one; Bidirectional many-to-one; One-to-one; Bidirectional one-to-one; Many-to-many; Bidirectional many-to-many; Components; Cascading
- **Mapping Inheritance:** Overview; Inheritance mapping strategies; Table per concrete class; Table per subclass; Table per hierarchy; Unions; Polymorphism
- **Spring and Hibernate Transaction Management:** Hibernate transaction configuration; Hibernate Transaction API; Transaction Propagation
- **Performance Optimization:** Using the 2nd level cache effectively; Batching; DML-style operations
- **Industrial Strength Hibernate:** Optimistic locking and versioning; Pessimistic locking; Mixing Hibernate and JDBC
- **Interceptors and Events:** Overview; Defining interceptors; Defining events; Recommendations

Who Should Attend:

Developers creating enterprise Java data-access applications using Hibernate.

Prerequisites:

Java programming experience, and an awareness of enterprise development.