
Hibernate

This program will provide you with training on Hibernate topics.

Mode: Classroom

Duration: 30 hours

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Course Outline:

UNIT 1: Introduction

- What is persistence?
- Understanding ORM
- Hibernate - Introduction & Alternatives
- Hibernate Architecture and API
- Installing and Configuring Hibernate
- First Hibernate Application
- Why is Hibernate better than JDBC?

UNIT 2: Working with Hibernate

- Working with Session interface
- Select, Update, Delete program
- Transaction program

UNIT 3: Fundamentals of Object Relational Mapping

- Basic O/R Mapping
- Associations
- One-to-one, Many-to-one
- Many-to-many Relationships
- Applying Mappings to Associations
- Types of Mapping
- Association Mappings
- Associations in the Real World
- Implementing inheritance
- Implementing Inheritance With Table Per Class Strategy
- Implementing Inheritance With Joined Strategy
- CRUD Operations
- Transient, Persistent and Detached Objects
- Understanding State Changes
- Persisting Detached Objects

UNIT 4: Hibernate annotations

- Introduction of Annotations
- Creating Hibernate Mappings with Annotations

- Cons and pros of annotations
- Configuring the Annotated Classes
- Configure Annotations in Your Application
- Persistence Annotations
- Modeling Entity Relationships

UNIT 5: Java EE Hibernate Query Language (HQL)

- Why to use HQL?
- Building HQL Queries
- The From, Select, Where, Order by, Group by and Having Clause
- The Group by and having Clause
- Associations and joins
- Aggregate functions and Expressions
- Bulk Updates and Deletes

UNIT 6: The Criteria Query API

- Introduction to Criteria API
- Multi-criteria search functionalities
- When are multi-criteria search screens appropriate?
- Using the Hibernate Criteria API
- Using Restrictions with Criteria
- Paging Through the Result Set
- Obtaining a Unique Result
- Sorting the Query's Results
- Projections and Aggregates
- Query by Example (QBE)

UNIT 7: Hibernate Caching

- Need of Caching in Hibernate
- How Caching works
- Configuring Second Level Cache
- Different Caching Strategies

