

# Persistence with Hibernate Certification Training

Course Curriculum: Your 8 module Learning Plan

https://www.edureka.co/persistence-with-hibernate-self-paced

#### About Edureka

Edureka is a leading e-learning platform providing live instructor-led interactive online training. We cater to professionals and students across the globe in categories like Big Data & Hadoop, Business Analytics, NoSQL Databases, Java & Mobile Technologies, System Engineering, Project Management and Programming. We have an easy and affordable learning solution that is accessible to millions of learners. With our students spread across countries like the US, India, UK, Canada, Singapore, Australia, Middle East, Brazil and many others, we have built a community of over 1 million learners across the globe.

#### **About Course**

A self-paced course designed to give you an understanding about the fundamental concepts of Hibernate, solve complex RDBMS problems and to enhance your skills to become a Hibernate expert.

#### Curriculum

#### Introduction to ORM and Hibernate

**Learning Objectives** - In this module, you will understand Java Persistence and basic concepts of ORM and its necessities, introduction to Hibernate and building ORM with Hibernate.

**Topics** - Introduction to Java Persistence, SQL in Persistence, About Object Relational Mapping, Purpose of ORM, Entity Beans, About Hibernate, ORM with Hibernate.

## Persistence and Session Factory

**Learning Objectives** - In this module, you will learn about the Hibernate Tools and installing the execution environment of Hibernate. Explore all the configuration options and understand the life cycle of the entities. Also, understanding and building the session factory.

**Topics** - Hibernate Tools, Hibernate Environment, Persistence Lifecycle, Hibernate Configurations, JPA, Annotations and XML Configurations, Creating and Configuring Hibernate Session Factory, Advance Configurations.

### Association, Mapping & Inheritance

**Learning Objectives** - In this module, you will understand different associations of Hibernate, Hibernate inheritance strategies and data types of Hibernate including the custom types.

**Topics** - Associations, Unidirectional Associations, Bidirectional Associations, Inheritance Strategies, Polymorphism, Entities and Types, Basic Types, Custom Types.

# Criteria and Query Language

**Learning Objectives** - In this module, you will understand the Hibernate Query Language and achieving all the SQL operations by using HQL. Exploring the Criteria Query and use of Native SQL in Hibernate.

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**Topics** - Hibernate Query Language - HQL, Polymorphic and Sub-queries, HQL functions and Aggregations, Criteria with Hibernate, Fetching Strategies of Criteria, Detached Criteria, Executing Native SQL, SQL Named Queries.

#### Transactions, Filter and Performance

**Learning Objectives** - In this module, you will understand Transactions, Concurrency, Isolation and Locking. You will also understand the Acid principles and filtering data using Hibernate. You will learn to improve the performance using different Caching strategies.

**Topics** - Session Scopes, Transaction Scopes, JTA, Locking, Filtering with Hibernate, Filter Annotations, Fetching Strategies, Cache.

#### Search & Validation Framework

**Learning Objectives** - In this module, you will understand about the search that uses the Lucence API and you will also explore different types of validations of fields using Hibernate Validation Framework.

**Topics** - Hibernate Search, Lucence, Indexing fields, Search and Lucence API, Validation of Beans, Configuration, Metadata API, Validating Constraints and Groups.

### OGM, NoSQL and Spring

**Learning Objectives** - In this module, you will understand the most advanced features of Hibernate NoSQL and persistence of NoSql and OGM. You will also understand Spring and uses of Spring Modules with Hibernate.

**Topics** - Understanding NoSQL, Hibernate OGM, NoSQL Data Persistence, Spring with Hibernate, Hibernate Template, Transaction Management with Spring, Transaction Advice, Exception Handling.

## Project

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**Learning Objectives** - In this module, you will learn to develop a CRUD Web Application using Hibernate.

**Topics** - Problem statement, Build JPA entities, Define DAO layers, Interaction with Web Layer, Executing CRUD in application.

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# **Projects**

How will I execute the Practicals?

For your practical work, we will help you setup Edureka's Virtual Machine in your System. This will be a local access for you. The required installation guide is present in LMS.