Hibernate Course contents
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Advantages of Hibernate compared to JDBC
Introduction
ORM (Object Relational Mapping)
Hibernate Resources
- Configuration file
- Mapping file
- Persistent class or POJO
- Client application.

Hibernate Architecture

Installation and Directory Structure

Hibernate Data Types

First Application using Hibernate

Hibernate API
- Configuration
- SessionFactory
- Session
- Transaction

Object Life cycle in Hibernate
- Transient object
- Persistent object
- Detached object

CRUD operations using Session methods.
- save, persist, SaveOrUpdate
- update, merge, delete
- load, get
- flush, evict, clear etc

Versioning

Primary key Generators

- Assigned
- Increment
- Sequence
- Hilo
- Seqhilo
- Identity
- Foreign
- Native
- UUID
- Custom generator

Hibernate Query Language (HQL)

Joins in Hibernate

Batch processing and Native SQL

Criteria API

Criteria with projections

Inheritance Mapping
- Table per class
- Table per sub class
- Table per concrete class

Component Mapping

Custom Mapping

Collection Mapping
- <list>
- <set>
- <map>
- <bag>
- Mapping array
- Sorting collections

Association Mapping
- one to one
- one to many
- many to one
- many to many
- Uni directional

- Bi directional
- Explanation on inverse and cascade attributes

Caching

- First level Cache(Session cache)
- Second level Cache(SessionFactory cache)
- Query level cache

Connection Pool

- Default connection pool
- Server supplied pool
- Third party vendor connection pool

Transactions and Concurrency

- Programmatic transactions with JTA
- Optimistic Concurrency control
- Pessimistic Concurrency control

Hibernate Pagination

Hibernate Filter

Hibernate Interceptor

Connecting with Multiple Databases(Oracle, HypersonicSQL)

Integrating Hibernate with Servlet

Integrating Hibernate with Struts

Working with Hibernate Annotations