LAKSHMAN_JAVA_IT_SCHOOL

Hibernate 5.X

Introduction:

1. Persistence
2. Object Persistence
3. Object/Relational Paradigms
4. Impedance Mismatch
5. Object Relational Mapping ()ORM)
6. Persistent Framework
7. Hibernate
8. Java ORM/Persistent Frameworks

Hibernate Architecture

1. Hibernate Architecture
2. Hibernate Installation/Setup
3. Configuration
4. Configuration Properties
5. Mapping Files
6. Persistent Classes
7. Persistent Classes
8. POJOs
9. JavaBeans
10. Basic Mapping
11. Class to Table Mappings
12. Property Mapping
13. Identifiers
14. Generators
15. Natural Keys
16. Identifier Exposure
17. Quoting SQL Tables and Columns
18. Working with Persistent Objects

Entity Life Cycle

1. Transient State
2. Persistent State
3. Persistent Object Updates and Automatic Dirty Checking
4. Detached State
5. Deleted
6. Object Identifiers Revisited
7. Merge

Components

1. Domain Model
2. Entities and Values
3. Components

Associations

1. Many-to-one
2. Bidirectional Many-to-one
3. Other Collections
4. Many-to-one List
5. Many-to-one Map
6. Many-to-one Bag
7. Many-to-one Array

LAKSHMAN_JAVA_IT_SCHOOL

More Associations

1. One-to-one
2. Bidirectional One-to-one
3. Many-to-many
4. Bidirectional Many-to-many
5. Many-to-many Identifier Bag
6. Value Type Collections

Collections of Value Types

1. Collections of Components
2. Sorting Collections
3. Inheritance
4. Inheritance Mapping Strategies
5. Table per concrete class
6. Table per subclass
7. Table per hierarchy
8. Inheritance Mapping Pros/Cons
9. Polymorphism
10. Table per concrete class with unions
11. Choosing an Inheritance Strategy

Transitive Persistence

1. Lazy Loading
2. Proxies
3. Eager Loading
4. What's a Proxy?
5. Detached Objects and Proxies
6. Polymorphic Associations Revisited

Custom Mapping

1. Custom Mapping Types
2. User Type
3. Enumerations

HQL

1. Hibernate Object Fetching Options
2. Hibernate Query
3. HQL
4. HQL Parameters
5. Named Queries
6. Native SQL

Criteria

1. Hibernate Criteria
2. Restrictions
3. Query By Example
4. Scrolling
5. Pagination
6. Query Hints
7. Query Option Pros/Cons

LAKSHMAN_JAVA_IT_SCHOOL

Transactions and Concurrency

1. The Java Transaction
2. Hibernate Transaction Configuration
3. Hibernate Transaction API
4. Concurrency
5. Isolation Levels
6. Optimistic Locking
7. Versioning
8. Optimistic Locking without Versioning
9. Pessimistic Locking

Appendix A: Fetching Strategies

1. N + 1 Selects
2. Fetching Strategies
3. Join Fetching
4. Subs select Fetching
5. Batch Fetching
6. Queries and Fetching Strategies
7. Cartesian Product Problem

Appendix B: Cache

1. The Promise of Cache
2. Hibernate Caching Architecture
3. First Level Cache
4. Second Level Cache
5. Cache Concurrency
6. Configuring Second Level Cache
7. Cache Regions
8. Eviction

Appendix C: Annotations

1. Metadata
2. Annotations Pros/Cons
3. Configuring Hibernate Annotations
4. EJB3/JPA Annotations
5. Entity Annotations
6. Embedded Object (Component) Annotations
7. Inheritance Annotations