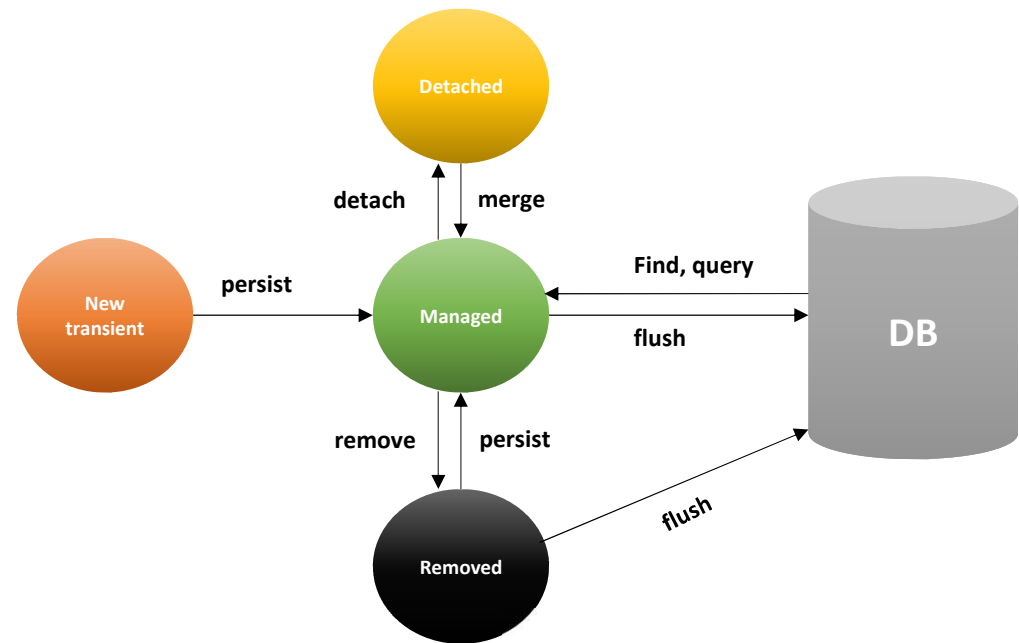
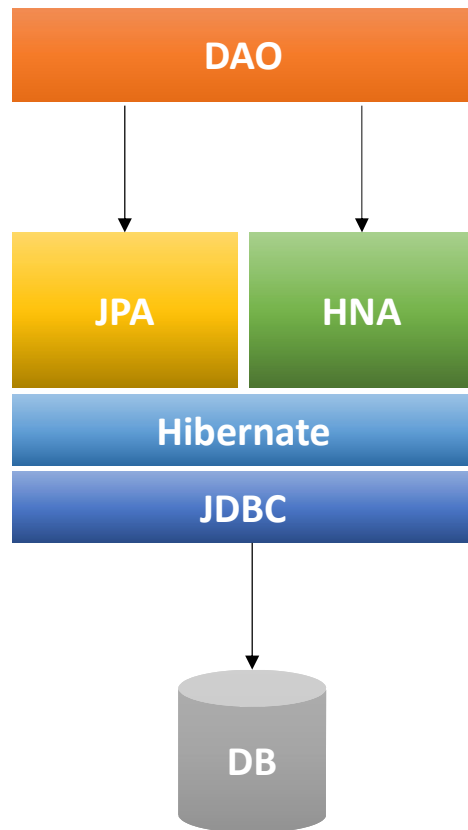


The Basics of Hibernate



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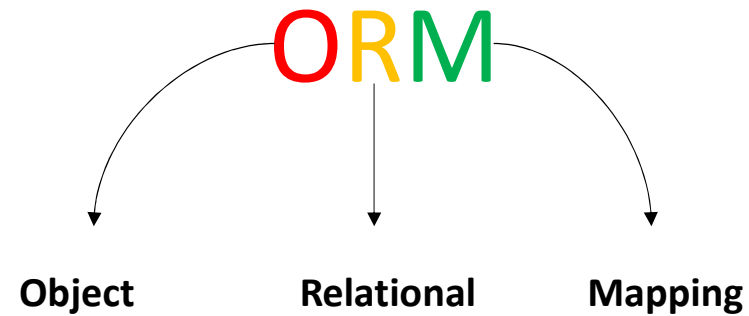


HIBERNATE

The Basics of Hibernate



Hibernate is a Open Source Java [framework](#) that maps Java classes and types into the relational databases.



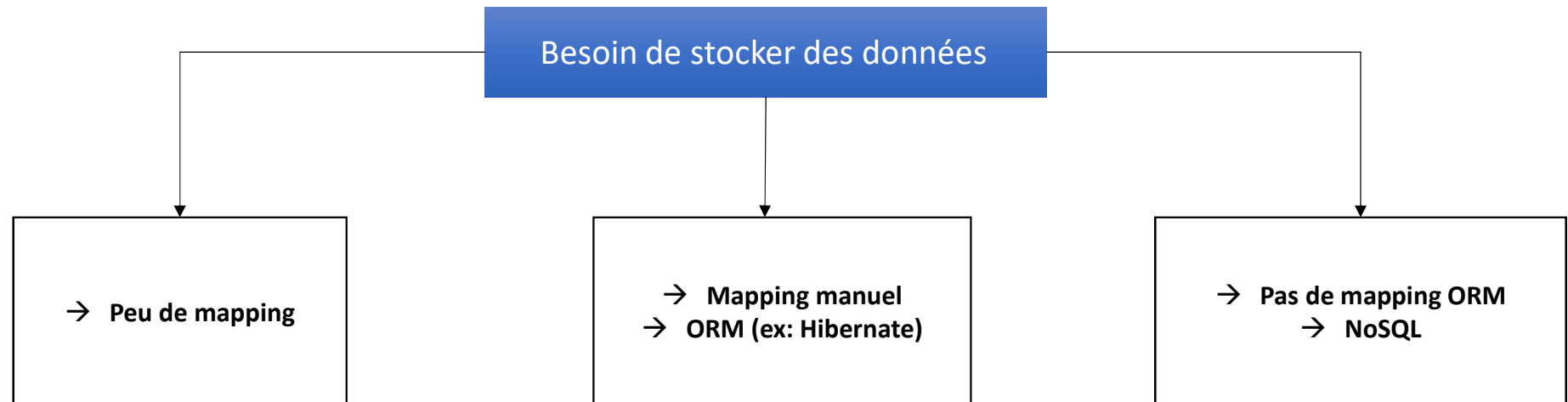
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The Basics of Hibernate



Why Hibernate?



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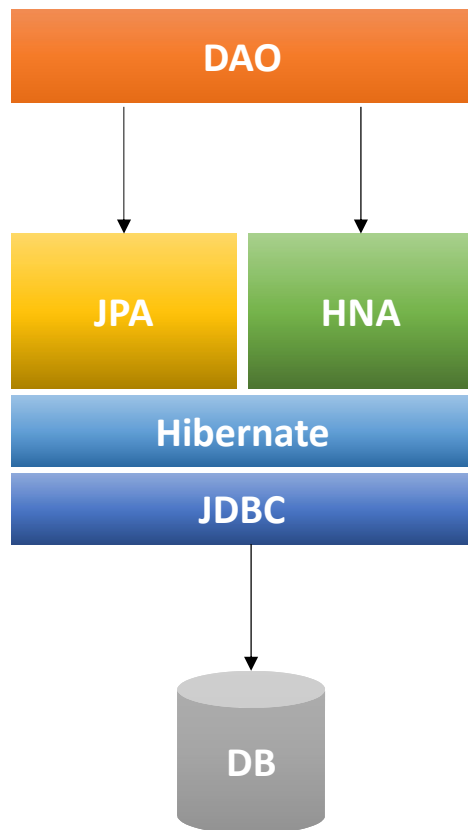


The Basics of Hibernate



Architecture of Hibernate

Hibernate works as an additional layer between Java application and database, above the Java Database Connectivity (JDBC) API:



To isolate dependencies, Hibernate's functionality is split into a number of modules. Some of the important modules include:

hibernate-core - ORM features and APIs

hibernate-encache - integrates Encache as a second-level cache provider

hibernate-spatial - integrates GIS data type support

hibernate-osgi - support for running in OSGi containers

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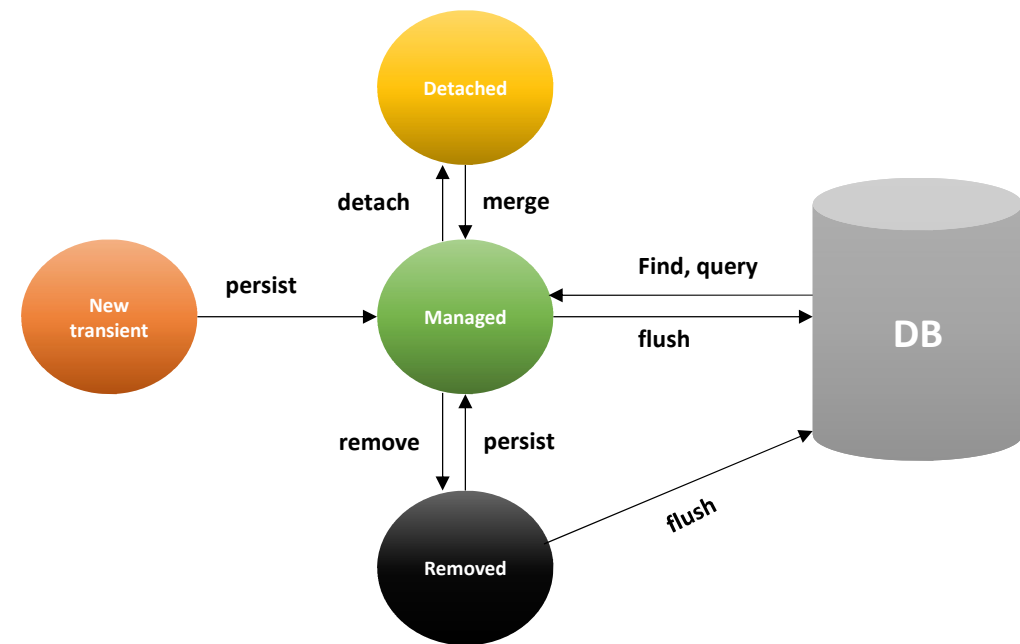


The Basics of Hibernate



As Hibernate implements Java Persistence API (JPA), it is important to understand the lifecycle of a JPA persistence object.

A newly created object is not associated with the Hibernate Session (not Persistent context) and is not mapped to the database yet. To make the object Manageable - include it into the mapping with the `persist()` method. The changes in the manageable object are seen by the Hibernate layer but not by the database, the `flush()` method writes changes to the database.



The Basics of Hibernate



Mapping datatypes

Hibernate introduces `org.hibernate.type.Type` datatypes as an intermediary between application and database data types that has additional functionality to do equality checks, clone values, etc.

Basic data types are denoted with `@Basic` (default) annotation and include the following Java data types:

- Java primitives
- Primitive wrappers
- Strings
- BigInteger, BigDecimal
- Date/time types
- Byte and character arrays
- Enums
- Serializable types.

Embeddable `@Embeddable` data types are a composition of values that is not an entity (is a part of a table in a database).

Collections `@ElementCollection` is a way of mapping Java's collections - `java.util.Collection` and `java.util.Map` subclasses.

Entity type `@Entity` describes the mapping between the actual persistable domain model object and a database table row



The Basics of Hibernate

