

HOMework #4

1 – What is JPA ?

The Java Persistence API (JPA) is a specification of Java. It is used to persist data between Java object and relational database. JPA acts as a bridge between object-oriented domain models and relational database systems.

2 - What is the naming convention for finder methods in the Spring data repository interface ?

To be able to create a native query, complying with the format, such as get, read, stream, count.

3 - What is PagingAndSortingRepository ?

When there is a large number of data, when we get all of them, a certain interval is used for the return. Paging and sorting is mostly required when we are displaying domain data in tabular format in UI.

4 - Differentiate between findById() and findOne() ?

Both findById() and findOne() methods are used to retrieve an object from underlying datastore. findOne() returns a reference to the entity with the given identifier. findById() hits the database and return the real object mapping to a row in the database.

5 - What is @Query used for ?

Query can be made with this annotation using Jpql. We can use also native SQL to define our query. All we have to do is set the value of the nativeQuery attribute to true.

6 - What is lazy loading in hibernate ?

It's in the default. Eager has it, it prevents unnecessary load by loading only the necessary ones, not all of them. It can be controlled with annotations. It shortens the stand-up time of the application. It also prevents the ram from taking up unnecessary space.

7 – What is SQL injection attack ? Is Hibernate open to SQL injection attack ?

It happens because of using native sql. Database can be attacked, even if precautions are taken with jpql, it cannot be enough. It's safer to do it in a way that takes parameters into the Query. Hibernate does not grant immunity to SQL Injection.

8 - What is criteria API in hibernate ?

Criteria API allows you to build up a criteria query object programmatically where you can apply filtration rules and logical conditions. The Hibernate **Session** interface provides **createCriteria()** method, which can be used to create a **Criteria** object that returns instances of the persistence object's class when your application executes a criteria query.

9 - What Is Erlang? Why Is It Required For Rabbitmq ?

Erlang is a programming language used to build massively scalable soft real-time systems with requirements on high availability. The **RabbitMQ** server program is written in the **Erlang** programming language and is built on the Open Telecom Platform framework for clustering and failover.

10 – What is the JPQL ?

The Java Persistence query language (JPQL) is used to define searches against persistent entities independent of the mechanism used to store those entities. As such, JPQL is "portable", and not constrained to any particular data store.

11 – What are the steps to persist an entity object ?

1. Creating an entity manager factory object
2. Obtaining an entity manager from factory.
3. Intializing an entity manager.
4. Persisting a data into relational database.
5. Closing the transaction
6. Releasing the factory resources.

12 – What are the different types of entity mapping ?

- one-to-one
- one-to-many or many-to-one (dependent on the direction)
- many-to-many

13 - What are the properties of an entity ?

An entity can be place, person, object, event or a concept, which stores data in the database. The characteristics of entities are **must have an attribute, and a unique key**. Every entity is made up of some 'attributes' which represent that entity.

14 - Difference between CrudRepository and JpaRepository in Spring Data JPA?

CrudRepository and JPA repository both are the interface of the spring data repository library. JPA repository extends CrudRepository and PagingAndSorting repository. It inherits some finders from crud repository such as findOne, gets and removes an entity.