

1) What is JPA ?

JPA(Java Persistence API) is a standard which associated between Java class and relational database. It provide to match with class variables and table and make database process wiithout writing SQL. JPA don't process any operation on data. There are some implemantion tools such as Hibernate, EclipseLink, OpenJPA to process data.

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

We can create finder methods on the entity fields names. To create finder methods we need to follow certain naming convention. All JPA finder methods starts with find by. Then field name comes. For example: findByName().

3) What is PagingAndSortingRepository?

It is extension of CRUD repository to provide additional methods to retrieve entities using the pagination and sorting abstraction. It has two method: Page findAll(Pageable pageable), Iterable findAll(Sort sort).

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

Both findById() and findOne() methods can use to bring a object. But they do this with different ways.

GetOne() method return referance of object with given id. This method calls EntityManager.getReference() on backgroud. A proxy returns, before this method don't go database. If requested entity is not in database, EntityNotFoundException throws.

FindById() method goes to database when it calls and it brings the object. If requested entity is not in database, null returns.

5) What is @Query used for?

The @Query annotation can only be used to annotate repository interface methods. It provide to use JQPL and Native SQL.

6) What is lazy loading in hibernate?

Lazy loading is a one of entity loading strategies. We assume that we have customer entity and customer adress entity. We want to call information about customer table. Also we want that when we call these information, adress information don't come. This is called lazy loading.

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

SQL Injection attack can be defined as injecting SQL commands into SQL queries of web applications. SQL injection attack cause that a hacker can arrive web application database and manage it. We can prevent Sql injection with HQL(Hibernate Query Language.).

8) What is criteria API in hibernate?

Criteria is a simplified API for retrieving entities by creating Criterion objects. This is a very convenient approach for functionality like "search" screens where there is a variable number of conditions to be placed upon the result set.

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

Erlang is a programming language which is functional and modular. Erlang provides to programme real time systems and is concurrent. It has garbage collector property. Erlang provides many ready components. Rabbitmq runs in Erlang runtime and Rabbitmq server has been written in Erlang.

10) What is the JPQL?

JPQL (Java Persistence Query Language) is a language defined by JPA and it queries entities. It is similar to SQL. Difference between SQL and JPQL is that while SQL uses database tables, JPQL uses entities.

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

Firstly, an entity manager factory object is created. Then the entity manager is obtained from the factory. Then the entity manager is initialized. The data is persisted into the relational database. The transaction is closed and the factory resources are released.

12) What are the different types of entity mapping?

Many to many mapping: If a record in one table communicates with an extra record in another table, this is many to many mapping.

Many to one mapping: It is considered like while an employee can work in one department but a department has a lot of employees.

One to many mapping: An article has one writer. But a reader can read many articles.

One to one mapping: If a record in one table communicates with only one record in another table.

13) What are the properties of an entity?

Persistability: An object is called persistent if it is stored in the database and can be accessed anytime.

Persistent Identity: In Java, each entity is unique and represents as an object identity. Similarly, when the object identity is stored in a database then it is represented as persistence identity. This object identity is equivalent to primary key in database.

Transactionality: Entity can perform various operations such as create, delete, update. Each operation makes some changes in the database. It ensures that whatever changes made in the database either succeed or fail atomically.

Granularity: Entities should not be primitives, primitive wrappers or built-in objects with single dimensional state.

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

JPA repository is the most used implementation. CRUD repository provide only CRUD functions but JPA provide some extra methods. JPA repository extends PagingAndSorting repository but crud repository not. JPA extends crud and pagingand sorting repository but crud not, it behave as marker interface. We can say: JpaRepository > PagingAndSortingRepository > CrudRepository