REPOSITORY PATTERN AND QUERY METHODS IN SPRING DATA JPA

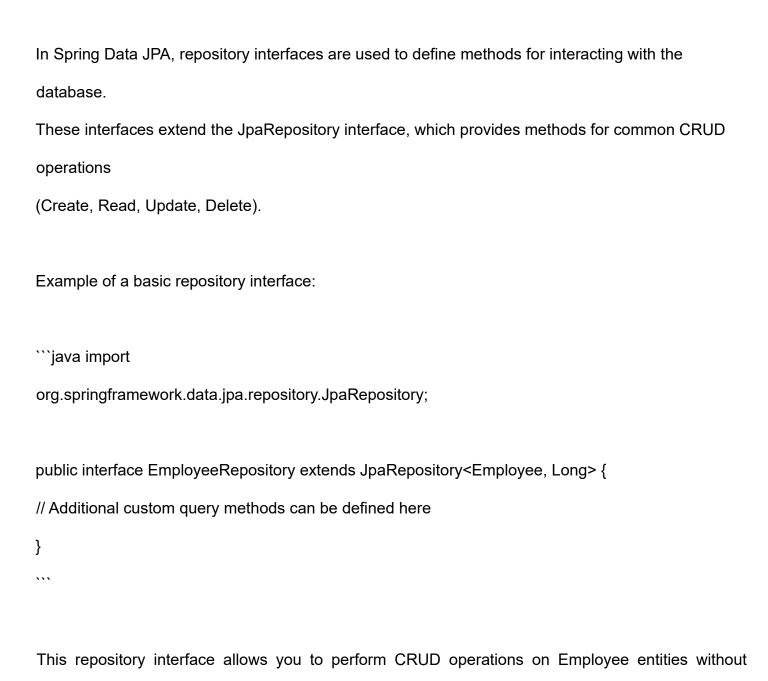
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Introduction to Repository Pattern

The Repository Pattern is a design pattern used to abstract the data access logic in an application. It provides a collection-like interface for accessing domain objects and managing their persistence. In Spring Data JPA, the repository pattern is implemented using repository interfaces that extend the

JpaRepository interface, providing CRUD operations and query methods.

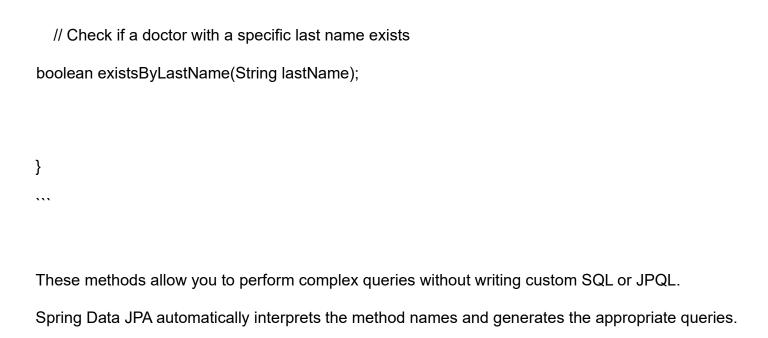
Implementing Repository Interfaces



needing to write any SQL queries or implement any methods manually.

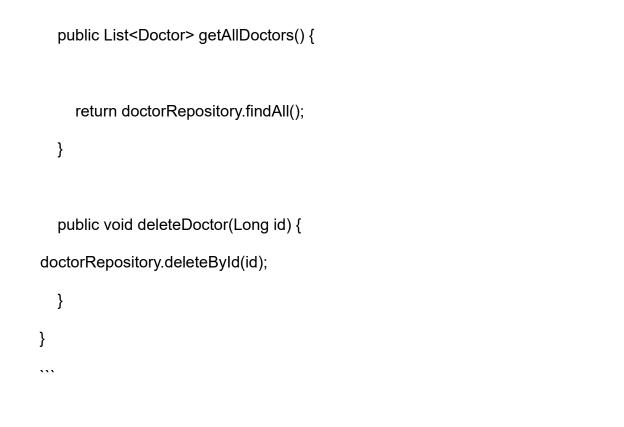
Custom Query Methods Using Method Naming Conventions

Spring Data JPA provides the ability to define custom query methods using method naming
conventions.
These methods are automatically implemented by Spring Data JPA based on the method names.
Examples of custom query methods:
```java import
org.springframework.data.jpa.repository.JpaRepository; import
java.util.List;
public interface DoctorRepository extends JpaRepository <doctor, long=""> {</doctor,>
// Find doctors by specialty
List <doctor> findBySpeciality(String speciality);</doctor>
// Find doctors by last name
List <doctor> findByLastName(String lastName);</doctor>
// Count doctors by specialty long
countBySpeciality(String speciality);



# **Using Repositories in Services and Controllers**

Repositories are typically used in service classes and controllers to interact with the database
Service classes encapsulate business logic and use repositories to manage data persistence.
Example of a service class using a repository:
```java import
org.springframework.beans.factory.annotation.Autowired; import
org.springframework.stereotype.Service;
import java.util.List;
@Service
public class DoctorService {
@Autowired private DoctorRepository doctorRepository;
<pre>public Doctor createDoctor(Doctor doctor) {</pre>
return doctorRepository.save(doctor);
}



In this example, the DoctorService class uses the DoctorRepository to perform CRUD operations on Doctor entities.