

[CrudRepository](#) and [JpaRepository](#) are interfaces provided by Spring Data JPA for data access layers, but they offer different levels of functionality:

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## CrudRepository

- **Basic CRUD Operations:**

Provides methods for basic Create, Read, Update, Delete operations.

- **Common Methods:**

- `save(S entity)`
- `findById(ID id)`
- `findAll()`
- `deleteById(ID id)`
- `count()`

- **Lightweight:**

Good for simple CRUD use cases.

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## JpaRepository

- **Extends CrudRepository :**

Inherits all CRUD methods.

- **Adds JPA-Specific Features:**

- **Pagination and Sorting:**

Methods like `findAll(Pageable pageable)` and `findAll(Sort sort)`.

- **Batch Operations:**

Methods like `deleteInBatch()` and `saveAll()`.

- **Flush and Custom JPA Methods:**

Methods like `flush()`, `saveAndFlush()`, `findOne()`.

- **Richer API:**

Preferred for most JPA-based applications as it offers more capabilities for complex queries and data manipulation.

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## Summary Table

Feature	CrudRepository	JpaRepository
Basic CRUD	✓	✓
Pagination/Sorting	✗	✓
Batch Operations	✗	✓
JPA-Specific Methods	✗	✓
Inheritance	—	Extends CrudRepository

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### Best Practice:

- Use **JpaRepository** for JPA projects unless you have a specific reason to limit features to basic CRUD (in which case, use **CrudRepository**).
- **JpaRepository** is suitable for almost all use cases in Spring Data JPA.