

Difference between JPA, Hibernate, and Spring Data JPA

Here's a clear distinction between JPA, Hibernate, and Spring Data JPA in a different style:

1. JPA (Java Persistence API):

- - It is a specification provided by Java (part of Java EE) for ORM (Object Relational Mapping).
- - JPA defines standard interface and annotations like @Entity, @Table, @Id etc.
- - It does not provide an actual implementation – you need a provider (like Hibernate) for that.

2. Hibernate:

- - It is an implementation of the JPA specification (and also has extra features).
- - Provides functionalities like lazy loading, caching, etc. beyond the JPA standard.
- - Hibernate can be used with or without JPA.

3. Spring Data JPA:

- - It is a Spring Framework project that builds on top of JPA.
- - Simplifies data access by reducing boilerplate code using interfaces like JpaRepository.
- - Automatically provides query methods like `findByName()` without writing actual SQL/JPQL.
- - Internally uses Hibernate or any other JPA provider.