Hibernate Tip: Use an ORDER BY clause in a CriteriaQuery

Question:

How do I create a *CriteriaQuery* which returns the selected entities in the ascending order of an attribute?

Solution:

You can define an ORDER BY clause with the *orderBy* method of the *CriteriaQuery* interface and the *asc* or *desc* method of the *CriteriaBuilder* interface.

The following *CriteriaQuery* returns *Book* entities in the ascending order of their *title* attribute.

```
// Define the CriteriaQuery
CriteriaBuilder cb = em.getCriteriaBuilder();
CriteriaQuery<Book> cq = cb.createQuery(Book.class);
Root<Book> root = cq.from(Book.class);
cq.orderBy(cb.asc(root.get(Book_.title)));

// Execute query with pagination
List<Book> books = em.createQuery(cq).getResultList();
```

I get a *CriteriaBuilder* from the *EntityManager* and create a *CriteriaQuery* that returns *Book* entities.

Then I define the FROM clause by setting the *Book* entity as the *Root* of the query.

In the next step, I call the *asc* method on the *CriteriaBuilder* to create an ascending *Order* of the *title* attribute. The *Book_* class, which I use to reference the *title* attribute, is part of the JPA metamodel. I then use the *Order* object to create the ORDER BY clause.

That's all you need to do to define a *CriteriaQuery* with an ORDER BY clause. You can then use the *CriteriaQuery* to create and execute a *TypedQuery*.

Based on the *CriteriaQuery*, Hibernate generates the following SQL statement.

```
07:12:02,889 DEBUG [org.hibernate.SQL] -
    select
        book0_.id as id1_1_,
        book0_.publisherid as publishe5_1_,
        book0_.publishingDate as publishi2_1_,
        book0_.title as title3_1_,
        book0_.version as version4_1_
    from
        Book book0_
    order by
        book0_.title asc
```
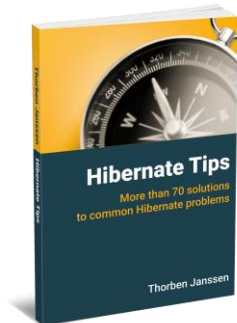
Learn more

You can learn more about *CriteriaQuery*s with the following Hibernate Tips:

- [Hibernate Tips: How to select a POJO with a Criteria Query](#)
- [Hibernate Tips: How to select multiple scalar values in a Criteria Query](#)
- [Hibernate Tips: How to Use a SubQuery in a CriteriaQuery](#)
- [Hibernate Tips: How to call a user-defined function in a CriteriaQuery](#)

Hibernate Tips Book

Get more recipes like this one in my book Hibernate Tips: More than 70 solutions to common Hibernate problems.

It gives you more than 70 ready-to-use recipes for topics like basic and advanced mappings, logging, Java 8 support, caching and statically and dynamically defined queries.