

# Hibernate Tips: Auto-incremented column as primary

1-3-22

## Question:

My database supports auto-incremented columns. How can I use them as primary keys in Hibernate?

## Solution:

JPA and Hibernate support different strategies to generated primary key values. One of them is the identity strategy which uses an auto-incremented database column.

If you want to use this strategy, you have to annotate the primary key attribute `@Id` and with the `@GeneratedValue` annotation and set the strategy attribute to `GenerationType.IDENTITY`.

The following code snippet shows an example of this annotation

```
@Entity
public class Author {

    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name = "id", updatable = false, nullable = false)
    private Long id;

    ...

}
```

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If you now persist a new *Author* entity, Hibernate will use the auto-incremented database column to generate the primary key value. You can see that in the log file if you activate the [logging for SQL statements](#).

```
10:20:08,299 DEBUG [org.hibernate.SQL] - insert into Author
(firstName, lastName, version) values (?, ?, ?)
10:20:08,302 TRACE [org.hibernate.type.descriptor.sql.BasicBinder] -
binding parameter [1] as [VARCHAR] - [FirstName]
10:20:08,302 TRACE [org.hibernate.type.descriptor.sql.BasicBinder] -
binding parameter [2] as [VARCHAR] - [LastName]
10:20:08,303 TRACE [org.hibernate.type.descriptor.sql.BasicBinder] -
binding parameter [3] as [INTEGER] - [0]
10:20:08,308 DEBUG [org.hibernate.id.IdentifierGeneratorHelper] -
Natively generated identity: 1
```

Databases handle auto-incremented columns very efficiently. But you need to be aware that Hibernate has to perform the *INSERT* statement immediately to get the primary key value. This prevents it from using different performance optimizations that rely on the delayed execution of database operations.

## Further reading:

Auto-incremented database columns are only 1 out of 4 options to generate primary key values. I get into more details about the different strategies in [How to generate primary keys with JPA and Hibernate](#).