

# Hibernate Tip: Automatically set an attribute before persisting it

## Question:

I want to initialize an entity attribute automatically before it gets persisted. How can I execute custom code before Hibernate persists an entity?

## Solution:

The JPA specification defines a set of callback annotations to trigger method calls for certain lifecycle events. If you want to initialize an entity attribute before it gets persisted, you just have to do 2 things:

1. Add a method to the entity which initializes the attribute.
2. Annotate this method with `@PrePersist` so that Hibernate calls it before it persists the entity.

You can see an example of such a method in the following code snippet.

```
@Entity
public class Author {

    ...

    @PrePersist
    private void initializeCreatedAt() {
        this.createdAt = LocalDateTime.now();
        log.info("Set createdAt to "+this.createdAt);
    }
}
```

# Hibernate Tip: Automatically set an attribute before persisting it

Hibernate will call this method when it persists a new Author entity and trigger the initialization of the *createdAt* attribute. You can see that in the following log output. Hibernate calls the *initializeCreatedAt* method before it performs the SQL statements to get the primary key value and to persist the entity.

```
14:31:14,871 INFO [org.thoughts.on.java.model.Author]
– Set createdAt to 2016-12-14T14:31:14.868
14:31:14,878 DEBUG [org.hibernate.SQL] – select
nextval ('hibernate_sequence')
14:31:14,920 DEBUG [org.hibernate.SQL] – insert into
Author (createdAt, firstName, lastName, version, id)
values (?, ?, ?, ?, ?)
14:31:14,923 TRACE
[org.hibernate.type.descriptor.sql.BasicBinder] – binding
parameter [1] as [TIMESTAMP] – [2016-12-
14T14:31:14.868]
14:31:14,924 TRACE
[org.hibernate.type.descriptor.sql.BasicBinder] – binding
parameter [2] as [VARCHAR] – [first name]
14:31:14,924 TRACE
[org.hibernate.type.descriptor.sql.BasicBinder] – binding
parameter [3] as [VARCHAR] – [last name]
14:31:14,925 TRACE
[org.hibernate.type.descriptor.sql.BasicBinder] – binding
parameter [4] as [INTEGER] – [0]
14:31:14,926 TRACE
[org.hibernate.type.descriptor.sql.BasicBinder] – binding
parameter [5] as [BIGINT] – [1]
```

# Hibernate Tip: Automatically set an attribute before persisting it

## Learn more:

I get into more details about entity lifecycle events and the more advanced *EntityListeners*, in my [Advanced Hibernate Training](#). I'm happy to see you there if you want to dive deeper into this topic.

The JPA specification also defines callback annotation for other entity lifecycle events. You can, for example, use the `@PrePersist` annotation to execute custom code before Hibernate deletes an entity, as I do in this post: [How to implement a soft delete with Hibernate](#).