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Hibernate SessionFactory

APRIL 2, 2018 BY [PANKAJ](#) — [6 COMMENTS](#)

Hibernate SessionFactory is the factory class through which we get sessions and perform database operations.

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Hibernate SessionFactory



Hibernate SessionFactory provides three methods through which we can get Session object – `getCurrentSession()`, `openSession()` and `openStatelessSession()`.

Hibernate SessionFactory `getCurrentSession`

Hibernate `SessionFactory` `getCurrentSession()` method returns the session bound to the context. But for this to work, we need to configure it in hibernate configuration file like below.

```
<property name="hibernate.current_session_context_class">thread</property>
```

If its not configured to thread, then we will get below exception.

```
Exception in thread "main" org.hibernate.HibernateException: No CurrentSessionContext
configured!
    at
    org.hibernate.internal.SessionFactoryImpl.getCurrentSession(SessionFactoryImpl.java:1012)

    at
    com.journaldev.hibernate.main.HibernateSessionExample.main(HibernateSessionExample.java:1
```



Since this session object belongs to the hibernate context, we don't need to close it. Once the session factory is closed, this session object gets closed.

Hibernate Session objects are not thread safe, so we should not use it in multi-threaded environment. We can use it in single threaded environment because it's relatively faster than opening a new session.

Hibernate SessionFactory openSession

Hibernate `SessionFactory` `openSession()` method always opens a new session. We should close this session object once we are done with all the database operations.

We should open a new session for each request in multi-threaded environment. For web application frameworks, we can choose to open a new session for each request or for each session based on the requirement.

Hibernate SessionFactory openStatelessSession

Hibernate `SessionFactory` `openStatelessSession()` method returns instance of `StatelessSession`. There is another overloaded method where we can pass `java.sql.Connection` object to get a stateless session object from hibernate.

`StatelessSession` in Hibernate does not implement first-level cache and it doesn't interact with any second-level cache. Since it's stateless, it doesn't implement transactional write-behind or automatic dirty checking or do cascading operations to associated entities.

Collections are also ignored by a stateless session. Operations performed via a stateless session bypass Hibernate's event model and interceptors. It's more like a normal JDBC connection and doesn't provide any benefits that come from using hibernate framework.

However, stateless session can be a good fit in certain situations. For example where we are loading bulk data into database and we don't want hibernate session to hold huge data in first-level cache memory.

A simple program showing Hibernate SessionFactory methods usage is given below.

```
package com.journaldev.hibernate.main;
```

```
import org.hibernate.Session;
```

```
import org.hibernate.SessionFactory;
import org.hibernate.StatelessSession;

import com.journaldev.hibernate.util.HibernateUtil;

public class HibernateSessionExample {

    public static void main(String[] args) {

        SessionFactory sessionFactory = HibernateUtil.getSessionFactory();

        //Current Session - no need to close
        Session currentSession = sessionFactory.getCurrentSession();

        //open new session
        Session newSession = sessionFactory.openSession();
        //perform db operations

        //close session
```

That's all for SessionFactory in Hibernate and it's different methods to obtain session object.



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About Pankaj

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Recently I started creating video tutorials too, so do check out my videos on [Youtube](#).

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farhan says

DECEMBER 16, 2015 AT 5:19 AM

Hi Pankaj,

When I am using sessionFactory.getCurrentSession() and create criteria query, Its give me error has "createCriteria is not valid without active transaction"

[Reply](#)

Vishwas says

JUNE 27, 2015 AT 12:05 PM

Using getCurrentSession(), we cannot perform lazy loading whereas openSession supports lazy loading

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Vinod Kumar says

OCTOBER 20, 2016 AT 11:21 PM

Hello I have checked in eclipse that getCurentSession() also support lazy loading

[Reply](#)

manish gupta says

MAY 27, 2015 AT 10:27 PM

Hi Pankaj,

What I interpret from article that hibernate `CurrentSession()` is not thread safe only and rest two `OpenSession()` and `OpenStatelessSession()` are thread safe. Can you please confirm?

[Reply](#)

arka says

APRIL 29, 2018 AT 10:14 PM

Never ,any sessions are not thread safe.

[Reply](#)

nagesh says

FEBRUARY 24, 2015 AT 5:37 PM

Hi pankaj,

You have really explained the concepts very well.It was really helpful going through this website.If you can avoid more technical and use simple words it will be still easier to understand the concepts.Thanks a lot for sharing your knowledge.

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