

Hibernate

Prerequisites:- JDBC

So let's start with JDBC.

It is a API (Application Programming Interface) which allows us to interact with DB.

Why not JDBC?

- It depends on DB Software like Oracle, MySql, Postgresql etc.
- Suppose If you want to migrate to different DB Software in the middle of development then the queries written in Oracle will not work in MySQL.
- It's not portable.
- Boilerplate code

Here comes Hibernate.

Hibernate is an Open Source, lightweight, ORM (Object Relational Mapping) tool which helps to interact with DB.

Why Hibernate?

- It is portable.
- It doesn't depends on queries (DB Software like Oracle, MySQL, PostgreSQL).
- Doesn't contain Boilerplate code.

Some Terminologies:

- POJO :- Plain Old Java Object Class. It is a simple Java Class.
- POJI :- Plain Old Java Interface. It is a simple Java Interface.

If you want to develop lightweight Application then it must support POJO Class and POJI Interface.

Connection Pooling:- Open/prepare/close the connection whenever there is no use.

Life Cycle Of Hibernate

/*

* Life Cycle of Hibernate (Transient, Persistent & Detached)

*

* - Session Factory is build

* - Session is opened

* - The session which is created will have one active connection to the db

* - Now creating the object of the entity class

* - initializing the value of the fields of the entity class

- * - This particular entity class object is not managed by session this is at TRANSIENT STATE.

- * - begin the transaction

- * - Now the entity class object is saved by the session i.e the object will be saved to the db.

- * - db will assign an id. Now this object is called Persistent.

- * - Committing the object to the db.

- * - Session is closed

- * - Once u close the session. Session object will be destroyed. this object is no longer managed by the session

- * - Now this is in detached State.

- *

- */

```
// sessionFactory sessionFactory = HibernateUtils.getSessionFactory();
//
// Session session = sessionFactory.openSession();
//
// Song song1 = new Song();
// song1.setSongName("Perfect");
// song1.setArtist("Ed Sheeran");

// **** TRANSIENT STATE ****
//
// session.beginTransaction();
// session.save(song1);

// **** PERSISTENT STATE ****

// session.getTransaction().commit();

//
// session.close();

// **** DETACHED STATE ****
```