



ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

CODEN: IJRSFP (USA)

International Journal of Recent Scientific Research  
Vol. 8, Issue, 11, pp. 21587-21589, November, 2017

**International Journal of  
Recent Scientific  
Research**

DOI: 10.24327/IJRSR

## Research Article

### ORM FOR A WEB BASED APPLICATION EXTENSION

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DOI: <http://dx.doi.org/10.24327/ijrsr.2017.0811.1100>

#### ARTICLE INFO

##### Article History:

Received 16<sup>th</sup> August, 2017  
Received in revised form 25<sup>th</sup>  
September, 2017  
Accepted 23<sup>rd</sup> October, 2017  
Published online 28<sup>th</sup> November, 2017

##### Key Words:

Hibernate, HQL, ORM.

#### ABSTRACT

This paper defines the minimal work of end user and developers as well as administrator. Basic Aim of this research paper is to elaborate the actual use hibernate framework. With the help of some configuration files we are reducing the work of an application. Just go and explore the concepts behind the whole OMR mapping through configuration files.

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#### INTRODUCTION

Hibernate is a framework to build application for a large database records. Lets here understand what exactly this framework for? ORM is a programming method to map the objects in java with the relational entities in the database. It gives a tremendous reflection to existing database records. It provides end user to configure files and also provide flexibility for the developing and configuring java beans.

##### Improved productivity

- High-level object-oriented API
- Less Java code to write
- No SQL to write

API gives tremendous flexibility to end user with simple configuration of objects of existing class. It will reduce a developer work to write down the same code again and again. By using this framework developer and end user doesn't worry about to write a single query to fetch or execute some records from D/B.

##### Working of Hibernate

From the below figure you can get idea how hibernate works. At top level your existing any application take place. According to your mapping configuration files Java objects are created and take its persistency.

Then hibernate frameworks comes in the picture with its latest API and it will provide you flexibility. From below figure you

can understand Session factory is responsible to create any bean's session. Once it does not need any living environment then automatically it garbage by factory itself. Transaction is crucial part for any application and that's why JTA (Java Transaction API) is integrated with this framework in-built.

So user doesn't worry about ACID properties any more. The Hibernate architecture is layered to keep you isolated from having to know the underlying APIs. Hibernate is like a bridge between java application and relational database.

```

Configuration configuration=new Configuration();
configuration.configure();
ServiceRegistry sr= new
ServiceRegistryBuilder().applySettings(configuration.getPropert
ies()).buildServiceRegistry();
SessionFactory sf=configuration.buildSessionFactory(sr);

```

From the above code you can realize how any session's object is created and living throughout out its life cycle.

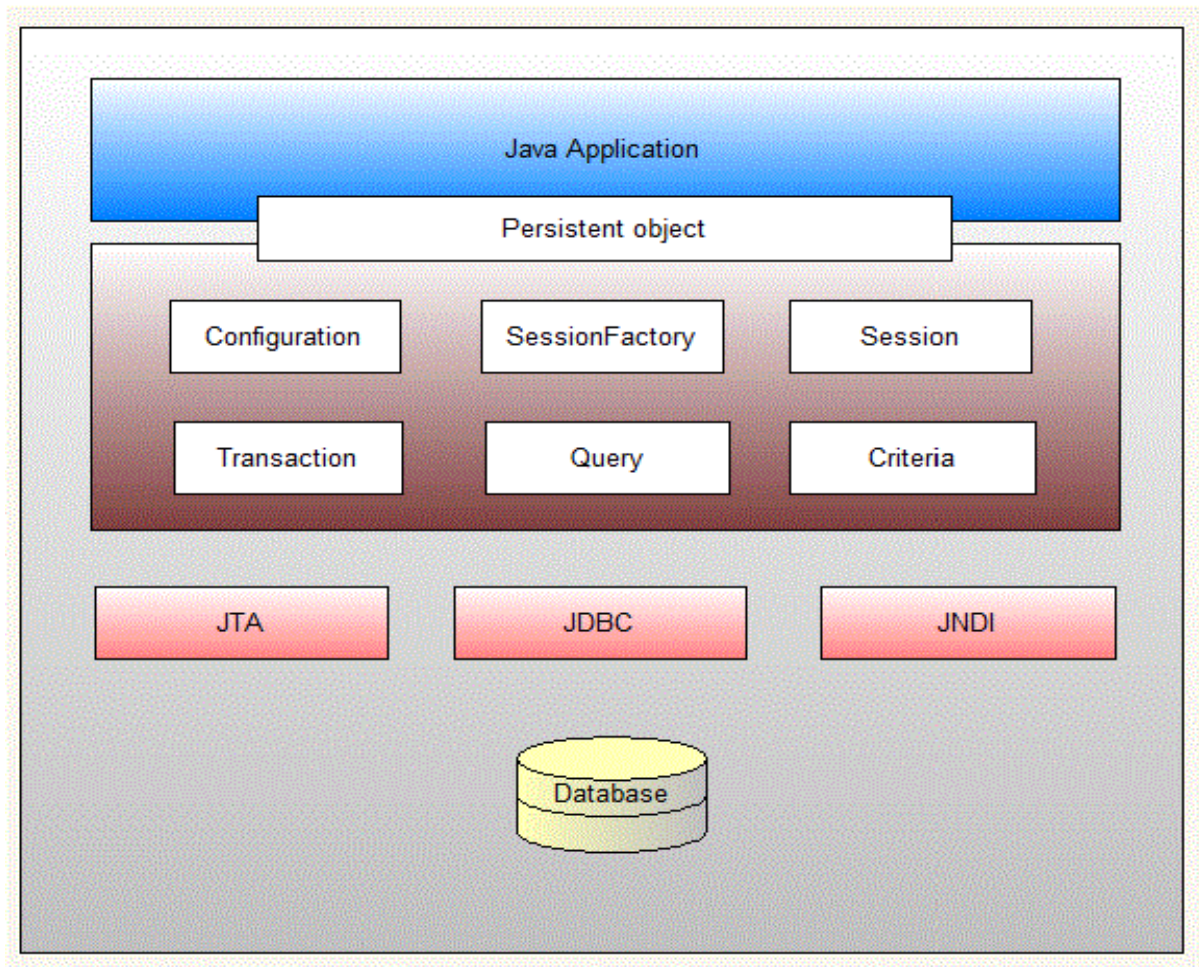
##### Configuration Interface

This is used to configure hibernate. It's also used to bootstrap hibernate. Mapping documents of hibernate are located using this interface.

##### Transaction Interface

This is an optional interface but the above three interfaces are mandatory in each and every application. This interface abstracts the code from any kind of transaction implementations such as JDBC transaction, JTA transaction.

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### **Hibernate Architecture**

In this frame work two configuration files are quite important and both are end user created.

Lets us discusses one by one.

The first one is for database configurations (For example which driver you would like to use, for which user, what are credentials and all that) and remaining config file is for two map your objects properties.

#### **Connection management:**

Hibernate Connection management service grant efficient management of the database connections. Database connection is the priciest part of database as it requires a lot of resources of open/close the database connection.

#### **Transaction management**

It is taking care of Atomicity, Consistency, Isolation and Durability properties of any transaction. Hibernate Query Language or HQL for short is extremely powerful query language. HQL is much like SQL and are case-insensitive, except for the names of the Java Classes and properties.

Hibernate Query Language or HQL for short is extremely powerful query language. HQL is much like SQL and are case-insensitive, except for the names of the Java Classes and properties. Hibernate Query Language is used to execute queries against database. Hibernate automatically generates the sql query and execute it against underlying database if HQL is used in the application [4].

HQL is based on the relational object models and makes the SQL object oriented. Hibernate Query Language uses Classes and properties instead of tables and columns. Hibernate Query Language is extremely powerful and it supports Polymorphism, Associations and is less verbose than SQL. There are other options that can be used while using hibernate [3]. These are Query By Criteria (QBC)

#### **Disadvantages of Hibernate**

Lots of API to learn: A lot of effort is required to learn Hibernate. Not so easy to learn hibernate easily Debugging: Sometimes debugging and performance tuning becomes difficult. Slower than JDBC: Hibernate is slower than pure JDBC as it is generating lots of SQL statements in runtime Not suitable for Batch processing: It sensible to use pure JDBC for batch processing.

### **CONCLUSION**

This paper has illustrated an introduction to what hibernate can do. The analyses how hibernate delivers a high resolution to any web application.

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### How to cite this article:

Prajapati Keyur P.2017, ORM for A Web Based Application Extension. *Int J Recent Sci Res.* 8(11), pp. 21587-21589.  
DOI: <http://dx.doi.org/10.24327/ijrsr.2017.0811.1100>

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