Hibernate HQL

HQL：Hibernate Query Language，是 Hibernate 框架提供的一种查询机制，它和 SQL 类似，不同的是 HQL 是面向对象的查询语句，让开发者能够以面向对象的思想来编写查询语句，对 Java 编程是一种好友好的方式。

HQL 不能直接参与数据库的交互，中间层语言。

Java ---》HQL ---〉Hibernate ---》SQL ---〉DB

HQL 只能完成查询、修改、删除，新增是无法操作的。

1、查询对象

查询表中所有数据，自动完成对象的封装，返回 List 集合。

HQL 进行查询，from 关键字后面不能写表名，必须写表对应的实体类名。

```
package com.southwind.test;

import com.southwind.entity.Customer;
import com.southwind.entity.People;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.hibernate.query.Query;

import java.util.List;

public class Test11 {
    public static void main(String[] args) {
        //创建 Configuration
        Configuration configuration = new
Configuration().configure("hibernate.xml");
        //获取 SessionFactory
        SessionFactory sessionFactory = configuration.buildSessionFactory();
        //获取 Session
        Session session = sessionFactory.openSession();

        String hql = "from People";
        Query query = session.createQuery(hql);
        List<People> list = query.list();
        for(People people:list){
            System.out.println(people);
        }

        session.close();
    }
```

```
}
```

2、分页查询

HQL 分页查询可以通过调用 query 的方法来完成。

1、setFirstResult() 设置起始下标

2、setMaxResults() 设置截取长度

```
package com.southwind.test;

import com.southwind.entity.Customer;
import com.southwind.entity.People;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.hibernate.query.Query;

import java.util.List;

public class Test11 {
    public static void main(String[] args) {
        //创建 Configuration
        Configuration configuration = new
Configuration().configure("hibernate.xml");
        //获取 SessionFactory
        SessionFactory sessionFactory = configuration.buildSessionFactory();
        //获取 Session
        Session session = sessionFactory.openSession();

        String hql = "from People";
        Query query = session.createQuery(hql);
        query.setFirstResult(1);
        query.setMaxResults(3);
        List<People> list = query.list();
        for(People people:list){
            System.out.println(people);
        }

        session.close();
    }
}
```

3、where 条件查询

HQL 直接追加 where 关键字作为查询条件，与 SQL 没有区别。

```
package com.southwind.test;
```

```
import com.southwind.entity.Customer;
import com.southwind.entity.People;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.hibernate.query.Query;

import java.util.List;

public class Test11 {
    public static void main(String[] args) {
        //创建 Configuration
        Configuration configuration = new
Configuration().configure("hibernate.xml");
        //获取 SessionFactory
        SessionFactory sessionFactory = configuration.buildSessionFactory();
        //获取 Session
        Session session = sessionFactory.openSession();

        String hql = "from People where id = 6";
        Query query = session.createQuery(hql);
        People people = (People) query.list().get(0);
        System.out.println(people);

        session.close();
    }
}
```

query.list() 返回一个集合，此时集合中只有一个对象，通过下标 0 取出该对象。

```
String hql = "from People where id = 0";
Query query = session.createQuery(hql);
People people = (People) query.uniqueResult();
System.out.println(people);
```

不会抛出异常。

4、模糊查询

查询名称包含 “三” 的所有记录

```
package com.southwind.test;

import com.southwind.entity.Customer;
import com.southwind.entity.People;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
```

```
import org.hibernate.cfg.Configuration;
import org.hibernate.query.Query;

import java.util.List;

public class Test11 {
    public static void main(String[] args) {
        //创建 Configuration
        Configuration configuration = new
Configuration().configure("hibernate.xml");
        //获取 SessionFactory
        SessionFactory sessionFactory = configuration.buildSessionFactory();
        //获取 Session
        Session session = sessionFactory.openSession();

        String hql = "from People where name like '%三%'";
        Query query = session.createQuery(hql);
        List<People> list = query.list();
        for(People people:list){
            System.out.println(people);
        }

        session.close();
    }
}
```

5、order by

按照 id 进行排序

```
package com.southwind.test;

import com.southwind.entity.Customer;
import com.southwind.entity.People;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.hibernate.query.Query;

import java.util.List;

public class Test11 {
    public static void main(String[] args) {
        //创建 Configuration
        Configuration configuration = new
Configuration().configure("hibernate.xml");
        //获取 SessionFactory
        SessionFactory sessionFactory = configuration.buildSessionFactory();
        //获取 Session
```

```
        Session session = sessionFactory.openSession();

        String hql = "from People order by id asc ";
        Query query = session.createQuery(hql);
        List<People> list = query.list();
        for(People people:list){
            System.out.println(people);
        }

        session.close();
    }
}
```

asc 是生序排列，desc 是降序排列。

6、查询实体对象的属性

```
package com.southwind.test;

import com.southwind.entity.Customer;
import com.southwind.entity.People;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.hibernate.query.Query;

import java.util.List;

public class Test11 {
    public static void main(String[] args) {
        //创建 Configuration
        Configuration configuration = new
Configuration().configure("hibernate.xml");
        //获取 SessionFactory
        SessionFactory sessionFactory = configuration.buildSessionFactory();
        //获取 Session
        Session session = sessionFactory.openSession();

        String hql = "select name from People where id = 6";
        Query query = session.createQuery(hql);
        String name = (String) query.uniqueResult();
        System.out.println(name);

        session.close();
    }
}
```

7、占位符

```
package com.southwind.test;

import com.southwind.entity.Customer;
import com.southwind.entity.People;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.hibernate.query.Query;

import java.util.List;

public class Test11 {
    public static void main(String[] args) {
        //创建 Configuration
        Configuration configuration = new
Configuration().configure("hibernate.xml");
        //获取 SessionFactory
        SessionFactory sessionFactory = configuration.buildSessionFactory();
        //获取 Session
        Session session = sessionFactory.openSession();

        String hql = "from People where name = :name";
        Query query = session.createQuery(hql);
        query.setString("name","张三");
        List<People> list = query.list();
        for (People people:list){
            System.out.println(people);
        }

        session.close();
    }
}
```

8、级联查询

```
package com.southwind.test;

import com.southwind.entity.Customer;
import com.southwind.entity.Orders;
import com.southwind.entity.People;
import org.hibernate.Session;
import org.hibernate.SessionFactory;
import org.hibernate.cfg.Configuration;
import org.hibernate.query.Query;

import java.util.List;

public class Test11 {
```

```
    public static void main(String[] args) {
        //创建 Configuration
        Configuration configuration = new
Configuration().configure("hibernate.xml");
        //获取 SessionFactory
        SessionFactory sessionFactory = configuration.buildSessionFactory();
        //获取 Session
        Session session = sessionFactory.openSession();

        String hql1 = "from Customer where name = :name";
        Query query1 = session.createQuery(hql1);
        query1.setString("name","张三");
        Customer customer = (Customer) query1.uniqueResult();
        String hql2 = "from Orders where customer = :customer";
        Query query2 = session.createQuery(hql2);
        query2.setEntity("customer",customer);
        List<Orders> list = query2.list();
        for(Orders orders:list){
            System.out.println(orders);
        }

        session.close();
    }
}
```