<http://www.cnblogs.com/chiangchou/p/mappedBy.html>

[**hibernate基于注解的维护权反转：@OneToMany(mappedBy=)**](http://www.cnblogs.com/chiangchou/p/mappedBy.html)

# 一、JoinColumn

背景说明：首先是SSH环境下，对象基于注解的方式映射到数据库；

昨天遇到一个比较纠结的问题，@OneToMany(mappedBy="xxx")， mappedBy属性有什么用，然后是写在哪一边？

还有一个问题是：@JoinColumn(name="xxxxx")，JoinColumn有什么用？

先贴出最初的代码：一些基本的注解，在一对多的关系上没有使用JoinColumn和mappedBy属性

部门类：主要是第33、34行

[复制代码](javascript:void(0);)

1 package com.lizhou.entity.test;

2

3 import java.util.ArrayList;

4 import java.util.List;

5

6 import javax.persistence.Column;

7 import javax.persistence.Entity;

8 import javax.persistence.GeneratedValue;

9 import javax.persistence.GenerationType;

10 import javax.persistence.Id;

11 import javax.persistence.OneToMany;

12 import javax.persistence.Table;

13

14 import org.hibernate.annotations.GenericGenerator;

15

16 /\*\*

17 \* 部门：与员工一对多关系

18 \* @author bojiangzhou

19 \*

20 \*/

21 @Entity

22 @Table(name="department")

23 public class Department {

24

25 @Id

26 @GeneratedValue(generator="\_native")

27 @GenericGenerator(name="\_native", strategy="native")

28 private int id; //ID

29

30 @Column(length=20)

31 private String dname; //部门名称

32

33 @OneToMany

34 private List<Employee> employeeList = new ArrayList<>(); //部门下的员工集合

35

36 // get/set方法59

60 }

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员工类：主要是第32、33行

[复制代码](javascript:void(0);)

1 package com.lizhou.entity.test;

2

3 import javax.persistence.Column;

4 import javax.persistence.Entity;

5 import javax.persistence.GeneratedValue;

6 import javax.persistence.Id;

7 import javax.persistence.ManyToOne;

8 import javax.persistence.Table;

9

10 import org.hibernate.annotations.GenericGenerator;

11

12 /\*\*

13 \* 员工：与部门多对一关系

14 \* @author bojiangzhou

15 \*

16 \*/

17 @Entity

18 @Table(name="employee")

19 public class Employee {

20

21 @Id

22 @GeneratedValue(generator="\_native")

23 @GenericGenerator(name="\_native", strategy="native")

24 private int id; //ID

25

26 @Column(length=20)

27 private String ename; //员工姓名

28

29 @Column(length=20)

30 private String phone; //电话

31

32 @ManyToOne

33 private Department department; //所属部门

34

35

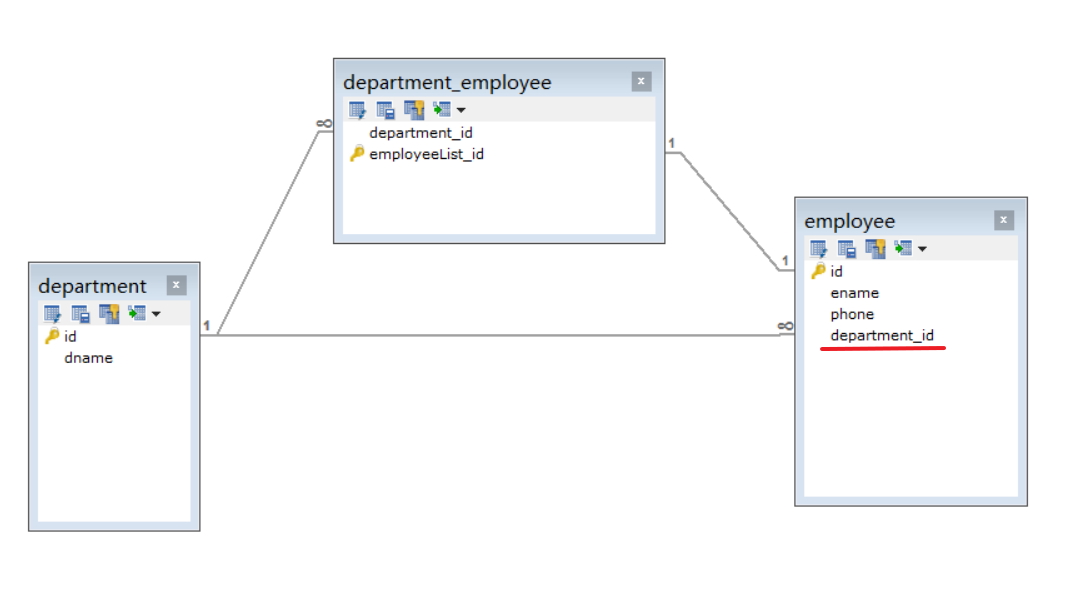
36 //get/set方法67

68 }

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## 1.最初的注解配置里，在一对多的关系上，即employeeList和department没有使用JoinColumn。

## 2.、看下图，employee表会自动添加一个外键列department\_id，虽然关系映射上是正确了，但是有一个问题，数据库里多了一张表出来，这不是想要的结果。



## 3、解决方法：在employeeList和department字段上加上@JoinColumn注解

1 @OneToMany

2 @JoinColumn(name="departmentId")

3 private List<Employee> employeeList = new ArrayList<>(); //部门下的员工集合

1 @ManyToOne//

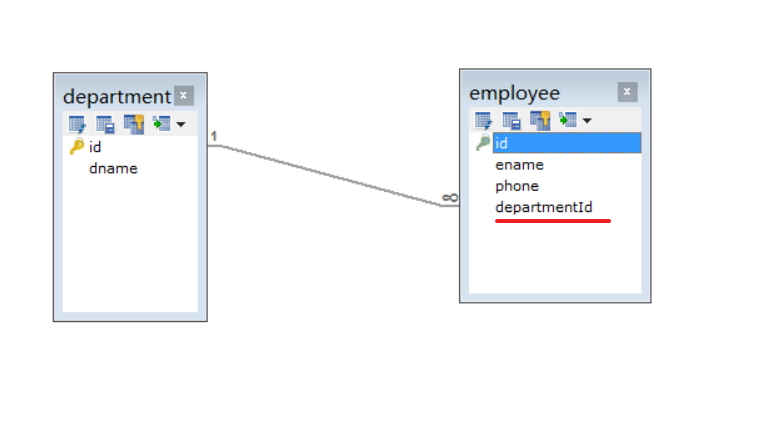
2 @JoinColumn(name="departmentId")//

3 private Department department; //所属部门

## 4、这样一来的话就只有两张表了，所以在一对多或者一对一的关系下，需要加上@JoinColumn来指定外键列，避免生成一张中间表。

## 5、而且经试验，多的一方(Employee)里的department必须加上@JoinColumn，Department里不加不会影响表的结构，不知道会不会有其它影响；

## 6、但是如果Employee属于多的一方，如果没有指定外键列，还是会自动生成一个department\_id外键列。



# 二、mappedBy

## 1.接下来讨论mappedBy属性：mappedBy属性主要是针对外键而言。与之相对应的是xml中的inverse属性。

## 2.如下是测试类代码：此时还没有设置mappedBy属性，映射时，默认是都由自身维护关联关系。

[复制代码](javascript:void(0);)

1 package com.lizhou.action.test;

2

3 import org.hibernate.Session;

4 import org.hibernate.SessionFactory;

5 import org.hibernate.Transaction;

6 import org.hibernate.cfg.Configuration;

7 import org.junit.Test;

8 import org.springframework.context.ApplicationContext;

9 import org.springframework.context.support.ClassPathXmlApplicationContext;

10

11 import com.lizhou.entity.test.Department;

12 import com.lizhou.entity.test.Employee;

13

14 /\*\*

15 \* 测试类

16 \* @author bojiangzhou

17 \*

18 \*/

19

20 public class TestAction {

21

22 private static SessionFactory sessionFactory = null;

23

24 static {

25 //读取classpath中applicationContext.xml配置文件

26 ApplicationContext applicationContext = new ClassPathXmlApplicationContext("applicationContext.xml");

27 //获取session中配置的sessionFactory对象

28 sessionFactory = (SessionFactory) applicationContext.getBean("sessionFactory");

29 }

30

31 @Test

32 public void testSave(){

33 //创建一个部门对象

34 Department d1 = new Department();

35 d1.setDname("研发部");

36

37 //创建两个员工对象

38 Employee e1 = new Employee();

39 e1.setEname("张三");

40 e1.setPhone("13111111111");

41 Employee e2 = new Employee();

42 e2.setEname("李四");

43 e2.setPhone("18523222222");

44

45 //设置对象关联

46 d1.getEmployeeList().add(e1);

47 d1.getEmployeeList().add(e2);

48 e1.setDepartment(d1);

49 e2.setDepartment(d1);

50

51 //获取Session

52 Session session = sessionFactory.openSession();

53 //开始事务

54 Transaction t = session.beginTransaction();

55 try {

56 //添加数据

57 session.save(d1);

58 session.save(e1);

59 session.save(e2);

60 //提交事务

61 t.commit();

62 } catch (RuntimeException e) {

63 //有异常则回滚事务

64 t.rollback();

65 e.printStackTrace();

66 } finally {

67 //关闭session

68 session.close();

69 }

70 }

71

72

73 }

[复制代码](javascript:void(0);)

执行testSave后，控制台打印如下语句：

1 Hibernate: insert into department (dname) values (?)

2 Hibernate: insert into employee (departmentId, ename, phone) values (?, ?, ?)

3 Hibernate: insert into employee (departmentId, ename, phone) values (?, ?, ?)

4 Hibernate: update employee set departmentId=? where id=?

5 Hibernate: update employee set departmentId=? where id=?

## 3.可以看到多了两条update语句，这是因为两边都维护关系，先插入的部门，再插入员工，插入员工时，已经设置好外键了，但部门方也维护关系，会再执行一次更新操作，为员工设置外键，这样就导致多出了两条update语句，这里是有性能损耗的。

一种解决办法是：将第46、47行去掉，即对象上部门不关联员工

[复制代码](javascript:void(0);)

1 package com.lizhou.action.test;

2

3 import org.hibernate.Session;

4 import org.hibernate.SessionFactory;

5 import org.hibernate.Transaction;

6 import org.hibernate.cfg.Configuration;

7 import org.junit.Test;

8 import org.springframework.context.ApplicationContext;

9 import org.springframework.context.support.ClassPathXmlApplicationContext;

10

11 import com.lizhou.entity.test.Department;

12 import com.lizhou.entity.test.Employee;

13

14 /\*\*

15 \* 测试类

16 \* @author bojiangzhou

17 \*

18 \*/

19

20 public class TestAction {

21

22 private static SessionFactory sessionFactory = null;

23

24 static {

25 //读取classpath中applicationContext.xml配置文件

26 ApplicationContext applicationContext = new ClassPathXmlApplicationContext("applicationContext.xml");

27 //获取session中配置的sessionFactory对象

28 sessionFactory = (SessionFactory) applicationContext.getBean("sessionFactory");

29 }

30

31 @Test

32 public void testSave(){

33 //创建一个部门对象

34 Department d1 = new Department();

35 d1.setDname("研发部");

36

37 //创建两个员工对象

38 Employee e1 = new Employee();

39 e1.setEname("张三");

40 e1.setPhone("13111111111");

41 Employee e2 = new Employee();

42 e2.setEname("李四");

43 e2.setPhone("18523222222");

44

45 //设置对象关联

46 // d1.getEmployeeList().add(e1);

47 // d1.getEmployeeList().add(e2);

48 e1.setDepartment(d1);

49 e2.setDepartment(d1);

50

51 //获取Session

52 Session session = sessionFactory.openSession();

53 //开始事务

54 Transaction t = session.beginTransaction();

55 try {

56 //添加数据

57 session.save(d1);

58 session.save(e1);

59 session.save(e2);

60 //提交事务

61 t.commit();

62 } catch (RuntimeException e) {

63 //有异常则回滚事务

64 t.rollback();

65 e.printStackTrace();

66 } finally {

67 //关闭session

68 session.close();

69 }

70 }

71

72

73 }

[复制代码](javascript:void(0);)

1 Hibernate: insert into department (dname) values (?)

2 Hibernate: insert into employee (departmentId, ename, phone) values (?, ?, ?)

3 Hibernate: insert into employee (departmentId, ename, phone) values (?, ?, ?)

这样部门方就不会去维护外键关系了。但是有一个问题，对象上就没有关联了，我们要做的是对象上要互相关联，数据库方面只让一方去维护关系即可。

对象上如果不关联，因为部门和员工添加到数据库后，是持久化状态，存在于session缓存中，那session操作缓存中这几个对象时，部门就没有关联员工了，那么就还得再查询一次数据库，这不是想要的结果。

这时就要用到mappedBy属性了。

## 4、在一的一方配置@OneToMany(mappedBy="department")，将维护权交由多的一方来维护；

那为什么不让多的一方交出维护权，让一的一方来维护呢？上面的实验也表明了如果让一的一方来维护，始终都会多出两条update语句，因为外键是在多的这一方的，所以维护权应该交由多的一方。

部门类的配置：第36行和第37行的配置，部门部门交出维护权利，让对方来维护

[复制代码](javascript:void(0);)

1 package com.lizhou.entity.test;

2

3 import java.util.ArrayList;

4 import java.util.List;

5

6 import javax.persistence.CascadeType;

7 import javax.persistence.Column;

8 import javax.persistence.Entity;

9 import javax.persistence.FetchType;

10 import javax.persistence.GeneratedValue;

11 import javax.persistence.GenerationType;

12 import javax.persistence.Id;

13 import javax.persistence.JoinColumn;

14 import javax.persistence.OneToMany;

15 import javax.persistence.Table;

16

17 import org.hibernate.annotations.GenericGenerator;

18

19 /\*\*

20 \* 部门：与员工一对多关系

21 \* @author bojiangzhou

22 \*

23 \*/

24 @Entity

25 @Table(name="department")

26 public class Department {

27

28 @Id

29 @GeneratedValue(generator="\_native")

30 @GenericGenerator(name="\_native", strategy="native")

31 private int id; //ID

32

33 @Column(length=20)

34 private String dname; //部门名称

35

36 @OneToMany(mappedBy="department")

37 private List<Employee> employeeList = new ArrayList<>(); //部门下的员工集合

38

39 // get/set方法62

63 }

[复制代码](javascript:void(0);)

员工类的配置不变。

调用testSave时，部门和员工再对象上依然是关联的：第46-49行

[复制代码](javascript:void(0);)

1 package com.lizhou.action.test;

2

3 import org.hibernate.Session;

4 import org.hibernate.SessionFactory;

5 import org.hibernate.Transaction;

6 import org.hibernate.cfg.Configuration;

7 import org.junit.Test;

8 import org.springframework.context.ApplicationContext;

9 import org.springframework.context.support.ClassPathXmlApplicationContext;

10

11 import com.lizhou.entity.test.Department;

12 import com.lizhou.entity.test.Employee;

13

14 /\*\*

15 \* 测试类

16 \* @author bojiangzhou

17 \*

18 \*/

19

20 public class TestAction {

21

22 private static SessionFactory sessionFactory = null;

23

24 static {

25 //读取classpath中applicationContext.xml配置文件

26 ApplicationContext applicationContext = new ClassPathXmlApplicationContext("applicationContext.xml");

27 //获取session中配置的sessionFactory对象

28 sessionFactory = (SessionFactory) applicationContext.getBean("sessionFactory");

29 }

30

31 @Test

32 public void testSave(){

33 //创建一个部门对象

34 Department d1 = new Department();

35 d1.setDname("研发部");

36

37 //创建两个员工对象

38 Employee e1 = new Employee();

39 e1.setEname("张三");

40 e1.setPhone("13111111111");

41 Employee e2 = new Employee();

42 e2.setEname("李四");

43 e2.setPhone("18523222222");

44

45 //设置对象关联

46 d1.getEmployeeList().add(e1);

47 d1.getEmployeeList().add(e2);

48 e1.setDepartment(d1);

49 e2.setDepartment(d1);

50

51 //获取Session

52 Session session = sessionFactory.openSession();

53 //开始事务

54 Transaction t = session.beginTransaction();

55 try {

56 //添加数据

57 session.save(d1);

58 session.save(e1);

59 session.save(e2);

60 //提交事务

61 t.commit();

62 } catch (RuntimeException e) {

63 //有异常则回滚事务

64 t.rollback();

65 e.printStackTrace();

66 } finally {

67 //关闭session

68 session.close();

69 }

70 }

71

72

73 }

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控制台打印的语句：只有三条插入语句，没有更新语句了

1 Hibernate: insert into department (dname) values (?)

2 Hibernate: insert into employee (departmentId, ename, phone) values (?, ?, ?)

3 Hibernate: insert into employee (departmentId, ename, phone) values (?, ?, ?)

## 5、这里遇到一个问题：如果配置mappedBy属性的同时加上@JoinColumn会抛出异常，所以不能同时使用@JoinColumn和mappedBy；因为@JoinColumn本身就是自己来维护外键，和mappedBy冲突了。--->>>不知道这样理解正确否！！^\_^

[复制代码](javascript:void(0);)

1 package com.lizhou.entity.test;

2

3 import java.util.ArrayList;

4 import java.util.List;

5

6 import javax.persistence.CascadeType;

7 import javax.persistence.Column;

8 import javax.persistence.Entity;

9 import javax.persistence.FetchType;

10 import javax.persistence.GeneratedValue;

11 import javax.persistence.GenerationType;

12 import javax.persistence.Id;

13 import javax.persistence.JoinColumn;

14 import javax.persistence.OneToMany;

15 import javax.persistence.Table;

16

17 import org.hibernate.annotations.GenericGenerator;

18

19 /\*\*

20 \* 部门：与员工一对多关系

21 \* @author bojiangzhou

22 \*

23 \*/

24 @Entity

25 @Table(name="department")

26 public class Department {

27

28 @Id

29 @GeneratedValue(generator="\_native")

30 @GenericGenerator(name="\_native", strategy="native")

31 private int id; //ID

32

33 @Column(length=20)

34 private String dname; //部门名称

35

36 @OneToMany(mappedBy="department")

37 @JoinColumn(name="departmentId")

38 private List<Employee> employeeList = new ArrayList<>(); //部门下的员工集合

39

40 // set/get 方法63

64 }

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抛出如下异常：

[复制代码](javascript:void(0);)

1 java.lang.ExceptionInInitializerError

2 at sun.reflect.NativeConstructorAccessorImpl.newInstance0(Native Method)

3 at sun.reflect.NativeConstructorAccessorImpl.newInstance(Unknown Source)

4 at sun.reflect.DelegatingConstructorAccessorImpl.newInstance(Unknown Source)

5 at java.lang.reflect.Constructor.newInstance(Unknown Source)

6 at org.junit.runners.BlockJUnit4ClassRunner.createTest(BlockJUnit4ClassRunner.java:217)

7 at org.junit.runners.BlockJUnit4ClassRunner$1.runReflectiveCall(BlockJUnit4ClassRunner.java:266)

8 at org.junit.internal.runners.model.ReflectiveCallable.run(ReflectiveCallable.java:12)

9 at org.junit.runners.BlockJUnit4ClassRunner.methodBlock(BlockJUnit4ClassRunner.java:263)

10 at org.junit.runners.BlockJUnit4ClassRunner.runChild(BlockJUnit4ClassRunner.java:78)

11 at org.junit.runners.BlockJUnit4ClassRunner.runChild(BlockJUnit4ClassRunner.java:57)

12 at org.junit.runners.ParentRunner$3.run(ParentRunner.java:290)

13 at org.junit.runners.ParentRunner$1.schedule(ParentRunner.java:71)

14 at org.junit.runners.ParentRunner.runChildren(ParentRunner.java:288)

15 at org.junit.runners.ParentRunner.access$000(ParentRunner.java:58)

16 at org.junit.runners.ParentRunner$2.evaluate(ParentRunner.java:268)

17 at org.junit.runners.ParentRunner.run(ParentRunner.java:363)

18 at org.eclipse.jdt.internal.junit4.runner.JUnit4TestReference.run(JUnit4TestReference.java:86)

19 at org.eclipse.jdt.internal.junit.runner.TestExecution.run(TestExecution.java:38)

20 at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.runTests(RemoteTestRunner.java:459)

21 at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.runTests(RemoteTestRunner.java:675)

22 at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.run(RemoteTestRunner.java:382)

23 at org.eclipse.jdt.internal.junit.runner.RemoteTestRunner.main(RemoteTestRunner.java:192)

24 Caused by: org.springframework.beans.factory.BeanCreationException: Error creating bean with name 'sessionFactory' defined in class path resource [applicationContext.xml]: Invocation of init method failed; nested exception is org.hibernate.AnnotationException: Associations marked as mappedBy must not define database mappings like @JoinTable or @JoinColumn: com.lizhou.entity.test.Department.employeeList

25 at org.springframework.beans.factory.support.AbstractAutowireCapableBeanFactory.initializeBean(AbstractAutowireCapableBeanFactory.java:1553)

26 at org.springframework.beans.factory.support.AbstractAutowireCapableBeanFactory.doCreateBean(AbstractAutowireCapableBeanFactory.java:539)

27 at org.springframework.beans.factory.support.AbstractAutowireCapableBeanFactory.createBean(AbstractAutowireCapableBeanFactory.java:475)

28 at org.springframework.beans.factory.support.AbstractBeanFactory$1.getObject(AbstractBeanFactory.java:302)

29 at org.springframework.beans.factory.support.DefaultSingletonBeanRegistry.getSingleton(DefaultSingletonBeanRegistry.java:228)

30 at org.springframework.beans.factory.support.AbstractBeanFactory.doGetBean(AbstractBeanFactory.java:298)

31 at org.springframework.beans.factory.support.AbstractBeanFactory.getBean(AbstractBeanFactory.java:193)

32 at org.springframework.beans.factory.support.DefaultListableBeanFactory.preInstantiateSingletons(DefaultListableBeanFactory.java:684)

33 at org.springframework.context.support.AbstractApplicationContext.finishBeanFactoryInitialization(AbstractApplicationContext.java:760)

34 at org.springframework.context.support.AbstractApplicationContext.refresh(AbstractApplicationContext.java:482)

35 at org.springframework.context.support.ClassPathXmlApplicationContext.<init>(ClassPathXmlApplicationContext.java:139)

36 at org.springframework.context.support.ClassPathXmlApplicationContext.<init>(ClassPathXmlApplicationContext.java:83)

37 at com.lizhou.action.test.TestAction.<clinit>(TestAction.java:26)

38 ... 22 more

39 Caused by: org.hibernate.AnnotationException: Associations marked as mappedBy must not define database mappings like @JoinTable or @JoinColumn: com.lizhou.entity.test.Department.employeeList

40 at org.hibernate.cfg.annotations.CollectionBinder.bind(CollectionBinder.java:493)

41 at org.hibernate.cfg.AnnotationBinder.processElementAnnotations(AnnotationBinder.java:2156)

42 at org.hibernate.cfg.AnnotationBinder.processIdPropertiesIfNotAlready(AnnotationBinder.java:963)

43 at org.hibernate.cfg.AnnotationBinder.bindClass(AnnotationBinder.java:796)

44 at org.hibernate.cfg.Configuration$MetadataSourceQueue.processAnnotatedClassesQueue(Configuration.java:3788)

45 at org.hibernate.cfg.Configuration$MetadataSourceQueue.processMetadata(Configuration.java:3742)

46 at org.hibernate.cfg.Configuration.secondPassCompile(Configuration.java:1410)

47 at org.hibernate.cfg.Configuration.buildSessionFactory(Configuration.java:1844)

48 at org.hibernate.cfg.Configuration.buildSessionFactory(Configuration.java:1928)

49 at org.springframework.orm.hibernate4.LocalSessionFactoryBuilder.buildSessionFactory(LocalSessionFactoryBuilder.java:343)

50 at org.springframework.orm.hibernate4.LocalSessionFactoryBean.buildSessionFactory(LocalSessionFactoryBean.java:431)

51 at org.springframework.orm.hibernate4.LocalSessionFactoryBean.afterPropertiesSet(LocalSessionFactoryBean.java:416)

52 at org.springframework.beans.factory.support.AbstractAutowireCapableBeanFactory.invokeInitMethods(AbstractAutowireCapableBeanFactory.java:1612)

53 at org.springframework.beans.factory.support.AbstractAutowireCapableBeanFactory.initializeBean(AbstractAutowireCapableBeanFactory.java:1549)

54 ... 34 more

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还有一点说明下：

如果将第57行代码移到第59行后面，即先保存员工，再保存部门，会多出四条update语句

[复制代码](javascript:void(0);)

1 package com.lizhou.action.test;

2

3 import org.hibernate.Session;

4 import org.hibernate.SessionFactory;

5 import org.hibernate.Transaction;

6 import org.hibernate.cfg.Configuration;

7 import org.junit.Test;

8 import org.springframework.context.ApplicationContext;

9 import org.springframework.context.support.ClassPathXmlApplicationContext;

10

11 import com.lizhou.entity.test.Department;

12 import com.lizhou.entity.test.Employee;

13

14 /\*\*

15 \* 测试类

16 \* @author bojiangzhou

17 \*

18 \*/

19

20 public class TestAction {

21

22 private static SessionFactory sessionFactory = null;

23

24 static {

25 //读取classpath中applicationContext.xml配置文件

26 ApplicationContext applicationContext = new ClassPathXmlApplicationContext("applicationContext.xml");

27 //获取session中配置的sessionFactory对象

28 sessionFactory = (SessionFactory) applicationContext.getBean("sessionFactory");

29 }

30

31 @Test

32 public void testSave(){

33 //创建一个部门对象

34 Department d1 = new Department();

35 d1.setDname("研发部");

36

37 //创建两个员工对象

38 Employee e1 = new Employee();

39 e1.setEname("张三");

40 e1.setPhone("13111111111");

41 Employee e2 = new Employee();

42 e2.setEname("李四");

43 e2.setPhone("18523222222");

44

45 //设置对象关联

46 d1.getEmployeeList().add(e1);

47 d1.getEmployeeList().add(e2);

48 e1.setDepartment(d1);

49 e2.setDepartment(d1);

50

51 //获取Session

52 Session session = sessionFactory.openSession();

53 //开始事务

54 Transaction t = session.beginTransaction();

55 try {

56 //添加数据

57 session.save(e1);

58 session.save(e2);

59 session.save(d1);

60 //提交事务

61 t.commit();

62 } catch (RuntimeException e) {

63 //有异常则回滚事务

64 t.rollback();

65 e.printStackTrace();

66 } finally {

67 //关闭session

68 session.close();

69 }

70 }

71

72

73 }

[复制代码](javascript:void(0);)

[复制代码](javascript:void(0);)

1 Hibernate: insert into employee (departmentId, ename, phone) values (?, ?, ?)

2 Hibernate: insert into employee (departmentId, ename, phone) values (?, ?, ?)

3 Hibernate: insert into department (dname) values (?)

4 Hibernate: update employee set departmentId=?, ename=?, phone=? where id=?

5 Hibernate: update employee set departmentId=?, ename=?, phone=? where id=?

6 Hibernate: update employee set departmentId=? where id=?

7 Hibernate: update employee set departmentId=? where id=?

[复制代码](javascript:void(0);)

## 6、很明显，在插入员工时，还没有部门的信息，等插入部门的时候，员工方会维护外键关系，更新外键；而部门方也会维护一次，所以多了四条语句。所以以后我们自己默认在添加数据的时候先保存一的一方，再保存多的一方。

# 总结

：mappedBy属性跟xml配置文件里的inverse一样。在一对多或一对一的关系映射中，如果不表明mappedBy属性，默认是由本方维护外键。但如果两方都由本方来维护的话，会多出一些update语句，性能有一定的损耗。

解决的办法就是在一的一方配置上mappedBy属性，将维护权交给多的一方来维护，就不会有update语句了。

至于为何要将维护权交给多的一方，可以这样考虑：要想一个国家的领导人记住所有人民的名字是不可能的，但可以让所有人民记住领导人的名字！

# 注意，

1.配了mappedBy属性后，不要再有@JoinColumn，会冲突！

OK!!!

# 三、FetchType.LAZY和FetchType.EAGER （fetch英文意思：到达类型）

1、FetchType.LAZY：懒加载，加载一个实体时，定义懒加载的属性不会马上从数据库中加载。  
  
2、FetchType.EAGER：急加载，加载一个实体时，定义急加载的属性会立即从数据库中加载。  
  
3、比方User类有两个属性，name跟address，就像[百度知道](https://www.baidu.com/s?wd=%E7%99%BE%E5%BA%A6%E7%9F%A5%E9%81%93&tn=44039180_cpr&fenlei=mv6quAkxTZn0IZRqIHckPjm4nH00T1YkmHu-PAuhnWDLPWN9rjmk0ZwV5Hcvrjm3rH6sPfKWUMw85HfYnjn4nH6sgvPsT6KdThsqpZwYTjCEQLGCpyw9Uz4Bmy-bIi4WUvYETgN-TLwGUv3EnWnzPjcvPj6Y)，登录后用户名是需要显示出来的，此属性用到的几率极大，要马上到数据库查，用急加载；而用户地址大多数情况下不需要显示出来，只有在查看用户资料是才需要显示，需要用了才查数据库，用懒加载就好了。所以，并不是一登录就把用户的所有资料都加载到对象中，于是有了这两种加载模式。

## 例子 department 为本类的名字，首字母小写

## 1.@OneToMany(mappedBy="department"fetch=FetchType.EAGER)

**@ManyToOne**

**@JoinColumn(name="departmentId")//**

**2. @OneToMany(cascade= CascadeType.ALL，optional=false)**

# 四optional 指定下面的关联属性不能为空

**2. @OneToMany(cascade= CascadeType.ALL，optional=false)**

# 四， 级联设置到哪边，哪边有决定权

# 五。多对多，中间表

## 1、中间表 rec\_special\_job

## 2.本表指向中间表的外键为 ord\_id ，属性referencedColumnName标注的是所关联表中的字段名，若不指定则使用的所关联表的主键字段名作为外键 。

## 3.另一张表对应中间表外键的为 job\_id

@ManyToMany(cascade = CascadeType.ALL)  
@JoinTable(name=**"rec\_special\_job"**,  
 joinColumns=@JoinColumn(name=**"ord\_id"** ,referencedColumnName=**"id"**),  
 inverseJoinColumns=  
 {@JoinColumn(name=**"job\_id"** ,referencedColumnName=**"id"**),  
 })  
**private** List<RecruitJob> recruitJobs = **new** ArrayList<RecruitJob>();

# 六 一对一 （主键关联）

OneToOne(cascade=CascadeType.ALL,optional=true)  
@JoinColumn(name="addressID")//注释本表中指向另一个表的外键。  
    public Address getAddress() {  
        return address;  
    }  
如果我们不加的话,也是可以通过的,在JBOSS里面,它会自动帮你生成你指向这个类的类名加上下划线再加上id的列,也就是默认列名是:address\_id.  
如果是主键相关联的话,那么可以运用如下注释  
@OneToOne(cascade={CascadeType.ALL})  
   @PrimaryKeyJoinColumn 表明两个实体通过主键相关联  
   public Address getAddress( ) {  
      return homeAddress;  
   }  
它表示两张表的关联是根据两张表的主键的 主键值相同

## 7. @PrimaryKeyJoinColumn，解释（就业去向信息主键和学生的主键一抹一样，同时就业去向表中拥有）

@Entity  
@Table(name = **"graduate\_destination"**)  
**public class** GraduateDestination {  
 *// 编号，主键UUID* @Id  
 @GenericGenerator(name = **"myForeignGenerator"**, strategy = **"foreign"**,  
 parameters = @Parameter(name=**"property"**,value=**"studentInfo"**))  
 @GeneratedValue(generator = **"myForeignGenerator"**)  
 **private** UUID **id**;  
  
 *// 关联的学生信息* @OneToOne(cascade={CascadeType.***ALL***}, optional = **false**)  
 @PrimaryKeyJoinColumn  
 **private** StudentInfo **studentInfo**;

以大连理工的学籍项目为例，在线程中开辟了保存学生的同时也要保存就业去向的信息，可以先保存就业去向信息再保存学生信息，即使保存就业去向信息的时候学生的id还没有，但是不用担心。因为会自动将学生的id变成和就业去向一抹一样的id

*//就业去向*GraduateDestination graduateDestination = **new** GraduateDestination();  
graduateDestination.setStudentInfo(studentInfo);  
graduateDestination.setStuStatus(**"00"**);  
**graduateDestinationCommandService**.save(graduateDestination);  
  
StudentInfo studentInfoGraduate = **studentInfoCommandService**.saveStudentInfo(studentInfo);