实验4 Spring与MyBatis实验——案例补充

(一) 实验目的

- 1. 通过本实验了解MyBatis的作用
- 2. 通过本实验了解什么是ORM
- 3. 通过本实验了解SqlSessionFactory
- 4. 通过本实验了解SqlSession
- 5. 通过本实验掌握MyBatis的配置
- 6. 通过本实验学会用JUnit进行单元测试

(二) 实验内容

- 1. 新建Web工程
- 2. 创建applicationContext.xml 文件,引入Spring的约束
- 3. 分层实现service层和dao层bean
- 4. 将MyBatis核心包和数据库驱动jar包文件导入项目
- 5. 配置MyBatis框架的配置文件SqlMapConfig.xml
- 6. 编写mapper接口
- 7. 配置实体映射文件xml

(三) 实验要求

- 1. 实验过程要求每个同学根据实验指导书认真完成
- 2. 每个同学认真书写实验总结,不能有雷同

案例

- 1. 添加用户
- a. 打开IUserMapper接口,并添加方法addUser(User user)方法

```
package cn.edu.abtu.mappers;
mybatis_test E:\ideaworkspace\SSM\mybatis_test
                                                import cn.edu.abtu.pojo.User;

∨ □ src

∨ □ main

    🗸 🗀 java
                                          IUserMapper
        > 🖻 pojo

✓ 
    service

✓ impl

               © UserServiceImpl
            IUserService

∨ □ resources

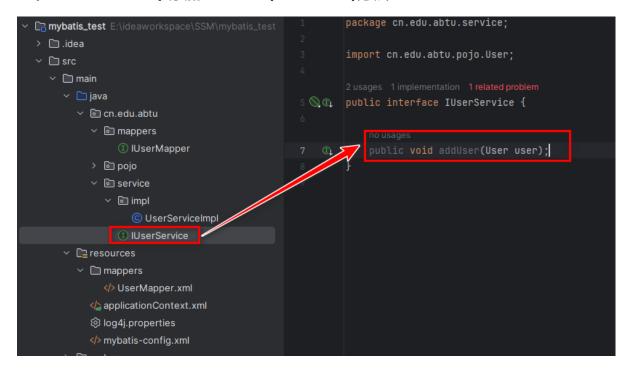
∨ □ mappers

√ UserMapper.xml

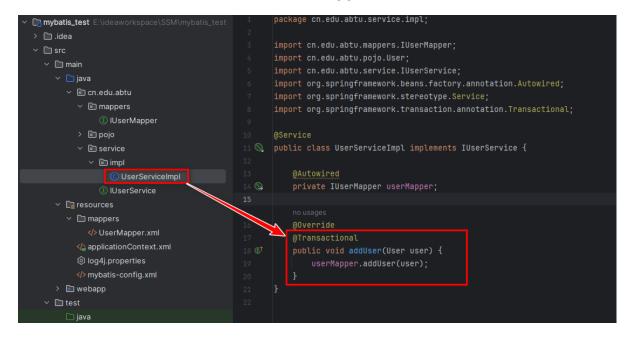
        applicationContext.xml
        log4j.properties
```

b. 打开UserMapper.xml文件,在该文件实现addUser的数据库操作

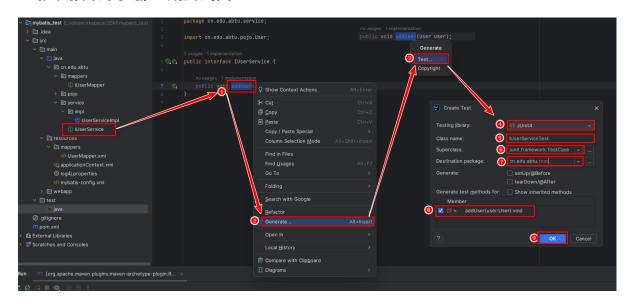
c. 在IUserService中添加addUser(User user)方法



d. 在UserServiceImpl类中实现IUserService接口中的addUser(User user)方法,该方法实现事务,并在该方法中调用Mapper层的addUser()方法。



e. 依次按以下步骤生成测试类



f. 在测试类的addUser方法中编写测试代码

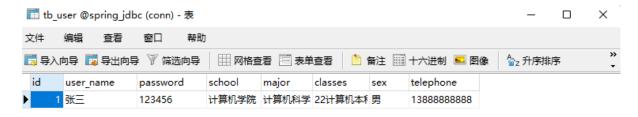
```
package cn.edu.abtu.test:
                                                                    @Test
public void testaddUser() {
     cn.edu.abtu
            (I) IUserMapper
                                                                         IUserService userService = (IUserService) applicationContext.getBean( s: "UserService)
                                                                        User user = new User();
user.setUserName("张三");
         ∨ lomi impl
                                                                        user.setPassword("123456");
user.setSchool("计算机学院");
            ① IUserService
 resources
                                                                        user.setMajor("计算机科学与技术");
user.setClasses("22计算机本科");
     mappers 
      applicationContext.xml

⊗ log4j.properties

> 🖻 webapp

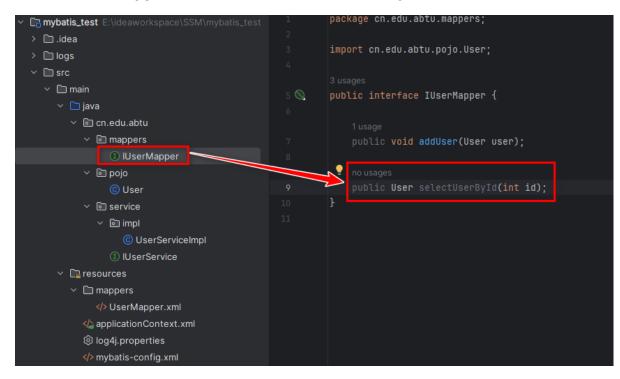
∨ In cn.edu.abtu.test
```

g. 观察实验结果

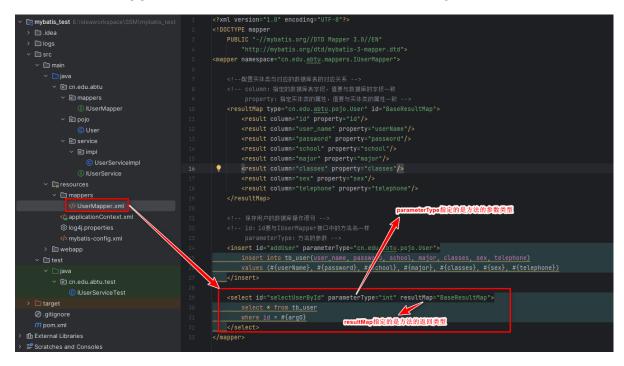


2. 查询用户

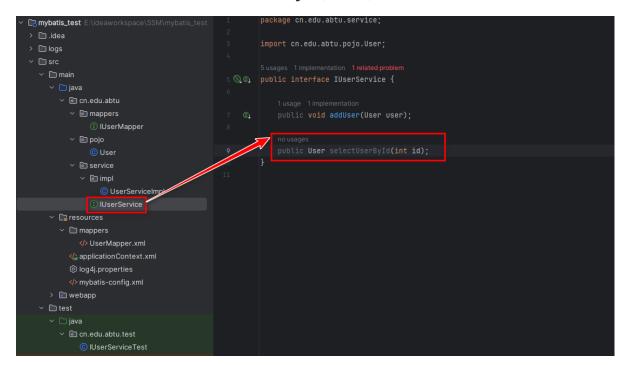
a. 打开IUserMapper接口,并添加方法selectUserByld(int id)方法



b. 打开UserMapper.xml文件,在该文件实现selectUserByld的数据库操作



c. 在IUserService中添加selectUserByld(int id)方法



d. 在UserServiceImpl类中实现IUserService接口中的selectUserByld(int id)方法,该方法实现事务,并在该方法中调用Mapper层的selectUserByld(int id)方法。

```
package cn.edu.abtu.service.impl:
mybatis_test E:\ideaworkspace\SSM\mybatis_tes
> 🗀 logs

∨ □ main

                                                    import org.springframework.beans.factory.annotation.Autowired;
       import org.springframework.transaction.annotation.Transactional;
          mappers
              IUserMapper
          ✓ logo pojo

∨ iservice

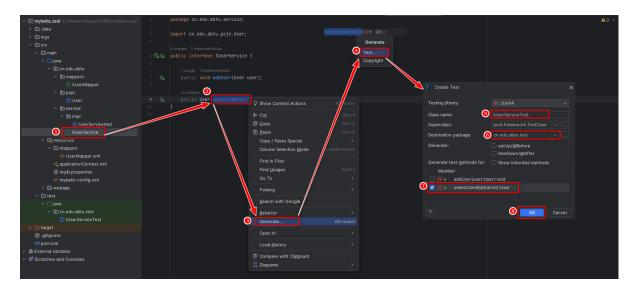
            ✓ impl
                  UserServiceImpl
        mappers

√ UserMapper.xml

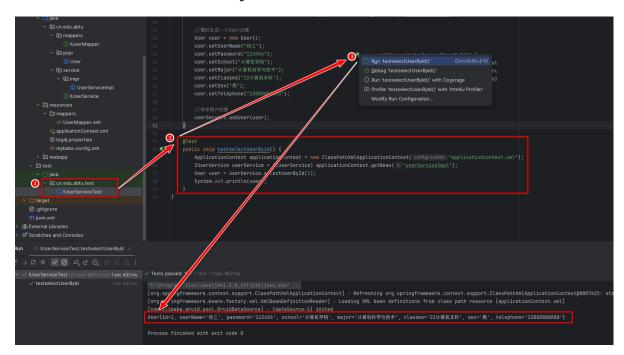
                                                            userMapper.addUser(user);
          </a> applicationContext.xml
         log4j.properties
         mybatis-config.xml
                                                         @Override
   ∨ li⊓ test

∨ i cn.edu.abtu.test
```

e. 生成测试方法。



f. 在测试方法testselectUserByld方法中编写测试代码, 并打印查询的实体



3. 查询用户列表

a. 打开IUserMapper接口,并添加方法selectUserList(User user)方法

```
package cn.edu.abtu.mappers;
mybatis_test E:\ideaworkspace\SSM\mybatis_test
 > 🗀 .idea
                                                                                                                                                                                                                                                                                                               import cn.edu.abtu.pojo.User;
 > 🗀 logs

∨ □ src

               main
                            🗸 🗀 java

√ No. | public interface IUserMapper {
                                                         IUserMapper
                                                        ∨ 🗈 pojo
                                                                                                                                                                                                                                                                                                                                       public void addUser(User user);

∨ iservice

✓ impl

                                                                                                 © UserServiceImpl
                                                                                  IUserService

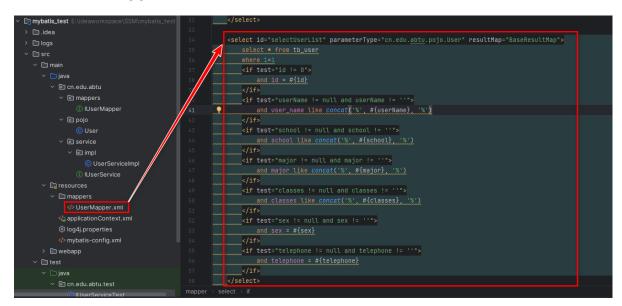
∨ □ resources

                                          mappers

√ UserMapper.xml

                                                       applicationContext.xml
                                                       @ log4j.properties
                                                       mybatis-config.xml
                            > 🖻 webapp
```

b. 打开UserMapper.xml文件,在该文件实现selectUserList的数据库操作



c. 在IUserService中添加selectUserList(User user)方法

```
mybatis_test E:\ideaworkspace\SSM\mybatis_test
  > 🗀 logs
  ∨ 🗀 src

∨ □ main

∨ 
in cn.edu.abtu

                                                                                                                                                                                                                                                                                                                                          7 Q.♠ public interface IUserService {
                                                                    ① IUserMapper
                                                                    ✓ i pojo
                                                                                                  © User

∨ iservice

                                                                                                                                                                                                                                                                                                                                                                                                                            public User selectUserById(int id);

✓ impl

                                                                                                        © UserServiceImpl

∨ □ resources

∨ □ mappers

◆ UserMapper.xml

                                                                  applicationContext.xml

⊗ log4j.properties

                                                                 mybatis-config.xml
```

d. 在UserServiceImpl类中实现IUserService接口中的selectUserList(User user)方法,该方法实现事务,并在该方法中调用Mapper层的 selectUserList(User user)方法。

```
mvbatis_test E:\ideaworkspace\SSM\mvbatis tes
                                              Dublic class UserServiceImpl implements IUserService {
> 🗀 logs
  🗸 🗀 main
       ① IUserMapper
                                                      public void addUser(User user) {
         ∨ lo pojo

✓ 
iii service

    impl

           © UserServiceImpl
                                                         return userMapper.selectUserById(id);

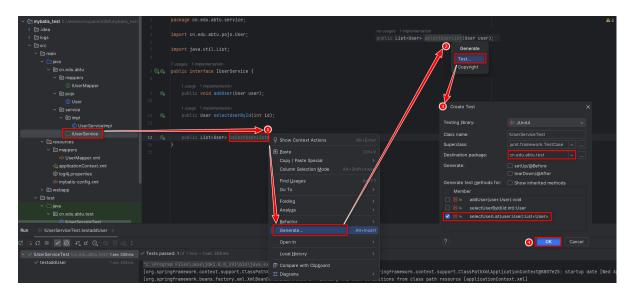
∨ 

□ resources

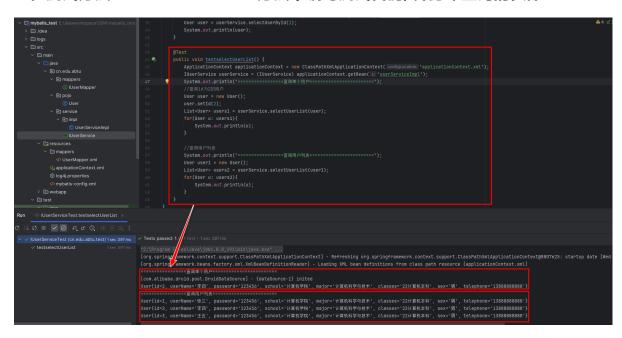
⟨→ UserMapper.xml

         @ log4j.properties
                                                      public List<User> selectUserList(User user) {
         mybatis-config.xml
                                                         return userMapper.selectUserList(user);
    > 🖻 webapp
```

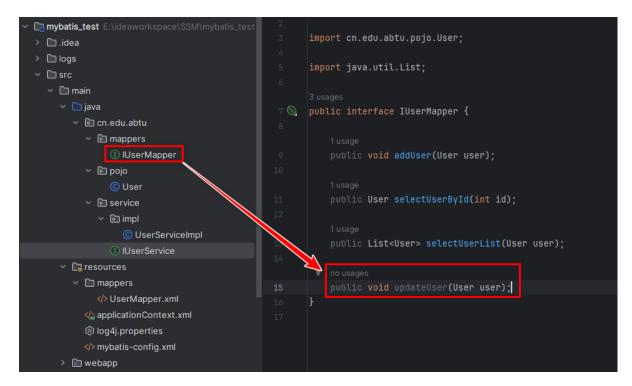
e. 生成测试方法。



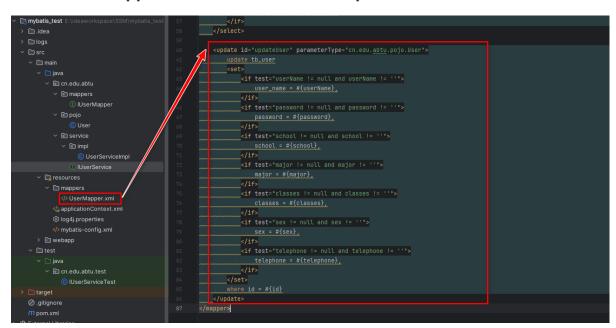
f. 在测试方法testselectUserList方法中编写测试代码, 并打印查询的实体



- 4. 修改用户信息
- a. 打开IUserMapper接口,并添加方法updateUser(User user)方法



b. 打开UserMapper.xml文件,在该文件实现updateUser的数据库操作



c. 在IUserService中添加updateUser(User user)方法

```
package cn.edu.abtu.service;

➤ □ mybatis_test E:\ideaworkspace\SSM\mybatis_test

             > 🗀 .idea
                                                                                                                                                                                                                                                                                             import cn.edu.abtu.pojo.User;
            > 🗀 logs
             ∨ 🗀 src
                                                                                                                                                                                                                                                                                             import java.util.List;

∨ □ main

∨ 
in cn.edu.abtu

                                                                                                                                                                                                                                                      7 ♥ public interface IUserService {
                                                           IUserMapper
                                                            ✓ i pojo
                                                                                  © User

∨ iservice

                                                                                                                                                                                                                                                                                                                  public User selectUserById(int id);

✓ impl

                                                                                           © UserServiceImpl

    IUserService 

∨ □ resources

∨ □ mappers

                                                                     ♦ UserMapper.xml
                                                                                                                                                                                                                                                                                                                     public void updateUser(User user);
                                                          applicationContext.xml

⊗ log4j.properties

√ mybatis-config.xml

                                   > 🖻 webapp

∨ 
□ test
```

d. 在UserServiceImpl类中实现IUserService接口中的updateUser(User user) 方法,该方法实现事务,并在该方法中调用Mapper层的updateUser(User user) 方法。

```
mybatis_test E:\ideawor
> 🗀 .idea

∨ 
in cn.edu.abtu

                                                                userMapper.addUser(user);
               ① IUserMapper

✓ 
iii service

                 © UserServiceImpl

∨ □ mappers

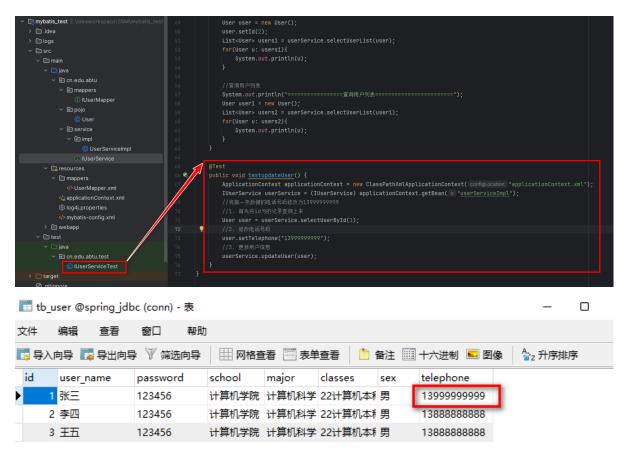
                                                            public List<User> selectUserList(User user) {
            UserMapper.xml
                                                                return userMapper.selectUserList(user):
          applicationContext.xml

⊗ log4j.properties

⟨→ mybatis-config.xml

   ∨ li⊐test
                                                            public void updateUser(User user) {
                                                                userMapper.updateUser(user);
```

e. 生成测试方法。在测试方法testupdateUser方法中编写测试代码, 并查看数据记录



5. 删除用户

a. 打开IUserMapper接口,并添加方法deleteUser(int id)方法

```
package cn.edu.abtu.mappers;
mybatis_test
                                                 import cn.edu.abtu.pojo.User:
> 🗀 logs
    iava
                                             public interface IUserMapper {
         IUserMapper
        ✓ i pojo
                                                     public void addUser(User user):
         public User selectUserById(int id);
           ∨ 🗟 impl

∨ □ resources

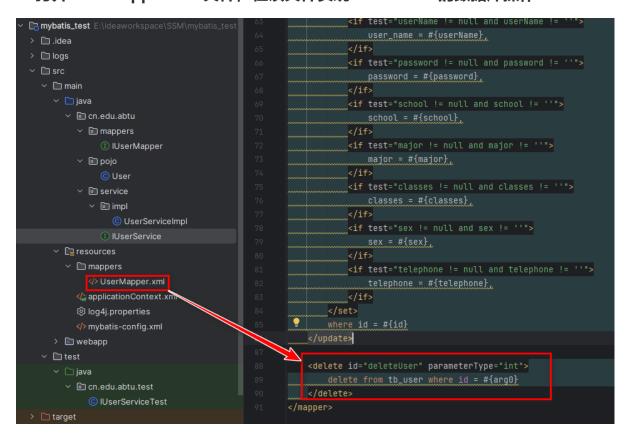
∨ □ mappers

√ UserMapper.xml

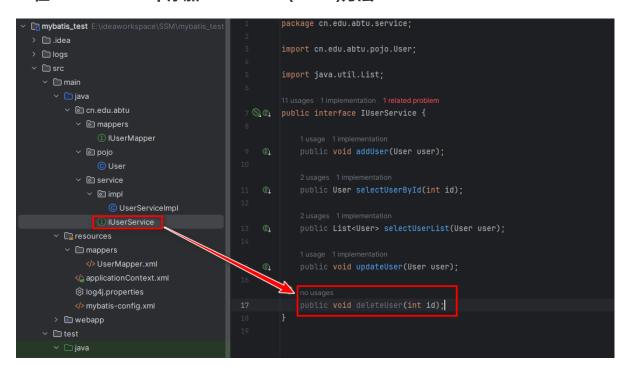
         applicationContext.xml
        ($) log4j.properties
         mybatis-config.xml
    > 🖻 webapp

✓ □ test
```

b. 打开UserMapper.xml文件,在该文件实现deleteUser的数据库操作



c. 在IUserService中添加deleteUser(int id)方法



d. 在UserServiceImpl类中实现IUserService接口中的deleteUser(int id)方法,该方法实现事务,并在该方法中调用Mapper层的deleteUser(int id)方法。

```
> 🗀 .idea
> 🗀 logs

∨ □ src

  main

✓ imappers

             IUserMapper
         ✓ i pojo
                                                          return userMapper.selectUserById(id);
         ✓ impl
               © UserServiceImpl
                                                      public List<User> selectUserList(User user) {

∨ □ resources

                                                         return userMapper.selectUserList(user);
       mappers
           UserMapper.xml
         applicationContext.xml
         log4j.properties
                                                      public void updateUser(User user) {
         mybatis-config.xml
                                                          userMapper.updateUser(user);
    > 🖻 webapp

∨ □ test

    java

∨ In cn.edu.abtu.test

           © IUserServiceTest
                                                      public void deleteUser(int id) {
 target
                                                          userMapper.deleteUser(id);
  .gitignore
```

e. 生成测试方法。在测试方法testdeleteUser方法中编写测试代码,并查看数据信息是否删除成功。

