LAB 6 AOP- Results

*This shows results/console output for each case along with results:*

Add AOP functionality to the Solution of Lab 4.

Add Maven dependencies

Add Configuration in XML file.

Disable Hibernate Show SQL

1. Create AuctionAspect.java

Add an implicit Pointcut [execution] that looks for all Service methods.

Use it in a Before advice type on an Advice method that Prints out Method name.

Verify that it generated a message for all the Service method calls [~ 12].

* Our advice was applied and console showed 16 logging messages.

\*\*\*\*\*\*\*\*\*\* METHOD NAME : save \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : update \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : save \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : save \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : save \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : save \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findOne \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findOne \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : update \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : update \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : update \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findAll \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findByCategoryName \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* NamedQuery -> Items by Category : Sports \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Skates

\*\*\*\*\*\*\*\*\*\* find By Buyer Or Seller \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findOne \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findOne \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findBySellerOrBuyer \*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Shoes

1. Make the pointcut into an explicit pointcut.

Validate that it works.

* Yes, it works the same as above.

1. Change the pointcut arguments from (..) to (Long)

What is the result?

* We only get our advice applied to service methods which has Long argument. So we got the logging at 4 places as shown below.

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findOne \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findOne \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* NamedQuery -> Items by Category : Sports \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Skates

\*\*\*\*\*\*\*\*\*\* find By Buyer Or Seller \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findOne \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findOne \*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Shoes

1. Change the pointcut arguments from (Long) to ()

What is the result?

* Only one service method with no arguments (i.e. the findAll method) will have the advice attached to it. But since it is not called from us, we do not get the logging message.

\*\*\*\*\*\*\*\*\*\* NamedQuery -> Items by Category : Sports \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Skates

\*\*\*\*\*\*\*\*\*\* find By Buyer Or Seller \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Shoes

1. Add a findAll() to testItems.java

Now what is the result?

* Since findAll() is called we get the logging message as below.

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findAll \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* NamedQuery -> Items by Category : Sports \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Skates

\*\*\*\*\*\*\*\*\*\* find By Buyer Or Seller \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Shoes

1. Replace the execution pointcut with a combination of a within() and an args() pointcut

* Logging on findAll() method call is observed as shown below.

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findAll \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* NamedQuery -> Items by Category : Sports \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Skates

\*\*\*\*\*\*\*\*\*\* find By Buyer Or Seller \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Shoes

1. Add another Advice method with a User parameter:

**public** **void** logResourceName(JoinPoint joinPoint, User user) {

use an explicit pointcut with a combination of a within() and an args(user).

**[ be sure to printout user name from advice method]**

* The advice method is now linked to methods in UserServiceImpl and called on save and update method which had args as user.

USER NAME: John Doe ####### TARGET CLASS & METHOD NAME: edu.mum.service.UserService.save #######

USER NAME: Jane Doe ####### TARGET CLASS & METHOD NAME: edu.mum.service.UserService.save #######

USER NAME: Jane Doe ####### TARGET CLASS & METHOD NAME: edu.mum.service.UserService.update #######

\*\*\*\*\*\*\*\*\*\* METHOD NAME : findAll \*\*\*\*\*\*\*\*\*\*

\*\*\*\*\*\*\*\*\*\* NamedQuery -> Items by Category : Sports \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Skates

\*\*\*\*\*\*\*\*\*\* find By Buyer Or Seller \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Item Name : Sled

Item Name : Shoes