

Smooks Tools Quick Start

Author : Dart Peng

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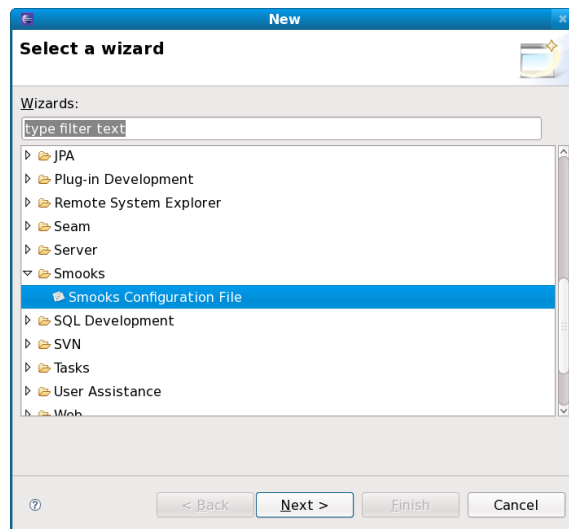
Java to Java

Ready to start

- Download the Smooks 1.0.1 examples and library first. <http://downloads.sourceforge.net/smooks/smooks-1.0.1.zip>
- Create a new Java project and copy the java-to-java example codes of the Smooks examples to this new project. (Include the some other xml configuration file)
- Get the Jbosstools 3.0.0 beta1.

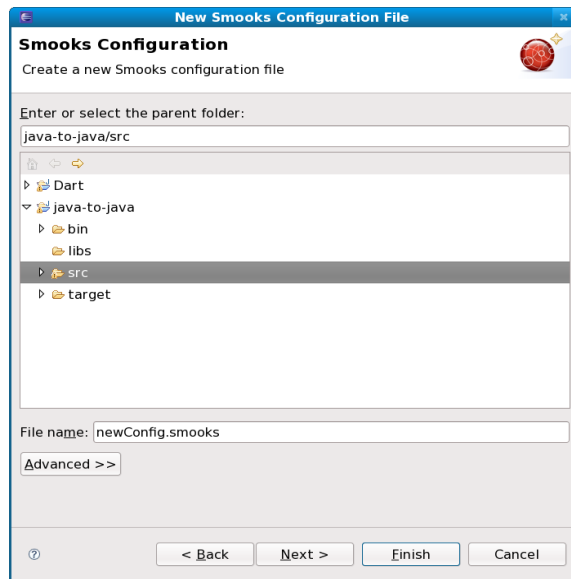
New a Smooks configuration file

First , select the Java project what you created first to create Smooks configuration file and right-click , select : “New” -> “Other...” , find the “Smooks Configuration File” wizard. Click “Next” button.



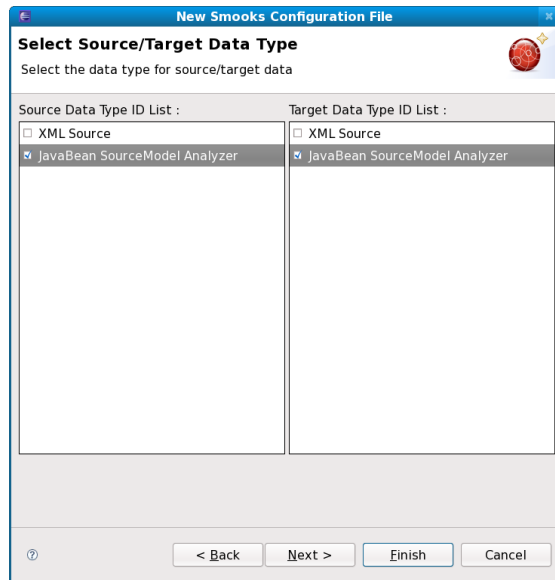
Pic 1.1 To select Smooks Configuration File wizard

First wizard page is file path creation page. Select the “src” to be the file's container , and type “smooks-newconfig.smooks” to be the file's name. Click “Next”.



Pic 1.2 Choose the configuration file container and type the file's name

The second wizard page is the transform data type choose page. For this tutorial, please select the “Java Bean” for source data type and “Java bean” for target data type.

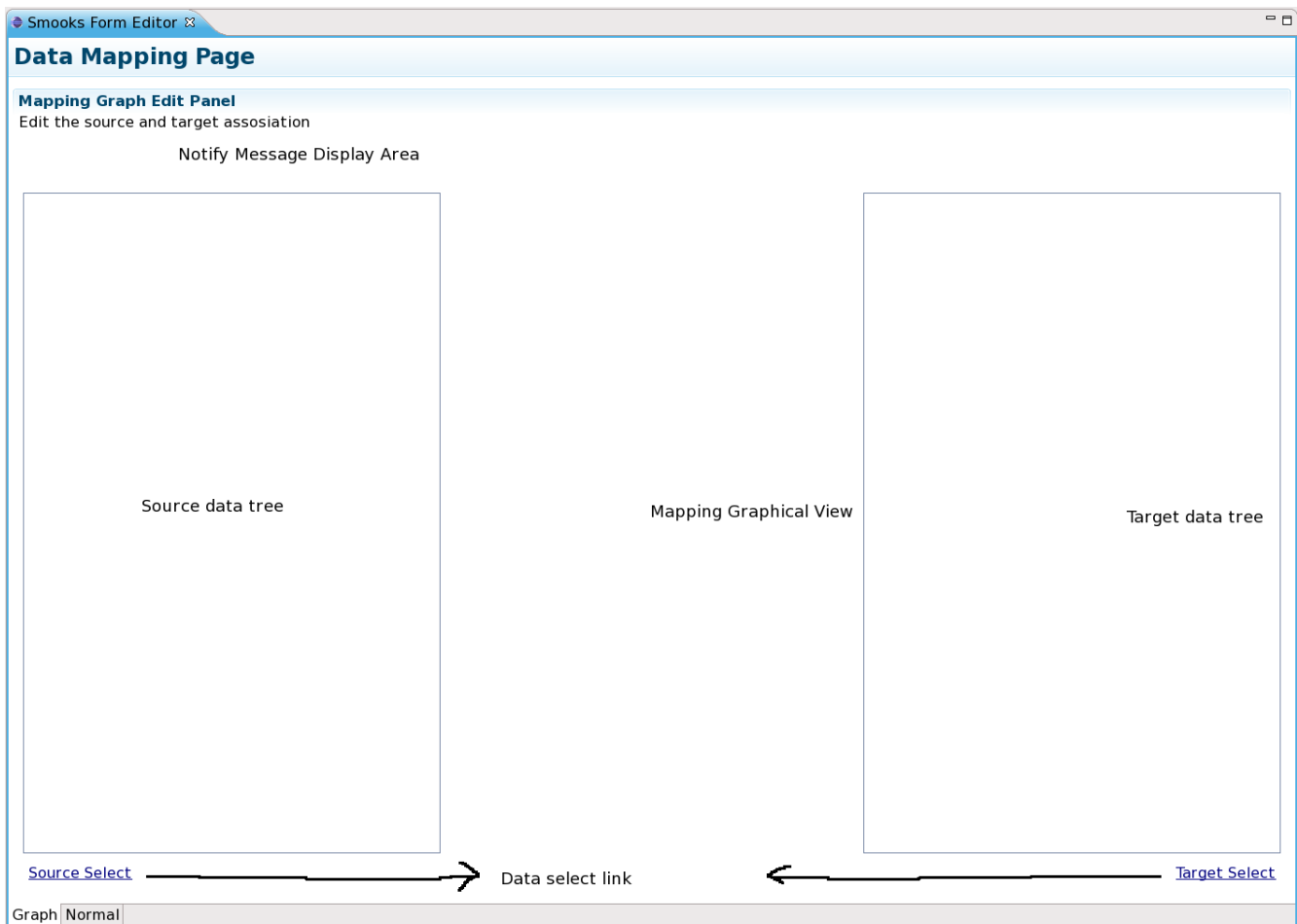


Pic 1.3 Data Type Select

Now , we can click “Finish” to create a new Smooks configuration file. You could click “Next” button to select the source/target data , but for telling you how to use the Smooks editor , please click “Finish” now.

Smooks Form Editor

When the wizard finish to create a new Smooks configuration file , the Smooks editor will be opened automatically. We will see a “Form Editor”.



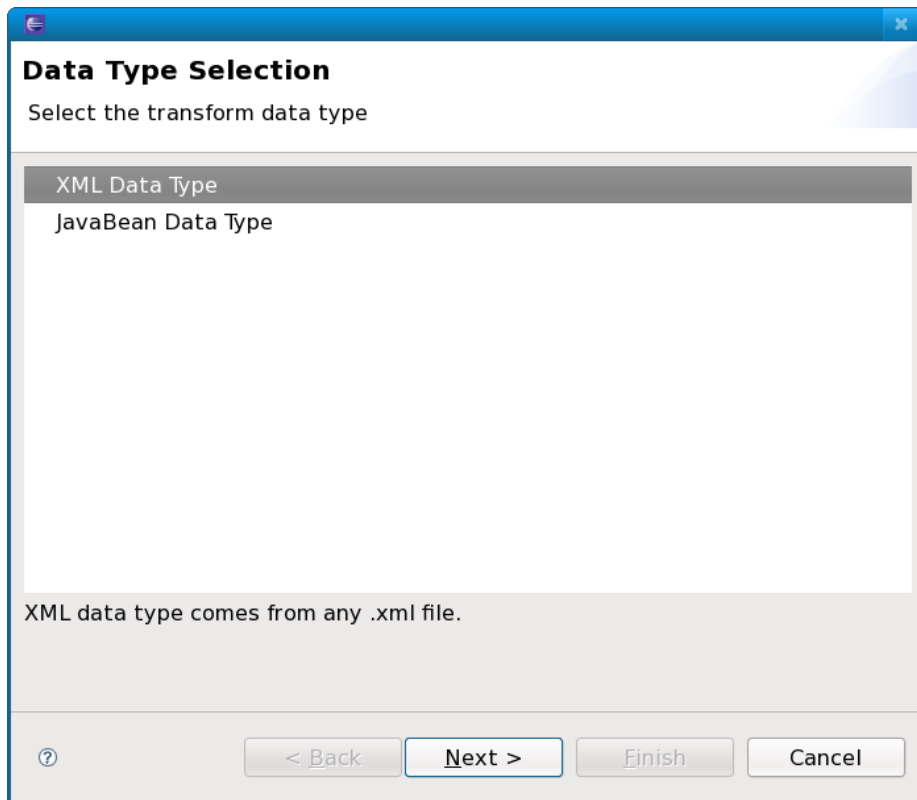
Pic 2.1 Form Editor

This editor contains several parts :

1. Notify message display area. If there are any errors , this area will display them.(You will see a empty area , because now there aren't any errors)
2. Source data tree. The tree will display the structured of transform source data.
3. Target data tree. The tree will display the structured of transform source target.
4. Mapping graphical area. Show the data mapping lines.
5. Source/Target data selection links. Click the link , there will open a data selection wizard to help user to choose the source/target data.

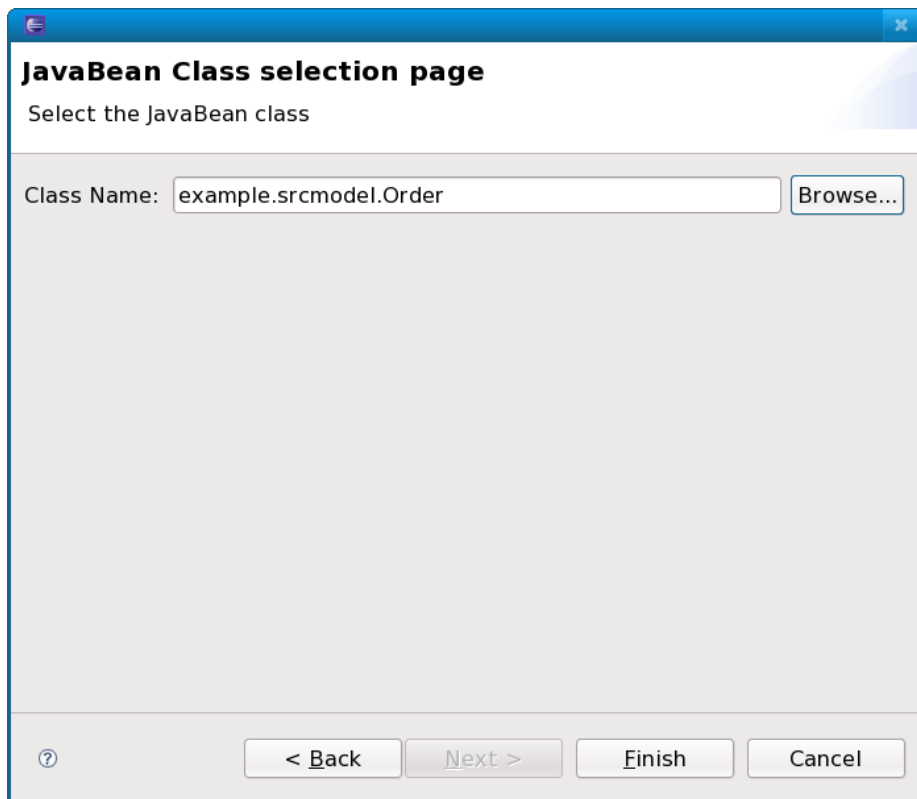
Choose the source/target data

Click the data selection links to choose the transform data. You will see a wizard , and there are two items on it : XML,Java.



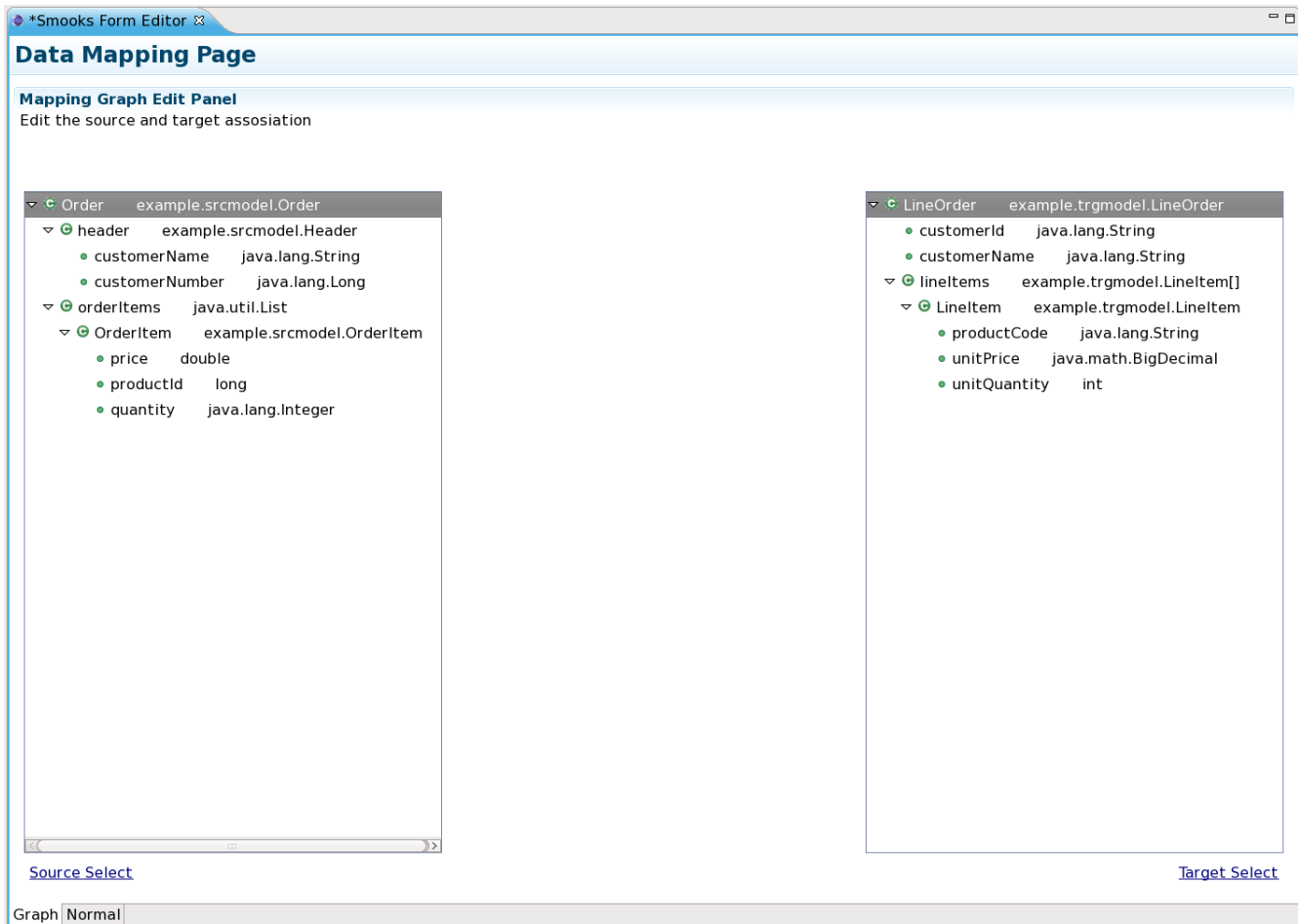
Pic 3.1 Data Selection Wizard

Select the "JavaBean Data Type" and click "Next" , you will see a java class selection page :



Pic 3.2 JavaBean Class selection page

After you confirm the java class , click “Finish” , you will find , the structured of the class was be display on the Source data tree. Please do the same operation for the target data link.



Pic 3.3 Display structure of the transform data.

Mapping

As you see , the source/target data tree display the structure of the java class. How to mapping it?

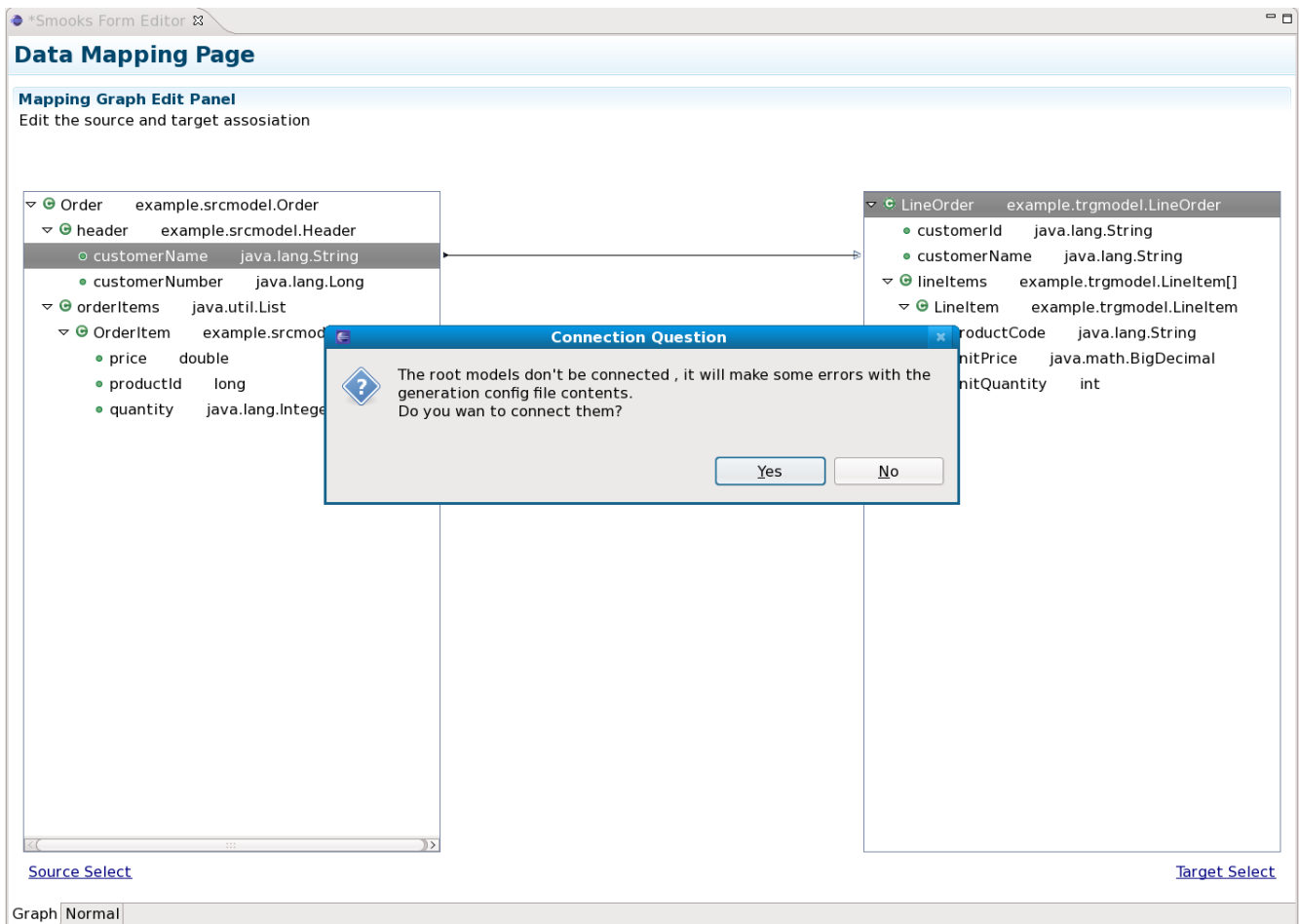
First , we should know what is we want to transform:

1. Bind the “customerName” property of the Order#header to the “customerName” property of LineOrder.
2. Bind the “customerNumber” property of the Order#header to the “customerId” property of LineOrder.
3. Bind the “price” property of the OrderItem to the “unitPrice” property of LineItem.
4. Bind the “productId” property of the OrderItem to the “productCode” property of LineItem.
5. Bind the “quantity” property of the OrderItem to the “unitQuantity” property of LineItem.

Make sense ? OK, let's select the “customerName” item of the “header” item on the source data tree and start to drag it.

When the drag item cross into the Mapping graphical area , we will see a connection line. Drop the item onto the “customerName” of the “LineOrder” on the target data view.

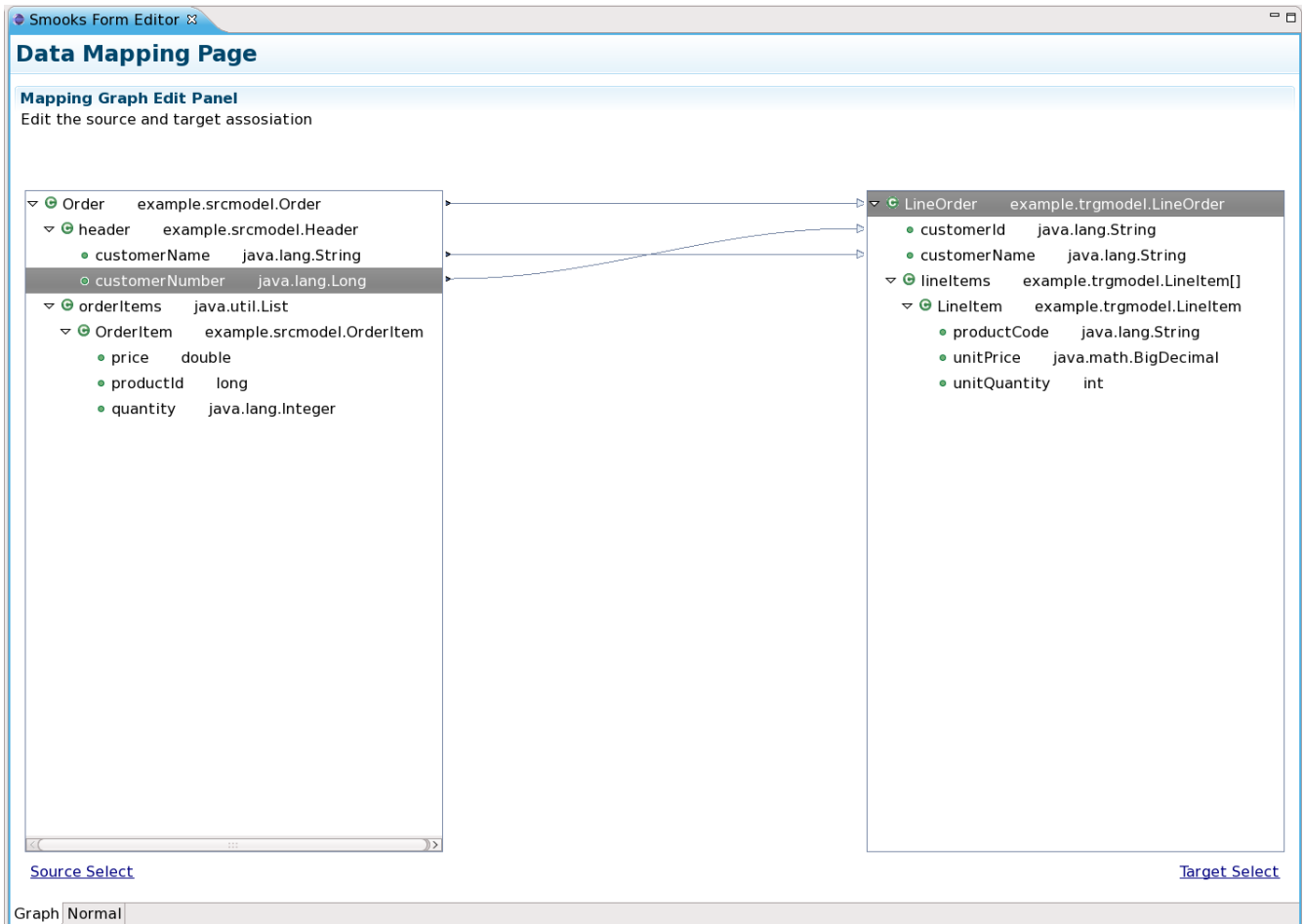
Now there will open a dialog to ask you that do you want to connect the root node:



Pic 4.1 A dialog to ask user to connect the root nodes

Please click “Yes” to connect the root node , if you don't , this dialog will open again when you connect other nodes. Please remember that : **The root nodes of the source data and target data MUST be connected.** (Not only Java-to-Java , the same as XML-to-Java).

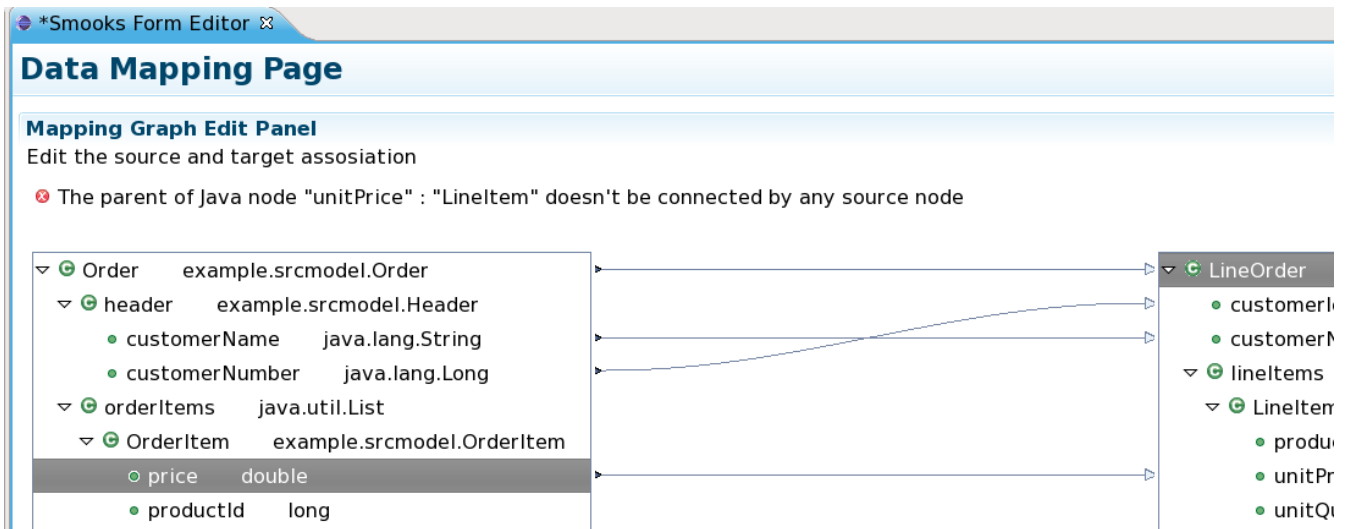
Now let's do the same operation with the “customerNumber” , that is the what we want to see :



Pic 4.2 Correctly mapping editor

Next , we are going to try to bind the properties of the “OrderItem” to the properties of the “LineItem”.

Select the “price” and drag it onto the “unitPrice” of the other side tree viewer. The notify message display area will show an error :



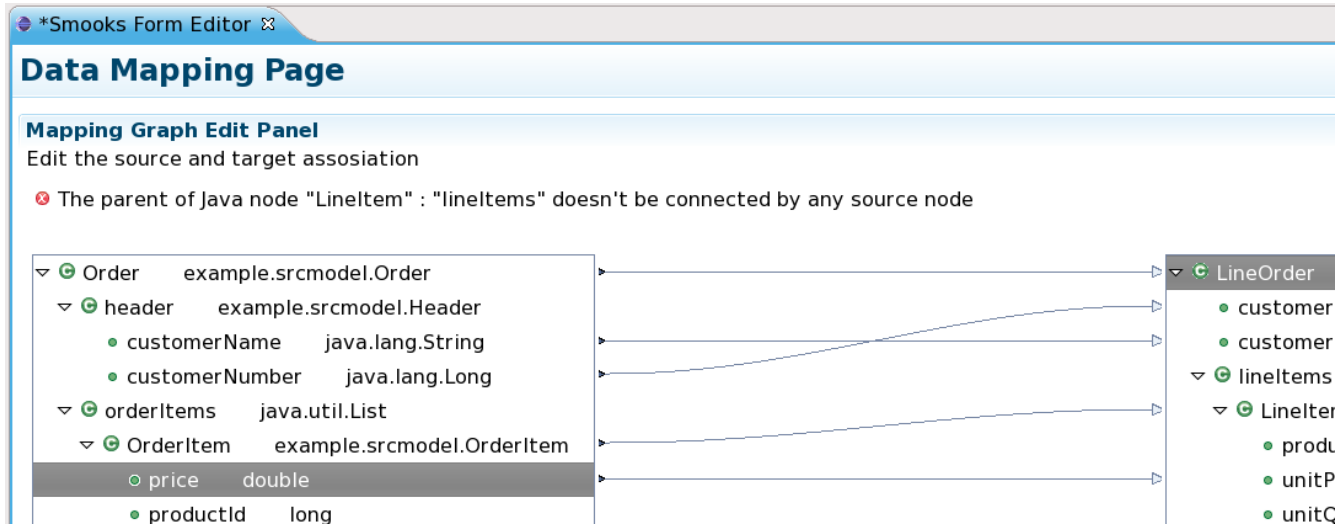
Pic 4.3 Connection Error 1

How to deal with the error ?

Please right-click the error message , you will see a menu and there will show several resolves on the menu (Sorry , can't get the captures when the menu opened).

Select the first resolve : <Connect the “OrderItem” to the “LineItem” > , then you will find that the “OrderItem” was connected with the “LineItem”.

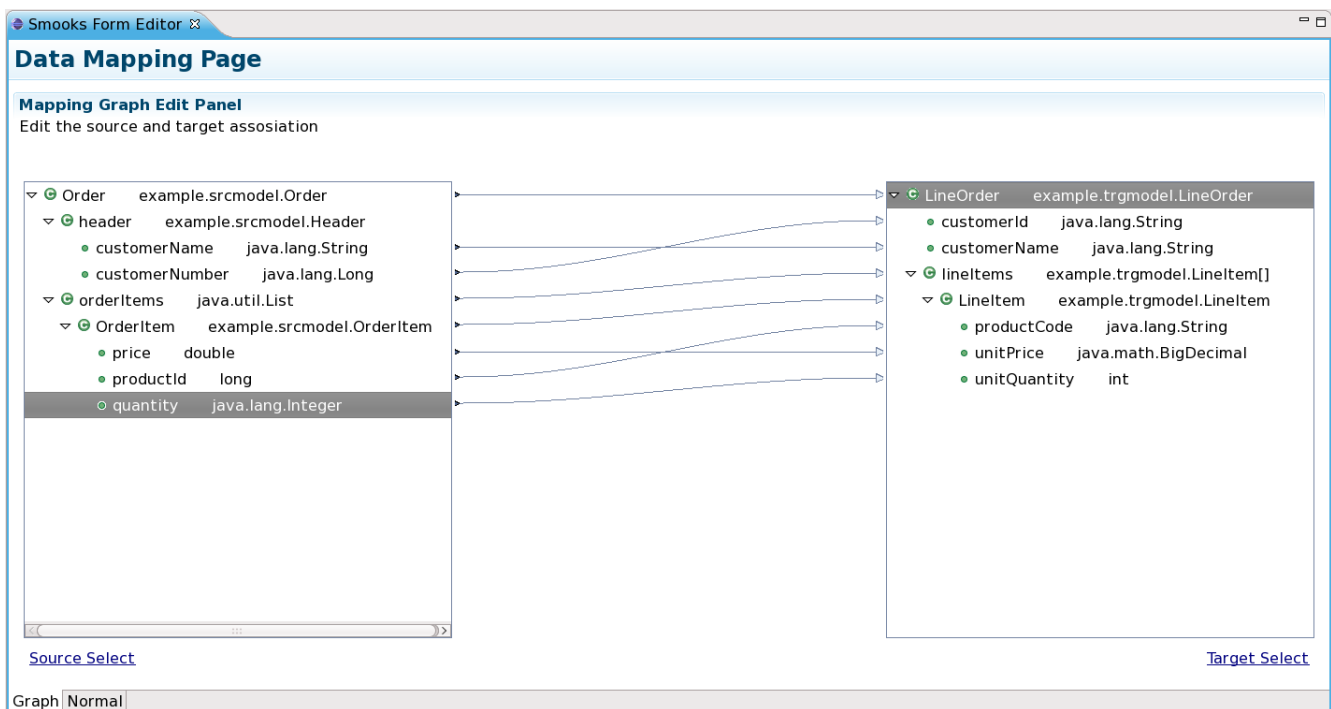
But the notify message area still show some other errors:



Pic 4.3 Connection Error 2

OK,Deal it with the fire error ---- Right-click , and select the first resolve item. The “orderItems” was connected with the “lineItems”.

Why there will occur error? We will find that , **if we only connect the property node without to connect the parent node of the property , the “connection error” will happen.** We can say that the connection of the “price to unitPrice” is the “Binding Connection” , but there need a “Instance Creation Connection” ---- the connection of the “OrderItem to LineItem”. After that , connect the quantity to the unitQuantity ; connect the productId to the productCode:



Pic 4.4 Complete mapping

Now , we should save the file.

Properties View

OK,Let run the test class : example.Main (Please make sure that the Smooks engine load the correct configuration file)

Oh , Exceptions occur!

Let me look at it :

```

Nov 2, 2008 10:40:07 PM org.milyn.delivery.ContentDeliveryConfigBuilder getStreamFilterType
INFO: All configured XML Element Content Handler resource configurations can be applied using the SAX or DOM Stream Filter. Defaulting to DOM Filter.
Nov 2, 2008 10:40:08 PM org.milyn.delivery.dom.SmooksDOMFilter processVisitorException
SEVERE: Failed to apply processing unit [org.milyn.javabean.BeanInstancePopulator] to [org:milyn:smooks:unknowndoc:/example.srcmodel.Order/orderItems/e
org.milyn.cdr.SmooksConfigurationException: Bean [LineItem] configuration invalid. Bean setter method [setUnitQuantity(java.lang.String)] not found on
    at org.milyn.javabean.BeanInstancePopulator.populateAndSetPropertyValue(BeanInstancePopulator.java:347)
    at org.milyn.javabean.BeanInstancePopulator.populateAndSetPropertyValue(BeanInstancePopulator.java:317)
    at org.milyn.javabean.BeanInstancePopulator.bindDomDataValue(BeanInstancePopulator.java:232)
    at org.milyn.javabean.BeanInstancePopulator.visitAfter(BeanInstancePopulator.java:178)
    at org.milyn.delivery.dom.SmooksDOMFilter$ElementProcessor.processMapping(SmooksDOMFilter.java:727)
    at org.milyn.delivery.dom.SmooksDOMFilter$ElementProcessor.process(SmooksDOMFilter.java:671)
    at org.milyn.delivery.dom.SmooksDOMFilter$ElementProcessor.access$000(SmooksDOMFilter.java:625)
    at org.milyn.delivery.dom.SmooksDOMFilter.filter(SmooksDOMFilter.java:352)
    at org.milyn.delivery.dom.SmooksDOMFilter.filter(SmooksDOMFilter.java:285)
    at org.milyn.delivery.dom.SmooksDOMFilter.doFilter(SmooksDOMFilter.java:235)
    at org.milyn.Smooks.filter(Smooks.java:288)
    at example.Main.runSmooksTransform(Main.java:56)
    at example.Main.main(Main.java:73)
Nov 2, 2008 10:40:08 PM org.milyn.delivery.dom.SmooksDOMFilter processVisitorException

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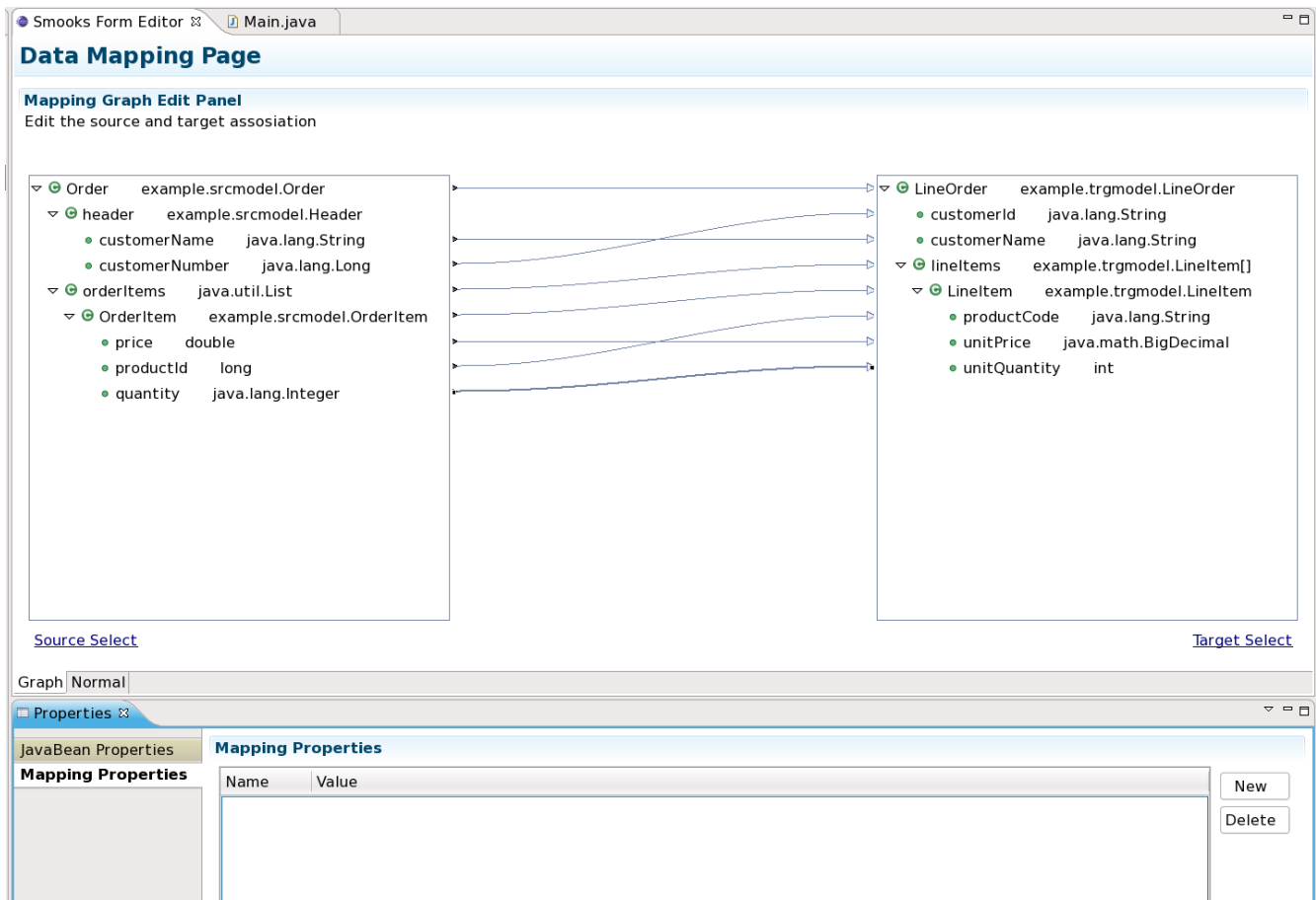
Pic 5.1 Exceptions

What does it mean?

Please open the Smooks editor , let's look at the quantity property of the "OrderItem" , we find that it's "Integer" type , but the "unitQuantity" property was "int" type. It seems that the Smooks find their type was not suitable , so Smooks throws an exception. Whatever , we need to make the configuration file to be correct.

Open the PropertySheetPage please.(Windows -> Show View -> Other.. -> Properties#General).

Select the connection line of the binding of quantity and unitQuantity. We will see that :



Pic 6.1 Properties Page

Click “New” button , there will create a new property on the view . And now , modify the new property's name to be “type” , modify the value to be “Integer”.

Select the connection line of the binding of the price and the unitPrice and create a new property for the connection , modify the name to be “type” and value to be “BigDecimal”.

Tips: The new GUI for editing the property binding type will come soon. :)

Then save the file.

OK , let's run the example.Main again. Success!