



# Transformation Manager

## Version 5.2

### Tutorial 1 - The Basics



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# Tutorial 1

## The Basics

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This tutorial will help you learn the basics of TM Designer. In the tutorial we will create a file by extracting the data from a data store and placing it into a flat file using two data models which we will define in this tutorial. We will then build and execute the transform project, thereby completing the project life cycle.

### Prerequisites

Before starting this tutorial we recommend that you have completed the following tasks.

- 1) Transformation Manager has been installed.
- 2) An appropriate license has been installed.
- 3) The tutorial resources including data models, samples and source and target data stores have been downloaded and extracted to your Transformation Manager home directory.

### Concepts

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This tutorial introduces you to the first concepts that Transformation Manager uses. A good understanding of these will help you fully to understand the nature of what Transformation Manager can do for you and your organisation. This tutorial will introduce you to the following Transformation Manager concepts.

- Repositories
- Data Models
- Projects
- Data Stores

During this tutorial you may perform some actions that you do not fully understand. These will become clearer as you work through the following tutorials in this user documentation.

### Information

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This tutorial will introduce various components of the Transformation Manager application suite and show how to use them to accomplish your goal and have a successful project. We will introduce you to the typical project life cycle in Transformation Manager and core components of the application. Below is a list of the main topics.

- The Transformation Manager Project Life Cycle
- The TM Designer Interface
- The TM Migrator Interface
- Simple Mapping Language (SML) Syntax

A thorough understanding of these will let you begin using Transformation Manager to implement your project.

This tutorial makes use of TM Migrator to run or execute the project but in later tutorials we will run our project within TM Designer alone. The decision to run any given project in TM Migrator or TM Designer depends on whether you intend to run other projects after the one you are about to run or whether you intend to create a deployment pack from your project which can only be done in TM Migrator.

## **Learning Objectives**

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The learning objectives for this tutorial are shown below.

### **Understanding a Complete Transformation Manager Project**

You will understand all the steps involved in a transformation project using Transformation Manager. You should be able to apply this knowledge to your own project and identify the tasks that need to be completed so you achieve your goal.

### **Creating and Using a Repository**

You will be able to create a repository and understand what goes into your repository. You will also learn how to connect to an existing repository that you have already created.

### **Loading a Database Data Model and a Flat File Data Model**

You will learn how to load a data model into your repository, what a model is and how these models are used by projects to perform transformation processing. You will learn that projects contain transformations that perform this processing and we will use a relational database and a flat file example data store to set up two simple models and perform a test transformation on source data using the provided sample source data.

### **Creating and Using a Project**

You will learn how to create a project and understand the parts of the Transformation Manager interface including the SML Editor Pane.

### **Creating and Using a Transform**

You will create a transform to move an attribute from the relational database into a column in a flat file.

### **Building a Project**

You will learn how to build a project ready to execute your transform.

### **Running a Transform Project**

You will learn how to run a transform project.

### **Viewing Data**

You will learn how to view data from data stores from within TM Designer.

## Exercise 1 - Start TM Designer

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Our tutorials assume you are using a Windows operating system. As a result there may be slight differences between your system and these instructions depending on the version of Windows you are using. If you are using a different operating system then please ask for the specific instructions required for your system.

There are three ways to start the Transformation Manager application. These are from the desktop icon, from the [Start > All Programs](#) menu or from the [Start > Search programs and files](#) menu option.

### Option 1 - Using the desktop icon



- 1) Looking at your desktop, find the icon that looks like this,
- 2) Then you have two options.
  - a) Using your mouse double-click the icon using the primary mouse button.
  - b) Using your mouse press the secondary mouse button, commonly the right-mouse button, while the cursor is over the icon to open the pop-up context menu and select [Open](#) from the available options.

### Option 2 - Using the Start > All Programs method



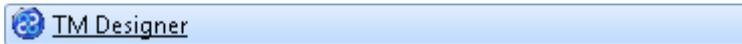
- 1) Go to the Start icon in the bottom left of your screen,
- 2) Click on the icon and then click once on the All Programs option just above the icon.
- 3) The list of installed programs will be displayed.
- 4) Find the TM Suite group in that list and expand the group to show the applications. You will see four options listed. These are Change TM Suite Installation, TM Designer, TM Migrator and TM Upgrader.
- 5) Select the TM Designer option as shown in the image below and click once on that item.



### Option 3 - Using the Start > Search programs and files menu option

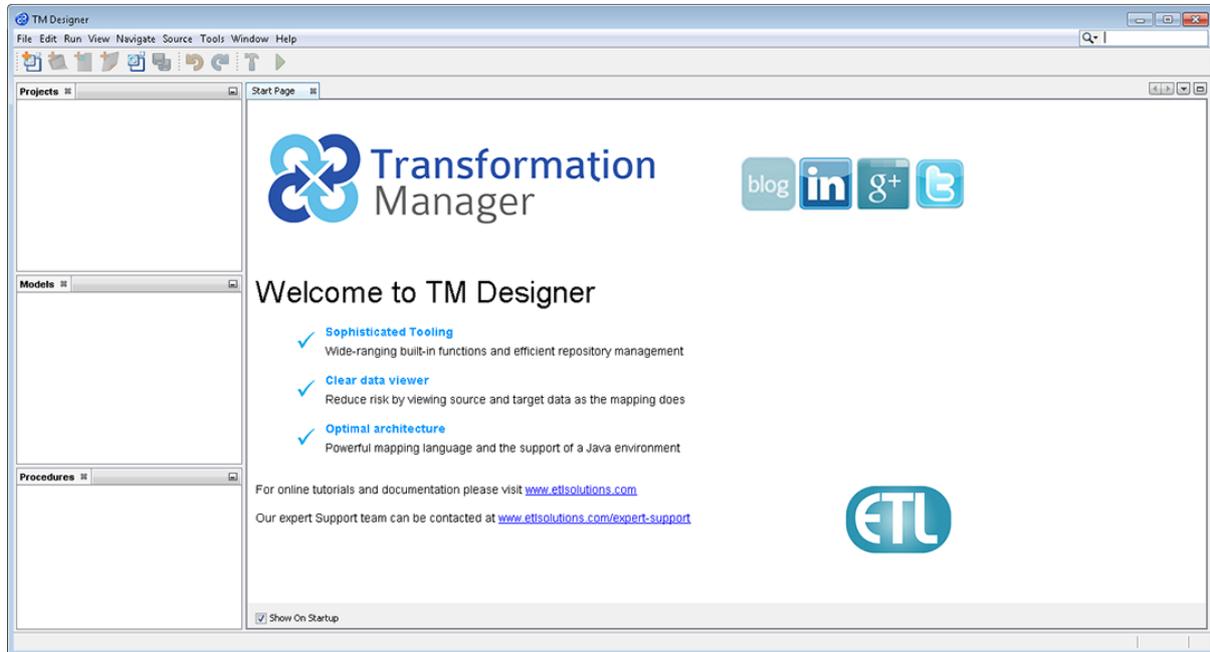


- 1) Go to the Start icon in the bottom left of your screen,
- 2) Type into the [Search programs and files](#) field `tm`.
- 3) A list of items will appear that match the term you have typed. You should see an item called TM Designer as shown in the image below.



- 4) Click once on the item to start the application.

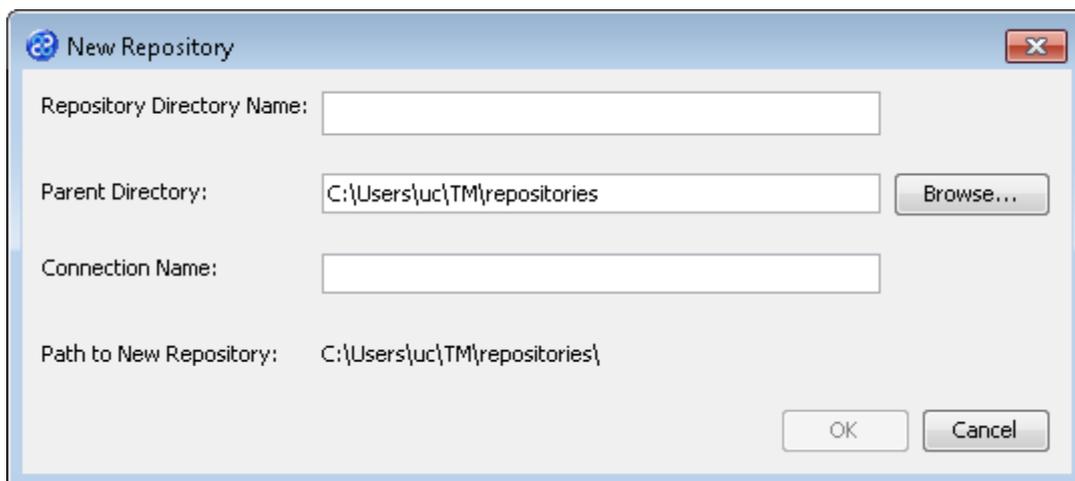
TM Designer will open irrespective of the method you have used above. The application will display the default application layout as shown below.



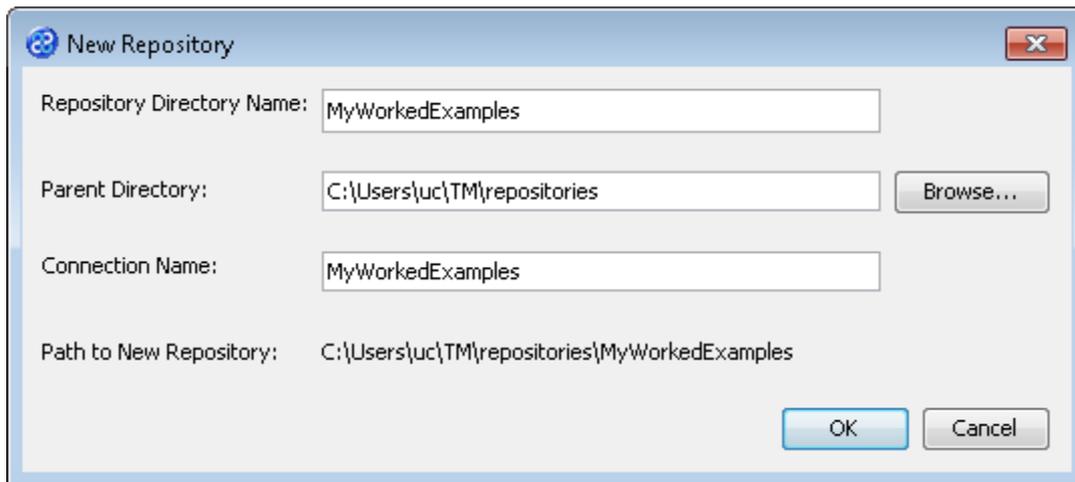
## Exercise 2 - Create a New Repository

This exercise shows you how to create your own repository which we will use for this and all the other tutorials following this one.

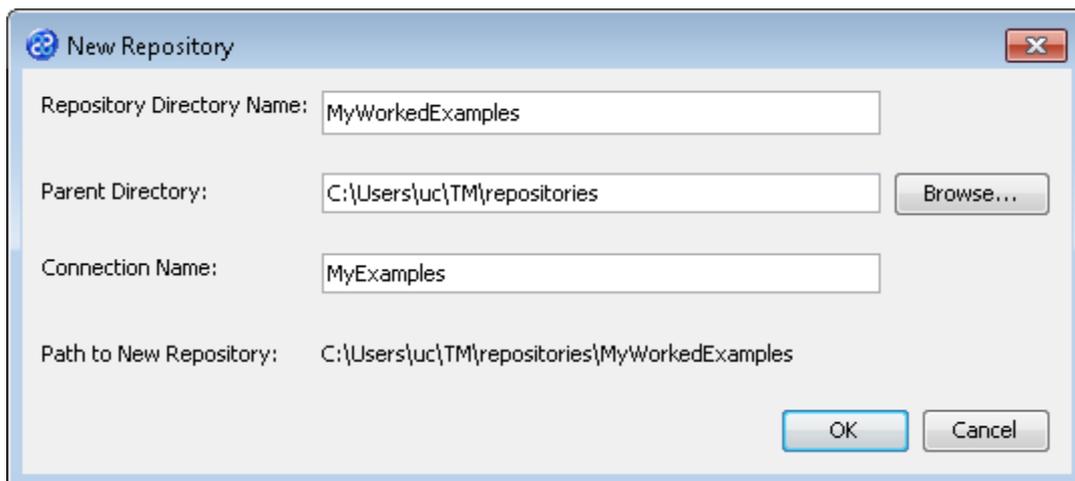
- 1) Using your mouse click on the **File** option from the menu bar of TM Designer.
- 2) From the menu, click once on the **New Repository...** option. The **New Repository** window will open as shown below.



- 3) Enter the **Repository Directory Name**. In this instance we will give it the directory name of **MyWorkedExamples**.



- 4) The Parent Directory field defaults to the \repositories directory in your application install directory. You can however change this parent directory by using the button and selecting an alternative location. In our exercise we will leave it as the default directory.
- 5) We will now provide an easier to use value in the **Connection Name** field. This is the name displayed in the **Open Repository** window accessed from the **File > Open Repository...** menu option of TM Designer. In this exercise we will enter **MyExamples**.

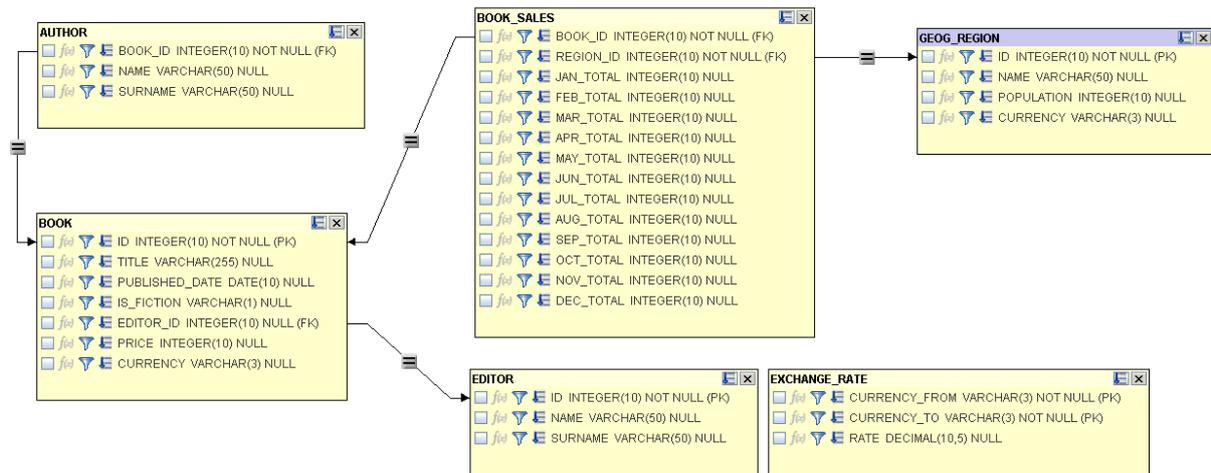


- 6) The **Path to New Repository** read only field will display the **Parent Directory** and the **Repository Directory Name** joined or concatenated together. In this exercise it should display [TMHOME]\repositories\myworkedExamples.
- 7) Click on the  button to create your new repository.
- 8) Your repository will now be created and TM Designer will have set this repository as your working repository. You can check this by looking at the title bar of the application which should display **TM Designer - MyExamples**. The **TMError v1** data model will also be automatically added to the repository for you.

## Exercise 3 - Load a Database Data Model

This exercise introduces you to the process of creating a relational database data model. We will be creating the data model from an Apache™ Derby relational database which is in the Tutorials Models sub-directory supplied by ETL Solutions in the tutorials.zip file and adding it into our repository. We

will not be importing the data, just its structure. The database we will be using is called Books. The diagram below shows you the structure of the database.

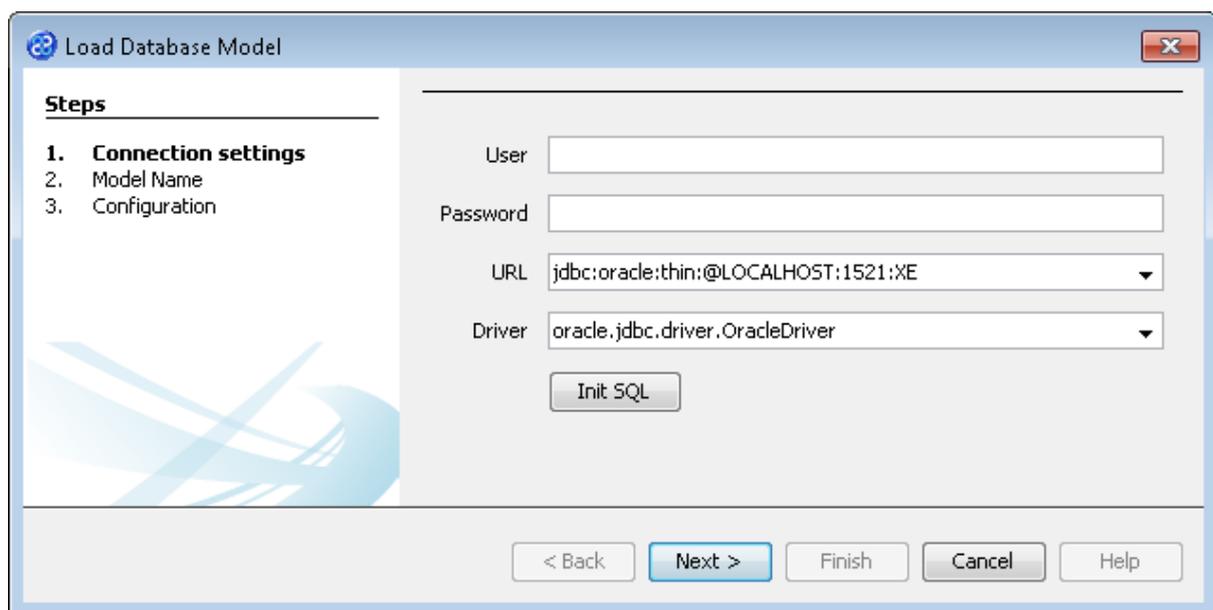


The Books database is a simple example for demonstration purposes and is not meant to replicate the complexity of your own systems. However, this process will be very similar to the process you will go through in order to generate the data model for the systems you do intend to work with.



The Derby databases that we use in our tutorials are file based and there is no software installation required. They can be obtained from the [Resource Centre](#) of our web site.

- 1) Using your mouse click on the **File** option from the menu bar of TM Designer.
- 2) From the menu, click once on the **Load Model** option. This will display a further list of options which represents the variety of data stores that TM Designer can import.
- 3) From the list presented click once on the **Database...** option.
- 4) The **Load Database Model** wizard will open. This wizard steps through the process of importing the data store you want to import. The wizard starts with the **Connection settings** page.



- a) In this exercise we do not need **User** or **Password** values to connect to the example relational database.
- b) In the URL drop down list we will select **jdbc:derby:<YOUR\_NAME>** from the list of options presented. The **<YOUR\_NAME>** part of the URL requires the path to the Derby database directory. This will be in the [TMHOME]\Tutorials\Models\Database\Books.
- c) We must now specify a driver to use for this example relational database. In the Driver drop down list select **org.apache.derby.jdbc.EmbeddedDriver** from the list provided.



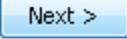
In order for TM Designer to set the connection settings to the database correctly you must ensure that the cursor is moved out of the **URL** and **Driver** fields. If you do not do this then you may receive an error when attempting to connect to the data store.

- d) In this example we do not need to provide any value for **Init SQL**.

The screenshot shows the 'Load Database Model' dialog box. On the left, a 'Steps' list shows '1. Connection settings' as the current step. The main area contains:
 

- User: empty text field
- Password: empty text field
- URL: dropdown menu showing 'jdbc:derby:C:\Users\uc\TM\Tutorials\Models\Database\Books'
- Driver: dropdown menu showing 'org.apache.derby.jdbc.EmbeddedDriver'
- Init SQL: button

 At the bottom, there are buttons for '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

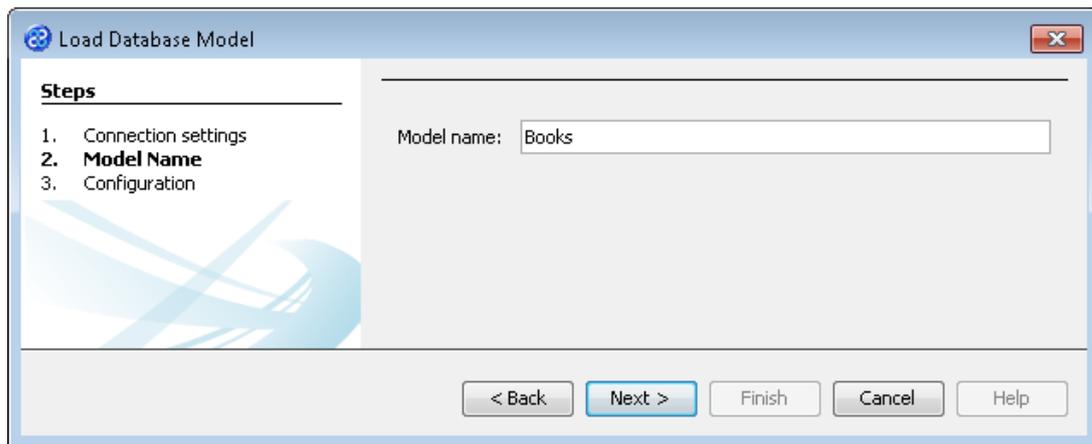
- 5) The **Connection settings** page is now complete. Click the  button to move to the next step.
- 6) The next page is the **Model Name** page. By default TM Designer will insert a lower case **m** into the **Model name** with the path to the data store added afterwards. So you will see the following value `m[TMHOME]TutorialsModelsDatabaseBooks`. This can be removed when you give the model your own name. Now we will provide a name for the model.

The screenshot shows the 'Load Database Model' dialog box at the 'Model Name' step. The 'Steps' list on the left shows '2. Model Name' as the current step. The main area contains:
 

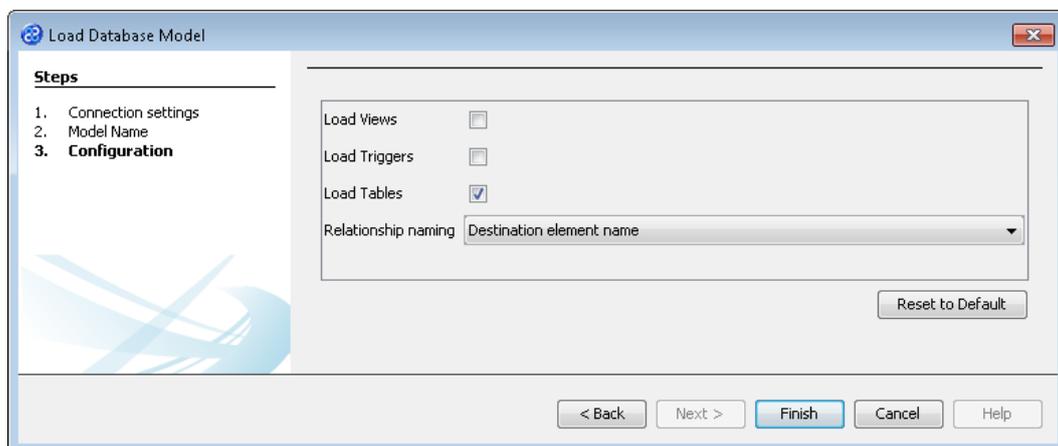
- Model name: text field containing 'mUsersucTM\Tutorials\Models\Database\Books'

 At the bottom, there are buttons for '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

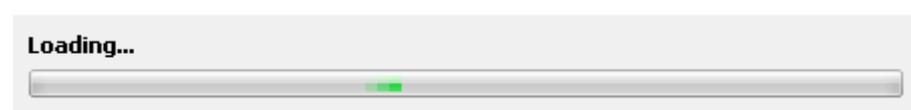
- a) In this example we will give our data model the name **Books**.



- 7) The Model Name page is now complete. Click the **Next >** button to move to the next step.
- 8) The last page is the **Configuration** page. The content of this page will change depending on the type of data store you are connecting to. Our example database is a simple relational database and therefore has a limited set of items to select.
- a) We will not **Load Views**.
  - b) We will not **Load Triggers**.
  - c) We will **Load Tables** so make sure that the tick box has a tick in it.
  - d) **Relationship naming** lets you specify how TM Designer will name data model relationships. The default value is **Destination element name** which, as an example, is the child element or table name in a parent child relationship. We will use that value for this exercise.



- 9) Now we will load the Derby database creating our data model by clicking the **Finish** button.
- 10) The **Loading...** message box will be displayed while Transformation Manager creates the data model. When the data model has been loaded this will disappear and you will return to the main interface.



11) The Models pane will display your new data model called **Books v1**. Additional elements are added to the data model by default. These are untyped nodes which allow the construction of transforms that can perform deep copies, handle unexpected XML data and provide partial deep copies with exception handling for elements of interest. It also provides access to non-text and element nodes. They are prefixed with the \$ sign and include the following elements.

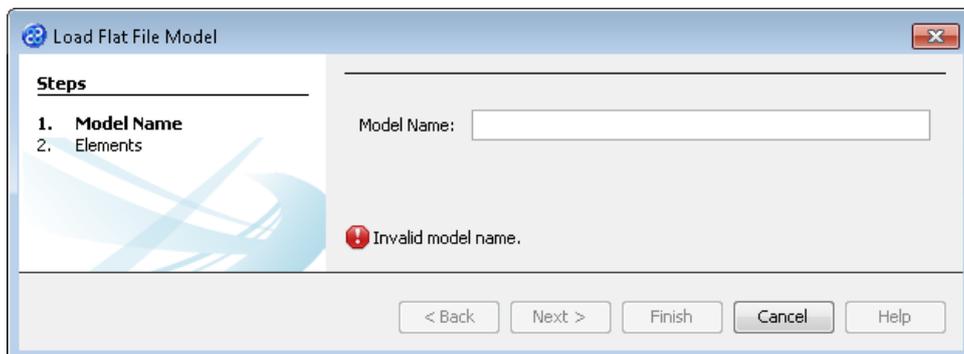
- \$TMError
- \$document
- \$element
- \$postdocument
- \$predocument

## Exercise 4 - Load a Flat File Data Model

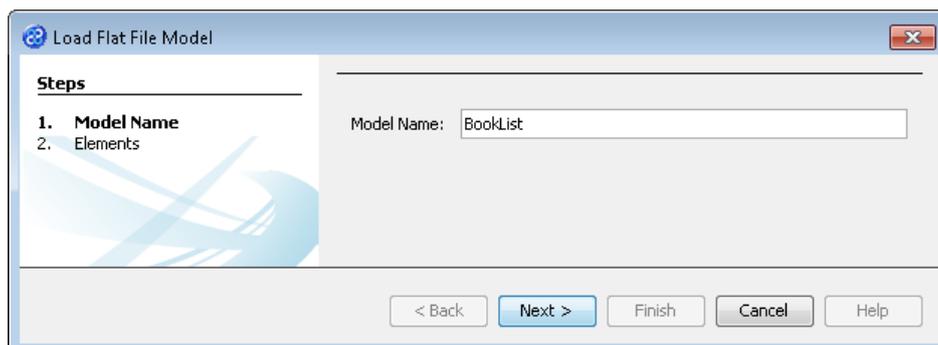
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This exercise introduces you to the process of creating a flat file data model. In this exercise we will be loading a flat file called BookList.csv. It is possible to add more than one file to a given flat file data model by adding each file as a new element to the model.

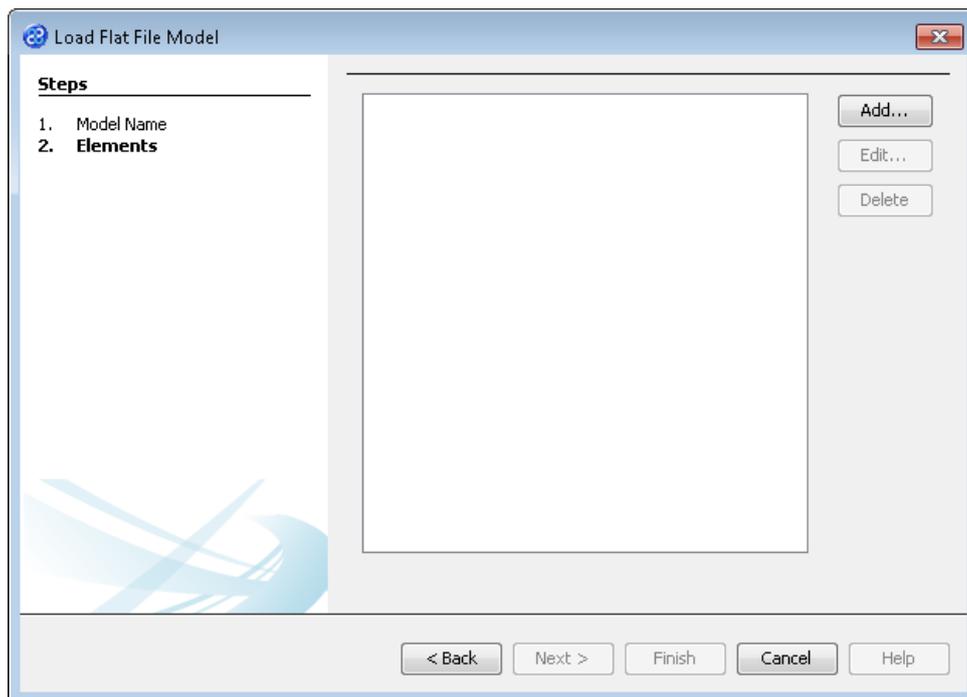
- 1) Using your mouse click on the **File** option from the menu bar of TM Designer.
- 2) Click the **Load Model** option from the menu. This will display a further list of options which represents the variety of data stores that TM Designer can import.
- 3) From the list presented click once on the **Flat File...** option.
- 4) The **Load Flat File Model** wizard will open. In this exercise we will use an existing flat file to create our data model.



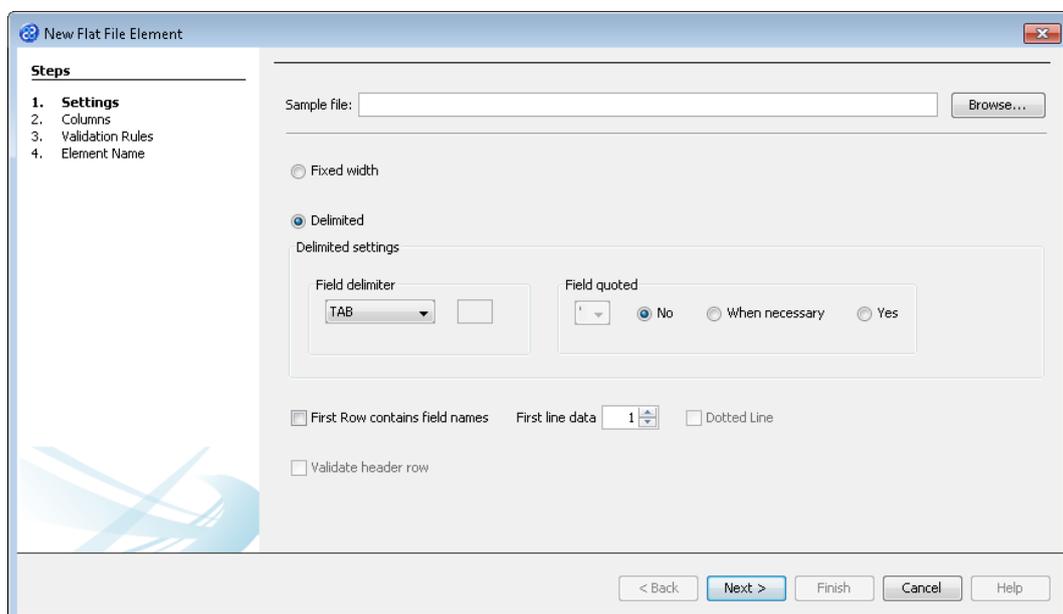
- 5) Now let's give the model a name. Type **BookList** into the **Model Name** field. Data model names can only contain alphabetic characters and must not have spaces.



- 6) Click the **Next >** button. This will take you to the **Elements** step of the wizard.



- 7) At this point we will need to click on the **Add...** button. This opens a secondary wizard that lets you create the elements you need for your data model. The wizard is called **New Flat File Element**.



- 8) This wizard lets you create your flat file data model. There are two ways to do this. The first is to create each column in the element manually. The second is to import the columns from an existing flat file. In this exercise we will import the columns from our existing file called BookList.csv. The wizard has four steps before the task is complete.

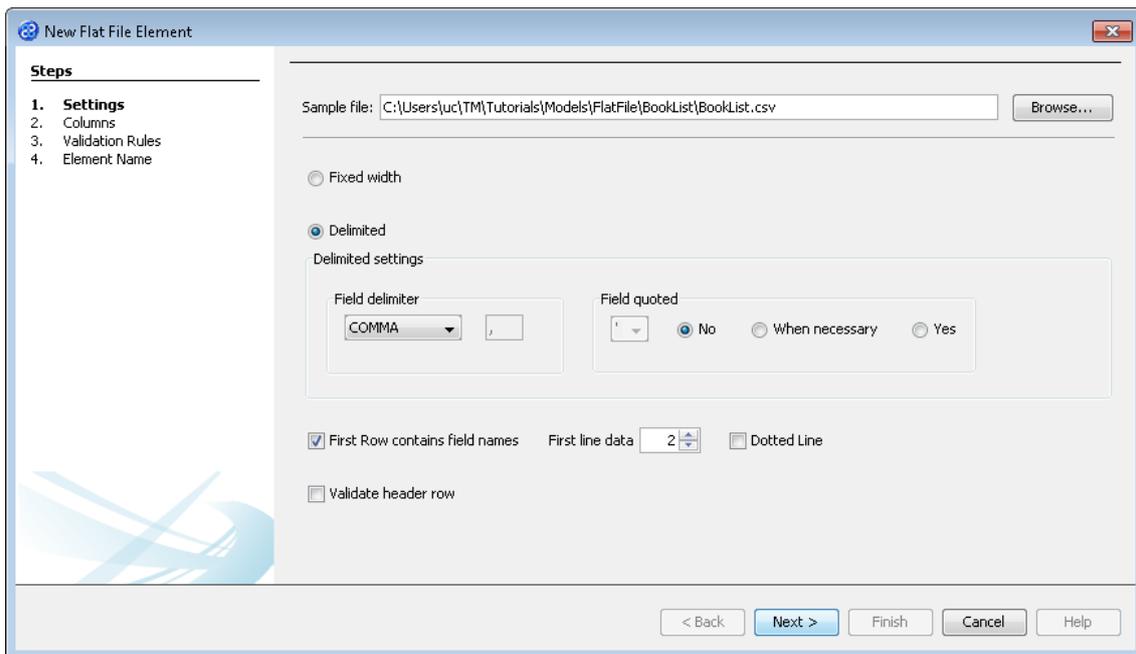
- 9) Click once on the **Browse...** button and navigate to the following location.

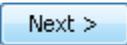
[TMHOME]\Tutorials\Models\FlatFile\BookList\BookList.csv

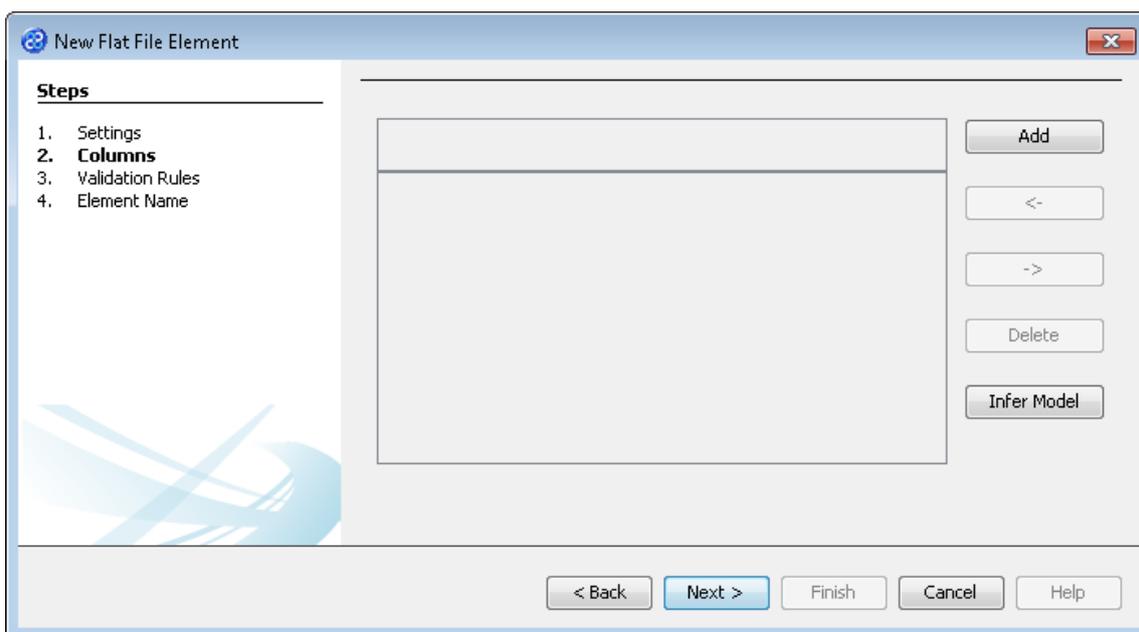
10) Click on the file to select the file and then click on the  button.

11) Let's complete the rest of the options for step **1. Settings**.

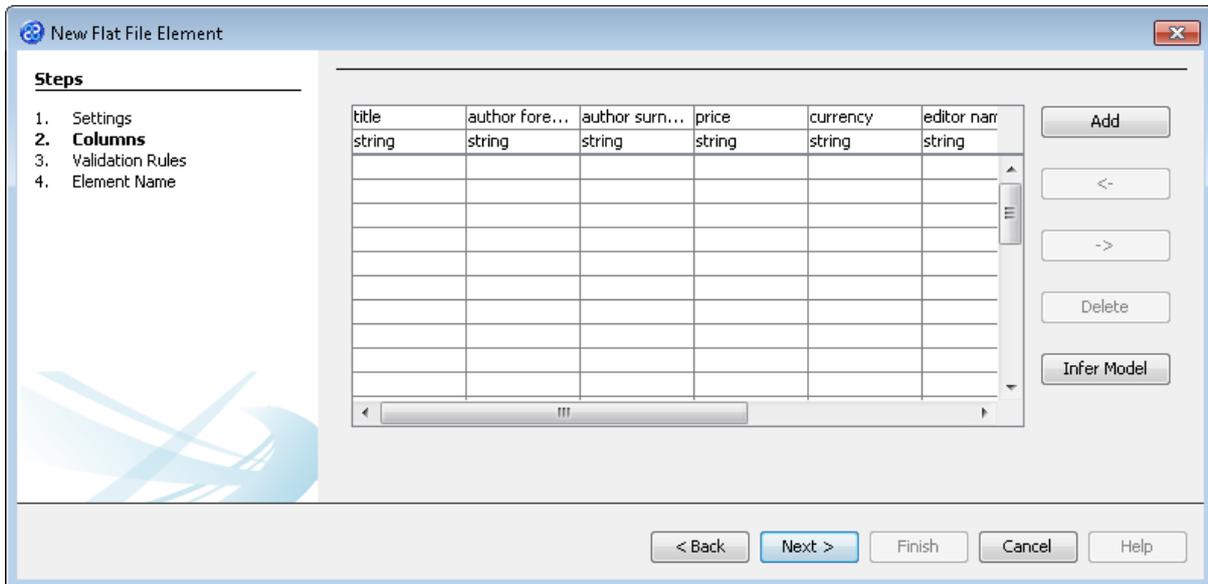
- a) Let's set the **Field delimiter** drop down list box to **COMMA**.
- b) We shall leave the **Field quoted** value as the default, the radio button **No** is selected.
- c) Let's now put a tick into the **First Row contains field names** tick box. You will notice that an error will be displayed,  **You have specified a start line of 1. This is not logical with your current header.** This occurs because the **First line data** field will, by default, have the value 1 but this is also the line for the field names. Change this value to **2** to handle the error.



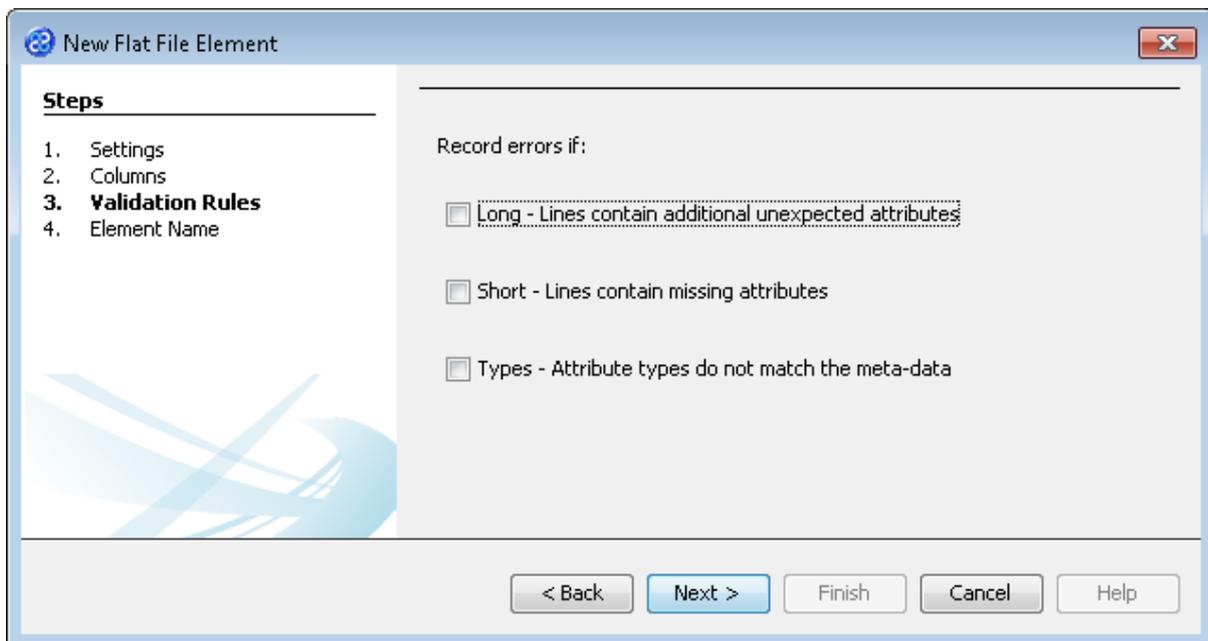
12) Click the  button to move to the next step, **2. Columns**.



- 13) Click on the **Infer Model** button in the **New Flat File Element** window. You will see the columns in the file appear in the page showing the column heading and the data type beneath each, which will be **string** for all nine columns.

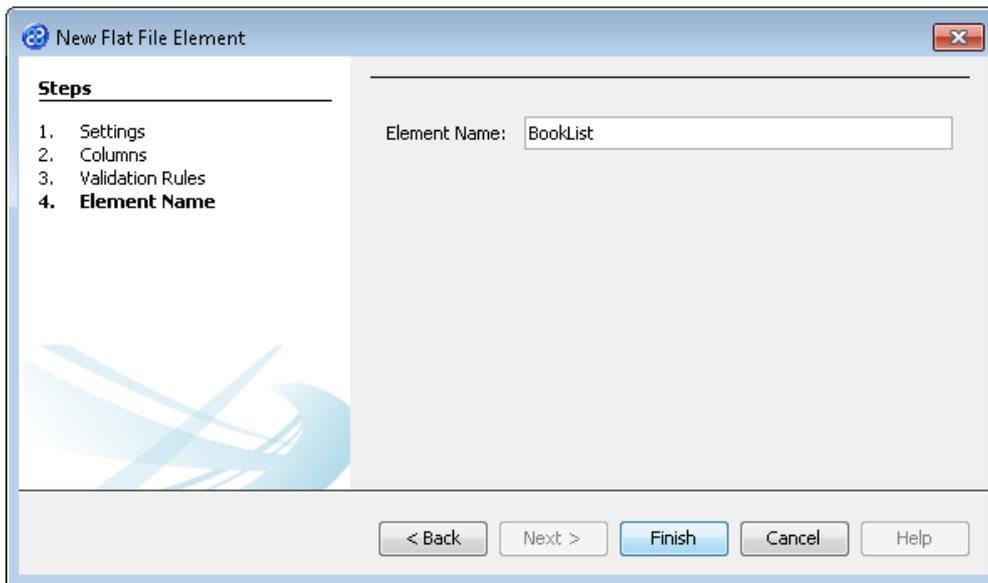


- 14) Click the **Next >** button to move to the next step, **3. Validation Rules**. There are three tick boxes on this page. For this flat file data model we will not require any of the validation rules. All tick boxes should be left blank.



- 15) Click the **Next >** button to move to the next step, **4. Element Name**.

- 16) Let's type the element name **BookList** into the **Element Name** field.

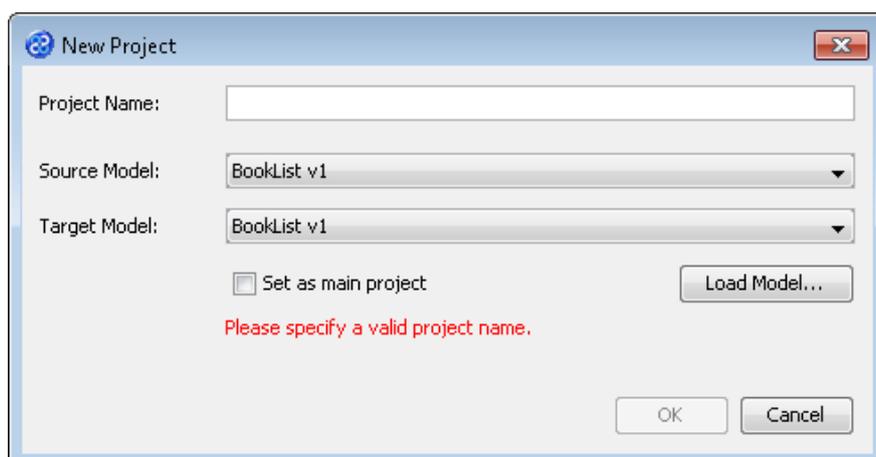


- 17) Click the  button to complete the wizard and return to your previous point in TM Designer.
- 18) Click on the  button to complete the **Load Flat File Model** wizard.
- 19) Your new model will appear in the Models pane and be called **BookList v1**.

## Exercise 5 - Creating a Project

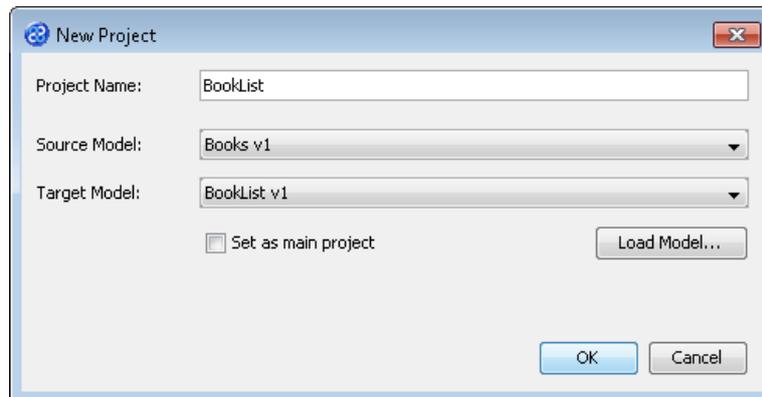
This exercise steps you through the process of creating a project. In this exercise we will use the two data models we have just loaded.

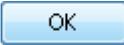
- 1) Using your mouse click on the **File** option from the menu bar of TM Designer.
- 2) From the menu, click once on the **New Project...** option.
- 3) The **New Project** window will open.



- 4) In the **Project Name** field we will provide a name for the project. As we will be processing a book list let's call our project **BookList** by typing the name into the field.

- Now we must select the target and source models for our project. These are the models we created in exercises 3 and 4. In the **Source Model** field select **Books v1** from the list. In the **Target Model** field select **BookList v1**.



- Now click once on the  button. Your project will be created and be displayed in the **Projects** pane.

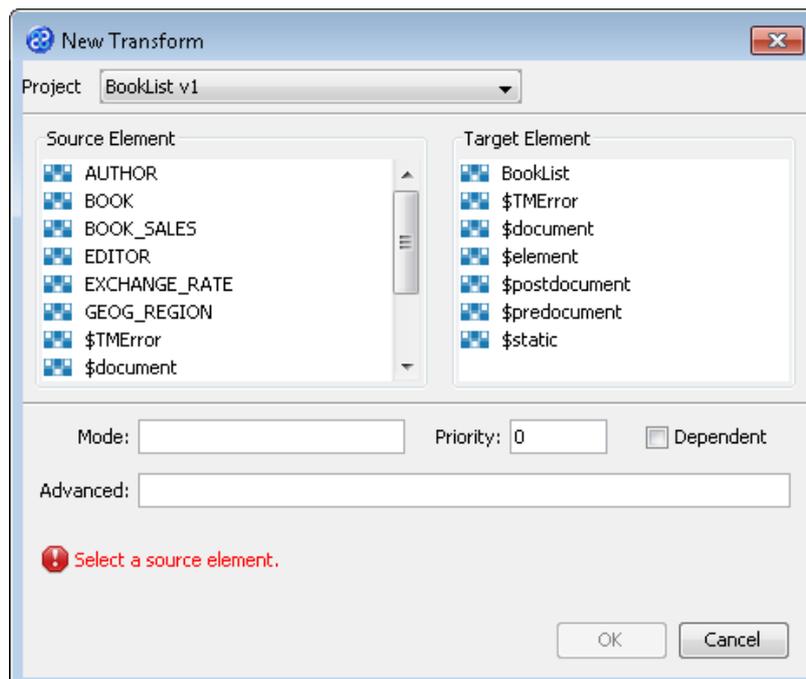
By default the project folder will be expanded and you will see that three sub-folders have also been created. These are the **Models**, **Transforms** and **Error handlers** folders.

## Exercise 6 - Create a Simple Transform

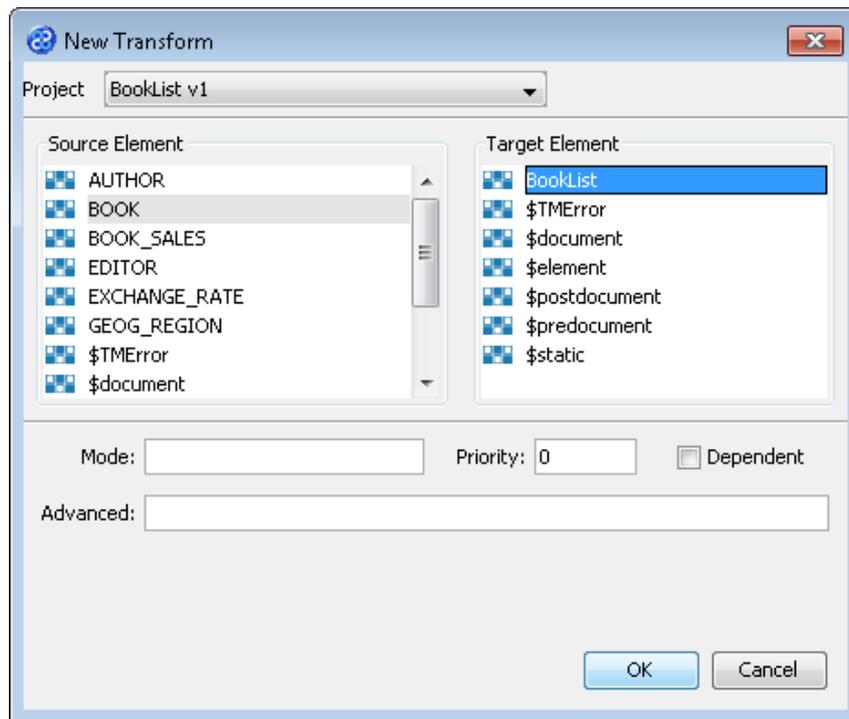
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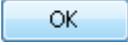
This exercise will show you how to create a simple transform in a project. We will use the project you have just created in order to demonstrate this.

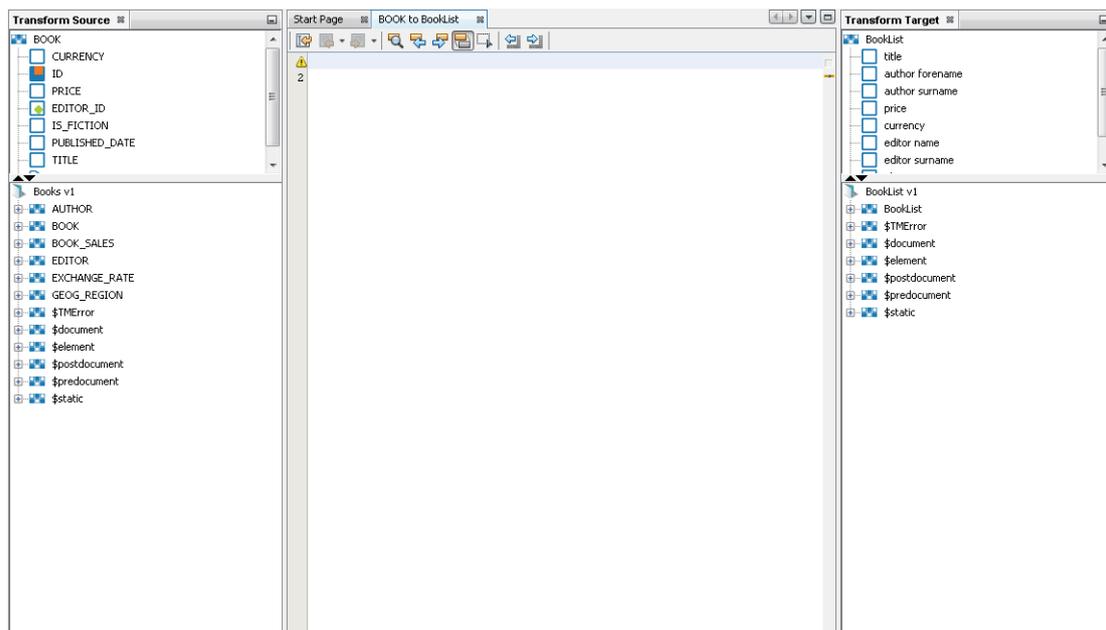
- Click the **File** menu bar option.
- Click the **New Transform...** option from the sub-menu.
- This will open the **New Transform** window. Ensure that you have the correct project selected in the **Project** drop down list, in our case this will be **BookList v1**.



- 4) With the **New Transform** window open, we will select the elements for the source and target. In this case the source element will be **BOOK** and the target element will be **BookList**. The **New Transform** window will look like the one below.



- 5) Click once on the  button to create your new transform.
- 6) The Editor pane will open ready for you to write your transform code once the **New Transform** is created. Note that the **Transform Source** and **Transform Target** panes will be displayed containing the previously selected element plus its related attributes and relationships.



- 7) Now we will write our first transform. This can be completed using two methods. The first is to type in manually the transform code displayed in the box below. The second method uses drag and drop. Place your cursor over the source data model attribute with the name **TITLE** and hold

the primary or left mouse button to pick up the label. Drag the label onto the target attribute called `title` and release the primary or left mouse button to drop the label onto the target attribute. This will create the transform code for the first line in the Editor pane for you. Repeat this process for the other attributes shown in the example below.

```
title := TITLE;  
currency := CURRENCY;  
price := PRICE;
```



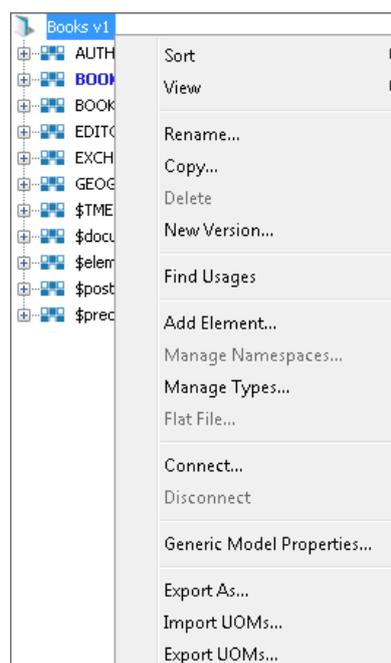
In the example transform above you should note that attributes to the left of the assignment symbol, `:=`, are attributes of the target data model while those to the right are attributes of the source data model. So, if we look at the first line of transform code above we can say that the `title` attribute in the target data model will be updated with data from the source data model attribute called `TITLE`.

- 8) We have completed our first simple transform.
- 9) Click once on the **File** menu bar option.
- 10) Click once on the **Save** menu bar option to save your transform. Make sure that your cursor focus is the Editor pane otherwise the **Save** option will not be activated for you.

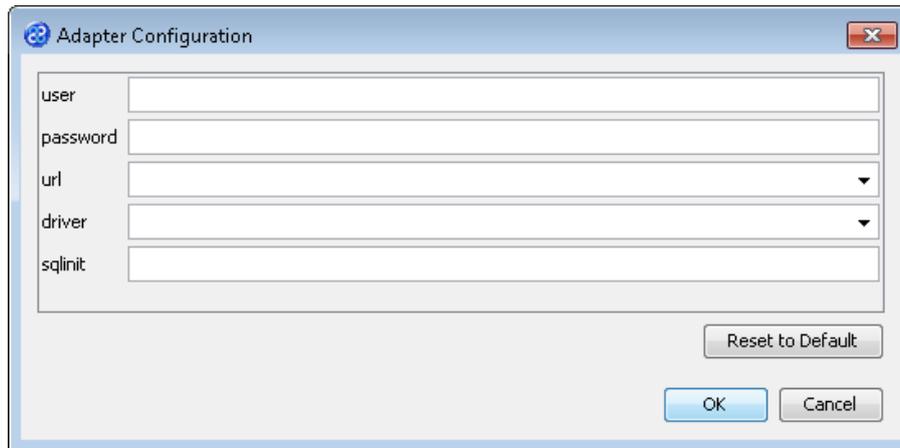
## Exercise 7 - View the Source Data

TM Designer lets you view data in a data store. You must connect to a data store via a data model before viewing element data. Element data is displayed on the basis that the data model accurately reflects the content of the element. So, we will now view the data in the `Book` element of the source data model and data store. We will then view the target data store after we have executed our project.

- 1) With the Editor pane still open, move the cursor over the name of the data model, **Books v1**, in the Transform Source pane and display the context menu for the data model.



- 2) Select the **Connect...** option from the menu. The Adapter Configuration window will open. It will display the connection parameters required for the specific type of data store you wish to connect to which in this case is a Derby database.

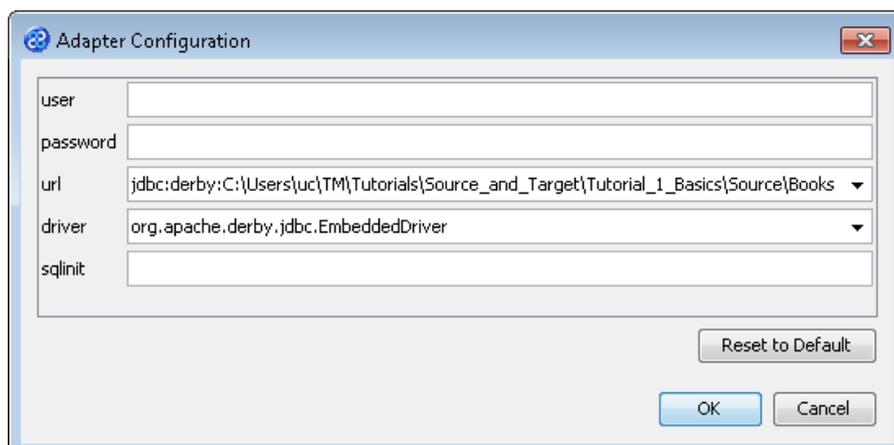


- 3) Let's provide the relevant connection information as shown below. Go to the **url** field. You will now need to provide the details of where to go to get the source data. View the list of options and select the option called **jdbc:derby:<YOUR\_NAME>** from the drop down list. Now replace the **<YOUR\_NAME>** part of the list item, including the angle brackets, with the directory where the Derby database is stored. This will be in the following location.

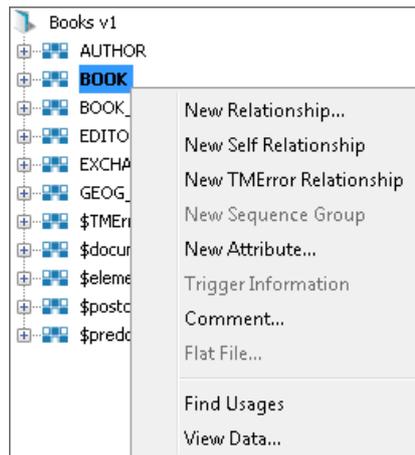


Be careful to ensure that you go to the `Tutorials\Source_and_Target\Tutorial_1_Basics\Source\Books` data store and not the `Tutorials\Models\Database\Books` data store.

- a) `[TMHOME]\Tutorials\Source_and_Target\Tutorial_1_Basics\Source\Books`
- 4) Go to the driver field and display the list of options available. Select the option called **org.apache.derby.jdbc.EmbeddedDriver**. The Adapter Configuration window will look similar to the image below. **user** and **password** are not required.



- 5) Click the **OK** button to connect to the data store. A message box will appear telling you that the connection is being made.
- 6) Move your cursor over the **BOOK** element in the **Transform Source** data model and display the context menu for the element.



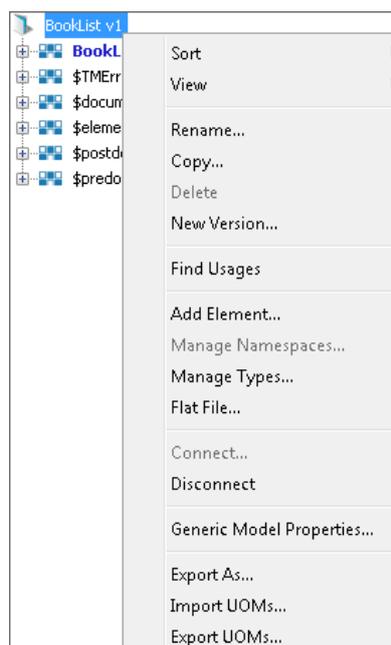
- 7) Select the **View Data...** option from the menu. This will open a new pane in the Editor pane displaying the data as shown below.

Books v1 : BOOK

CURRENCY	ID	PRICE	EDITOR_ID	IS_FICTION	PUBLISHED_DATE	TITLE
GBP	111	20	2001	Y	1999-01-06	Grass
USD	222	30	2001	Y	2002-01-09	Trees
USD	333	40	2002	N	1900-01-03	Soil
GBP	444	50		Y	1965-01-12	Soot

Hide empty columns
 Rows 4
Maximum Rows

- 8) So, in this tutorial we will be moving the currency, price and title data to our target. We should see four rows in our flat file target data store.
- 9) Let's close this pane and disconnect from the data store. Click on the  icon to close the data view pane for **BOOK**.
- 10) Now move the cursor over the name of the data model in the Transform Source pane again and display the context menu for the data model.



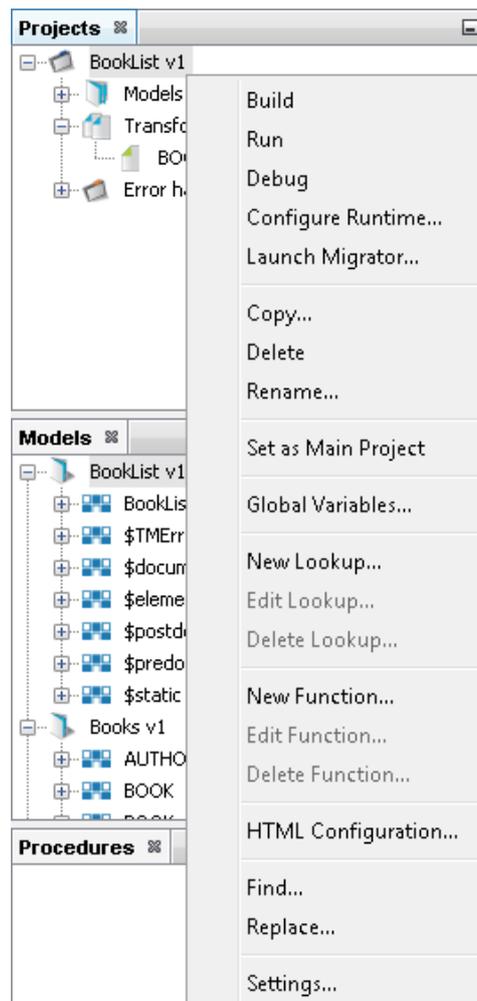
11) Note that the **Disconnect** option is active now. Click on this to disconnect from the data store.

## Exercise 8 - Build the Project

---

Building a project is a simple but necessary task for producing the program that will be used to execute the project. This exercise shows you how to do this for your project.

- 1) Move your mouse pointer so that it is over the title of the project you are working on and use the right mouse or secondary mouse button to display the pop-up menu.



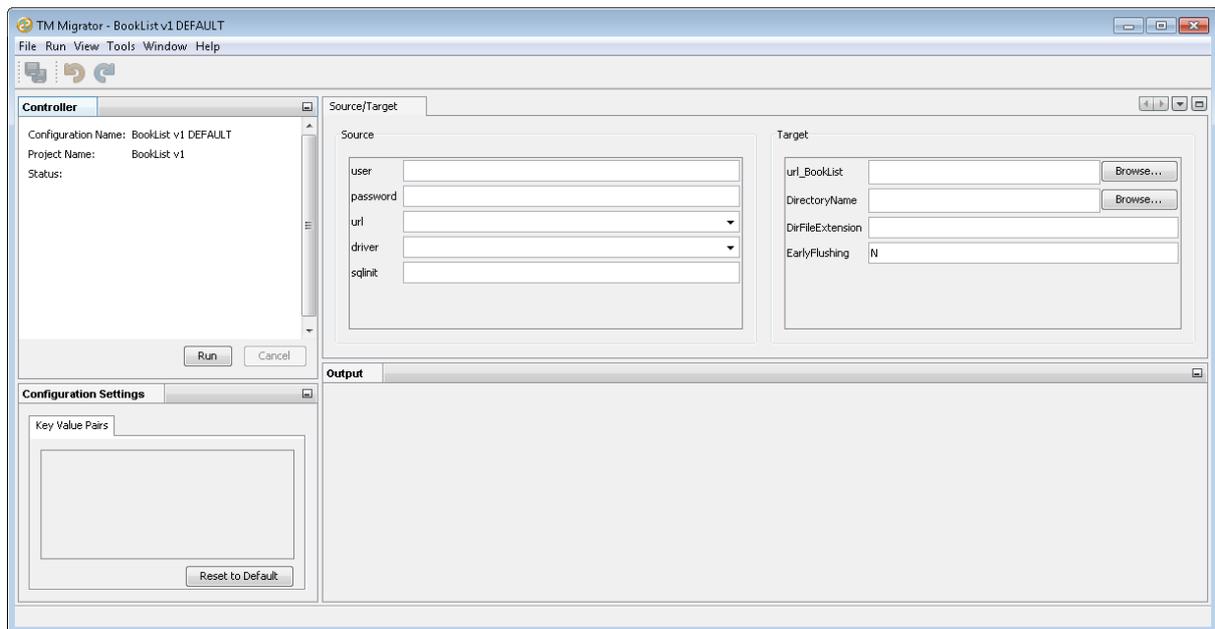
- 2) Click once on the **Build** option from the menu.
- 3) The **Output** pane will open and show you if there are any errors in your transform code. In this exercise you should not have any error messages and you should see a message stating **Build successful..**



## Exercise 9 - Launch the Project

Now let's Run our transformation project to see how it works. This exercise takes you through the run process which will execute the transformation using source and target data stores you will specify. The source and target data stores are provided by ETL.

- 1) Click once on the **Run** menu bar option.
- 2) Click once on the **Launch Migrator BookList v1...** option from the sub-menu. The options you see here do depend on the project you are working in. Since you have built the project **BookList v1**, this becomes the focus of the run process. TM Designer will now open TM Migrator so that you can test your transform. Below is an image of the interface.



- 3) Go to the **url** field of the **Source** pane. You will now need to provide the details of where to go to get the source data. View the list of options and select the option called **jdbc:derby:<YOUR\_NAME>**. Now replace the <YOUR\_NAME> part of the list item, including the angle brackets, with the directory where the Derby database is stored. This should be in the following location:

[TMHOME]\Tutorials\Source\_and\_Target\Tutorial\_1\_Basics\Source\Books.

The **url** entry should look similar to the one below.

**jdbc:derby:C:\Users\uc\TM\Tutorials\Source\_and\_Target\Tutorial\_1\_Basics\Source\Books.**

- 4) Go to the Driver field of the Source pane and display the list of options available. Select the option called **org.apache.derby.jdbc.EmbeddedDriver**. The Source pane should look similar to the image below. **user** and **password** are not required.

user	<input type="text"/>
password	<input type="text"/>
url	jdbc:derby:C:\Users\uc\TM\Tutorials\Source_and_Target\Tutorial_1_Basics\Source\Books ▼
driver	org.apache.derby.jdbc.EmbeddedDriver ▼
sqlinit	<input type="text"/>

- 5) Go to the **url\_BookList** field of the **Target** pane. In this field we will specify where our new file will go and give it a name. Enter into the field **[TMHOME]\Tutorials\Source\_and\_Target\Tutorial\_1\_Basics\Target\BookListOutput.csv**, you can use the button to select the directory but remember to add the file name to the end of the directory. Our example will create a file called BookListOutput.csv in the in the following directory.

[TMHOME]\Tutorials\Source\_and\_Target\Tutorial\_1\_Basics\Target\

- 6) The Target pane should look similar to the image below.

url_BookList	C:\Users\uc\TM\Tutorials\Source_and_Target\Tutorial_1_Basics\Target\BookListOutput.csv	Browse...
DirectoryName	<input type="text"/>	Browse...
DirFileExtension	<input type="text"/>	
EarlyFlushing	N	

- 7) You must tab out of the **url\_BookList** field of the **Target** pane once the target location is set.



It is important that you tab out of or click elsewhere on this window as this sets the source or target location for the run process. If this does not happen then you may get an error.

- 8) Click once on the **Run** option in the menu bar.
- 9) Click once on the **Run Project** option in the sub menu. This will execute the transform and the file will be created as described above.
- 10) Read the information in the Output pane of TM Migrator. It should look like the text below and tell you that 4 rows have been written to your new file, **Elements written, BookList 4**.

```
Running BookList v1 DEFAULT...
Transformation started.
Project:BookList ver:V1.m0 (1 map (+0) to run).
....-- JDBC Read Adapter --
  Free Queries
    done           : 1
    time           : 1046
Project Statistics
Transform         BOOK -> BookList
Rows started      4
Rows ended success 4
Rows ended failure 0
```

```

Number errors      0
Elements Read
BOOK 4
Elements Written
BookList 4

==== Performance Data ====
  Source read time      : 17%      1.046 seconds.
|XXXXXXXXXXXXXXXXXXXXX.....|
  Target write time    :  0%      0.000 seconds.
|.....|
  Target location time  :  0%      0.000 seconds.
|.....|
  System & connection time : 82%      4.923 seconds.
|XXXXXXXXXXXXXXXXXXXXX.....|
Map BOOK->BookList took 1953 msecs (1.953 secs) to do 4  (488.25 msecs per map / 2.048131
maps per sec)
Transaction Length:1 (Save per map:true)
Execution complete in 5.969 seconds for project:BookList ver:V1.m0
Run Finished Successfully.

```



On some occasions you may see an error similar to the one shown below. This is caused by a lack of permissions to a derby.log file in the Transformation Manager installation directory. This does not however cause the project to fail but does affect writing a log for the Derby database which is not necessary for our tutorials.

```

2012-11-08 08:37:13.364 GMT Thread[main,5,main] java.io.FileNotFoundException:
derby.log (Access is denied)
-----
2012-11-08 08:37:13.661 GMT:
  Booting Derby version The Apache Software Foundation - Apache Derby - 10.4.2.0 -
(689064): instance a816c00e-013a-df2a-7814-000000d92178
on database directory
C:\Users\uc\TM\Tutorials\Source_and_Target\Tutorial_1_Basics\Source\Books
Database Class Loader started - derby.database.classpath=''
2012-11-08 08:37:14.802 GMT:
Shutting down instance a816c00e-013a-df2a-7814-000000d92178
-----
Run Finished Successfully.

```

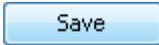
11) Navigate to the **BookListOutput.csv** file and view the contents with a text editor. The file will contain the following data. You will see that we have created our book list file from the Derby database.

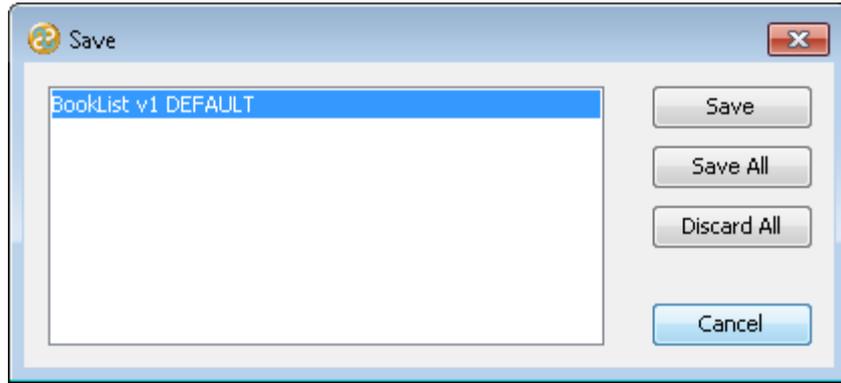
```

title,author forename,author surname,price,currency,editor name,editor
surname,id,fiction
Grass,,,20,GBP,,,,
Trees,,,30,USD,,,,
Soil,,,40,USD,,,,
Soot,,,50,GBP,,,,

```

12) Close TM Migrator. Click once on the **File** menu option and select **Exit** from the sub menu.

13) You will be prompted to save your configuration. Click once on the  button.



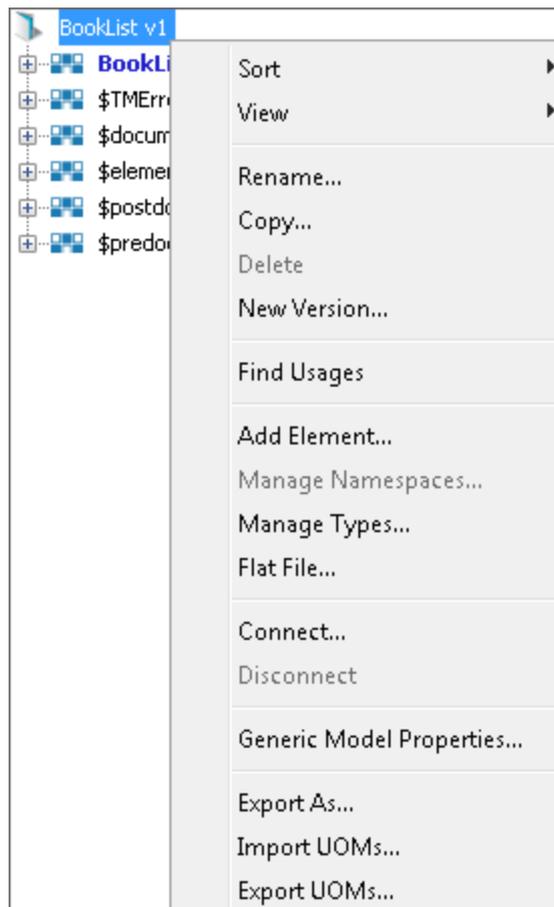
14) TM Migrator will close.

## Exercise 10 - View the Target Data

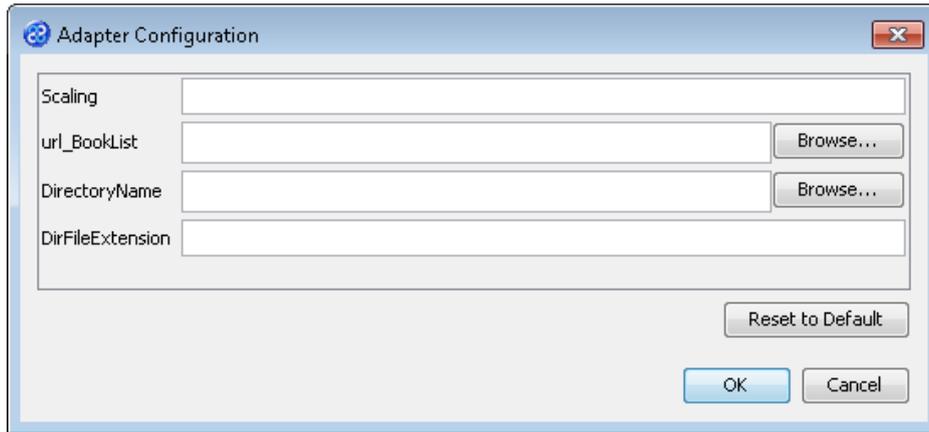
---

Lets now view the target data in TM Designer. We will connect to the target data store and view the data we have transformed with our project.

- 1) With the Editor pane still open, move the cursor over the name of the data model in the Transform Target pane and display the context menu for the data model.

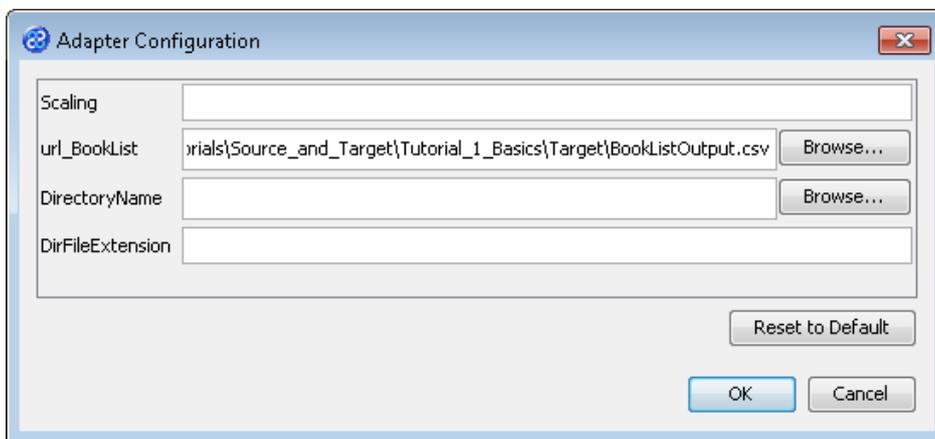


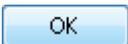
- 2) Select the **Connect...** option from the menu. The Adapter Configuration window will open. It will display the connection parameters required for the specific type of data store you wish to connect to which in this case is a flat file.

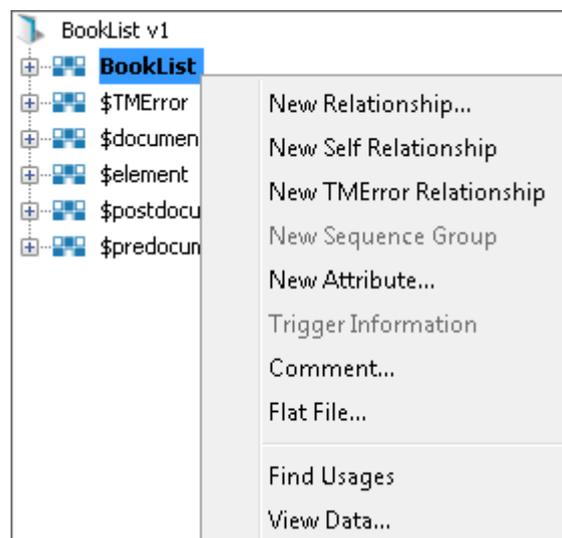


- 3) Lets provide the relevant connection information as shown below. The location of the flat file for the **url\_BookList** field will be as follows or you can use the button to locate the file.

[TMHOME]\Tutorials\Source\_and\_Target\Tutorial\_1\_Basics\Target\BookListOutput.csv



- 4) Click the  button to connect to the data store. A message box will appear telling you that the connection is being made.
- 5) Move your cursor over the **BookList** element in the data model and display the context menu for the element.

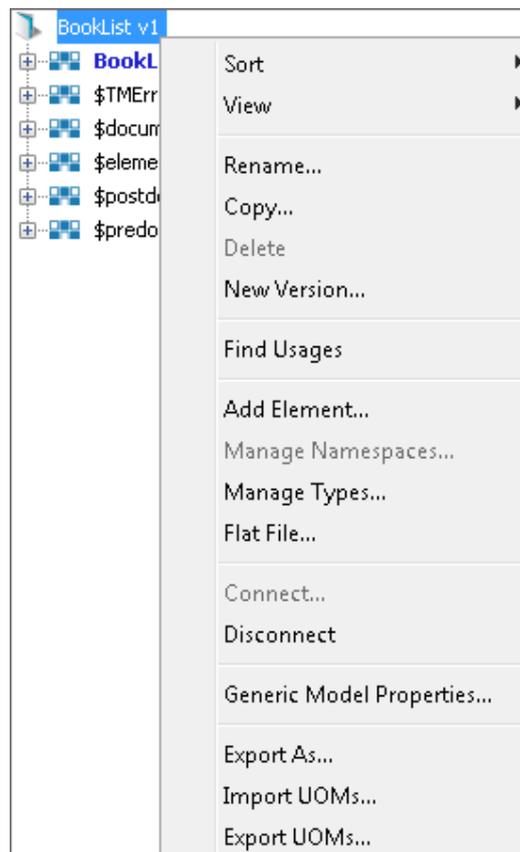


- 6) Select the **View Data...** option from the menu. This will open a new pane in the Editor pane displaying the data as shown below.

title	price	currency
Grass	20	GBP
Trees	30	USD
Soil	40	USD
Soot	50	GBP

Hide empty columns      Rows 4      Maximum Rows 200      Refresh

- 7) The results of the project are as expected. We have four rows with the data we decided to transform. Only the three relevant columns in the target data model are displayed because the Hide empty columns tick box is ticked.
- 8) Let's close this pane and disconnect from the data store. Click on the icon to close the data view pane for **BOOK**.
- 9) Now move the cursor over the name of the data model in the Transform Target pane again and display the context menu for the data model.



- 10) Note that the **Disconnect** option is active now. Click on this to disconnect from the data store.