Worksheet 1

Academic Year 2010-2011

Introduction to Solutions Factory Architecture 7.1a

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1. Client Server Architecture

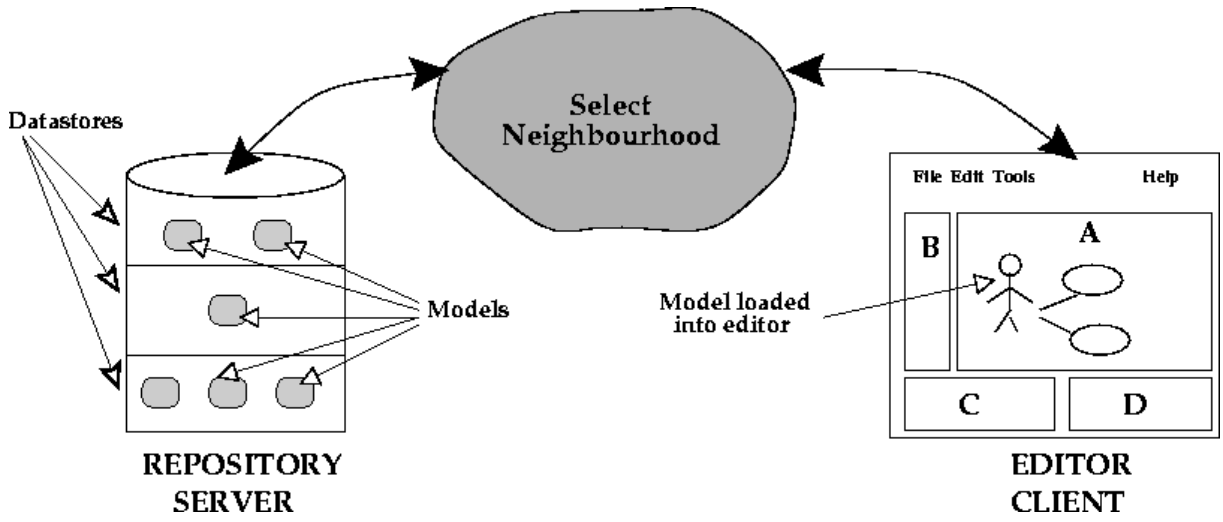

Figure 1: Solutions Factory client-server architecture

Solutions Factory is based on the client server architecture.

- The repository (database) application resides on the server, and has one or more logical partitions called datastores. The repository has responsibility for the storage and synchronisation of models in each datastore, where a model is composed of diagrams, documents, and the data dictionary for a specific project. The Repository Administrator tool administers the repository.
- Artifacts such as diagrams and documents are created and updated on a client editor called Select Architect. The client window is composed of four panels. Note that the client does not locally store any model related data.
- Select Models Neighborhood is an application that is used in mapping (connecting) a client to a specific datastore resident in a specific repository.

Possible configurations of Select are:

- Client and server reside on same machine: stand-alone installation.
- Client and server on different machines: distributed installation.

It is possible for one client to connect to many different servers, and for many clients to be connected to the same server.
The setup in the lab is based on a client server model i.e. distributed architecture. Select Architect has been installed on machines in the lab, but not the repository.

NOTE:

- Solutions Factory previously referred to as Component Factory, and
- Select Architect previously referred to as Select Enterprise
- Whenever you see the word Select, it implies the suite of UML CASE tools supplied by vendor

2. Using the Client Editor

Starting Select Architect

Click on Start → *Programs* → *Solutions Factory* → *Select Architect*
or double click on the Select Architect icon on the desktop.

This starts up the default client window as shown in figure 2.

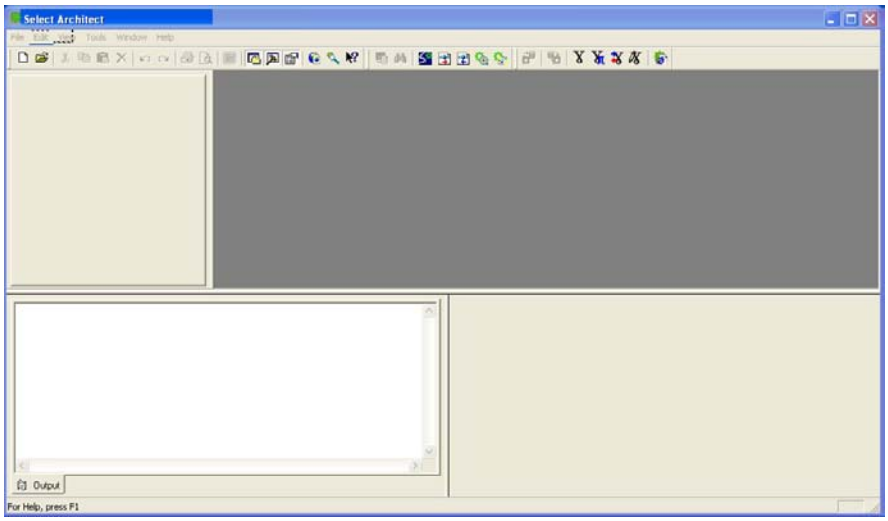

Figure 2: default client screen in Select Architect.

The window is divided into four panels:

1 The largest panel – upper right, is the diagram editor, where the use case and other diagrams are created and displayed.
2 The Explorer panel – upper left, is found to the left of the diagram editor.
3 Directly below the Explorer panel is the Output panel.
4 The Properties panel is found to the right of the output panel, and below the diagram editor.

Also referred to as panels A, B, C, and D in figure 1.

Opening a Model

To open and load an existing model from a datastore, click on **Open Model** under the File menu. Double click on the datastore that manages the model that you wish to

open. Lets try the Examples datastore, and the CaseStudy model in particular. Once these have been selected as shown in figure 3, click on the Open button.

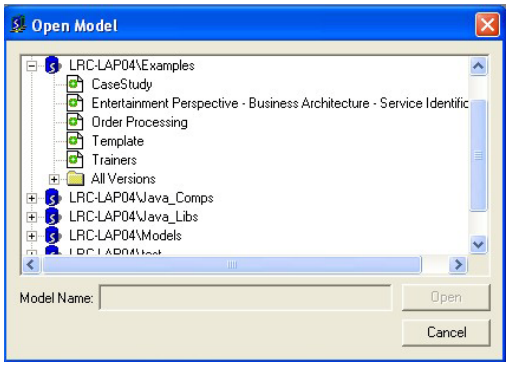

Figure 3: Opening a model.

The window should now appear as depicted in figure 4.

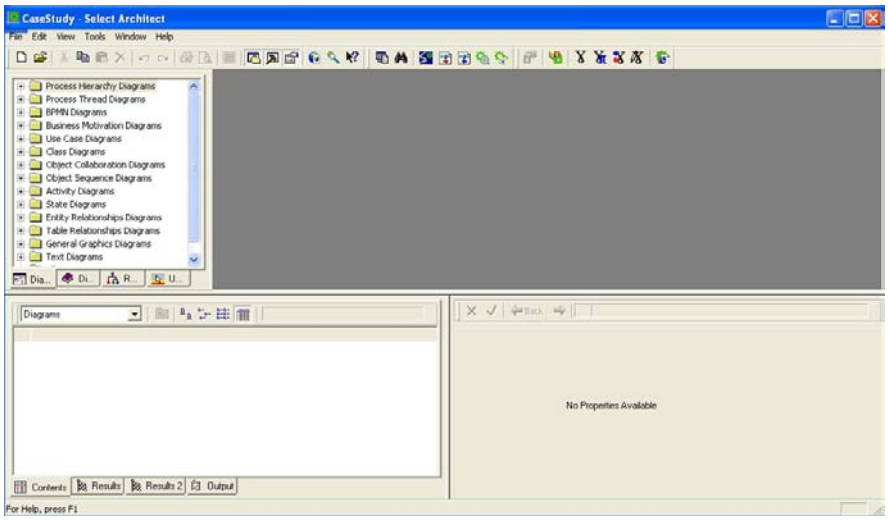

Figure 4. The Explorer panel becomes populated with diagram types after opening a model.

Expand the Use Case Diagrams folder in the Explorer Panel, the result is an icon which depicts a use case diagram. Double click to load this use case into the editor window, as in figure 5.

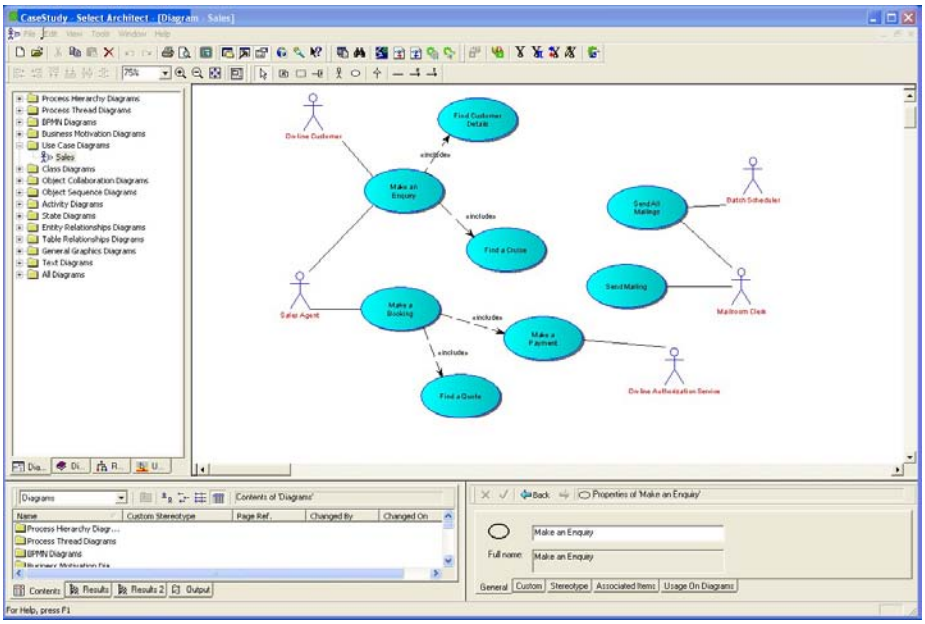

Figure 5: Opening a use case diagram.

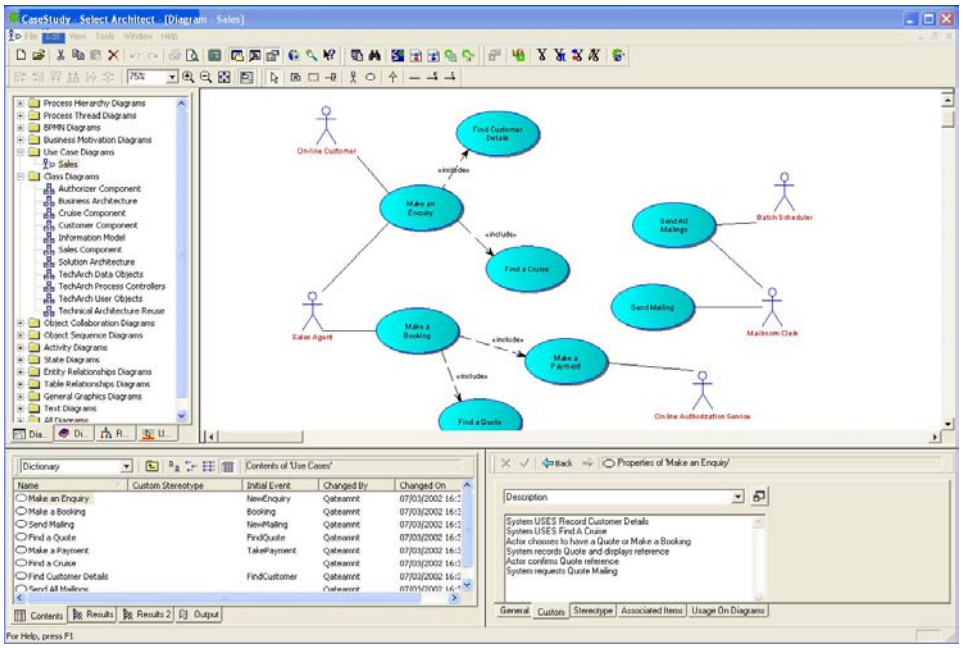

Figure 6: viewing a use case description.

Use Case Descriptions

To view a use case description, select **Dictionary** in the list box in the Output panel. A list of diagram artifacts is displayed in the associated box as shown in figure 6. Double click on the *Use Cases folder*. A listing of the use cases in the Use Case diagram is shown.

Double click on a use case, and its description may be viewed in the Properties panel as shown in figure 6. Make sure that the *Custom* tab is selected and that *Description* is selected in the drop-down list box.

Class Diagrams

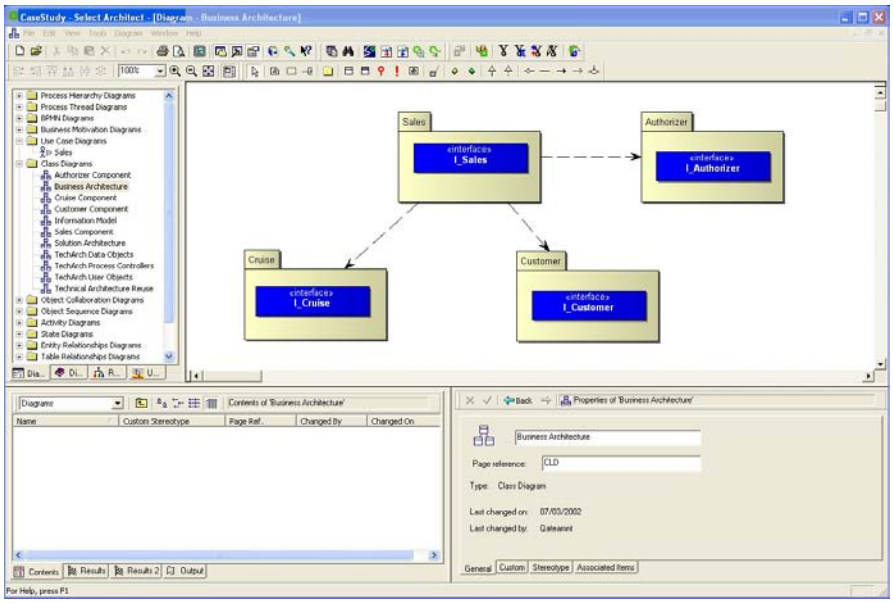

Figure 7: Business Architecture diagram

To open a class diagram, such as the one depicted in figure 7, expand the class folder, and double click on either the Business Architecture class diagram. Likewise for the Customer Component as shown in figure 8.

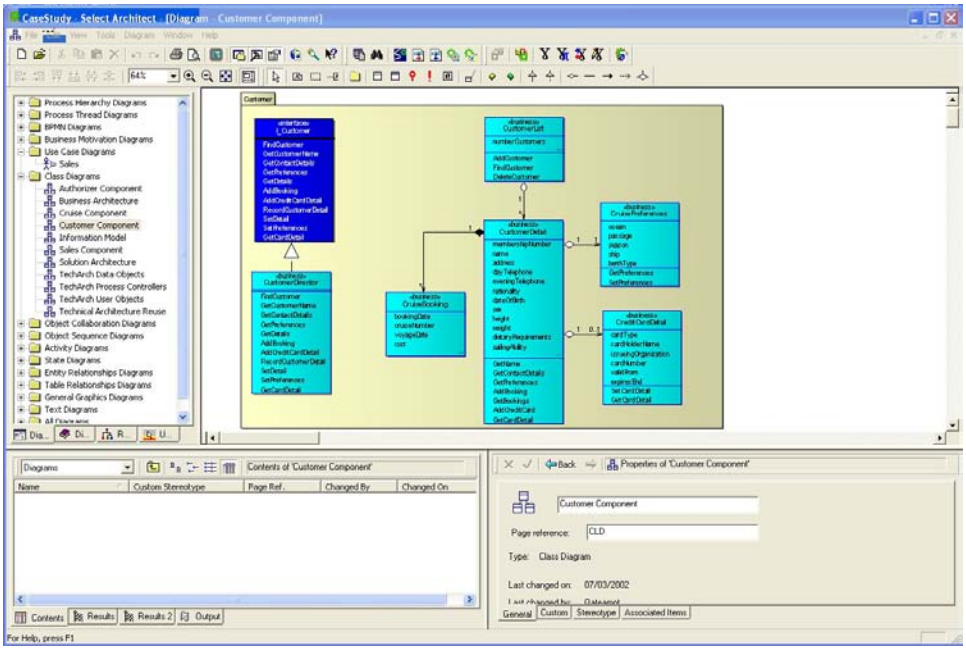

Figure 8: Customer package class diagram.

View a description of the class by using the Dictionary in the Output panel, and clicking on the Custom tab in the Properties panel.

Customising the Select Solutions Factory View

One can customise which panels and toolbars are shown by choosing the toolbars and panels used in the View menu. The same class diagram is depicted in figures 9 as shown in figure 8 but with different viewing options.

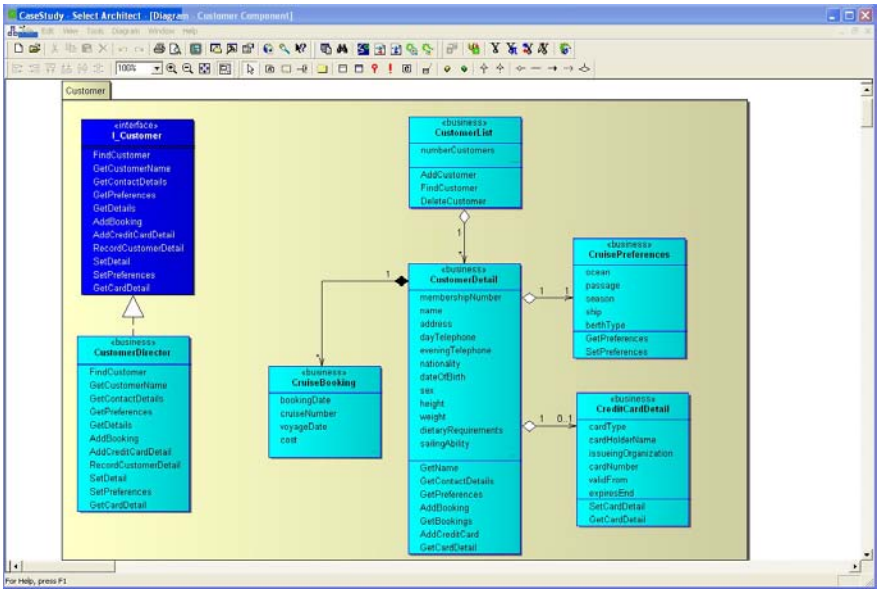

Figure 9: the same class diagram as that depicted in figure 8, but with the explorer, properties and output panel hidden. It is also possible to configure the toolbars by choosing options in the View menu.

Expand on a particular help topic in the explorer panel, and click on a selected subject, as illustrated in figure 10. Solutions Factory Help is very comprehensive and will provide detailed instructions on how to draw all diagrams that are required for your project.

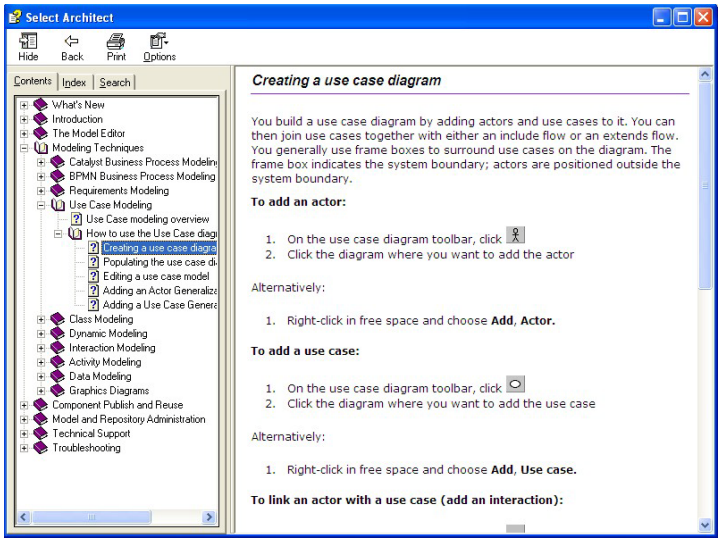

Figure 10: An example of a Select Solutions Factory help file.

And remember, the help window is a different application from the Select client. When using the editor, leave the help window minimised in the background, and context switch to the help window as required.

3. Select Models Neighbourhood and Mapping Datastores

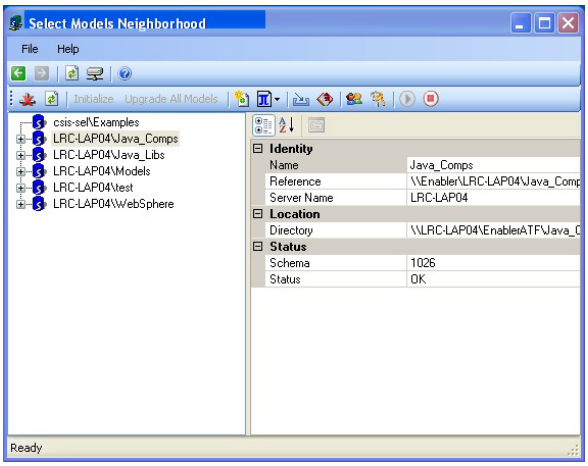

Figure 11.

For the purposes of this document, the local machine refers to the computer on which the client application resides i.e. the machine that you are now using.

The server is the machine on which the repository software runs. The server is LRC-LAP04 in the example shown in figure 11.

For CS5121 labs, the server should always be CSIS-SEL – MAJOR SOURCE OF ERROR!

The next task is to map or connect datastores on the server to the local machine. Open the Select Neighbourhoods Model by double clicking on its icon on your desktop, and make note of the datastores that are currently connected or mapped to the local machine.

Note that Examples is not mapped in figure 12.

Mapping a Datastore

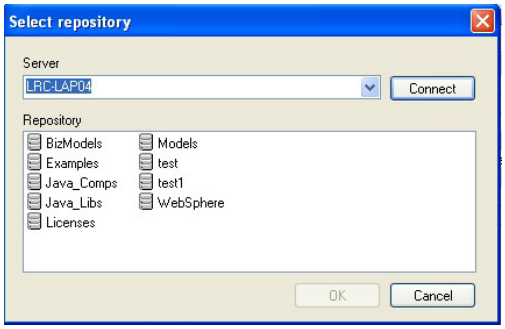

Figure 12.

Choose *File* → *Map Repository* in the Select Models Neighborhood menu. A window is presented as shown in figure 12.

Please make sure that the Server name is correct, i.e. CSIS-SEL when in the CSIS Lab. Next, click on Examples and the click OK

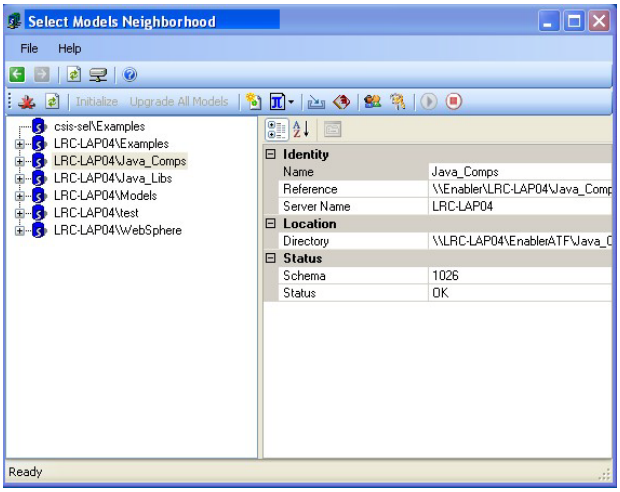

Figure 14.

Examples will now appear in the left panel of the Select Models Neighborhood screen as depicted in figure 14. Expand Examples by clicking on the + icon adjacent to its name. This action yields a screen as shown in figure 15.

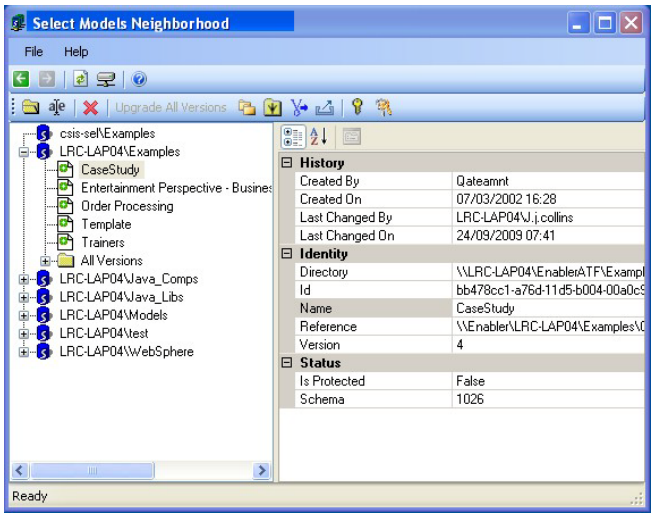

Figure 15.

Double click on Trainers. What happens?

Unmapping a Datastore

To unmap a datastore, right click on the datastore, and select *Unmap*