Mogwai ERDesigner NG

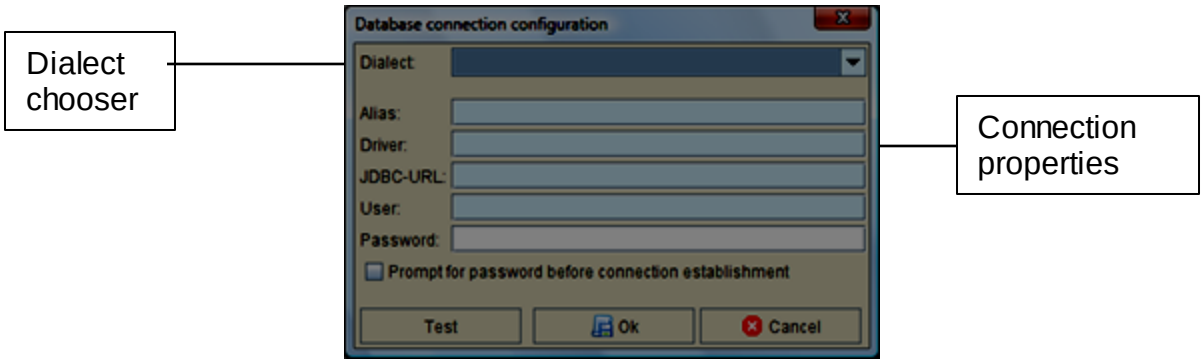
Basic Guide

Overview

Creating The First Database Model

To create your first ERDesigner model, please select File → New Model from the main menu. This will create an empty model.

Now, select Database → DB Connection. The database connection editor dialog will be displayed:



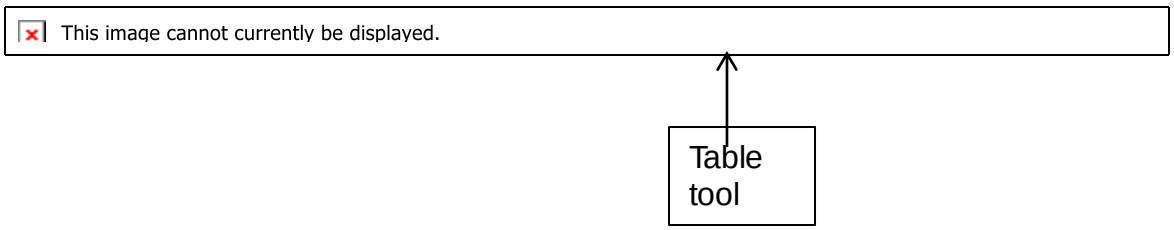
ERDesigner NG supports a rich set of different database types. These types are distinguished by their dialect. For every database, a special dialect exists. This dialect helps ERDesigner NG to create the right SQL statements for the right database, as every database vendor interprets the SQL standard differently.

Please enter the database connection properties. When you are ready, you can test the connection settings by clicking the “Test” button. ERDesigner NG will try to create a database connection. If something goes wrong, an error will be displayed. If the database connection is setup well, ERDesigner NG will display an information box informing you that everything is alright. Additionally, the current database version will be displayed to inform you about the type of database you’ve made a connection to.

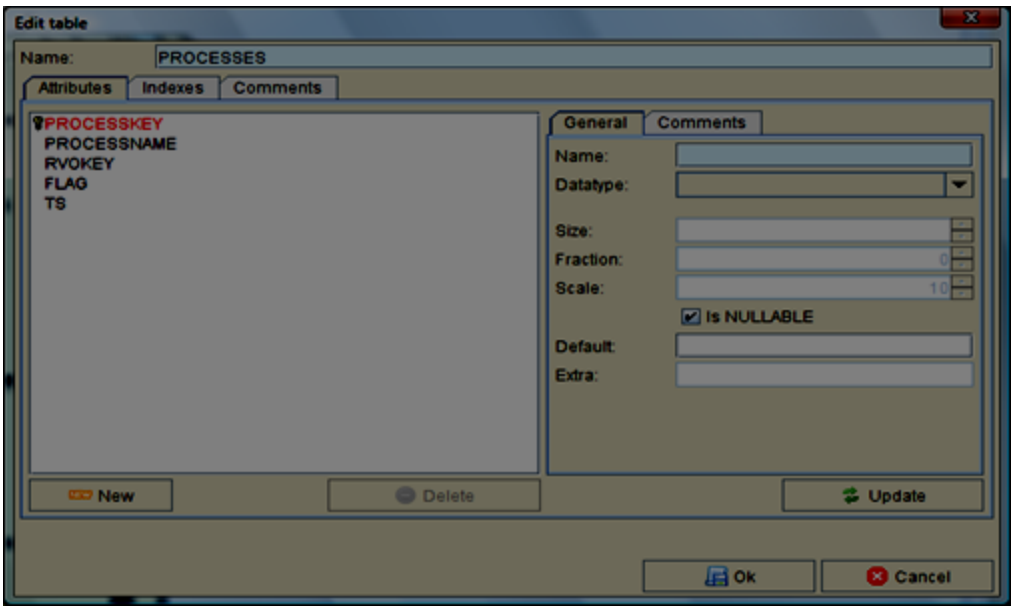
Note: You do not need a working database connection to model a diagram. If you do not have the right connection properties yet, please enter dummy values.

Adding Tables

To add a table to the model, you have to select the table tool from the main menu.



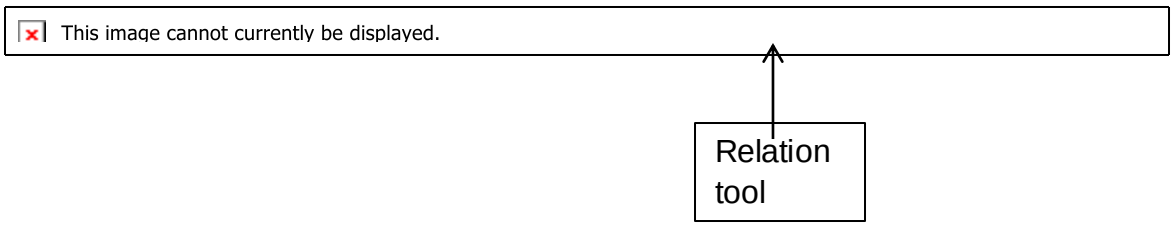
The table tool allows you to add tables to the model. Now, you have to click into the editing area. The table editor dialog will be displayed, allowing you to add attributes to the table, add indexes to the table, create a primary key, and finally to specify comments for documentation.



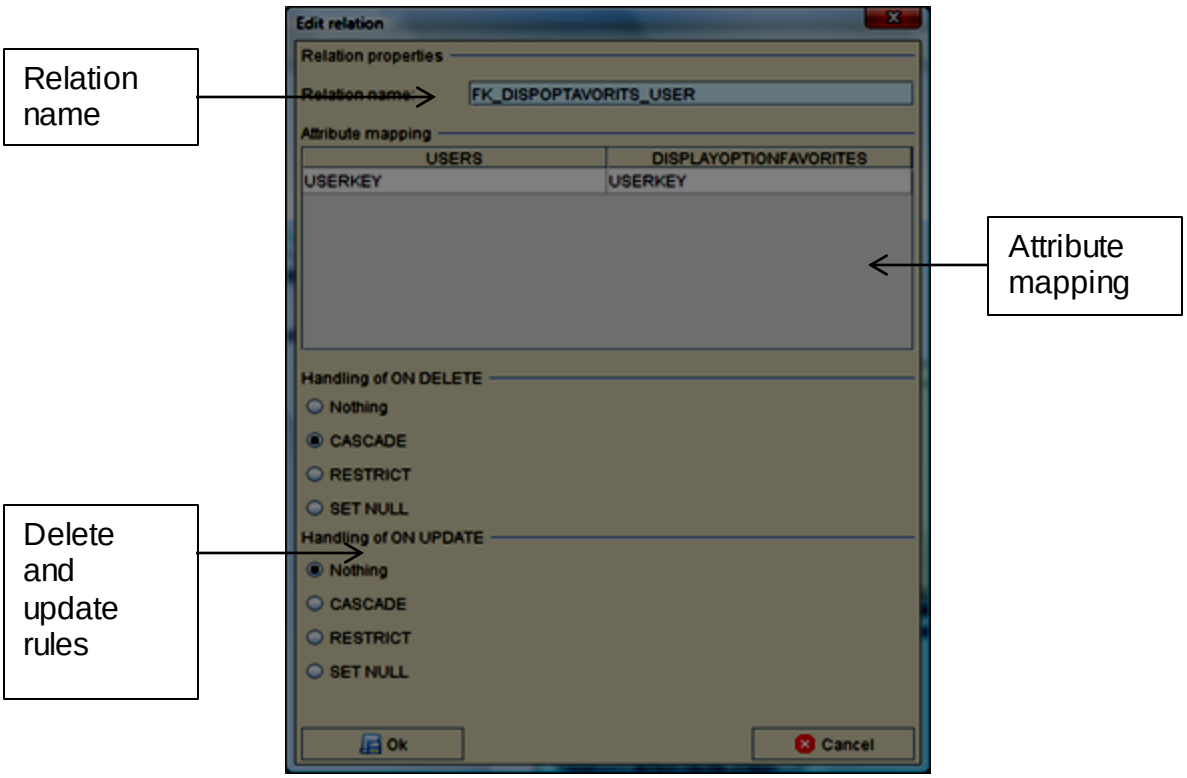
Attributes or indexes are added to the table by clicking the “New” button and specifying the necessary parameters. They can be removed from the table by selecting them from the list and clicking the “Delete” button. Attributes can be modified by selecting them from the list, modifying their parameters and clicking the “Update” button.

Adding Relations

To add a relation to the model, you need to select the relation tool from the main menu:



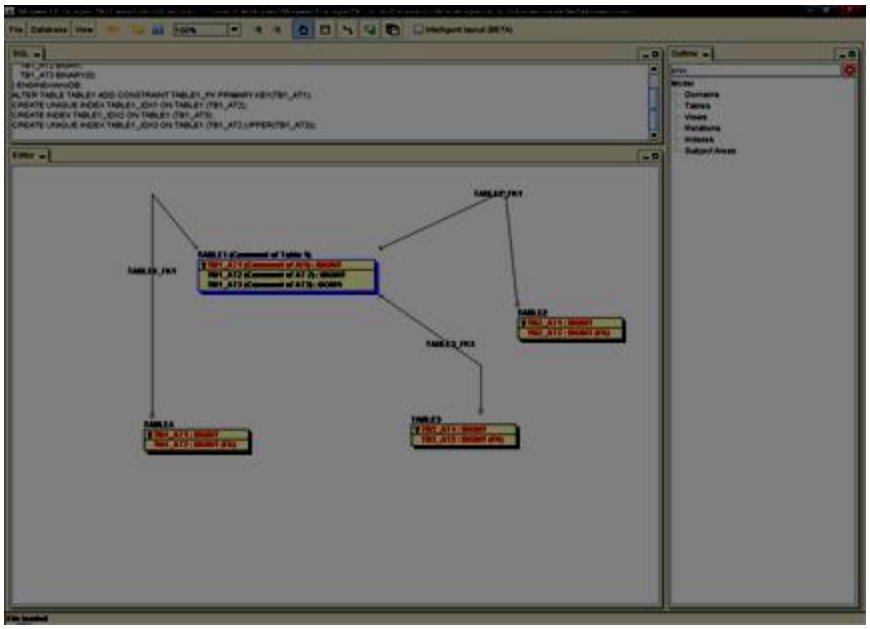
Now, you need to click on the importing table, the table where the foreign key should be created. Then, keep the mouse button pressed, and drag to the exporting table, the table where the referenced data exists. Now, release the mouse button. The relation editor dialog will be displayed:



In this dialog, you need to specify the unique relation name, and the attribute mapping fro the exporting table to the importing table. Finally, you need to specify the on delete and on update rules. After you have entered all parameters for the relation, click the “Ok” button, and the relation is added to the model.

Relations are displayed using an orthogonal layout. Sometimes, it might me necessary to add additional routing points to the relation. This can be done by holding down the ALT key and to a right mouse click to the place where you want to add the routing point. The added point can be moved to the place you want, and can also be deleted again

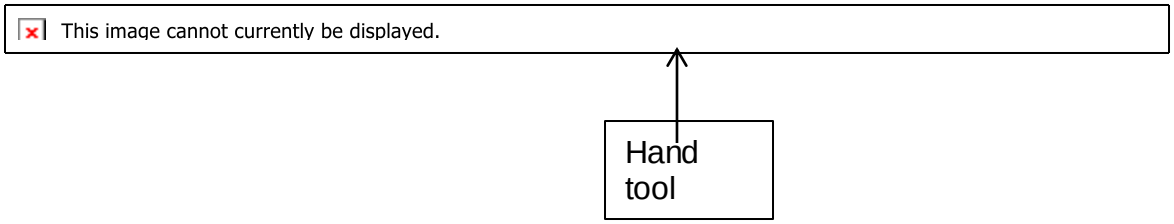
by using the ALT key down and to a right mouse click on the existing routing point. Here is an example of an Relation with added routing points:



ERDesignerNG also has a build in quick table creation macro. If you drag a relation from an existing table to an empty place, ERDesignerNG will show you a context menu. Here you can select if you want to create a new child or a new parent table here and connect it with a relation to the existing table. If you chose a menu entry, the table editor will be displayed. Now you can design the new table. After you have finished with the ok button, the relation editor will be displayed. Here you can specify the attribute mapping for the new relation.

Modifying Existing Model Objects

To modify an existent model object, you need to select it. To select an object, you have to select the hand tool from the toolbar.

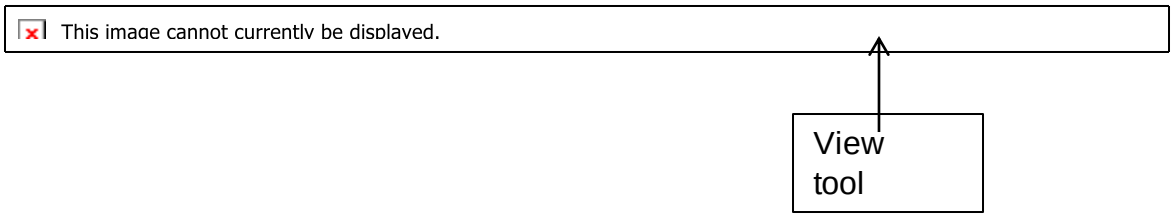


Now, click on the object you want to modify. It will get a blue border. Now, you can drag and drop if over the editing area to change its location. You can edit an existent object by double clicking it. The editing dialog will appear and you can change the object as you wish. You can also delete an object from the model. You do so by selecting the object, and to a right click on it. A context menu will appear. Here, you select “delete”. A confirmation dialog will be displayed, After you confirm the deletion with yes, the object will be permanently removed from the model.

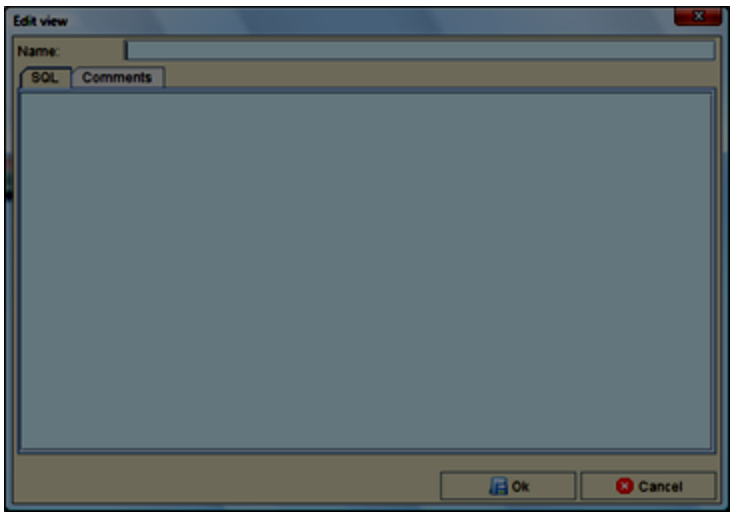
Additionally, you can select multiple objects by selecting the hand tool clicking the left mouse button, select an area from the editing area, and release the left mouse button. All objects within this area will be selected. You can also add or remove objects to and from the current selection by keeping the left shift key pressed and click with the left mouse button, or keep the left CTRL key pressed and click with the left mouse button.

Adding Views To The Model

ERDesignerNG supports views. To add a view to the model, you have to select the view tool from the main menu, and click at the place where you want to add the new view:



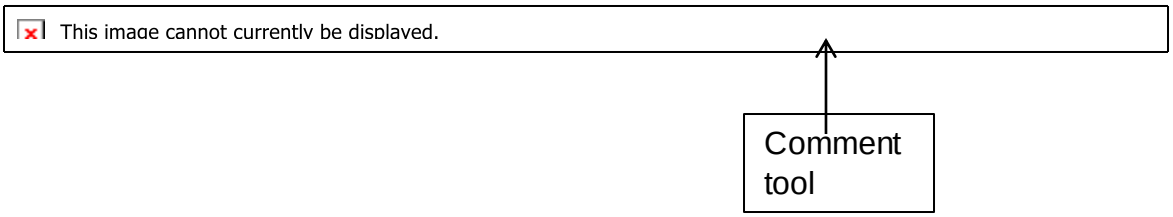
The view editor will appear. Now, you can enter the view definition.



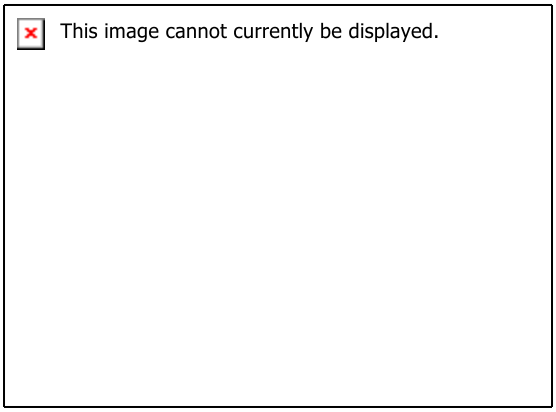
The view will be added to the model after you have clicked the “Ok” button. You can edit existing views by selecting the hand tool from the toolbar and clicking at the view.

Adding Comments To The Model

In some situations, you might want to add additional comments beside model elements. You can easily add comments to the model by selecting the comment tool from the toolbar, and click inside the model.



The comment editor will appear. Now, you can enter your model comments.

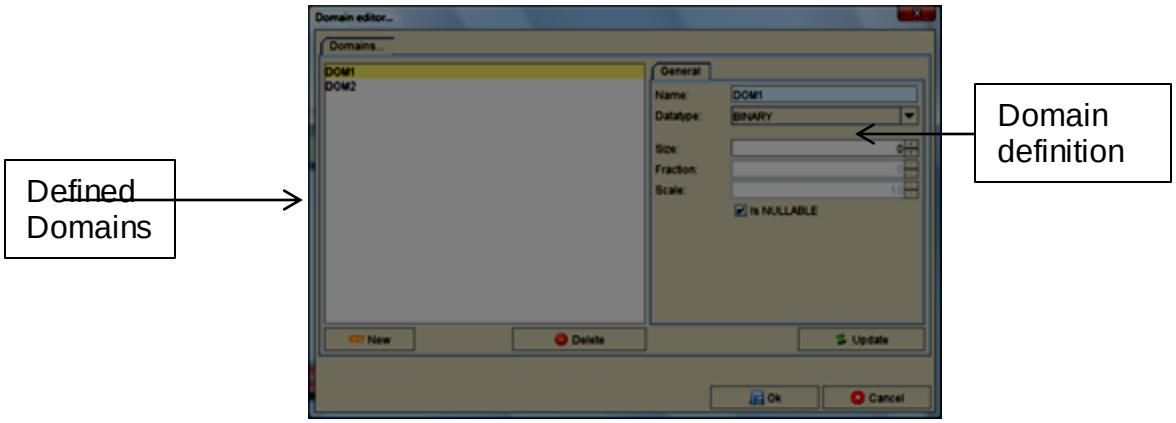


The comment will be added to the model after you have clicked the “Ok” button. You can edit existing comments by selecting the hand tool from the toolbar, and clicking at the comment.

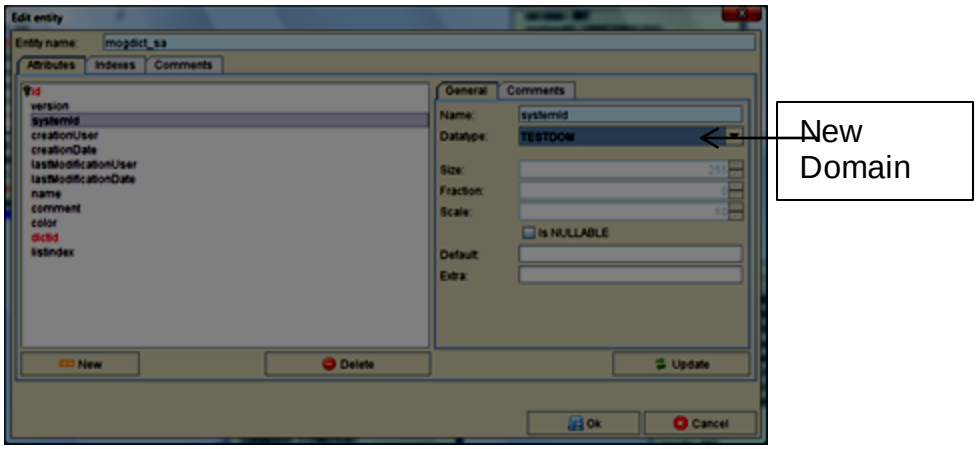
Working With Domains

Mogwai ERDesignerNG supports domains. A domain is a kind of logical datatype. For instance, if you want to model multiple tables with the same attribute like surname, and you want do make sure that every surname has the same datatype, you can define a domain called surname, and assign the datatype to this domain, varchar(20) for instance. Now, you can assign the domain to the attributes of the tables, and ERDesignerNG will take care of the correct datatype.

The domain editor can be started by selecting Database → Domain Editor from the main menu. The domain editor will appear.



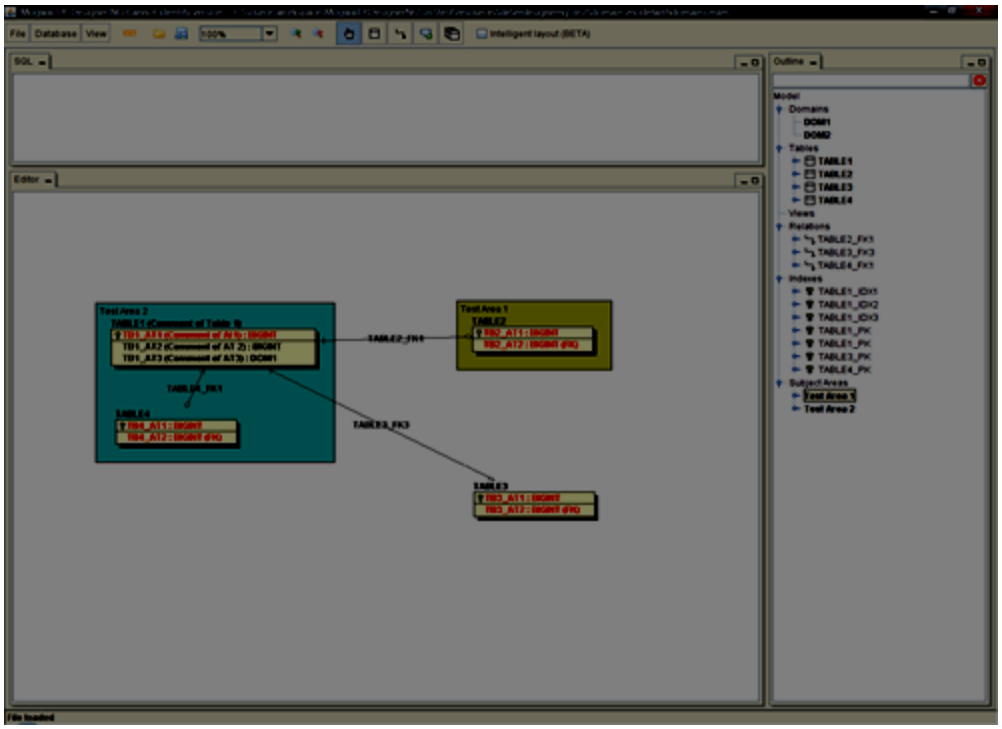
After you have confirmed the Domain definition, you have to click the “Ok” button. Now, you can select the domain in the table attribute definition:



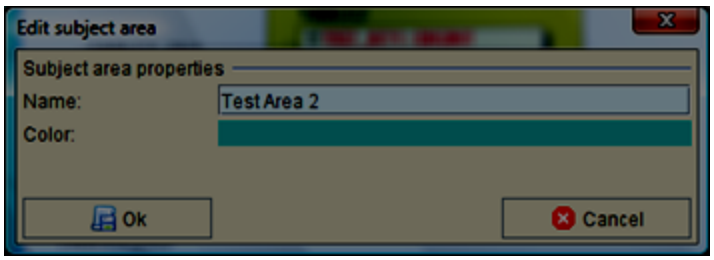
Working With Subject Areas

Logically related tables or views can be grouped to units. These units are called subject areas. Building a subject area has no affect on SQL generation. They are only to form the logical part of the model and to make your model look fancier.

To add a subject area to the model, you have to select the tables you want to add. To do so, use the hand tool for table selection. After you have selected some tables, do a right click on the editing area. A context menu will be displayed. Here, you have to select the “add to subject area” function. After clicking this menu item, the selected tables will be added to a new subject area. Please note that a table can only be part of one subject area.



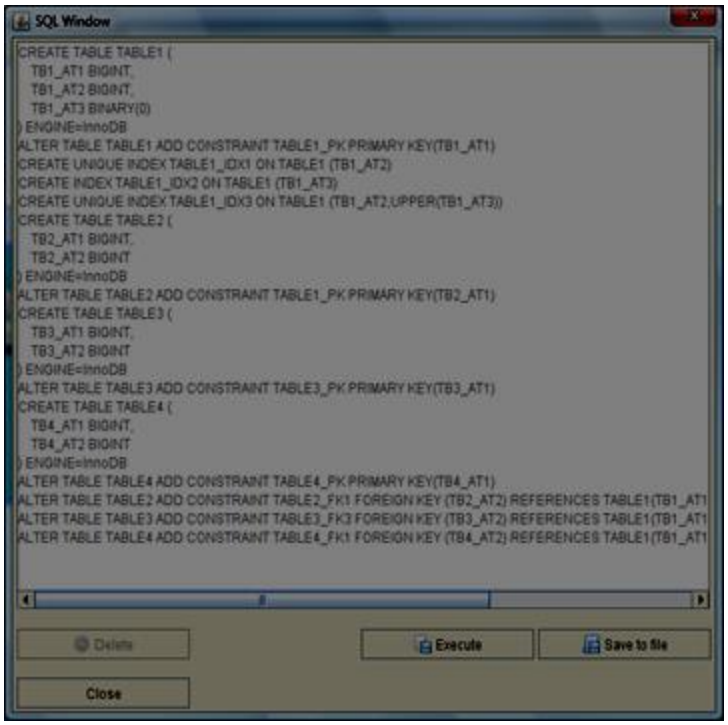
Tables can also be added to a subject area by dragging them into the area. They can be removed from a subject area by dragging them out of the area. If a subject area does not contain tables anymore, it will be deleted from the model. Subject areas can also be edited. You can edit a subject area by doing a double click on the subject area surface. The subject area editor will be displayed. Here, you can change the subject area properties and confirm your changes.


Edit subject area
Subject area properties
Name:
Test Area 2
Color:
Ok
Cancel

DDL Script Generation

Heart of Mogwai ERDesigner NG is the SQL DDL script generation module. Using this module, you can easily create the SQL statements for the current database model. The SQL statements will be optimized for the current database dialect (the dialect you have chosen when you have setup the database connection).

To create a DDL script for the current model, select Database → Create DDL for model from the main menu. The DDL SQL dialog will be displayed:



Now, you can save the generated statements to disc. Of course, you can also send them directly to the current database connection for execution. Statements you don't want to be executed can be removed. Creating a full functional database creation SQL file is quite easy with this functionality!

Exporting The Diagram

The current database diagram can be exported in various output formats. Currently, Mogwai ERDesigner NG supports the following formats:

- .MXM File : The core database model in XML notation (Mogwai format)
- .PNG file
- .BMP file
- .GIF file
- .SVG file

For every export, there are two operating modes. On mode is to export the whole model to the destination format, and one mode to export every table to a single file of the desired format.

You can start to export the current model to file by selecting File → Export as. Now, you have to select the item corresponding to the export format, and finally, select “All in one file”, or “One file per table”. After you have clicked the menu item of your choice, the “Save as” dialog will appear. Here, you have to select the target directory in one file per table mode, or the target file name in all on one file mode. If you export the model in one file per table mode, the files will be named by their tables, e.g. if the table is named “DATA” and you export it as a .PNG file, the file will be named “DATA.png”.