Db4o-NetBeans-Plugin

Version 0.3

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Introduction

Db4oNetBeans is a plug-in for the NetBeans IDE to explore and query the db4o database content (http://www.db4o.com)).
It is possible to open a custom number of db4o databases and explore and change the content in a db4o database editor window.

Feature list for version 0.3:

- Open/Close a db4o database file
- Browse the objects stored in the database
- Change properties of stored objects
- Add/Remove objects
- Add/Remove queries
- Executing queries
- Displaying query results in a separate editor window
- Auto-Update functionality
- Host a db4o database file in an embedded server

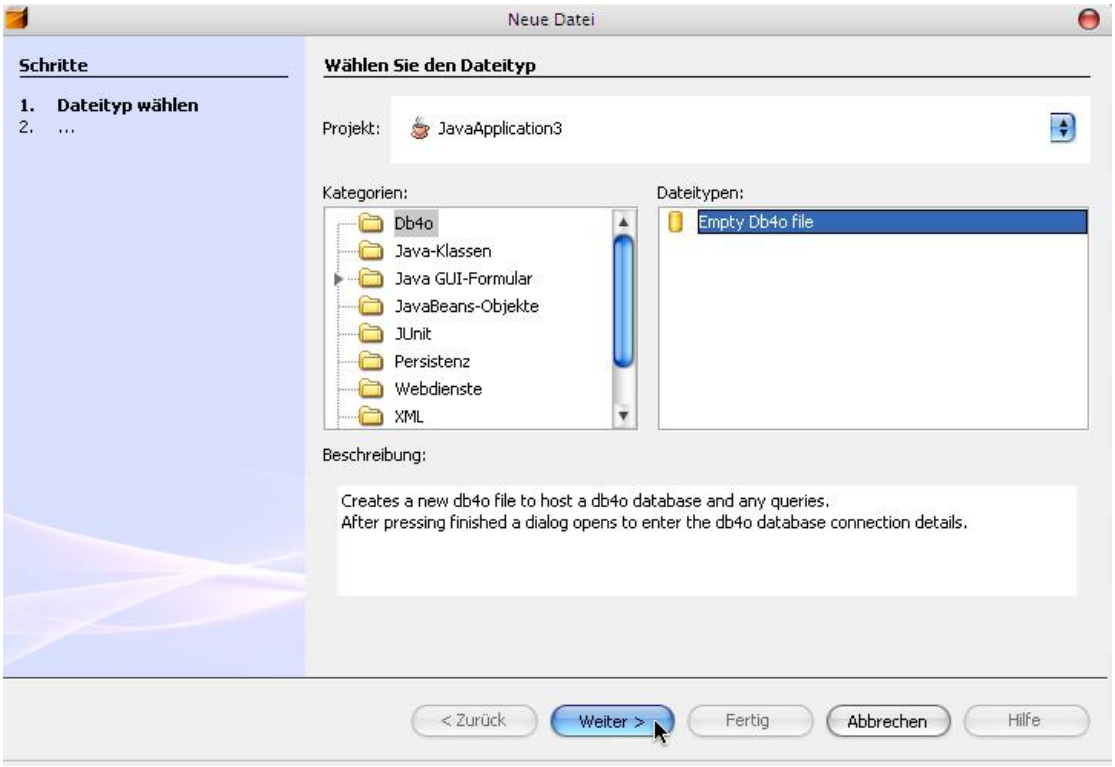
Changes in version 0.3:

- Auto-Update functionality
- Host a db4o database file in an embedded server
- Configuration of the db4o connection details are added to the wizard when creating a new file of the db4o file type.
- Direct queries from the navigation window has been reactivated
- Bugfixes

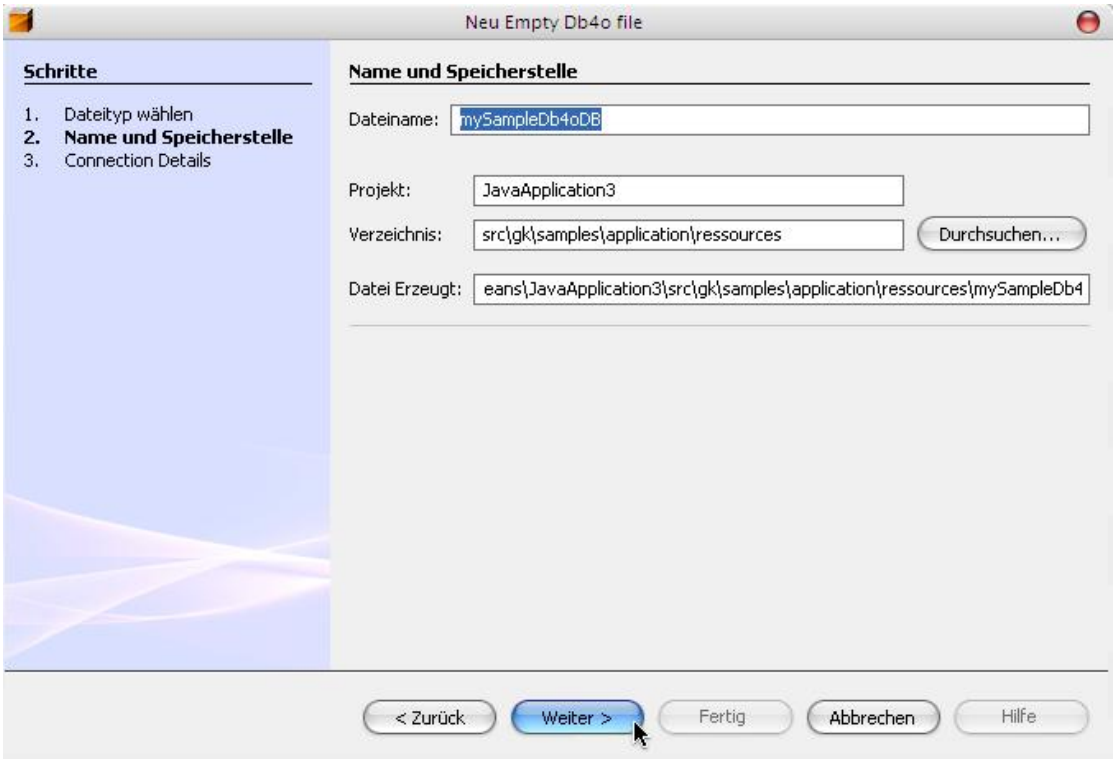
Accessing a db4o database

db4o databases are accessed by simply creating a custom file type choosing *New File* on the *File* menu and adding it to the opened java project.

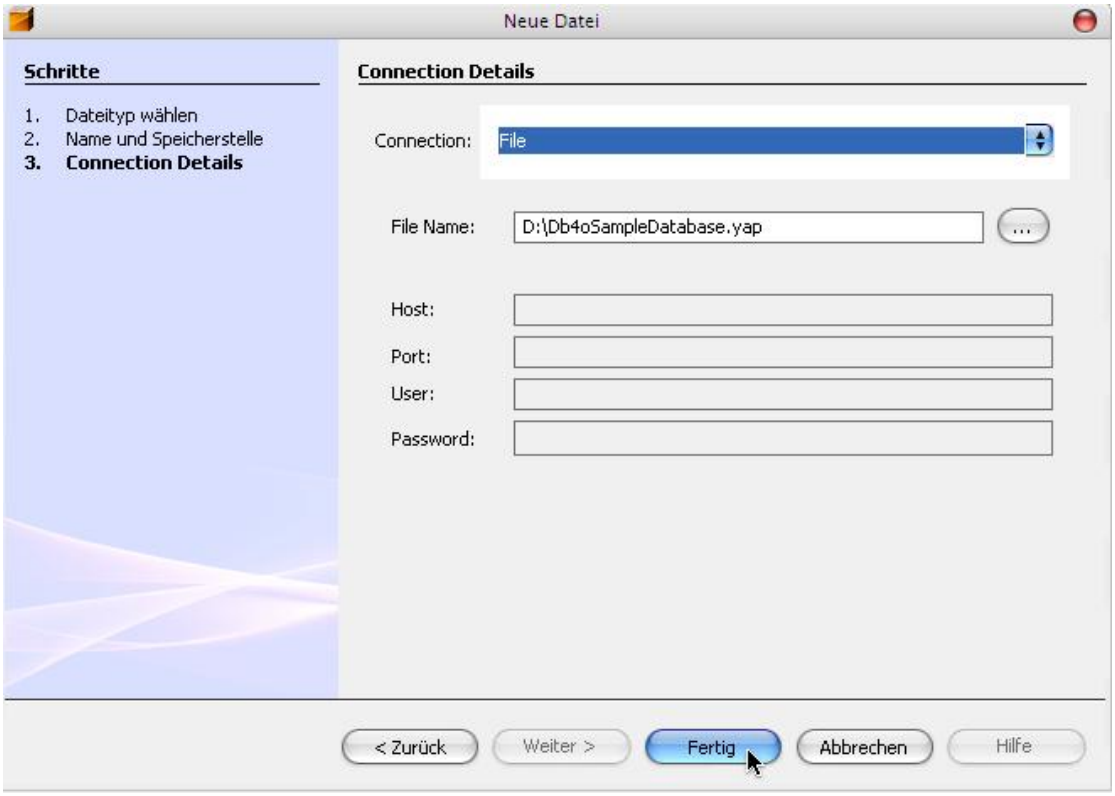
On page one of the *New File* wizard select the category *Db4o*. This category offers one new file template type called *db4oTemplate.db4o*. Select it and press *Next*.



The second step appears. Enter a name for the new *db4o* file and adjust settings for the location of the file.



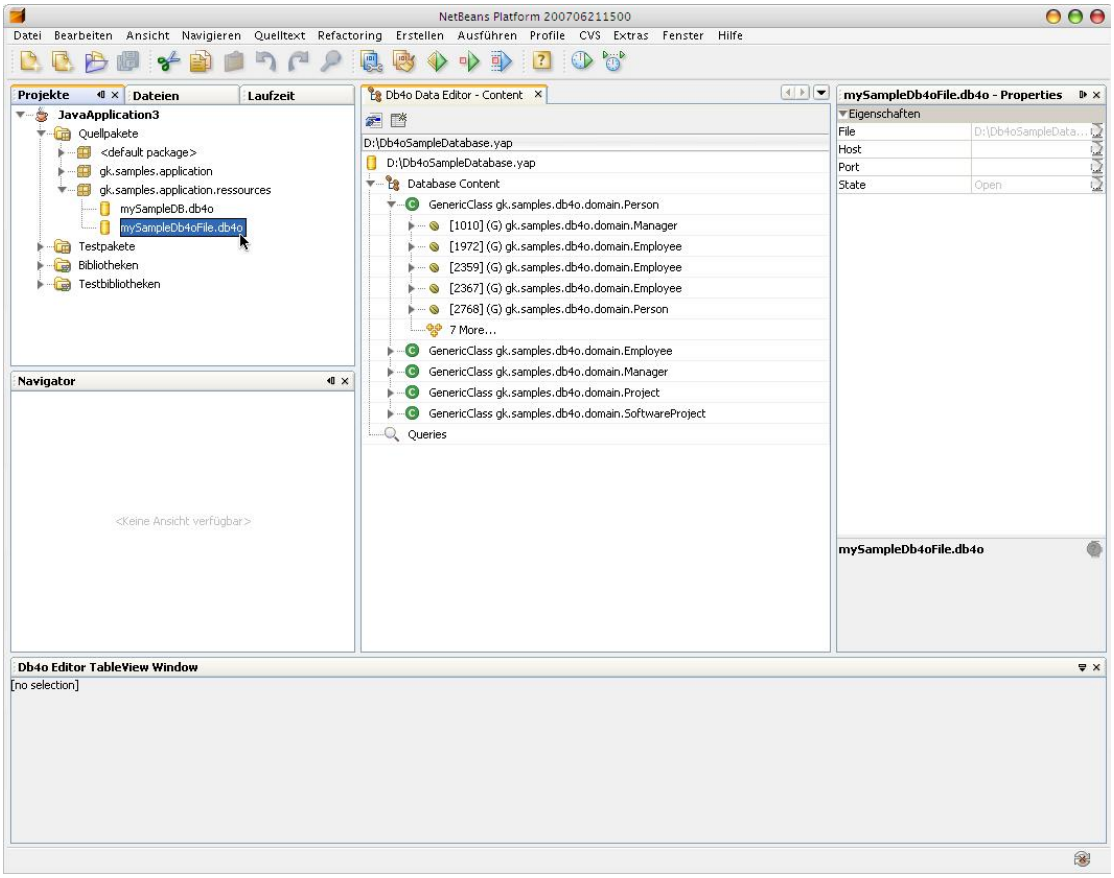
After entering the name, you can specify the connection details on the third page.



Depending on the type of db4o database connection:

- Enter or select a db4o database file
- Enter db4o object server connection parameters.

After pressing OK, the db4o database file will be added to the selected package as new sub node and it will be opened in the db4o database editor.

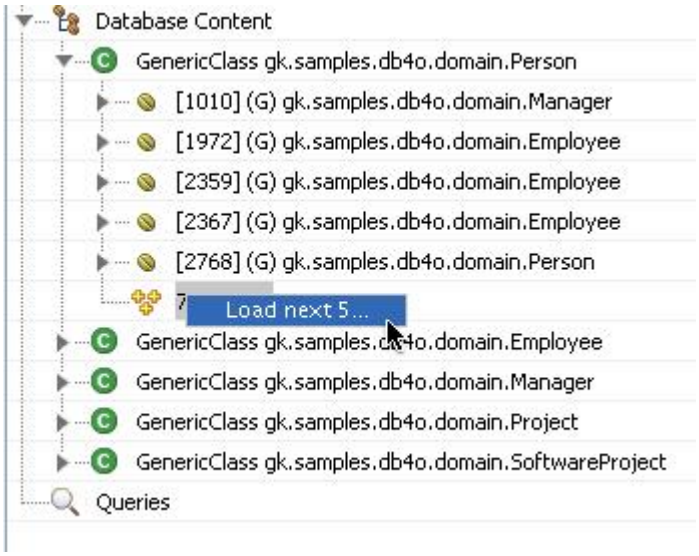


Any number of db4o databases may be added to a java project.

The db4o database editor will be used to display object data, add or remove objects and to define queries.

The opened db4o database is displayed in a tree with the reference to the database as a root. It has two child objects. One displays the database content structure. The other is the root for the queries that may be defined on the database.

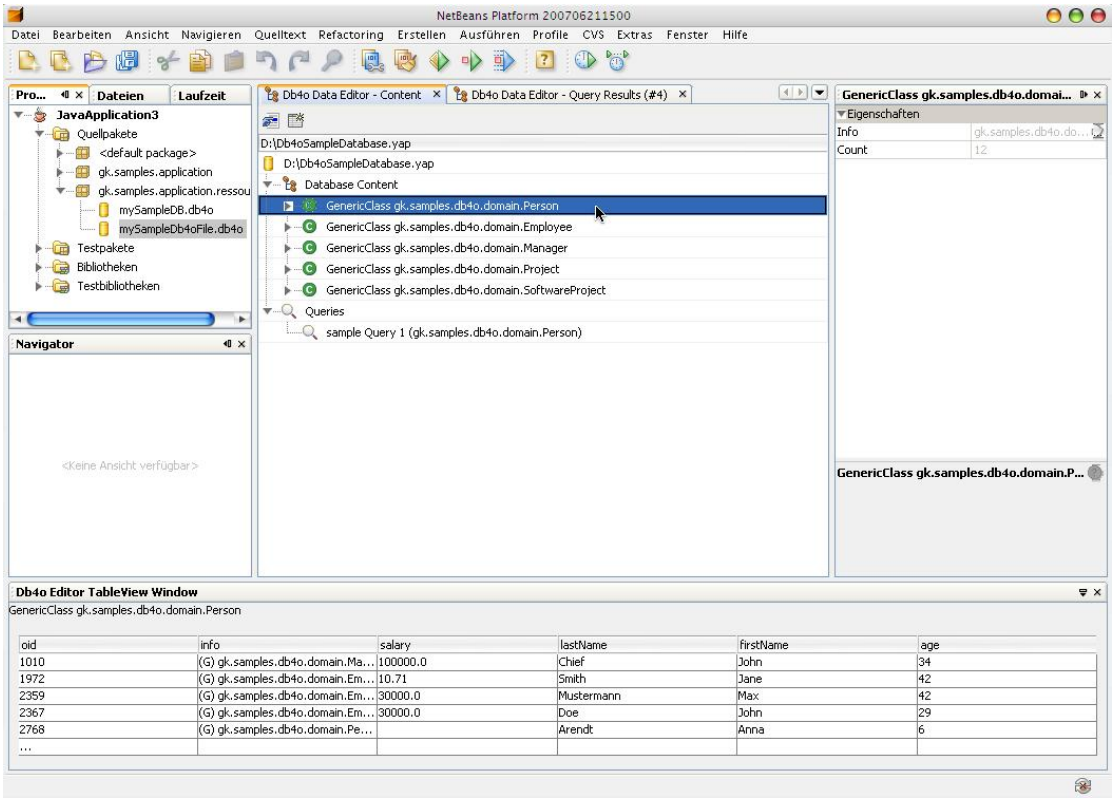
The database content structure displays the stored classes and its instances.
Note, that only a limited number of objects of each class are displayed. More can be loaded on demand.



The number of objects loaded on each request is a parameter in the options dialog.

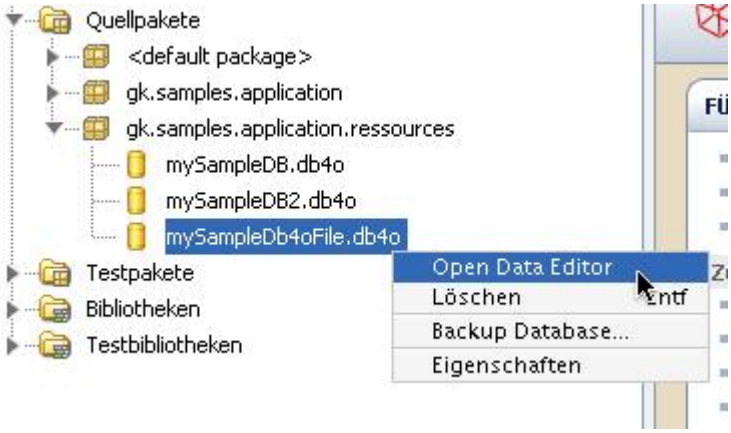
Editing data is based on the standard properties window provided by NetBeans. Note, that it (in version 0.2) the properties window is not visible when the db4o database editor is opened the first time. You can activate it by selecting it from the windows menu.

Depending on the node selected in the db4o database editor, you can display its data in a table view. Open the window menu and select the *Table View Window*. By default, it will be displayed docked at the bottom of the application window as illustrated in the picture below.



Re-Opening a db4o database file type

This is simply done by selecting the menu item Open Data Editor from the context menu of the db4o database file type in the navigator window.



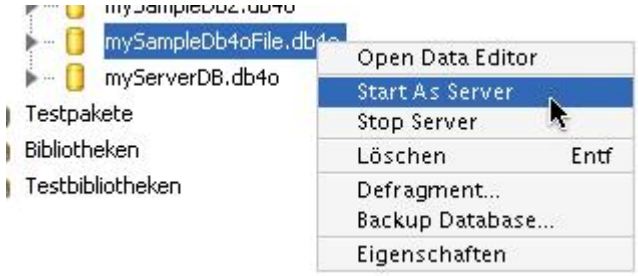
Closing a db4o database file

A db4o database file is closed by closing the editors.

Starting a db4o database file as a server

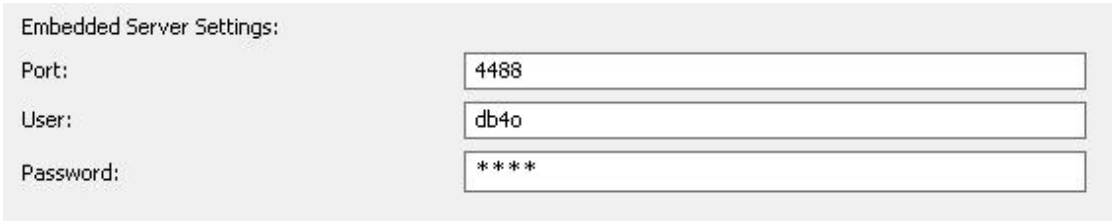
A db4o database file can be started as a server. That means, a server instance is started that hosts the database file.

A db4o database file is started as a server by using the menu item *Start As Server* from the context menu as shown below.



A db4o database file is stopped again by selecting the corresponding menu item *Stop Server*.

The connection details used by the server embedded into the plug in are available in the options dialog and can be modified there.



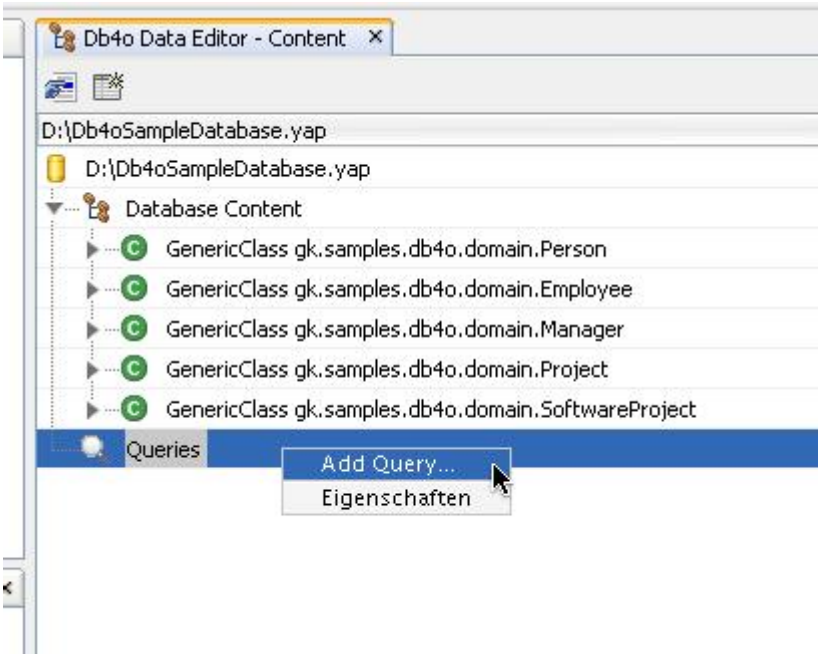
Default settings are: Port = 4488, User/Password = db4o.
The host is always set to localhost.

However, the current limitation is that only one server can be started in the plug in. This is subject to change.

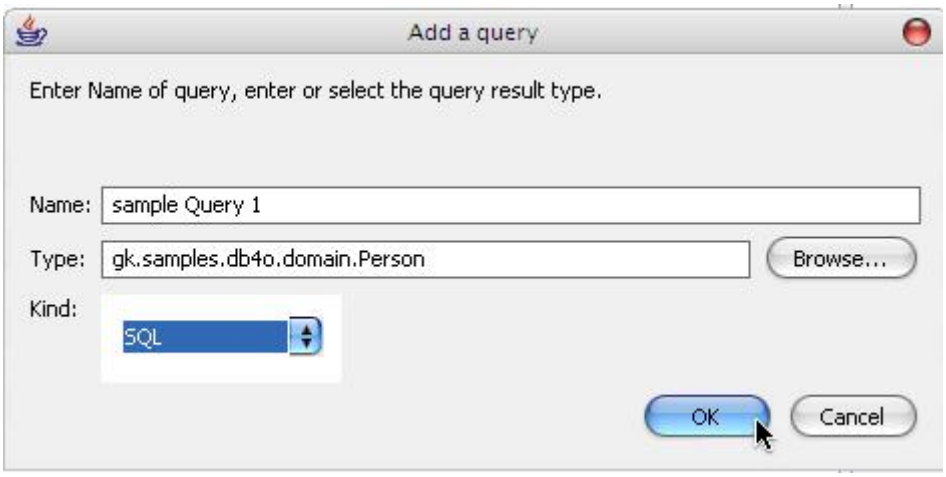
Queries

Adding Queries

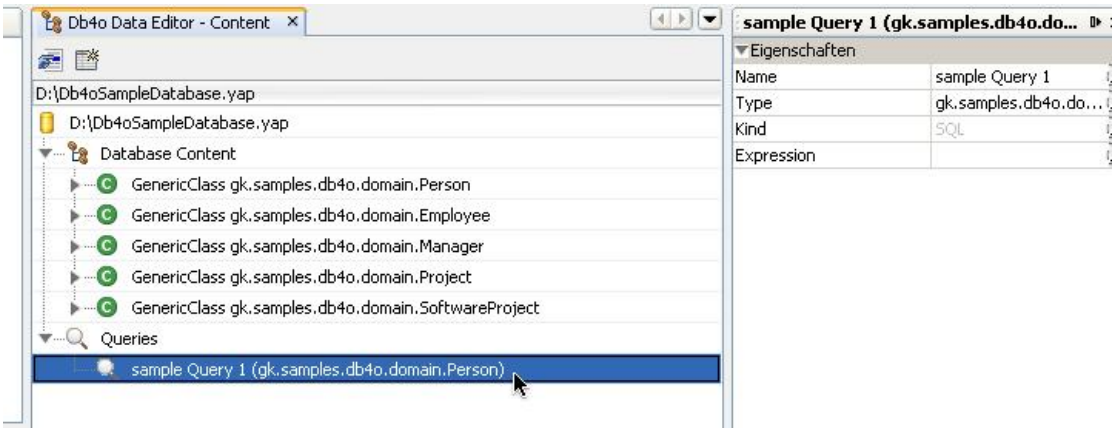
Queries are added by selecting the *Add Query…* from the context menu of the *Queries* sub node.



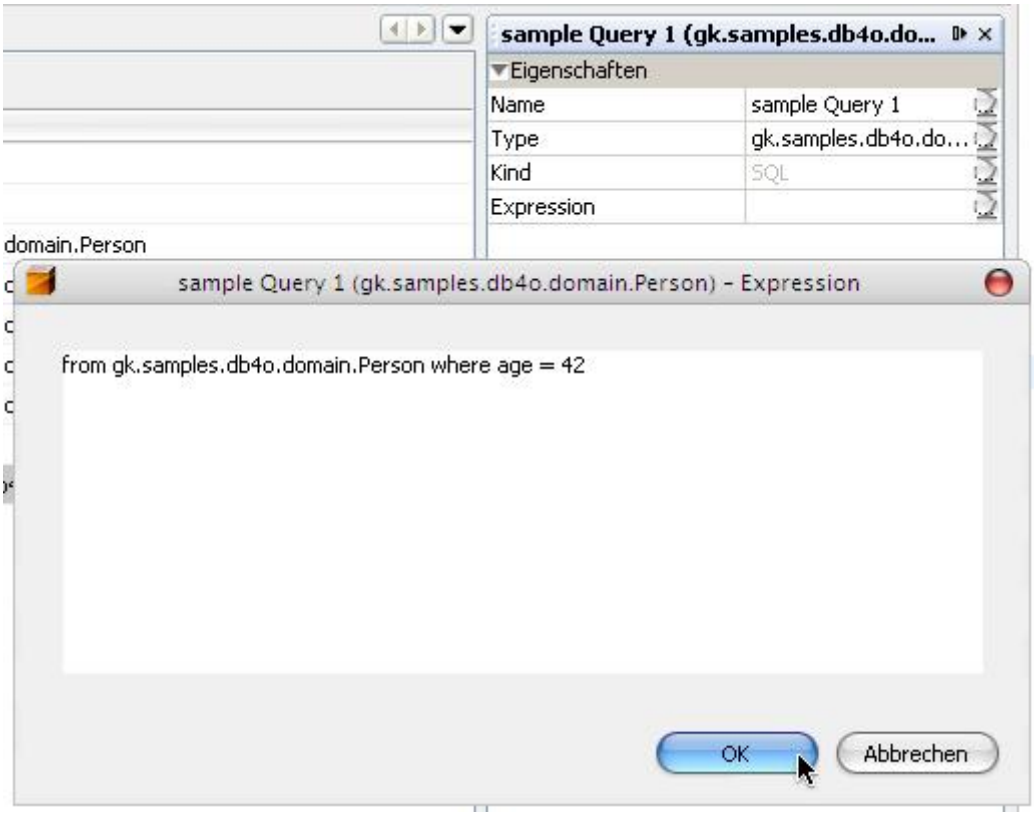
The Add Query dialog opens where you can add a name for the query and the type of the objects to query for.
Additionally, the type of query can be selected from a combo box. Two query types are supported by now: SQL and SODA.



When pressing OK and a new query sub node labeled with the given name is added to the *Queries* node.



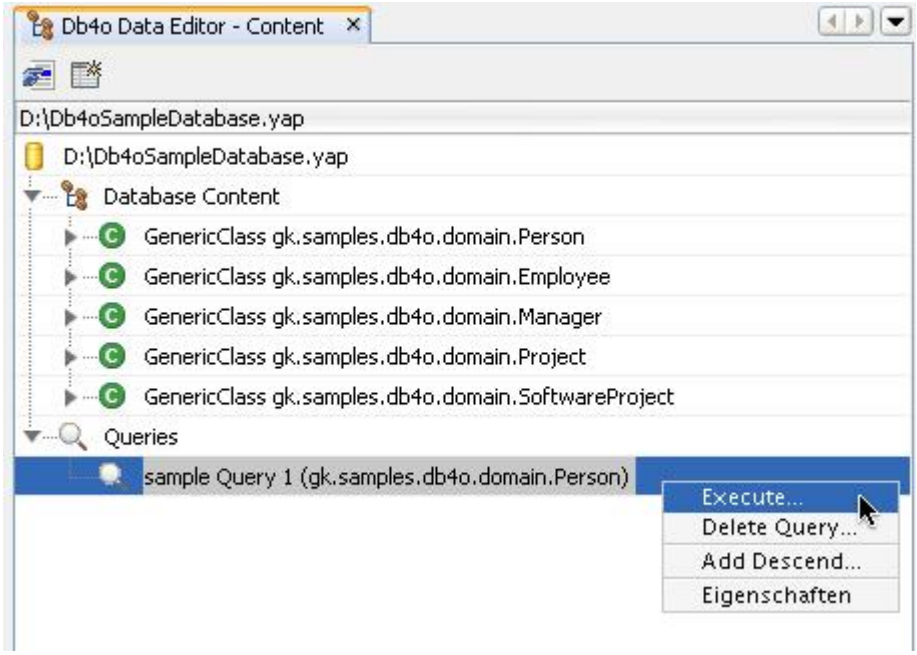
For a SQL query, the expression can now be entered using the properties window. Either enter the expression directly into the one-line edit field or open a multi-line text field by pressing the …-button on the right.



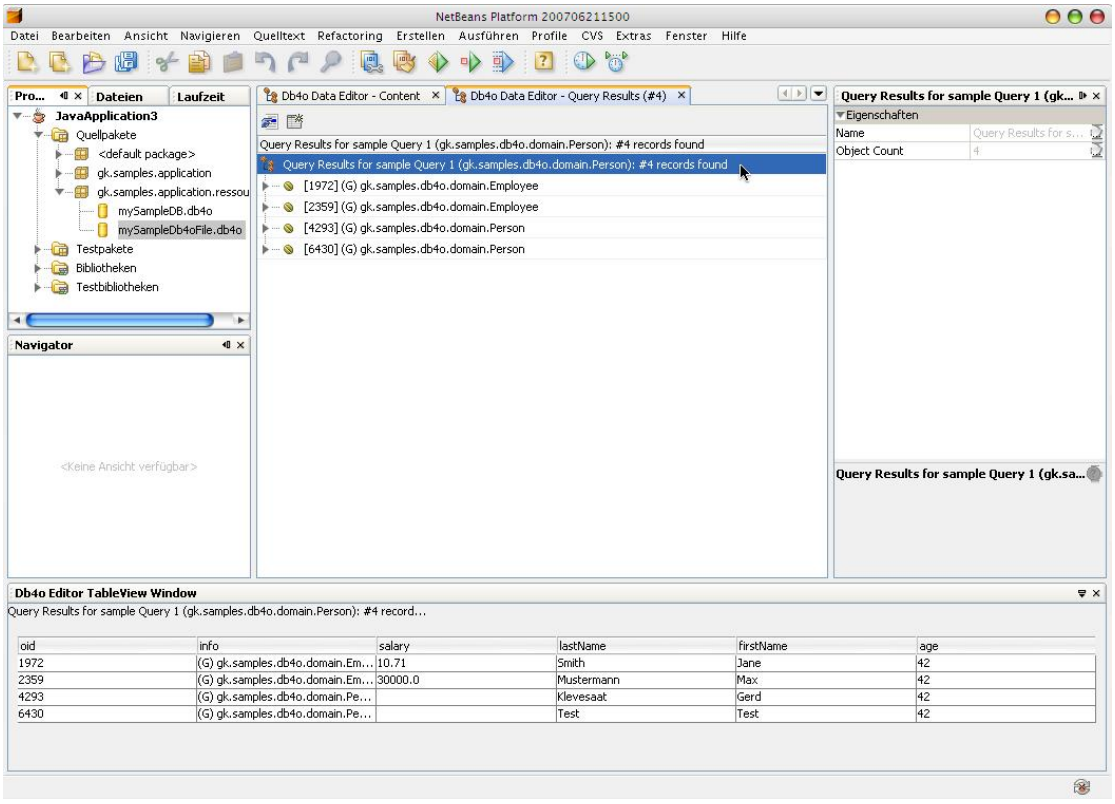
Pressing OK assigns the expression to the query.

Executing Queries

Queries can be executing by selecting the menu item Execute… from the context menu of the query.



After execution of the query, the result is displayed in another editor window.

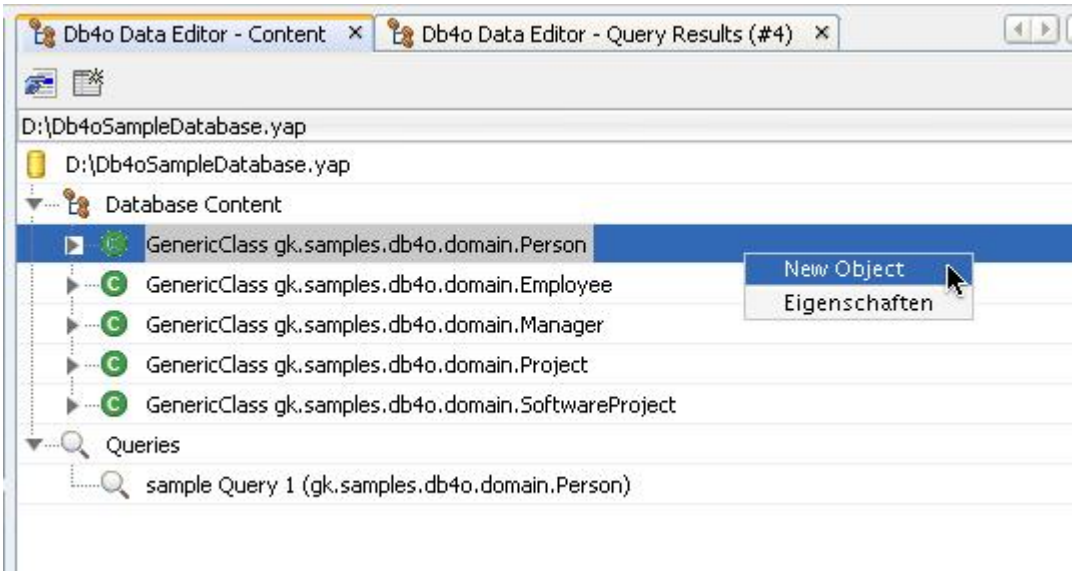


The count of objects affected by the query is displayed both in the properties window and in the title of the editor window.

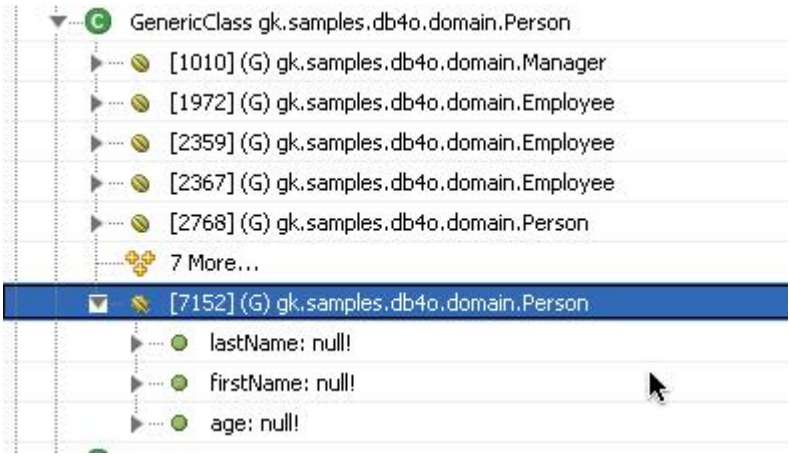
Editing

Object properties are edited using the properties window. Select the node of an object and edit its properties in the edit fields of the properties window.
(Future version may come up add customize editors)

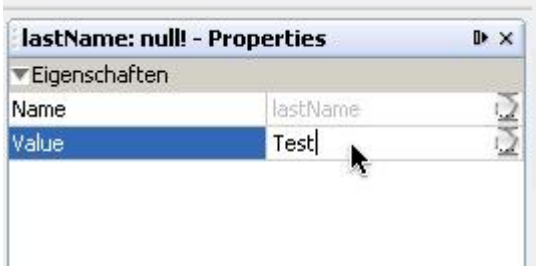
Objects can be added or removed.
Select a class node to add objects for and open its context menu.



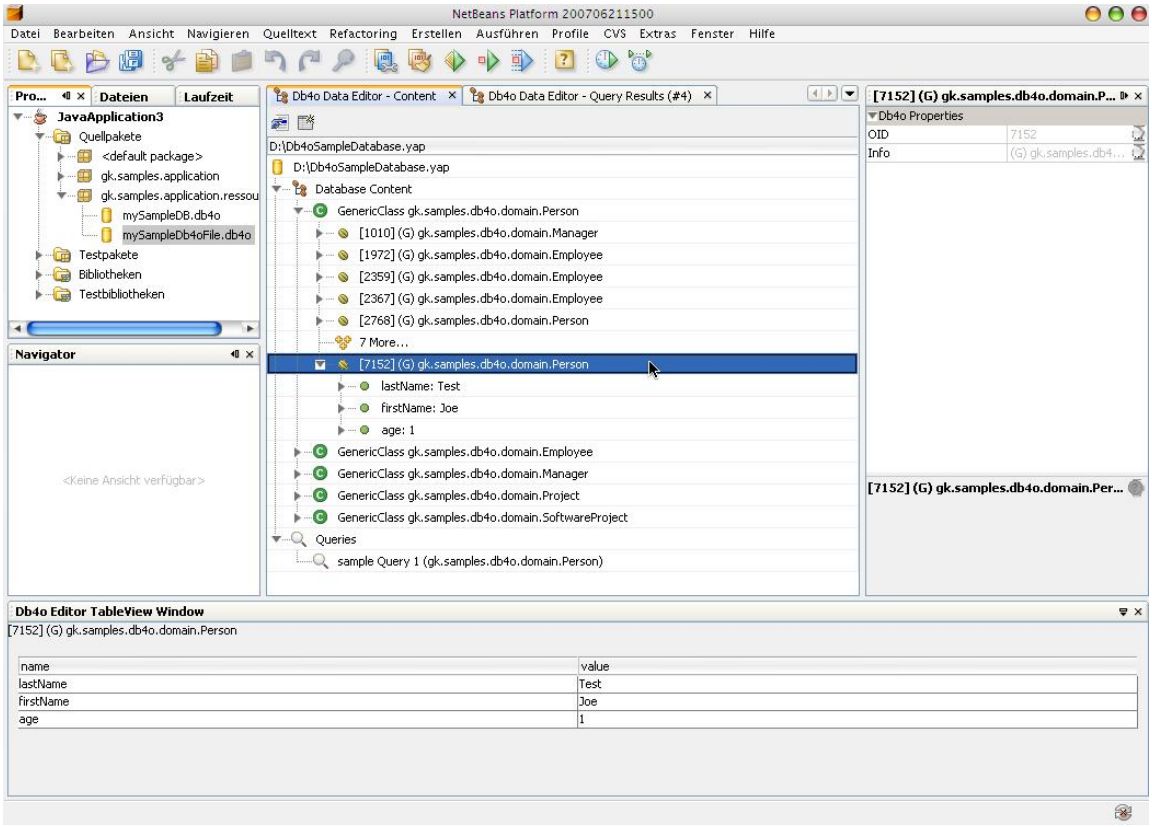
A new empty object node is appended to the class node.



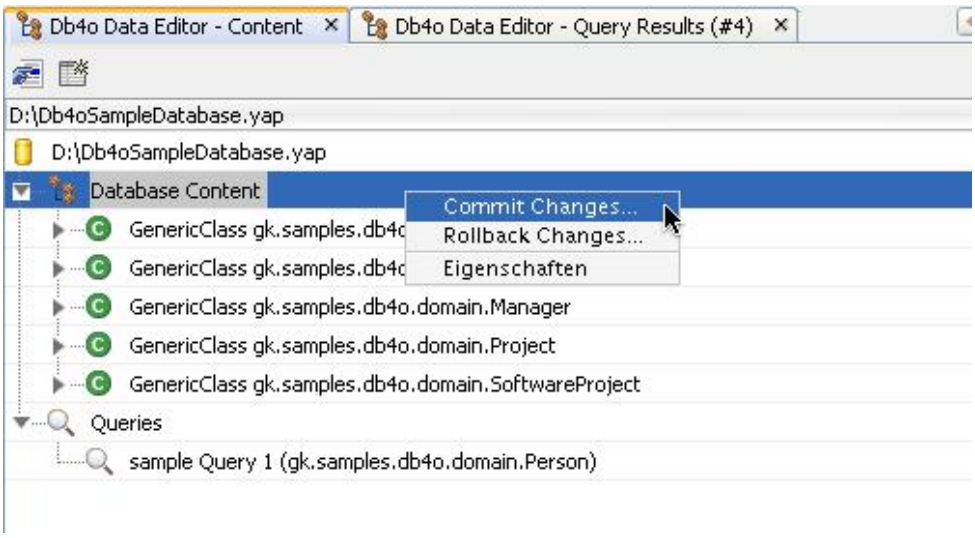
Now the properties can be changed using the properties window.



The properties sub nodes of the object node are updated accordingly.



Changes to the db4o database can be committed explicitly by selecting a corresponding context menu item on the root in the db4o database editor.



Options dialog

Some settings may be modified by the user using the standard options dialog. However, the options dialog will be revised in next versions.

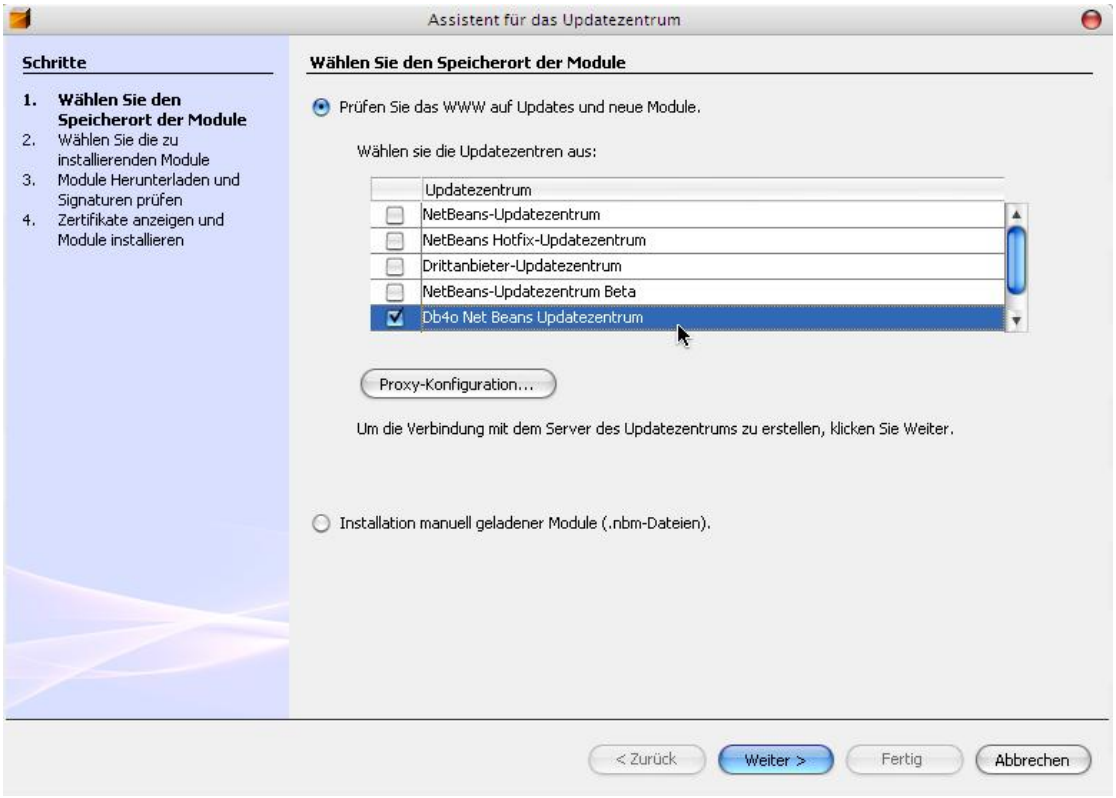
- *Threshold*: Number of objects to load on each request.

- *Suppress*: comma separated list of package names to suppress when displaying the database structure.
- *Delete on defragmentation*: If checked, objects may be deleted on defragmentation,
- *Classpath Settings*.
- *Embedded Server Settings*: Port, User name and password used for the server that is capable to host a configured db4o database file.

Updating db4o-netbeans plug in

Auto-update functionality has been added to the plug in. On installation, the plug-in adds a Update Center to NetBeans which is able to download and update the plug-in if a new version is available.

Open the Update Center by selecting the menu item *Update Center* from the *Extras* menu. The Update Center wizard opens.



Check mark the Update Center called *Db4o Net Beans Update Center* and press next. Net Beans will check for an updated version of the plug in. If it can find one, it is downloaded and installed after confirmation.

Important Notes

A db4o object container is opened when a db4o database editor is opened. It is closed again if the db4o database editor is closed again.
More precisely, it is closed if the last open editor referencing that object container is closed. This is valid for opened editor windows displaying query results: Even if the db4o database editor displaying the database content and queries is closed, the object container may remain opened if there is a editor window open displaying query results for that object container.