

DB Browser

UI Specs

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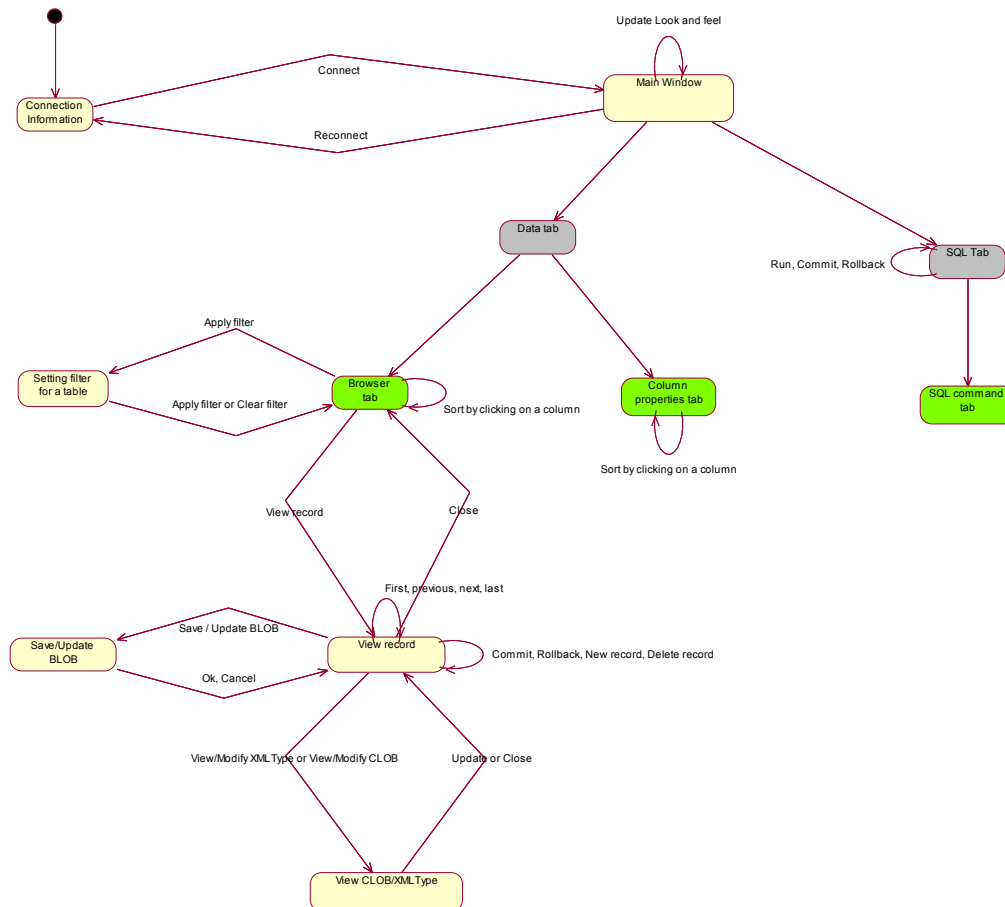
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Introduction

DBBrowser is an open source, cross-platform tool which can be used to view the contents of a database. It supports CLOBs, BLOBs and Oracle XMLTypes. It is designed to work with all the major DBMS (Oracle, MySQL, SQLServer). The user should never have to write SQL to view the data although a SQL window is provided. Support for ER (Entity Relationship) diagrams is planned for the next version.

DBBrowser is hosted on the SourceForge website (<http://sourceforge.net/projects/databasebrowser>).

UI Model

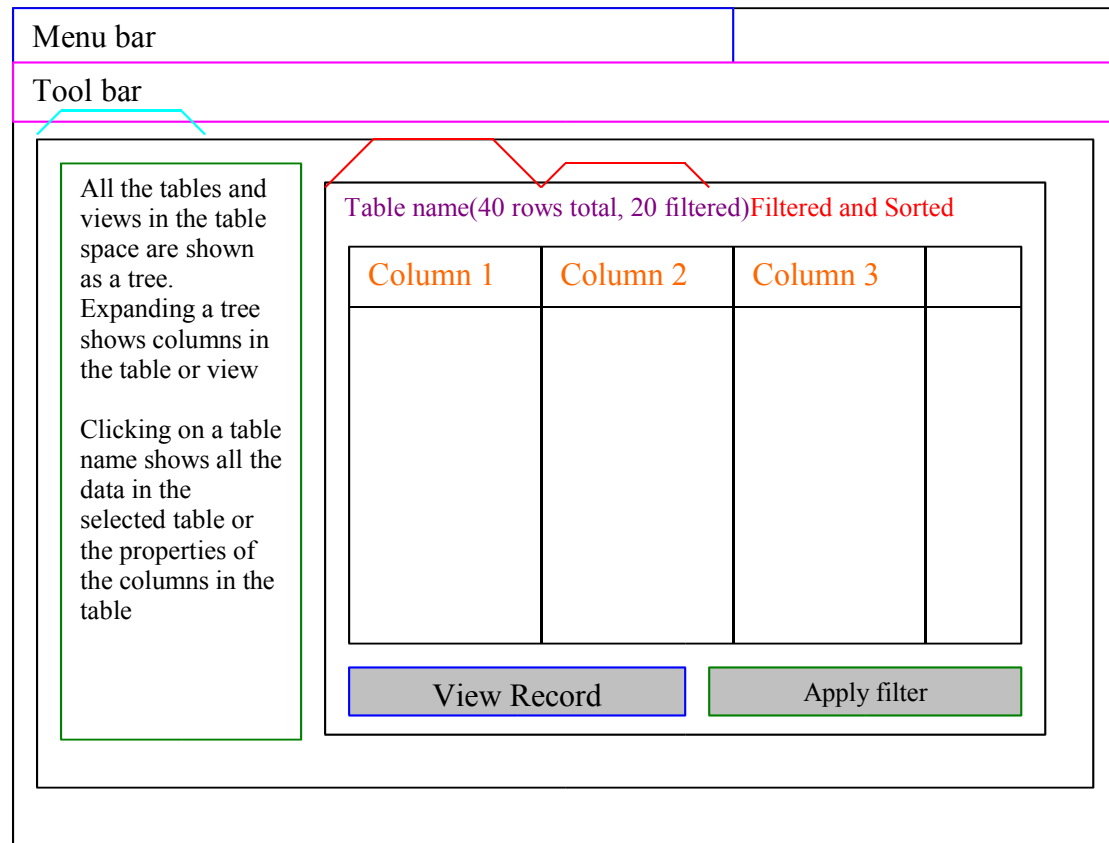


Legend:

- Boxes with round corners represent a user's view of the system. The yellow boxes are windows and the grey boxes are tabs within the window. Green boxes are sub tabs within a tab
- Arrows represent a transition from one view to another. The name on the arrow is the name of the user action which triggers the transition

Main Window

Showing Data Browser tab



Information shown

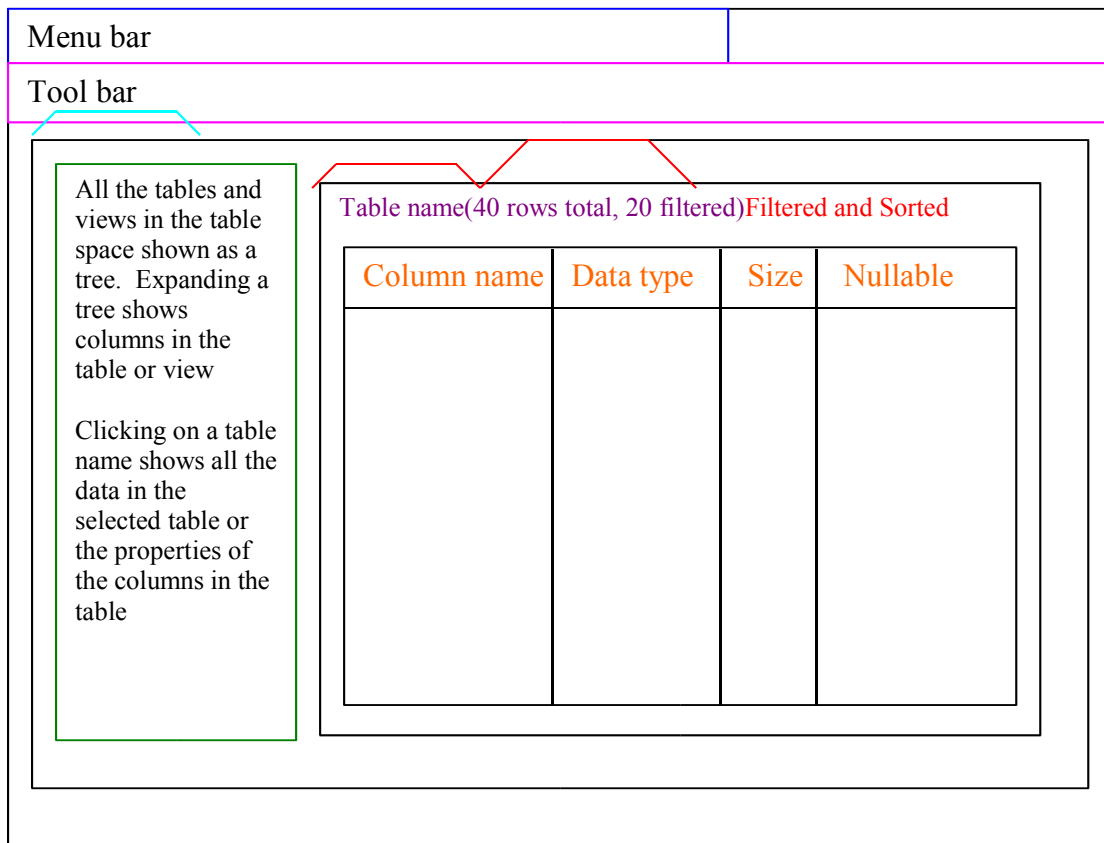
- Menu bar provides access to all the functionality available
- Tool bar provides a shortcut to common tasks
- Browser tab has 2 sub tabs – ‘Data’ and ‘Column properties’
- Tables and views are shown as a tree. If the Data tab is selected, then clicking on a table name shows all the data in the selected table. If the ‘Column properties’ tab is selected, then clicking on a table name shows the properties of columns in the selected table
- When the Data tab is selected, the **name of the table** is shown along with a **count of the number of rows** in the table. If any filter or sorting is applied, then the words ‘**Filtered and sorted**’ are shown
- ‘Column properties’ tab shows the properties (data type, nullable or not, and length) of each column in the selected table.

User actions

- Clicking on the ‘View Record’ button shows the current record in a popup window (See [View Record window](#))

- Clicking on the 'Apply filter' button allows the user to set the filter for a table. The filter settings for a table is remembered after the user exits the application
- Clicking on the **column names** sorts the data on the basis of the column (sorting can be done for all data types except CLOBS, BLOBS and XMLTypes)

Column properties tab



Information shown

- Properties of the columns of the selected table are shown
- The properties shown are: Column name, Data type, Size and Nullable

User actions

- The user can sort the properties by clicking on the **column headers**. The properties are sorted by Column name by default

SQL Tab


The diagram illustrates the SQL Tab interface. At the top, there is a tab bar with a yellow button labeled 'Open new SQL tab' and a dropdown list for 'SQL commands history'. Below this, the main area contains a large text area for 'User types SQL here (SQL text area)'. To the right of the text area are two dropdown lists: 'Drop down list for table names' and 'Drop down list for column names'. Below these lists are three buttons: 'Run', 'Commit', and 'Rollback'. At the bottom, there is a table with six columns. The first four columns are labeled 'Column 1', 'Column 2', 'Column 3', and 'Column 4'. Below the table is a 'View record' button.

Column 1	Column 2	Column 3	Column 4		

Information shown

- 'SQL' tab allows multiple tabs inside it. A new tab is created for every SQL statement run.
- The drop down list for SQL commands history remembers 10 previous SQL commands for 10 table spaces. This can be changed using the properties file. Example: User can store 200 previous SQL commands for 2 table spaces
- A text area allows the user to type the SQL statements
- There are two drop down lists. One list shows the list of all tables and views in the table space. The second list shows the list of all columns in the table selected by the first list.
- The results are shown in the form of a table.

User actions

- 'Open SQL tab' opens a new SQL tab inside the main SQL tab
- Buttons on tabs  can be used to close SQL tabs within the main SQL tab

- The user can drag and drop the name of the table or column from the list to the SQL text area. The name of the table or the column is appended to the SQL statement.
- The user can run the SQL statement by clicking on the 'Run' button. If 'Auto commit' is off, the 'Commit' and 'Rollback' buttons become enabled and flash drawing the user's attention to it.
- The user can choose to 'Commit' or 'Rollback' the SQL command only if 'AutoCommit' is off. If 'AutoCommit' is on, the 'commit' and 'rollback' buttons are disabled.
- The results are shown in the form of a table. The user can sort the results by clicking on a **column header**.

View Record window

Record 29 of 50

Column 1:	Column value
Column 2:	Column value
Column 3:	Column value
Column 4:	Save/Update BLOB
Column 5:	View/Modify XML Type
Column 6:	View/Modify CLOB

First
Previous
Next
Last

New record
Commit
Rollback
Delete record

Close

Information shown

- The **current record number** is shown in 'Record X of Y format'
- If column type is 'Number', 'String' or 'Date', the values of the data is shown opposite the name of the column
- For BLOBS, CLOBS and XMLTypes, a button is displayed.

User actions

- Clicking on the 'View/Modify XMLType', 'View/Modify CLOB' or 'View / Modify BLOB' button allows the user to view/modify the data. If the data type is CLOB, or XMLType, then the data in the String is shown. If the data type is BLOB, then the user is given the option to store the bytes in the BLOB to disc.
- Four navigation buttons allow the user to navigate around the list of rows.
- The user can click on the 'New record' or 'Delete record' to add a new record or to delete the current record. If 'Auto commit' is off, then the 'Commit' and 'Rollback' buttons are enabled and flash to draw the users attention to it.
- Clicking on the 'View/Modify CLOB' or the 'View/Modify XMLType' brings up another window which shows the String. The user can modify the contents and press 'Update'.

View CLOB/XMLType

CLOB or XML type string is shown here

Update Close

Connection Information window

Known connections

Name	Table space	URL	Last logged in

Connect

Connection details

Table space:

URL:

JDBC Driver:

Username:

Password:

New connection

Save changes

Delete connection

Information shown

- Selecting the connection from a list of previously used connections in the 'Known connections' area selects the connection. The details of the selected connection are shown in the 'Connection details' area

User actions

- User can click on 'Connect' to connect to a database for which the connection details are stored
- User can use the 'New connection' button to setup a new connection. After the connection details are entered, the user clicks on the 'Save changes' button. The connection details appear in the 'Known connections' area. The user can then select the new connection and click on 'Connect' to connect to the database
- The user can click on the 'Delete connection' to delete the selected connection details

- The user can click on the **column headers** to sort the connection details.
Default is sorting by 'Last logged in column'

Setting filter for a table window

The diagram illustrates the filter settings interface for a table window. It consists of a main container with a black border. At the top, there are three input fields: a 'Column name' dropdown menu with a blue border, an empty dropdown menu with a purple border, and a 'Text field for value' with an orange border. Below these fields are two buttons: 'Add to filter' with a grey background and purple border, and 'Clear selection' with a grey background and cyan border. In the center is a large green-bordered text area labeled 'Filter values are displayed here'. At the bottom are two more buttons: 'Apply filter' with a grey background and purple border, and 'Clear filter' with a grey background and olive border.

Information shown

- The drop down list contains the list of all the column names for the selected table
- Another drop down list contains operators. Possible values are: <, >, =, <>, <=, >=, Null and not null.
- A text field allows the user to type in the value to filter the records on
- The values for the filters are shown in the text area. The user can also manually type in the values for the filter

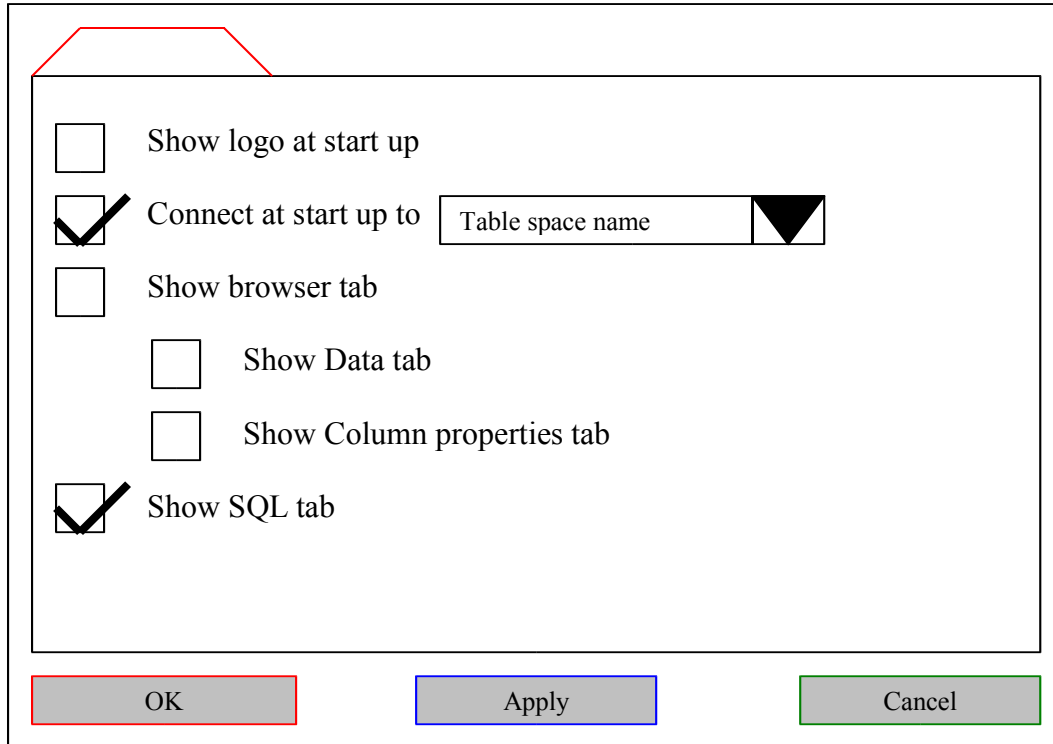
User actions

- User can click on the 'Add to filter' button to add the selection to the filter.
- User can click on the 'Clear selection' button to clear the selection
- User can click on the 'Apply filter' button to set the filter
- User can click on the 'Clear filter' button to clear all filters

Customise

The customise window is accessed through the toolbar or the menu bar

Start up tab



☐ Show logo at start up

☒ Connect at start up to ▼

☐ Show browser tab

☐ Show Data tab

☐ Show Column properties tab

☒ Show SQL tab

OK Apply Cancel

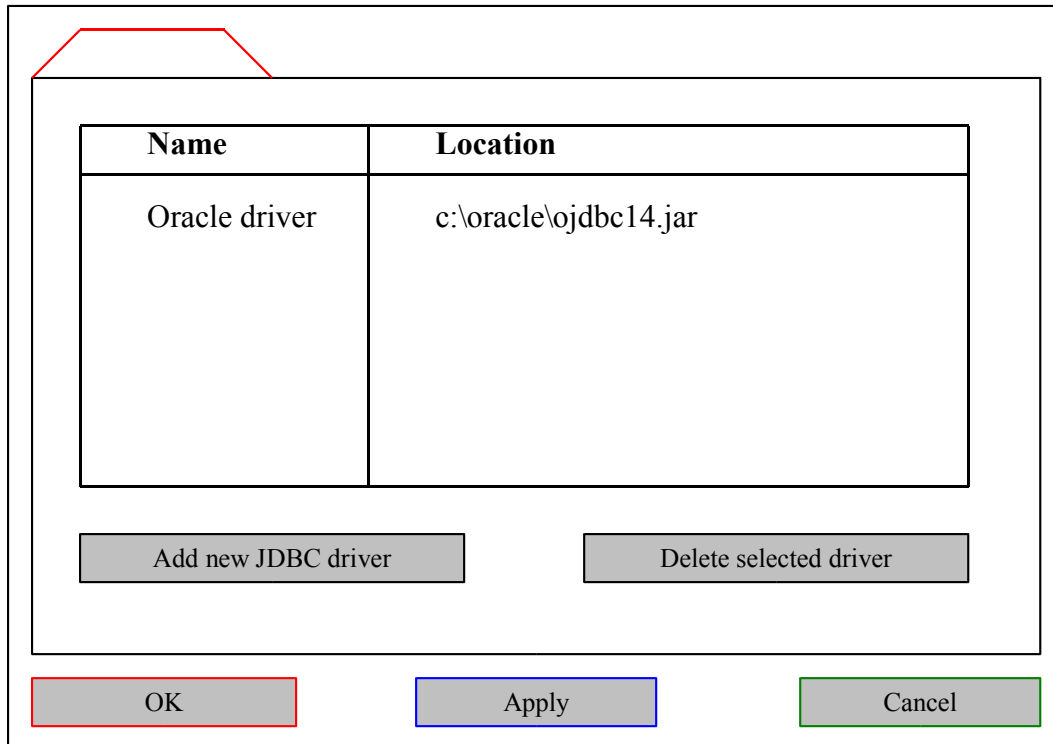
Information shown

- The customise window has 4 tabs:
 - Start up: Used to set the options which change the behaviour of the application at start up time
 - Engine: Used to set the options which change the way the engine works – currently the only option is to set the transaction level for batch run
 - Driver Manager: Used to add or remove a JDBC driver
 - Browser: Used to change the properties of 'Data' and 'Column properties' tab
 - SQL: Used to change the properties of the SQL tab

User actions

- User clicks on 'OK' or 'Apply' button to apply the changes
- User clicks on 'Cancel' button to quit without applying the changes

Driver Manager tab



The Driver Manager tab dialog box contains a table with two columns: Name and Location. The table has one row with the text 'Oracle driver' and the path 'c:\oracle\ojdbc14.jar'. Below the table are two buttons: 'Add new JDBC driver' and 'Delete selected driver'. At the bottom of the dialog are three buttons: 'OK', 'Apply', and 'Cancel'.

Name	Location
Oracle driver	c:\oracle\ojdbc14.jar

Add new JDBC driver

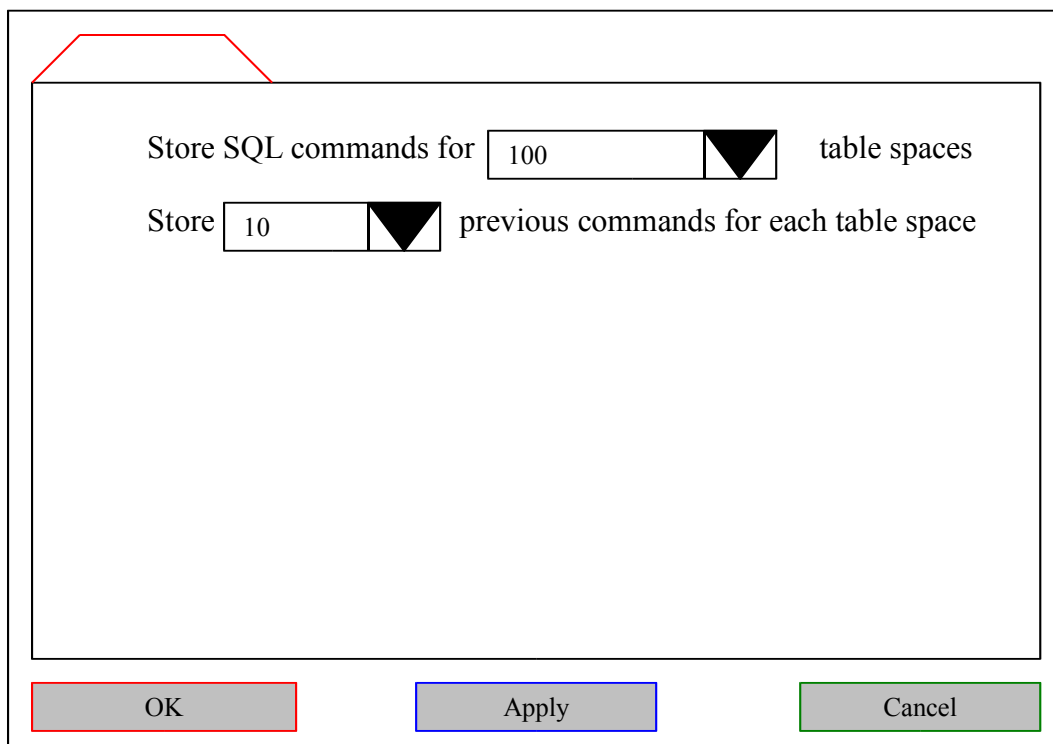
Delete selected driver

OK

Apply

Cancel

SQL tab



The SQL tab dialog box contains two rows of text. The first row is 'Store SQL commands for' followed by a text box containing '100' and a dropdown arrow, and then the text 'table spaces'. The second row is 'Store' followed by a text box containing '10' and a dropdown arrow, and then the text 'previous commands for each table space'. At the bottom of the dialog are three buttons: 'OK', 'Apply', and 'Cancel'.

Store SQL commands for 100 table spaces

Store 10 previous commands for each table space

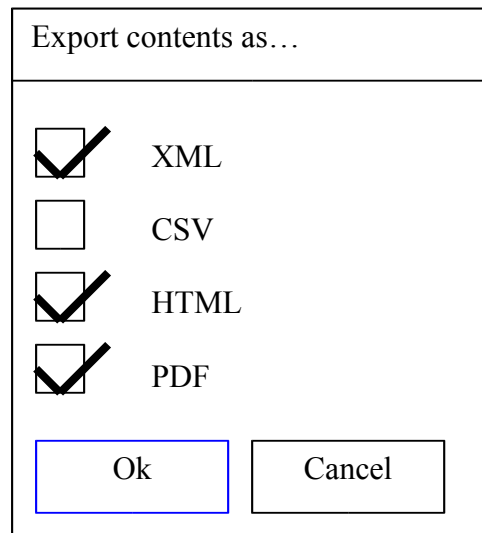
OK

Apply

Cancel

Export

The export window is accessed through the menu bar or the tool bar. It exports the results of the query as a PDF, XML, HTML or CSV file. The contents of the current window are exported.



A dialog box titled "Export contents as..." with a white background and a black border. Inside the dialog, there are four rows, each with a square checkbox and a label to its right. The first row has a checked checkbox and the label "XML". The second row has an unchecked checkbox and the label "CSV". The third row has a checked checkbox and the label "HTML". The fourth row has a checked checkbox and the label "PDF". At the bottom of the dialog, there are two buttons: "Ok" on the left and "Cancel" on the right. The "Ok" button has a blue border, while the "Cancel" button has a black border.

Export contents as...	
<input checked="" type="checkbox"/>	XML
<input type="checkbox"/>	CSV
<input checked="" type="checkbox"/>	HTML
<input checked="" type="checkbox"/>	PDF
<div><div>Ok</div><div>Cancel</div></div>	

Information shown

- The user is presented with 4 check boxes. He can choose all or none of the options. When the user presses the 'Ok' button, he is prompted for a location to store the file to

Batch Run

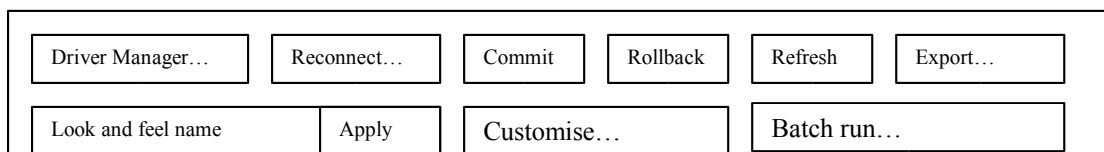
The user can specify the batch file which contains a list of sql commands which are run together. The user is presented with a standard file chooser dialog box to choose the location of the file. The user can specify the character which is used to separate the sql statements (default is ';').

The user can customise the batch run process via the customise tab. The user can specify whether to run each SQL statement as a separate transaction or to wrap the whole batch process in a single transaction.

Toolbar

The toolbar consists of the following shortcuts:

- Driver manager: Allows the user to specify the location of JDBC drivers used to connect to the Database
- Reconnect: Allows the user to connect to a different tablespace
- Commit and Rollback buttons: allow the user to commit or rollback the update to the database. They are enabled only if 'AutoCommit' is off.
- Refresh: Refresh the current view by reloading the data from the database. If the user has selected the 'Browser' tab, then the table contents are reloaded from the database. If the user has selected the 'SQL' tab, then the SQL query is run again
- Look and feel: The user can click this to change the look and feel. The UI is updated with the new look and feel
- Export: The user can click on this to export the contents of the current view as XML, CSV, HTML and PDF
- Customise: The user can click on this to set the various options to customise the application
- Batch run: The user can click on this button to specify the location of the batch file which contains a list of sql commands which are run together.



Keyboard shortcuts

- Ctrl-C: Press Ctrl-C over a text area. It will copy the highlighted text
- Ctrl-X: Press Ctrl-X over a text area. It will cut the text
- Ctrl-V: Press Ctrl-V over a text area. It will paste the text (if any) into the text area
- Ctrl-A: Press Ctrl-V over a text area. It will select all the text in the text area
- F5: Press F5 in the 'Browser', 'SQL' or 'Column properties' tab. It will refresh the data by retrieving the data from the database. In the case of 'SQL' tab, it will re-run the SQL
- F1: Press F1 to open the help window. The topic relevant to the selected UI widget is selected in the help window. Example: The user is typing a value into a text box and the text box has focus. The user presses F1 key. The help information shown is relevant to the text box. The user can also right click on a UI widget and select 'What is this'. In this case also the help window is opened which is relevant to the UI widget under the users mouse

Help window

Standard JavaHelp window is used to display help information. Only one Help window is shown. If the Help window is open and showing a help topic, the help window is updated and shows the new help topic. The Help window is shown when:

- The user right clicks on any UI widget and chooses 'Help' from the popup menu.
- The user chooses 'Help -> Help' from the menu bar

Context Sensitive Help is shown when:

- The user presses F1 over any UI widget
- The user right clicks on any UI widget and chooses 'What is this'
- The user chooses 'Help -> What is this' from the menu bar

When context sensitive help is shown, the help information shown is relevant to the UI widget. Example: The user is typing a value into a text box and the text box has focus. The user presses F1 key. The help information shown is relevant to the text box.

