



StarOffice™ 6.0 Software

Setting Up Database Connections

Sun Microsystems, Inc.
901 San Antonio Road
Palo Alto, CA 94303
U.S.A. 650-960-1300

Part No. 817-0364-05
September 2002, Revision A

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Introduction

This document describes how to create different types of database connections and provides a short introduction to the database functionality of the StarOffice™ 6.0 Software.

Icons Used in This Guide

There are three icons used to call your attention to additional helpful information.



The **Important!** icon points out important information regarding data and system security.



The **Note** icon points out extra information: for example, alternative ways to reach a certain goal.



The **Tip** icon points out tips for working with the program in a more efficient manner.

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A confirmation that we have received your email will be sent to you. We care about your feedback and we will use it to further improve the StarOffice documentation. Please note that this email address is not for requesting technical support.

Adabas

Installing Adabas

Usually, StarOffice setup starts the Adabas setup directly after the StarOffice installation. However, this is not the case with StarOffice network installations. For network installations, the Adabas setup must be started separately.

The StarOffice CD includes an Adabas database with the following limitations:

- Five concurrent users allowed.
- Maximum database size of 100 Mbytes.

Please contact Software AG directly for an Adabas version without these limitations.

Prerequisites for Installations on Solaris™ Operating Environment

Solaris™ Operating Environment (OE) requires a set of kernel parameters to run an Adabas database (see below).

To add the kernel parameters, log in as **root** and add the following lines to the `etc/system` file:

```
set msgsys:msginfo_msgmni = 10
set shmsys:shminfo_shmmax = 300000000
set shmsys:shminfo_shmmni = 100
set shmsys:shminfo_shmseg = 100
set semsys:seminfo_semmni = 100
set semsys:seminfo_semmns = 100
set semsys:seminfo_semap = 100
```

To activate the parameters, reboot the machine.

Installing Adabas on Linux and Solaris



If a user will not be sharing the Adabas database, install the database under that user name rather than **root**.

The setup application is called `adabas` and is located in the `solaris/adabas` or `linux/adabas` directory on the StarOffice CD.

1. Start the setup and follow the dialogs.
2. Close all shells, log out, and then log in as the same user.
3. Double-check the values of the database environment variables.

Open a shell and check by typing

```
echo $DBVAR
```

where DBVAR is each of the following environment variables. Each must point to the location of the Adabas installation:

DBROOT: <Adabas_install_dir>

DBWORK: <Adabas_install_dir>/sql

DBCONFIG: <Adabas_install_dir>/sql

LD_LIBRARY_PATH: <Adabas_install_dir>/lib

PATH: <Adabas_install_dir>/bin:<Adabas_install_dir>/pgm

If these environment variables are not set, double-check the `.profile` file in the home directory of the user. It should include the following lines for Adabas installations that are installed in the `/export/adabas` directory:

```
# by Sun Microsystems setup
set DBROOT=/export/adabas
set DBWORK=$DBROOT/adabas/sql
set DBCONFIG=$DBROOT/adabas/sql
set PATH=$DBROOT/bin:$DBROOT/pgm:$PATH
set LD_LIBRARY_PATH=$DBROOT/lib:$LD_LIBRARY_PATH
export DBROOT DBWORK DBCONFIG PATH LD_LIBRARY_PATH
```

Once the environment variables are set, the Adabas installation has been successfully finished.

Installing Adabas on Microsoft Windows

Adabas should be installed on the same machine as StarOffice.

1. Start the application `adabas.exe` located in the directory `windows/adabas` on the StarOffice CD and follow the dialogs during the setup.

Do not use a blank (space) or any special characters in the directory name.

For example, the name `c:\program file\adabas` is not allowed; use a path like `c:\db\adabas` instead.

2. Reboot the machine.
3. Open an MS-DOS command line.
4. Use the `echo` command to determine the values of the environment variables, for example:

```
c:>echo %DBROOT
C:\Db\Adabas
c:>echo %DBWORK
C:\Db\Adabas\sql
c:>echo %DBCONFIG
C:\Db\Adabas\sql
```

DBROOT must be the directory where Adabas is installed; **DBWORK** and **DBCONFIG** point to the `sql` subdirectory of the Adabas installation directory.

5. If the environment variables are not set, add the following lines to your `autoexec.bat` file (Windows 9x/Me) for Adabas installations located in the `c:\db\Adabas` directory:

```
set DBROOT=C:\db\Adabas
set DBWORK=%DBROOT%\sql
set DBCONFIG=%DBROOT%\sql
set path=%path%;%DBROOT%\bin;%DBROOT%\pgm
```

Windows NT/2000/XP users have to add these variables as system variables to the Windows system environment.

Creating an Adabas Database in StarOffice

Limitations

An Adabas database has some limitations that must be respected when creating a new database.

- An Adabas directory name is *limited to 40 characters*.

The Adabas directory structure requires at least 10 characters, and this number must be subtracted from the maximum length. This means you may use only 25 to 30 characters for the Adabas directory name. Keep the length of the DBROOT directory name as short as possible.

- The length of the Adabas database name is *limited to eight characters*, with no blanks or other special characters.

Do not confuse the Adabas database name with the StarOffice data source connection name. The StarOffice data source connection name does not have this limitation.

Creating an Adabas Database Connection

1. Start StarOffice

Solaris OE and Linux users should start StarOffice from a terminal window to be able to see all progress and error messages during the creation of the database. The executable file is named `soffice` and is located in the StarOffice `program` directory.

2. Choose **Data Sources** from the **Tools** menu to open the **Data Source Administration** dialog.

This dialog provides all the tools to create a new data source connection. The left side lists all existing database links; the right side shows the associated properties.

The tab pages and properties change with the database type, since the different types of databases have different properties and settings.

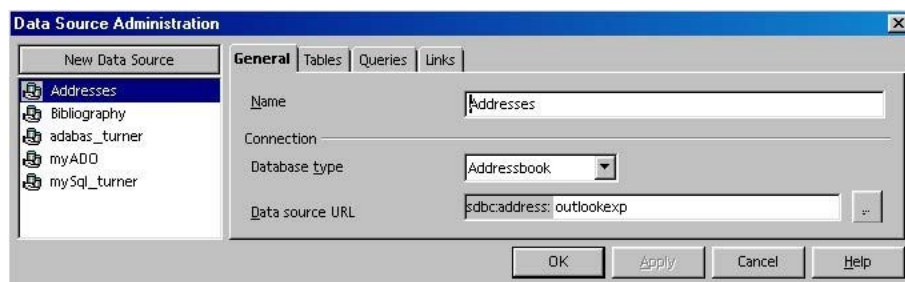


Illustration 1: Data Source Administration dialog in StarOffice

3. Click the **New Data Source** button in the upper left corner to create a data source connection.

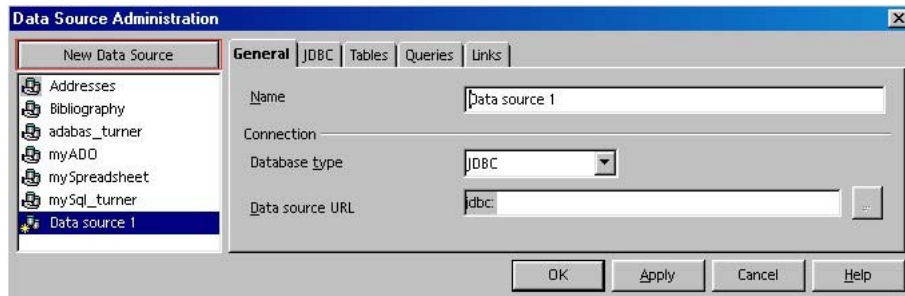


Illustration 2: Data Source Administration dialog during the creation of a new database

A new entry with the name **Data source 1** appears on the left side, and the right side displays the tab pages for a JDBC database.

4. Select **Adabas** from the **Database type** list box.

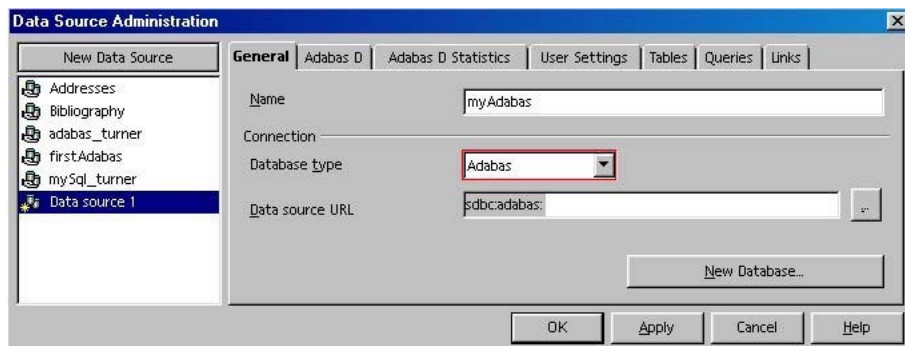


Illustration 3: Data Source Administration dialog in the Adabas database mode

The list of tab pages on the right side now includes **Adabas D** and **Adabas D Statistics**.

5. Enter a name for the data source connection in the Name field.
6. Enter a **Data source URL** for an existing Adabas database. The ... button located to the right of the **Data source URL** field opens a window with a list of existing Adabas databases on the machine.

Use the following data source URL syntax to connect to an external Adabas server:
<hostname of the server>:<name of the database>

7. If there is no existing Adabas database, click **New Database** in the lower right side of the dialog box to create a new database . The **Create New Adabas Database** dialog box appears.

Illustration 4: Adabas database creation dialog

- a. Enter a database name in the **Database name** field.

StarOffice uses the name of the data source connection set in the **Data Source Administration** dialog. StarOffice users usually only know this data source name. The connection to the original Adabas database name is made by the StarOffice database engine.

The Adabas database name has some limitations: Names longer than eight characters and names with spaces or other special characters are not allowed.

- b. Enter the system users in the **User settings** area.

The most important user is the **Administrator**. Enter a name for the administrator and enter a password by clicking **Password**. By default, the Control user and the Domain user use the same password as the administrator. This can be changed by clicking **Password** to the right of the corresponding field.

The **Control** user has the right to modify some parameters of the database. Normally, the default settings for the name and password of the control user remain unchanged.

The **Domain** user is used internally by Adabas. Normally, the default settings for the name and password remain unchanged. (You only see this field if you have called the dialog by using the **New Data Source** button.)

- c. Enter the system parameters for the database in the **Database settings** area.

SYSDEVSPACE, **TRANSACTIONLOG** and **DATADEVSPACE** define files that are required by the Adabas database. The directory for these three files must have available space at least 2.5 times the size of the database. These file may be located in different directories. You can find more information about Adabas database setup on the Software AG home page at <http://www.softwareag.com/adabasd>

SYSDEVSPACE	This file includes a link table between logical data pages of the databases and the physical location on the disk. All data in the database will be lost if this file is damaged. The file has a size between 800 Kbytes and 2 Mbytes.
TRANSACTIONLOG	This file stores the transaction log.
DATADEVSPACE	This file stores the database data.
Transaction file	This is the size of the transaction log file; it should be set to the same size as the database.
Database size	This is the amount of data that the database can handle. The Adabas version in StarOffice has a size limit of 100 Mbytes. The default size is 20 Mbytes.
Data buffer size	This should be set to 4 Mbytes.

8. When all settings are made in the **Create New Adabas Database** dialog box, click **OK**.

Solaris and Linux users will see messages in the terminal that started StarOffice. Microsoft Windows users have to wait until the dialog box disappears.

You can disregard the following error message:

```
No param file </export/adabas/sql/config/FIRST>
clear not executed!
```

These messages indicate that the database was successfully created:

```
Starting server 'FIRST', please wait ...
Server 'FIRST' successfully started
```

1. Adabas uses a large number of internal system tables. These tables should be hidden to the user:
 - a. Click the **Tables** tab page in the **Data Source Administration** dialog.
 - b. Clear the check boxes for the users **ADMINISTRATOR** and **DOMAIN**.

All system databases are now hidden.

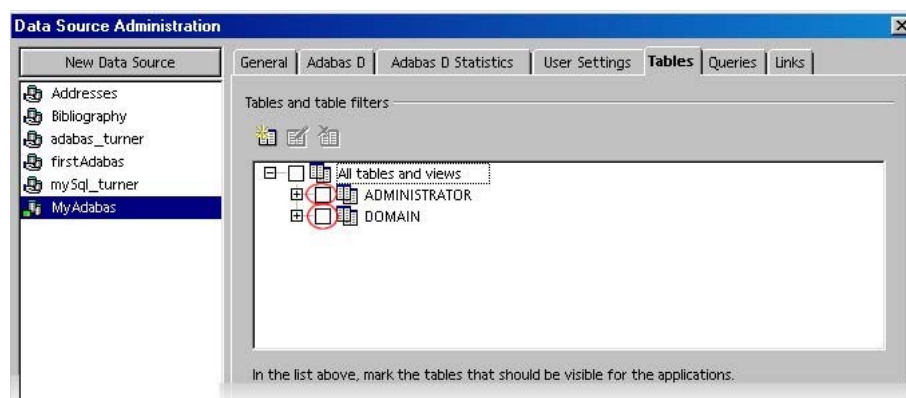


Illustration 5: Hiding the system database tables

2. You need to define a regular user to work with the database:
 - a. Click the **User Settings** tab page.
 - b. Click **Add User** to create a new user.

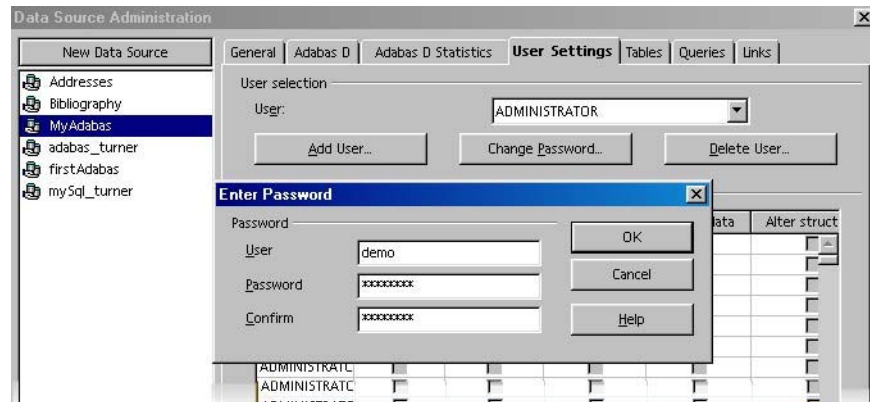


Illustration 6: Creating a new database user with the name 'demo'

- c. Enter a user name and a password in the corresponding fields.
 - d. Click **OK** to create the user.
 3. Click the **OK** button in the **Data Source Administration** dialog box to store the settings.
- The Adabas database is now successfully set up.

Troubleshooting

1. The environment variables for Adabas are empty (Linux and Solaris)

- Make sure that the user logged out from the desktop after the Adabas installation.
- Double-check the `.profile` file for the user running the Adabas database; it must include the `set` section described on page 8 of this guide. If this section exists, replace all `set` commands in this section with `export` and remove the line beginning with `export` at the end of the section. It will now look like this:

```
# by Sun Microsystems setup
export DBROOT=/export/adabas
export DBWORK=$DBROOT/adabas/sql
export DBCONFIG=$DBROOT/adabas/sql
export PATH=$DBROOT/bin:$DBROOT/pgm:$PATH
export LD_LIBRARY_PATH=$DBROOT/lib:$LD_LIBRARY_PATH
```

- Log out with the current user from the desktop.

2. You see the error message:

```
Client unable to establish connection;-813 SERVERDB MUST BE  
RESTARTED
```

This indicates that the Adabas database was not created successfully.

- Open a terminal/DOS command line and start the following command line program:

```
x_start <Name of the database>
```

- Watch the messages. The file `knldiag` includes a detailed list of messages. This file is located in the `<Adabas_installation>/sql/wrk/FIRST` directory. This file is an excellent source to use when diagnosing errors.

Also check that

- the environment variables **DBROOT**, **DBWORK**, and **DBCONFIG** are correct.
- the variable **LD_LIBRARY_PATH** is set to the `lib` directory of the Adabas database.
- the kernel parameters are set for Solaris (see page 7 of this guide).
- the length of the Adabas directory name is no longer than 40 characters (including the Adabas subdirectories).
- the length of the Adabas database name is shorter than 9 characters.
- there is sufficient disk space (a default database requires at least 50 Mbytes).

3. The Adabas tools to create databases do not work

The Adabas tools create databases with a default user number of **50**. This is not allowed by the StarOffice version of Adabas. Use the central configuration tool **XCONTROL** to change the kernel parameter **MAXUSERTASKS** to **3**.

The **XCONTROL** tool is very powerful and is used to set up, maintain, and monitor Adabas databases. You find more information about XCONTROL on the Adabas homepage on

<http://www.softwareag.com/adabasd>

JDBC™ Technology

StarOffice can communicate with a database using a JDBC™ API driver class provided by the database manufacturer. You find two examples for JDBC driver classes below.

Oracle Database Driver Class



We recommend using the JDBC database connection interface for Oracle databases with Solaris OE and Linux while using the ODBC database connection interface with Microsoft Windows.

The Oracle database client must be installed with JDBC support. The JDBC driver class from the Solaris OE Oracle client version 8.x is located in the `<Oracle client>/product/jdbc/lib/classes111.zip` directory. You can also download the latest version from the Oracle homepage:

http://otn.oracle.com/tech/java/sqlj_jdbc/content.html

MySQL Databases Driver Class

Use the `mm.mysql-2.0.4-bin.jar` driver archive available from <http://www.mysql.org/downloads/api-jdbc.html>

The driver archive must be part of the CLASSPATH for the JAVA™ Runtime Environment on the machine, or must be added to the StarOffice CLASSPATH.

To add the archive to the StarOffice Java CLASSPATH within StarOffice:

1. Choose **Options - StarOffice - Security** from the **Tools** menu.

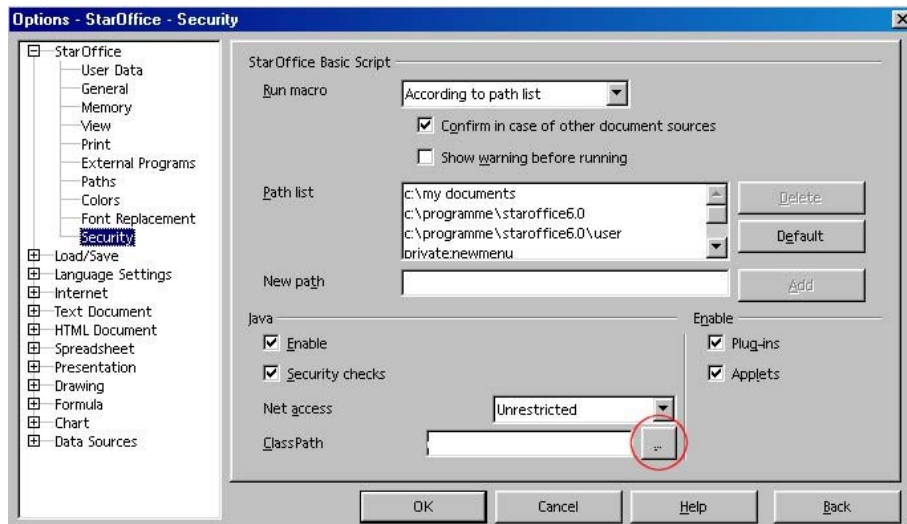


Illustration 7: Option dialog to add an additional driver archive to StarOffice

2. Click the ... button to the right of the **ClassPath** field to open the **Select Archives** dialog box to browse for the driver archive.

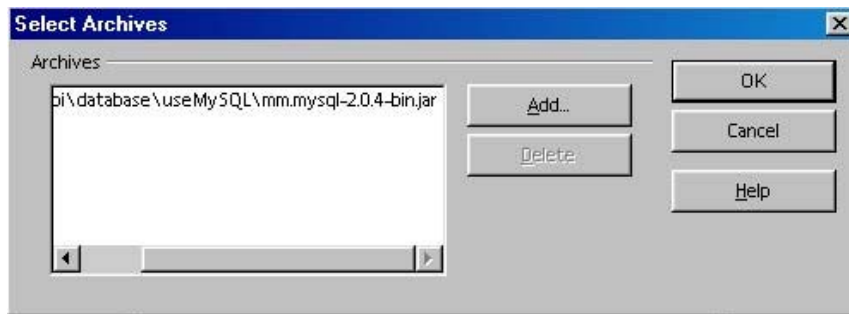


Illustration 8: Browse to the JDBC driver file

3. Click **Add** and browse to the location of the JDBC driver archive file to add it to the StarOffice CLASS-PATH.
4. Click **OK** to store the settings.

Creating a JDBC Database Connection

1. Choose **Data Sources** from the **Tools** menu to open the **Data Source Administration** dialog.

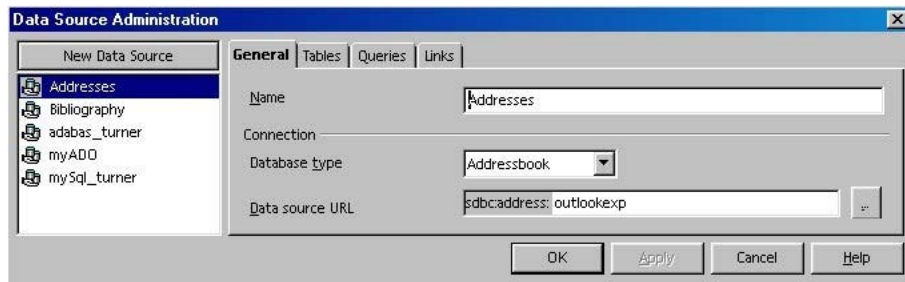


Illustration 9: Data Source Administration dialog in StarOffice

This dialog provides all the tools to create a new data source connection. The left side lists all existing data sources; the right side shows the associated properties.

The tab pages and properties change with the database type, since the different types of databases have different properties and settings.

2. Click **New Data Source** in the upper left corner to create a data source connection. A new entry with the name **Data source 1** appears on the left side, and the right side displays the tab pages for a JDBC database.

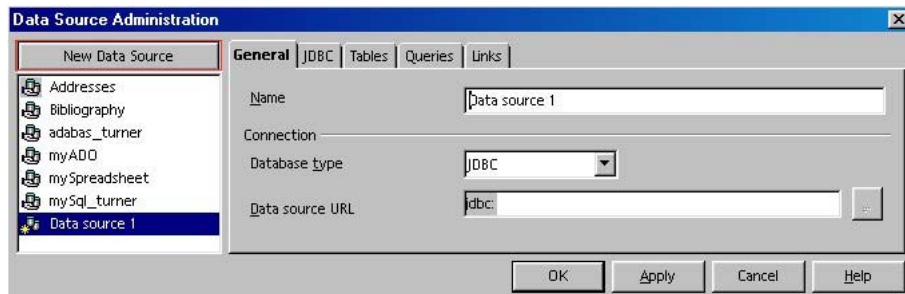


Illustration 10: Data Source Administration dialog during the creation of a new database

3. Enter the database URL in the field **Data source URL**. The syntax of this database URL changes with the database type. See your driver's documentation for more information.

The syntax for a **MySQL** database looks like this:

```
mysql://hostname:port/database name
```

with

hostname	The name or IP address of the machine that runs the database.
port	The port for connecting to the MySQL database (default: 3306).
database name	The name of the database to connect to. MySQL can run many databases in parallel; this parameter specifies one.

Example: `mysql://turner:3306/ADDRESS`

The syntax for an **Oracle** database looks like this:

```
oracle:thin:@hostname:port:database name
```

with

hostname	The name or IP address of the machine that runs the Oracle database.
port	The port for connecting to the Oracle. Ask your database administrator for the correct port number.
database name	The name of the Oracle database. Ask your database administrator for the name.

Example: `oracle:thin:@turner:1521:ADDRESS`

4. Enter a name for the database connection in the **Name** field. This name will be used by StarOffice for all types of database activities.
5. Click on the **JDBC** tab page to complete the creation of the data source connection.



Illustration 11: JDBC tab page of the Data Source Administration dialog

6. Insert the class name of the JDBC driver in the **JDBC driver class** field. You will find the name in the JDBC driver documentation.
The class name of the MySQL driver is: `org.gjt.mm.mysql.Driver`
The class name of the Oracle 8.x driver is: `oracle.jdbc.driver.OracleDriver`
7. The URL field contains the database URL described above.
8. Enter a database user name in the **User name** field. StarOffice will use this name to communicate with the database.
9. Check the **Password required** box if the user requires a password for connecting to the database. StarOffice will ask the user to enter the password during runtime.
10. Click on the **Tables** tab page to verify the database connection.

If you see the list of database tables you have successfully created the JDBC database connection.

Troubleshooting

1. You see the error message:

```
No connection could be established for the URL: jdbc.....
```

Check the following:

- Is the database server running?
- Is the host name correctly spelled and reachable? Check with a `ping` command, try using the IP address instead of the host name.
- Is the port number correct?
- Are the user name and password spelled correctly?
- Does the database name exist on the database server?

2. You see the error message:

```
The connection to the database source "... " could not be established  
The specified driver could not be loaded
```

This means the JDBC driver could not be loaded by StarOffice. Check the following:

- Is the JDBC driver archive part of the system or StarOffice Java CLASSPATH? See the instructions on page 18 for information on adding the JDBC driver archive.
- Is the name of the JDBC driver class spelled correctly (see Illustration 11)? The JDBC driver documentation shows the correct name.

3. You see the error message:

```
Error reading data from the database. Oracle-DLL could not be  
loaded! Please check your installation.
```

Download and install the latest JDBC driver version from Oracle. You will find the download and all required information on:

http://otn.oracle.com/tech/java/sqlj_jdbc/content.html

4. You see the error message:

```
Dismiss write access to Oracle databases tables
```

StarOffice 6.0 is unable to write data in the Oracle database. This is a known problem, and will be fixed as soon as possible.

ODBC

All Microsoft Windows installations normally include an ODBC driver. You will find the latest revision in the Microsoft Data Access Components (MDAC) package from Microsoft. This package is located at:

http://www.microsoft.com/data/mdac21info/manifest_intro.htm



We recommend using the JDBC database connection interface for Solaris and Linux while using the ODBC database connection interface with Microsoft Windows. You can find an ODBC implementation for Solaris and Linux on <http://www.unixodbc.org>.

Microsoft Access databases should be connected via the ADO database interface, rather than via ODBC.

Preparing Oracle 8i Databases

The ODBC interface for Oracle databases requires the installation of the Oracle Database Client software. This client is part of the Oracle database installation set. After the installation of the Oracle client you need to create a new *service name*.

The service name stores all information needed to connect to the database server. Oracle provides Net8 Assistant, an application for setting up the database client. After you have set up the database client, write down the service name; you will need it later for the ODBC driver setup.



It is very important to set up the Oracle client correctly. The data source connection setup is based on this client. Ask your Oracle database administrator for a detailed description that applies to your installation.

Creating an ODBC Database Connection

This procedure was tested under Microsoft Windows.

1. Choose **Data Sources** from the **Tools** menu in StarOffice to open the **Data Source Administration** dialog.

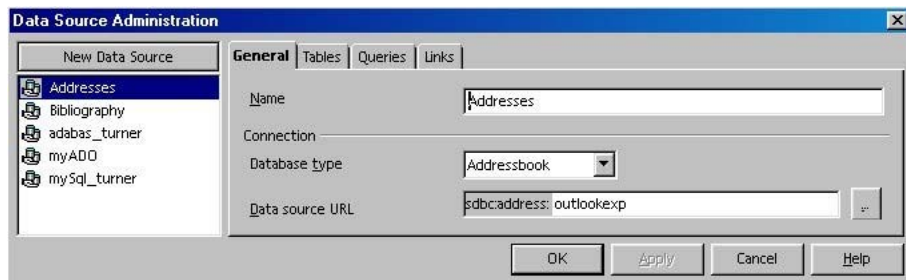


Illustration 12: Data Source Administration dialog in StarOffice

This dialog provides all the tools to create a new data source connection. The left side lists all existing data sources; the right side shows the associated properties.

The tab pages and properties change with the database type, since the different types of databases have different properties and settings.

2. Click **New Data Source** in the upper left corner to create a data source connection. A new entry with the name **Data source 1** appears on the left side, and the right side displays the tab pages for a JDBC database.

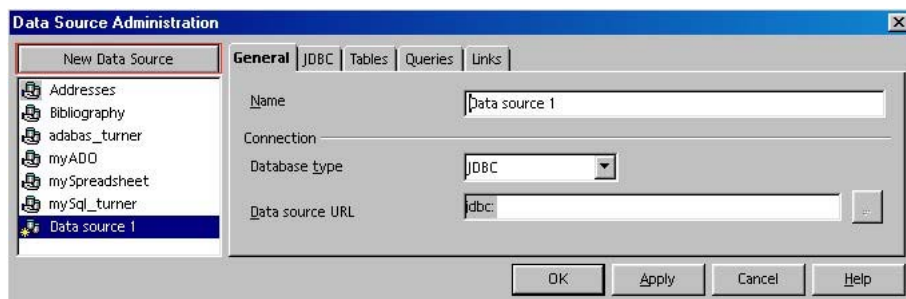


Illustration 13: Data Source Administration dialog during the creation of a new database

3. select **ODBC** from the **Database type** list. The tab pages for an ODBC database now appear on the right.

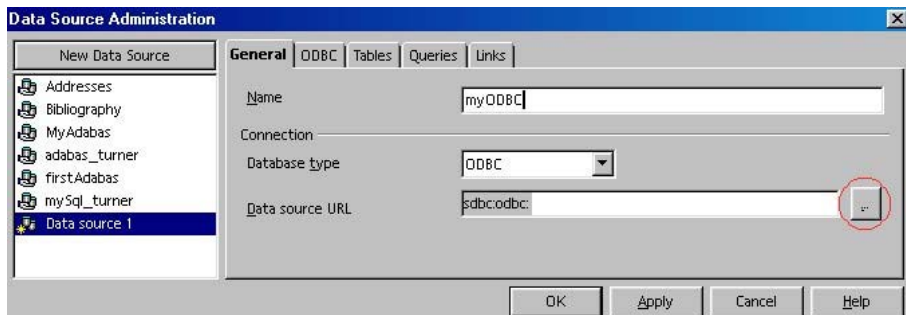


Illustration 14: Data Source Administration dialog to create a new ODBC data source connection

4. Enter a name for the data source connection in the **Name** field.
5. Click ... next to the **Data source URL** field and select an existing ODBC database connection and proceed to step 15.

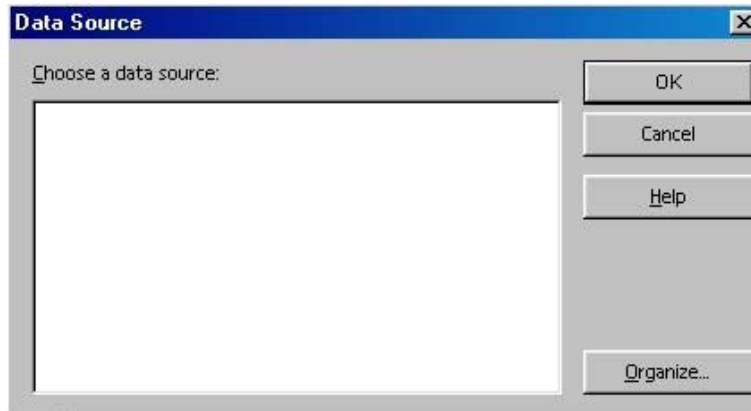


Illustration 15: All available ODBC data source items

6. To create a new ODBC database connection, click **Organize** to open the **ODBC Data Source Administrator** dialog.

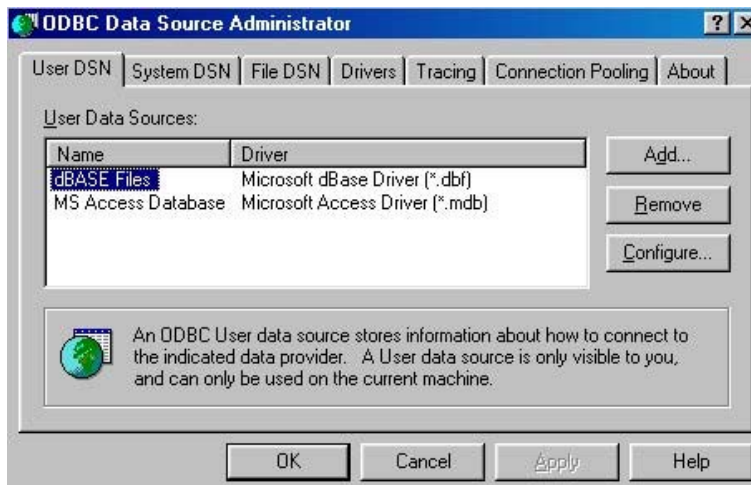


Illustration 16: ODBC Data Source Administrator dialog in Windows

7. Click **Add** to open the **Create New Data Source** dialog

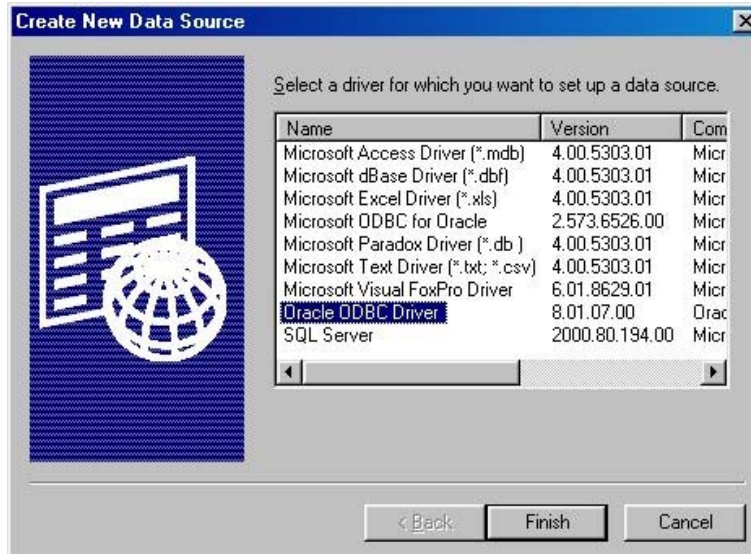


Illustration 17: Creating a new Oracle ODBC data source connection

8. Select **Oracle ODBC Driver** from the list and click **Finish**. This opens the **Oracle8 ODBC Driver Setup** dialog.

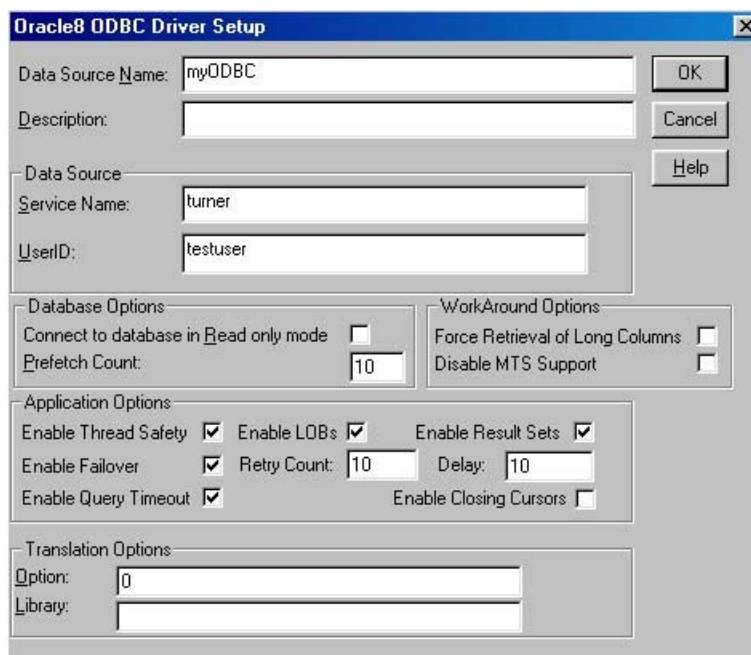


Illustration 18: Oracle 8 ODBC driver setup

9. Enter a name for the new Oracle data source connection in the **Data Source Name** field.
10. Enter the name you obtained from Oracle Net8 Assistant for the service name in the **Service Name** field.
11. Contact your Oracle database administrator for a user id and enter it in the **UserID** field.

12. Click **OK** to close the dialog.

The ODBC Administrator Data Source window now displays the new data source connection.

13. Click **OK** to apply the changes.

The dialog will close and the StarOffice **Data Source** dialog will now contain the name of the new data source connection.

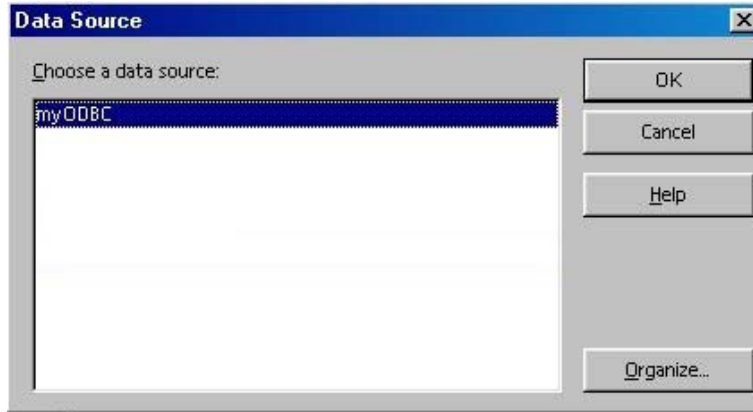


Illustration 19: Data source chooser with the new ODBC data source

14. Select the name of the data source connection and click **OK**.

15. Click the **ODBC** tab page in the StarOffice **Data Source Administration** dialog

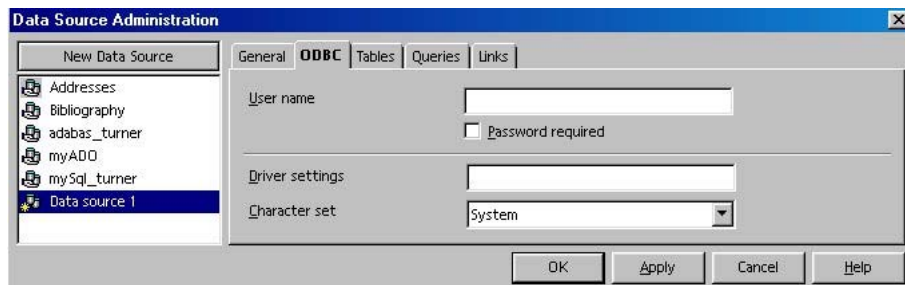


Illustration 20: The ODBC tab page of the data source administration

16. Insert the user name for the Oracle database in the **User name** field.

Use the same user name as you used in the ODBC Driver Setup dialog. StarOffice uses this user name to communicate with the database.

17. Click the **Tables** tab to check the connection to the database to hide the system database tables. These system database tables are used internally by Oracle; there is no need to display the tables to the users.

18. Clear all check boxes for the system tables.

The system tables for Oracle are **CTXSYS**, **MDSYS**, **ORDSYS**, **OUTLN**, and **SCOTT**.

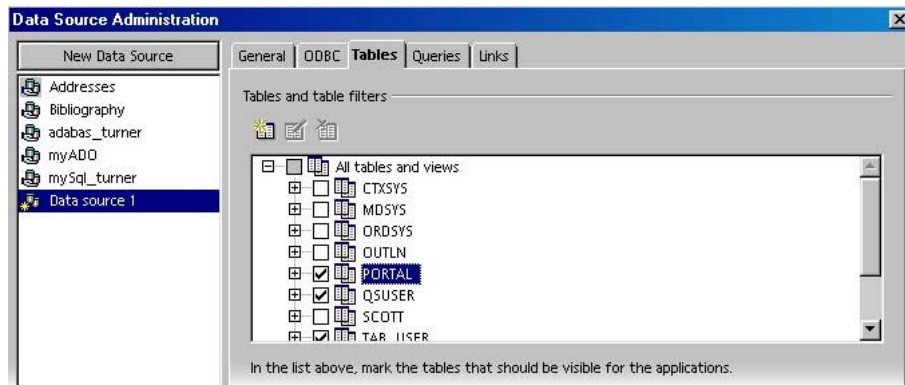


Illustration 21: List of database tables of the current ODBC database

19. Click **OK** to save the database connection.

Troubleshooting

1. You see the error message:

**The connection to the data source "... " could not be established.
[Oracle][ODBC][Ora]ORA-12154:TNS:Could not resolve the service name.**

This error message does not come from StarOffice. This means the Oracle database client is unable to communicate with the database.

- Open the **Oracle ODBC Driver Setup** dialog (see illustration 18) and check the value of the **Service Name** field. This must be the same name that was used in Net8 Assistant. If you did not use Net8 Assistant, check the value of **Service Name** in the file `TNSNAMES.ORA`.
- Net8 Assistant provides a test functionality. Use it to see if you can connect to the database.
- Verify that the file `TNSNAMES.ORA` exists, is in the correct location, and is accessible. See the operating-system-specific manual for details on the required name and location.
Make sure there are no syntax errors anywhere in the file. Check carefully for mismatched parentheses or stray characters.

2. You see the error message:

**The connection to the data source "... " could not be established.
Please check the current settings, e.g. user name and password.**

The user name is unknown by the Oracle database server.

- Check the value of the **User name** field on the **ODBC** tab page of the StarOffice **Data Source Administration** dialog (see illustration 20).
- An Oracle user normally requires a password. Verify that the **Password required** box is checked (see illustration 20).
- Ask your Oracle database administrator for the correct user name and password.

ADO

ADO is a Microsoft Windows proprietary interface container for connecting to databases. The container implements an interface to data providers. A data provider is similar to a driver and allows ADO to interact with a database.

There is a long list of database providers. For a good summary, see:

http://www.able-consulting.com/ADO_Conn.htm or the Microsoft homepage. The following examples use ADO with a Microsoft Access database.



The ADO connection type is only available under Microsoft Windows.

StarOffice requires Microsoft Data Access Components (MDAC) in order to make use of the ADO interface. MDAC is freely available, and can be downloaded directly from Microsoft. Microsoft Windows XP and 2000 already include MDAC.

More details can be found at:

http://www.microsoft.com/data/mdac21info/manifest_intro.htm

Creating an ADO Database Connection

1. Choose **Data Sources** from the **Tools** menu in StarOffice to open the **Data Source Administration** dialog.

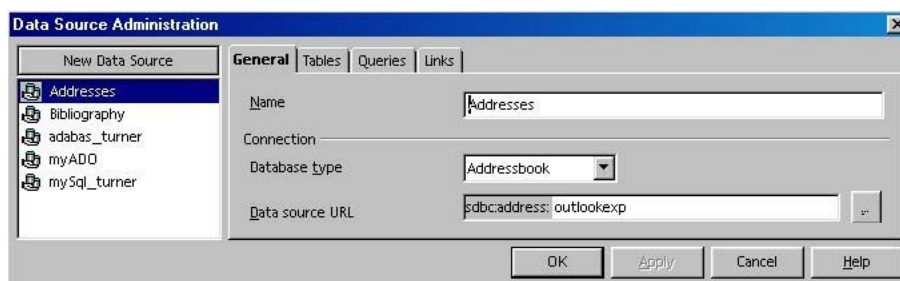


Illustration 22: Data Source Administration dialog in StarOffice

This dialog provides all the tools to create a new data source connection. The left side lists all existing data sources; the right side shows the associated properties.

The tab pages and properties change with the database type, since the different types of databases have different properties and settings.

2. Click **New Data Source** in the upper left corner to create a data source connection.

A new entry named **Data source 1** appears on the left side, and the right side displays the tab pages for a JDBC database.

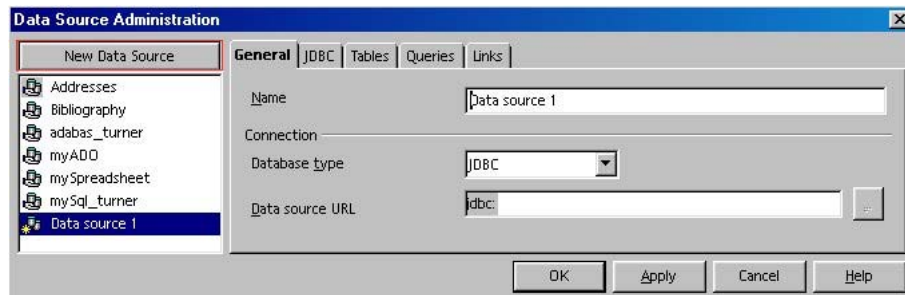


Illustration 23: Data Source Administration dialog during the creation of a new database

3. Select **ADO** from the **Database** type list. The tab pages for an ADO database now appear on the right.
4. Enter a name for the data source connection in the **Name** field. This is the connection name that StarOffice will use.

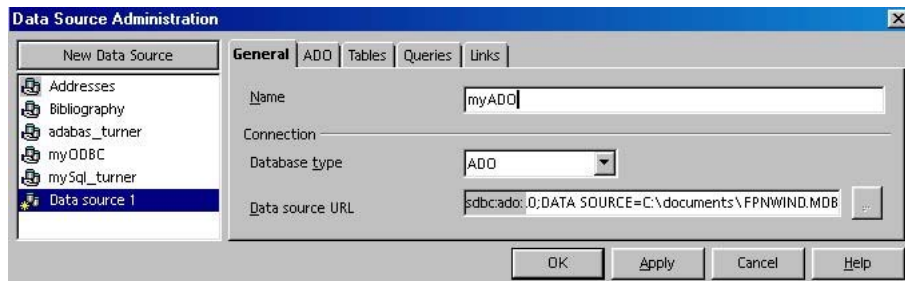


Illustration 24: Creation of an ADO connection with the Data Source Administration dialog

5. Enter an ADO data connection string for the data source in the **Data source URL** field.

Connection String for Microsoft Access

```
PROVIDER=Microsoft.Jet.OLEDB.4.0;DATA SOURCE=MDB-File
```

with

MDB-File	Path and filename of the .mdb file that represents the Microsoft Access database.
----------	---

Example:

```
PROVIDER=Microsoft.Jet.OLEDB.4.0;DATA SOURCE=c:\address.mdb
```

Connection String for Microsoft SQL Server

```
PROVIDER=sqloledb;DATA SOURCE=Servername;INITIAL CATALOG=Catalog name
```

with

Servername	Host name of the machine running the Microsoft SQL server.
Catalog name	Name of the initial catalog of the databas, the name of the database that runs on the server.

Example:

```
PROVIDER=sqloledb;DATA SOURCE=turner;INITIAL CATALOG=First
```

- Click the **ADO** tab in the **Data Source Administration** dialog.
- Enter the the user name for the database connection in the **User name** field.

Usually a **Microsoft Access** database does *not* have a user defined; if this is the case, do *not* insert a name into the **User name** field.

A **Microsoft SQL Server** requires a user name and password. Check the **Password required** box and the user will be asked for a password when opening the database connection.

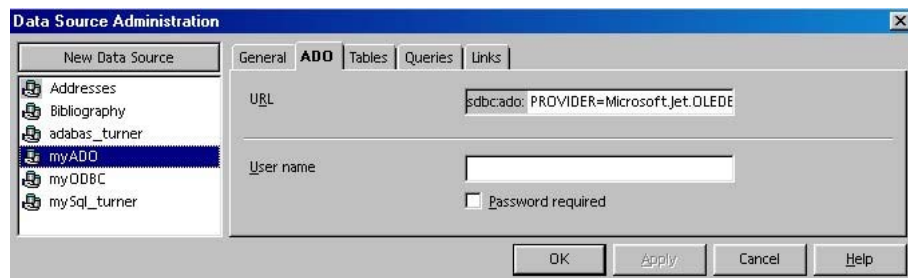


Illustration 25: Data Source Administration dialog tab page to insert a user name

- Click the **Tables** tab to subscribe or unsubscribe the database tables within the database.

StarOffice also displays the tables that are used internally by Microsoft Access. These tables start with **Msys** for Access and **sys** for SQL Server. Hide these tables by clearing the boxes next to the table names.

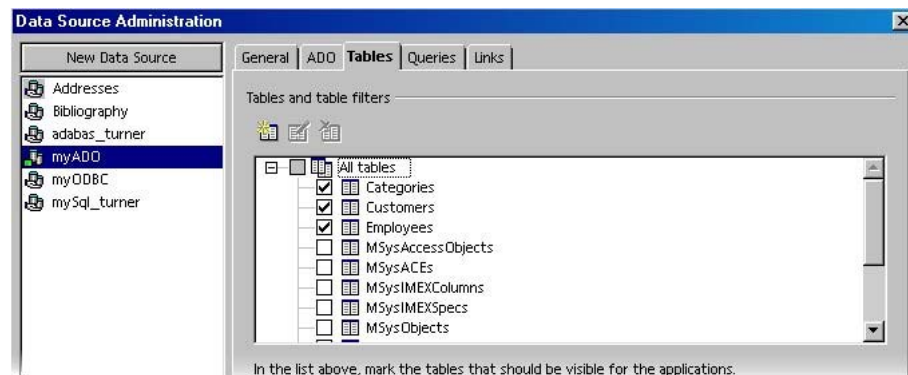


Illustration 26: Tables tab page to hide system tables for a Microsoft Access database

Troubleshooting

1. You see the error message:

No connection could be established for the URL: sdbc:ado..... for Microsoft Access databases.

- Make sure there are no typos in the database file name or connection string.
- Check if the Access database has a user or a password.
- Install the newest version of Microsoft Data Access Components (the location is given above). We recommend MDAC version 5.6.

2. You see the error message:

No connection could be established for the URL: sdbc:ado..... for Microsoft SQL-Server databases.

- Make sure there are no typos in the connection string.
- Do a ping command to the host name and see if it answers.
- Make sure the SQLServer is running.
- Install the newest version of Microsoft Data Access Components (the location is given above). We recommend MDAC version 5.6.

dBase

dBase databases are not database servers like Adabas or a single files like Microsoft Access. They are based on the content of a directory. All files with the extension `dbf` that are located in a special directory are part of the database source.

It is very easy to create and maintain a dBase database. This is its biggest advantage. But the performance is slow, so we don't recommend it for databases with more than 1,000 data rows.

Creating a dBase Database Connection

1. Choose **Data Sources** from the **Tools** menu in StarOffice to open the **Data Source Administration** dialog.

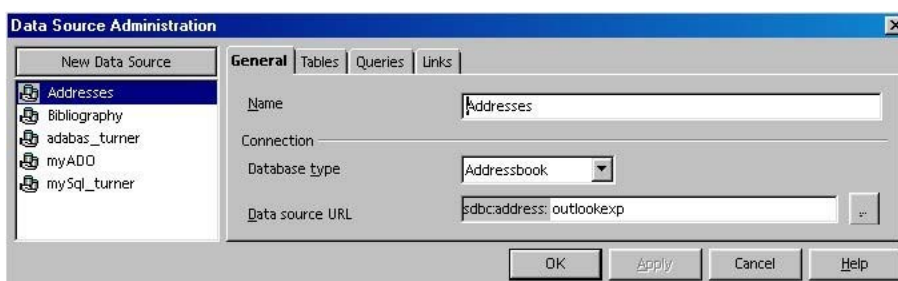


Illustration 27: Data Source Administration dialog in StarOffice

This dialog provides all the tools to create a new data source connection. The left side lists all existing data sources; the right side shows the associated properties.

The tab pages and properties change with the database type, since the different types of databases have different properties and settings.

2. Click **New Data Source** in the upper left corner to create a data source connection.

A new entry named **Data source 1** appears on the left side, and the right side displays the tab pages for a JDBC database.

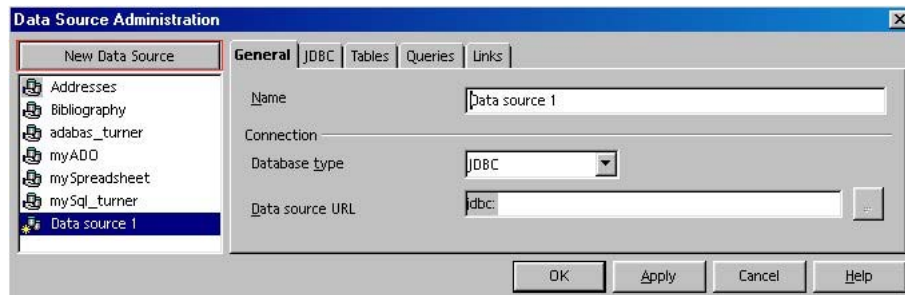


Illustration 28: Data Source Administration dialog during the creation of a new database

3. Select **dBase** from the **Database type** list. The tab pages for a dBase database now appear on the right.

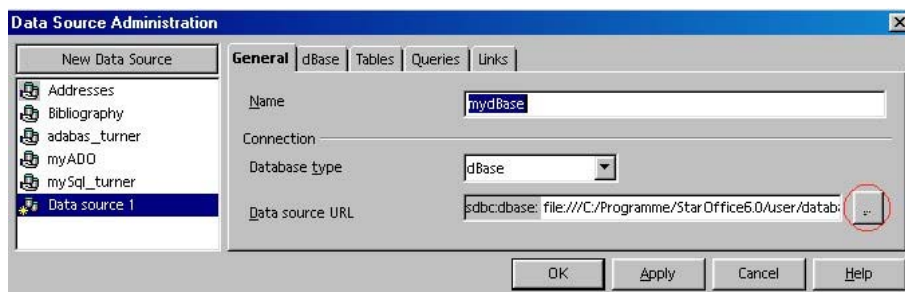


Illustration 29: Data Source Administration dialog to create a new dBase database connection

4. Click ... on the right side of the **Data source URL** field and select the base directory for the dBase database. This directory must contain all dbf files.
5. Enter a name for the data source connection in the **Name** field.
6. Click the **Tables** tab to check the available database tables.

A check box next to a table name controls whether the database table will be displayed or not. To hide the database table clear the corresponding check box.



Illustration 30: List of all dBase files located in a directory

Troubleshooting

1. You see the error message:

```
Error while connecting to the data source  
[StarOffice Base dbase] The file 'file:/...' is an invalid or  
unrecognized dbase file
```

All files with the extension `dbf` will be displayed as database tables. This error message indicates that a file is not a valid dBase file. StarOffice supports files from dBase version 3 and higher.

Text

The Text database connection type allows you to import structured text files in the database front end. You can create queries to filter the data.

This type of database connection can only read plain text files, not StarOffice Writer or Microsoft Word documents. These files need to be structured using a separator between data fields, for example:

```
"one"; "two"; 1.0; 1,000; 10000
```

Data source connections to text files are directory-oriented. This means that one data source connection represents *all files in a directory*. These files will be displayed as database tables. This makes it possible to import a large set of text files.



Text files will be imported read only. It is not possible to edit such files with the database front end of StarOffice. Use a database like Adabas or dBase for this purpose instead.

Creating a Data Source Connection With Text Files

1. Choose **Data Sources** from the **Tools** menu in StarOffice to open the **Data Source Administration** dialog.

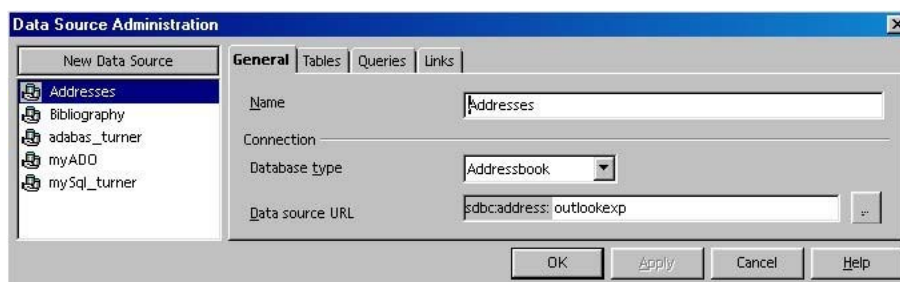


Illustration 31: Data Source Administration dialog in StarOffice

This dialog provides all the tools to create a new data source connection. The left side lists all existing data sources; the right side shows the associated properties.

The tab pages and properties change with the database type, since the different types of databases have different properties and settings.

2. Click **New Data Source** in the upper left corner to create a data source connection.

A new entry with the name **Data source 1** appears on the left side, and the right side displays the tab pages for a JDBC database.

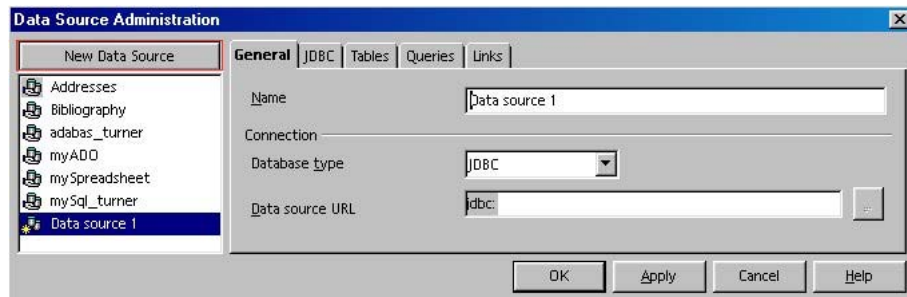


Illustration 32: Data Source Administration dialog during the creation of a new database

3. Select **Text** from the **Database type** list. The tab pages for a Text database now appear on the right.

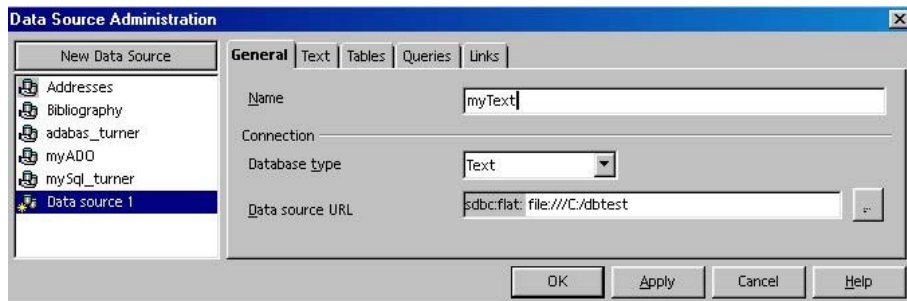


Illustration 33: Data Source Administration dialog to create a Text database connection

4. Click ... next to the **Data source URL** field and select the base directory for the text files. All files in this directory are displayed as database tables.
5. Enter a name for the data source connection in the **Name** field.

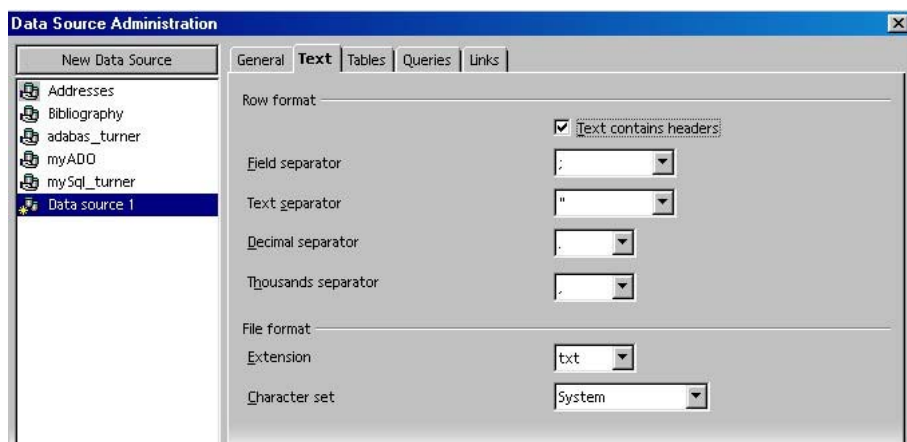


Illustration 34: Dialog for specifying the row format of Text files

6. Click the **Text** tab to specify the row format of the text files in detail. Ensure that these properties are correct to prevent errors during the data import.

To prevent display errors for special characters, select the correct character set, especially if the file came from a different operating system.

7. Click the **Tables** tab to check the list of database tables.

A check box next to a table name controls whether the database table will be displayed or not. To hide the database table clear the corresponding check box.

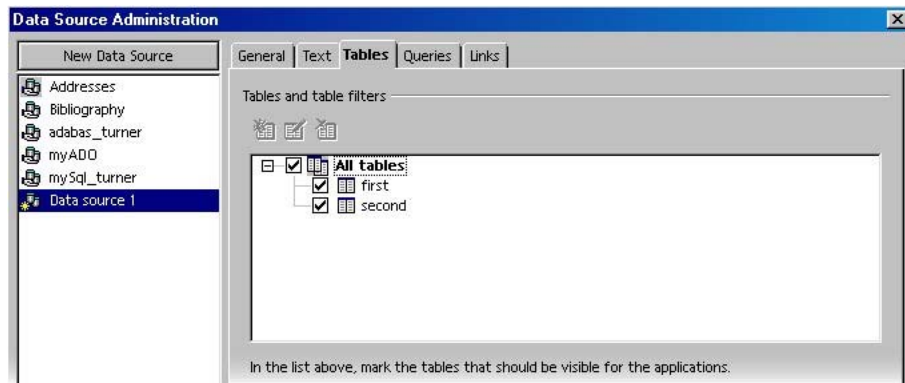


Illustration 35: List of text files located in a directory

Troubleshooting

1. Special characters are not correctly displayed

This indicates that the data source connection is using the wrong character set. Use the **Text** tab page in the **Data Source Administration** dialog to select a different character set.

2. Date values from the text files are displayed as floating numbers

This means the data source **Text** import filter cannot display date formats correctly. Use a database like Adabas or dBase to store such complex values.

Spreadsheet

With the Spreadsheet data source connection, you can use a spreadsheet document as a data source for a database.

All sheets in the spreadsheet document that include data will be imported as database tables. This means that a spreadsheet document that contains data on two sheets will be imported as two database tables.



The contents of the spreadsheet documents cannot be edited within the data source connection. Use a database like Adabas or dBase for this purpose instead.

Creating a Spreadsheet Data Source Connection

1. Choose **Data Sources** from the **Tools** menu in StarOffice to open the **Data Source Administration** dialog.

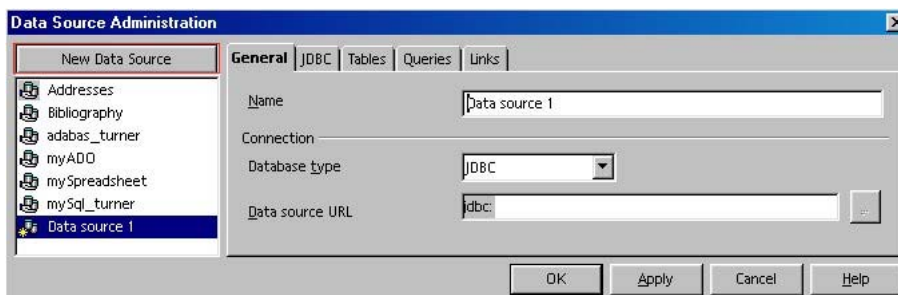


Illustration 36: Data Source Administration dialog during the creation of a new database

This dialog provides all the tools to create a new data source connection. The left side lists all existing data sources; the right side shows the associated properties.

The tab pages and properties change with the database type, since the different types of databases have different properties and settings.

2. Click **New Data Source** in the upper left corner to create a data source connection.

A new entry with the name **Data source 1** appears on the left side, and the right side displays the tab pages for a JDBC database.

3. Select **Spreadsheet** from the **Database type** list. The tab pages for a Spreadsheet database now appear on the right.

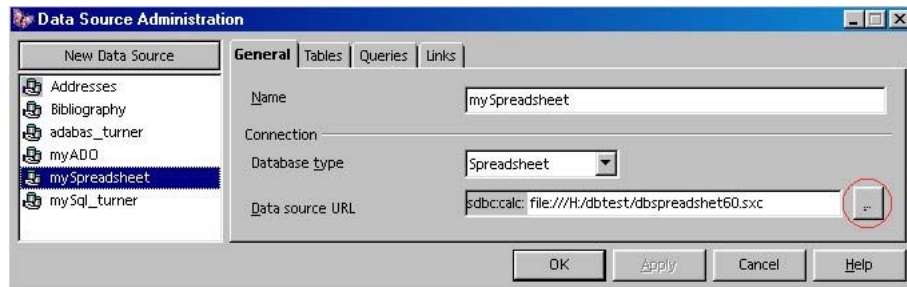


Illustration 37: Data Source Administration dialog to create a Spreadsheet data source connection

4. Click ... next to the **Data source URL** field and select a spreadsheet document that contains the data for the data source connection.
5. Enter a name for the data source connection in the **Name** field.
6. Click the **Tables** tab to check the data connection.

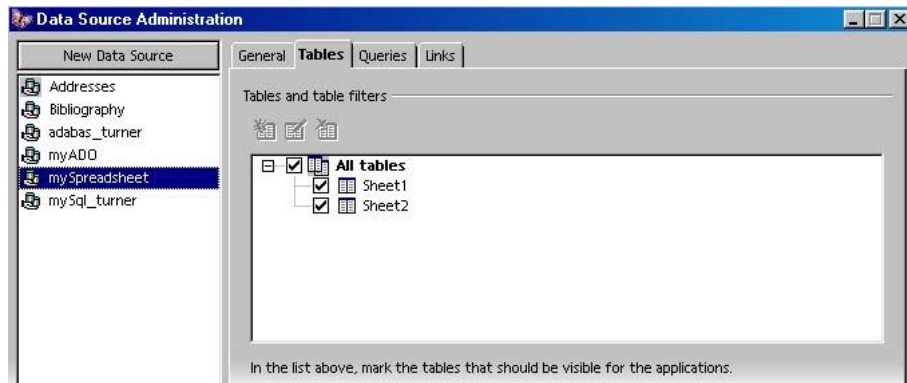


Illustration 38: A spreadsheet with two sheets with data

Address Book

This type of data source connection is different from the other data source connection types described so far. The Address Book connection does not connect directly to a database or database file but uses an *address book handler* to connect to an address book.

The following types of address books can be read:

- LDAP
- Mozilla (Netscape)
- Microsoft Outlook
- Microsoft Windows Address Book

The Outlook and Windows address books are only available under Microsoft Windows.



The data values of an address book cannot be edited.

StarOffice provides an AutoPilot to create an Address Book data source connection. Start this AutoPilot by choose **File - AutoPilot - Address Data Source** in StarOffice.

Creating an Address Book Data Source Connection

1. Choose **Data Sources** from the **Tools** menu in StarOffice to open the **Data Source Administration** dialog.

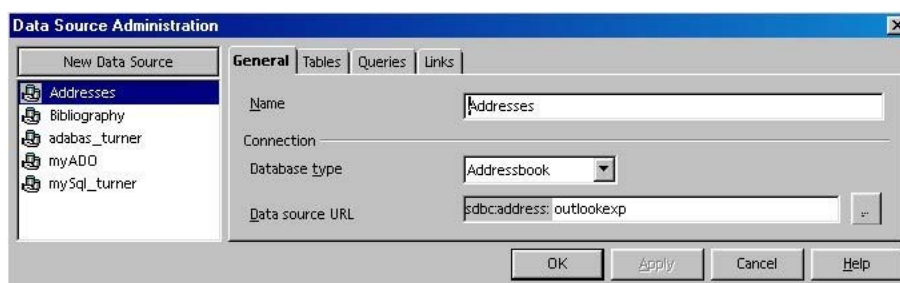


Illustration 39: Data Source Administration dialog in StarOffice

This dialog provides all the tools to create a new data-source connection. The left side lists all existing data sources; the right side shows the associated properties.

The tab pages and properties change with the database type, since the different types of databases have different properties and settings.

2. Click **New Data Source** in the upper left corner to create a data source connection.

A new entry with the name **Data source 1** appears on the left side, and the right side displays the tab pages for a JDBC database.

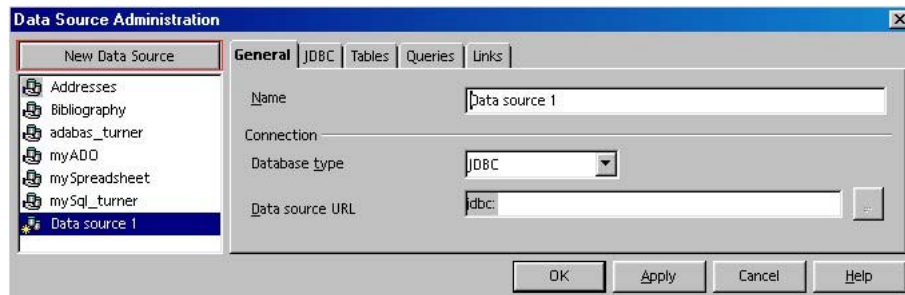


Illustration 40: Data Source Administration dialog during the creation of a new database

3. Select **Address Book** from the **Database type** list. The tab pages for an Address Book database now appear on the right.
4. Click ... next to the **Data source URL** field to open the **Data Source** dialog for choosing the address book type.

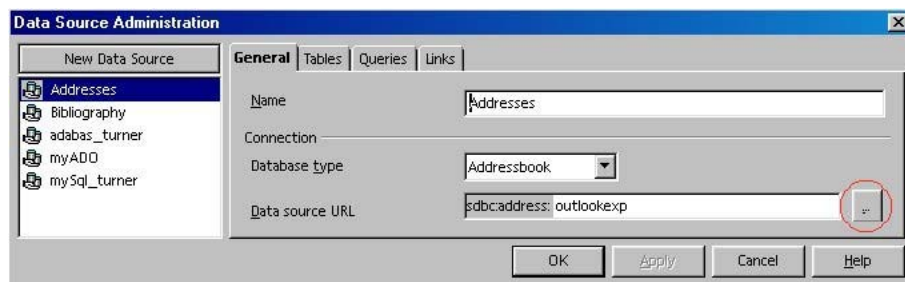


Illustration 41: Data Source Administration dialog to create a new Addressbook data connection

5. In the **Data Source** dialog select one of the data sources and click **OK**.

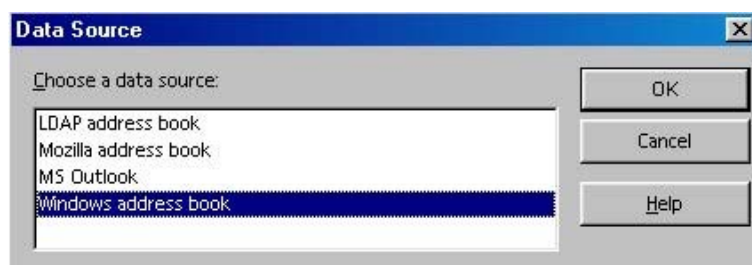


Illustration 42 Dialog for choosing the address book type

LDAP address book	Use this data source if you want to connect to an LDAP server. Ask your system administrator for more information about your LDAP server.
Mozilla address book	Use this connection type if you want to connect to the address book of your Netscape or Mozilla browser.
MS Outlook	Use this connection if you want to connect to the address book in Microsoft Outlook. However, the group address book in the Exchange server cannot be accessed.
Windows address book	Use this connection if you want to connect to the Microsoft Windows address book.

- Click the **Tables** tab in the **Data Source Administration** dialog to connect to the address book.

The list of tables

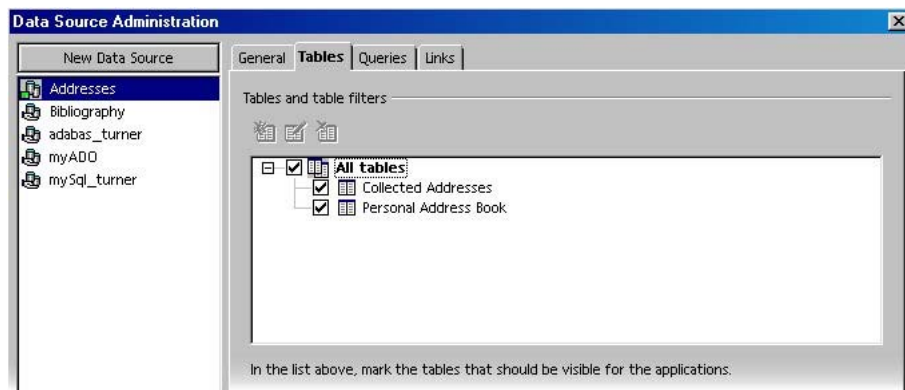


Illustration 43: The Tables tab page for a Netscape address book

varies with the address book type. Illustration 43 shows tables for a Netscape/Mozilla address book.

- Click **OK** to store the settings.

Working With Existing Databases

This section describes the usage of existing data sources. The procedure is common to all types of data source connections.

We will use the data source connection named **Bibliography** as example in this section since it is included in all StarOffice installations.

- Press **F4** or choose **Data Sources** from the **View** menu in StarOffice.

The left side of the window shows a list of all available data sources. Clicking the plus sign (+) in front of each listed data source displays all available items.



Illustration 44: Data Sources dialog

In Illustration 44, the **Bibliography** data source is opened, and **Links**, **Queries** and **Tables** are listed.

- Click the plus sign to display all available entries of these items.

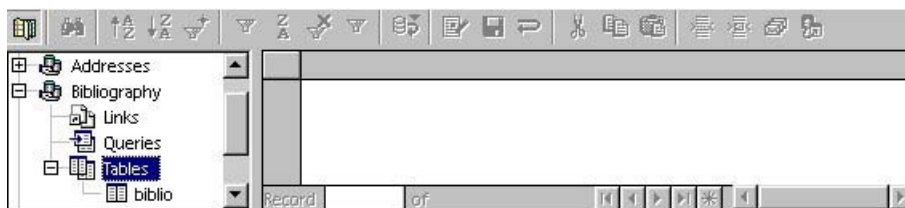


Illustration 45: Display of all available items in the "Bibliography" database

In Illustration 45, the **Bibliography** database has one database table **biblio** and no queries or links.

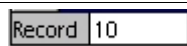
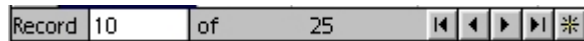
- Click on **biblio** and the right side of the window shows the data rows in the **biblio** table.

Identifier	Type	Address	Annote	Author	Booktitle	Chapter
SAU99	1	Kaarst-Büttg		Sautter, Ka		
SEE98A	1	Kaarst-Büttg		Seeboerger		
BOR99A	1	München		Borges, Mal		
STA99	1	München		Staas, Diete		
ESS99A	1	Düsseldorf		Esser, Hein		

Illustration 46: View of the database content of the “biblio” table

You can now edit the database content.

- The data row navigation bar at the bottom of the dialog allows you to navigate through the database.



Displays the current selected row number. You can enter a row number here to directly go to that row.

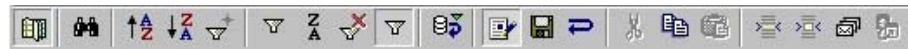


Moves to the first, previous, next, or last data row, respectively.



Creates a new data row.

- The toolbar at the top of the dialog allows you to filter and sort the data rows.



Opens a dialog to define search parameters for the data table content.



Sorts the data table content in ascending or descending order. The selected data column is used as the sort condition.



Builds a filter condition from the currently selected item (**Autofilter**).



Opens an additional dialog to build a filter condition (**Default Filter**).



Opens a dialog to set up a complex sort order.



Removes all filter and sort conditions that are currently active.



Indicates if a filter condition is active; the button is pressed if a condition is active.



Refreshes or rebuilds the display of all currently listed data rows.

A **refresh** does *not* re-read the data from the database table. This is a fast method to make sure that all data rows will print correctly and that the data filter works correctly. A **rebuild** reads the data directly from the database; this method is slower but it reads the latest data rows from the table.



Switches between the read only and edit mode for the data rows. A pressed button indicates the edit mode.



Saves the edited data values.



Undoes the data changes.



Cuts, copies and pastes the selected data value to or from the clipboard.

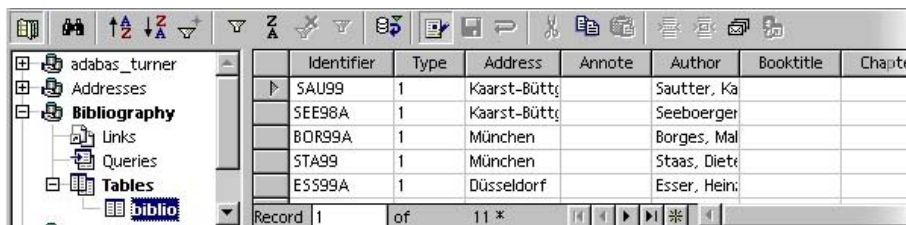
Form Letters

Creating a Form Letter Document

Form letters can be associated with data using the **Data Sources** dialog.

1. Create a text document by choosing **New** from the **File** menu.
2. Press **F4** to open the **Data Sources** dialog.
3. Open the data source connection you want to use for the form letter as described in Chapter 10: *Working With Existing Databases*.

In the following examples we will use the **Bibliography** data source connection for creating a form letter.



Identifier	Type	Address	Annote	Author	Booktitle	Chapter
SAU99	1	Kaarst-Büttg		Sautter, Ka		
SEE98A	1	Kaarst-Büttg		Seeboerger		
BOR99A	1	München		Borges, Mal		
STA99	1	München		Staas, Diet		
ESS99A	1	Düsseldorf		Esser, Hein		

Illustration 47: Data sources dialog displaying the data in “biblio”

A form letter document includes fields that are associated with a data source column. The value of these fields changes during the printing of the form letter. There are two ways to add such fields to a document:

- You can use the menu to choose **Insert - Fields - Other - Database - Form letter field**.
- You can drag and drop the column headers from the **Data Sources** dialog to the document (see).

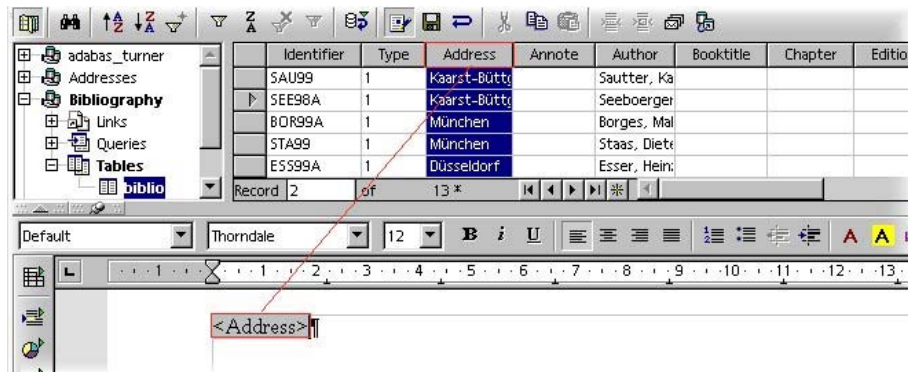


Illustration 48: Inserting a form letter field in a text document using drag and drop

4. Add all database fields you want to use in your form letter to the text document.

The initial caption of the form letter field displays the database field name. This will be replaced by the data content during the printing of the form letter document.

5. After all fields are placed in the document select one data row in the **Data Sources** dialog, and click the **Data to Fields** icon in the toolbar to check how the document will look with the content from the database.



Data to Fields: Inserts the values of the currently selected data row into the form letter fields.

All form letter fields in the document are now filled with the data from the selected data row.

Printing a Form Letter Document

1. Click the **Form Letter** icon to open the **Form Letter** dialog.



Form Letter: Opens a dialog to start printing a form letter.

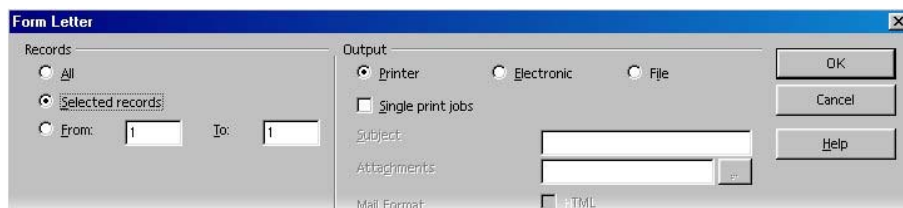


Illustration 49: Dialog to start form letter printing

2. Select a data range to include in form letter printout in the **Records** area.
3. Select an output medium in the **Output** area.

- **Printer** means a normal printer.
- **Electronic** sends the form letters as email.
- **File** creates a separate file for each form letter.

Check the **Single print jobs** box to create a separate print job for each form letter. This is useful, for example, when sending form letters by fax.

Creating a Database Table

This section describes the creation of a database table within a data source connection.

1. Press **F4** to open the **Data Sources** dialog.
2. Open the data source connection in which you want to create a new table as described in Chapter 10: *Working With Existing Databases*.



Illustration 50: Data source dialog displaying the “Bibliography” data source connection

3. Select **Tables** (see Illustration 50) and click the right mouse button to open the context menu.
4. Click **New Table Design** to open the **Table Design** dialog.

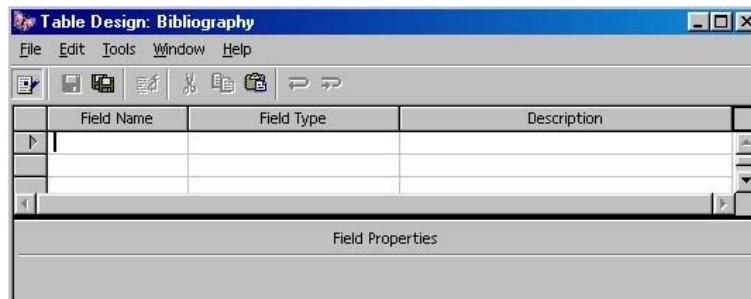


Illustration 51: Table Design dialog to create new database tables

5. Enter a name for the first field of the new database table in the first (see Illustration 51).

6. Select a field type from the list box that appears in the second column (see).

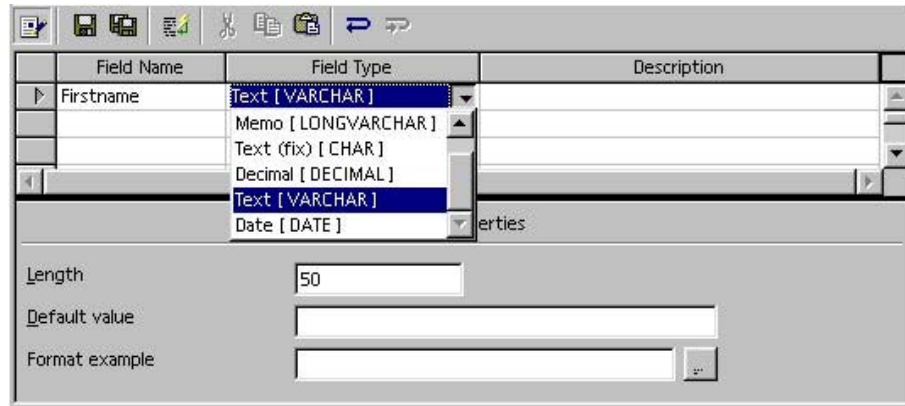


Illustration 52: Inserting the first field of the new database table

The list of the available field types varies with the database type.

7. Insert a description for the field in the third column. This text is optional and only for informational purposes. Each field type has a set of properties, like **Length** or **Default value**. These properties are listed in the lower part of the window.
8. When all fields are defined click the **Save** icon to save the new table design under a new name.



Save: Saves the table design.

Inserting Data Into the Database Table

1. Open the database you want to add data to as described in Chapter 10: *Working With Existing Databases*.

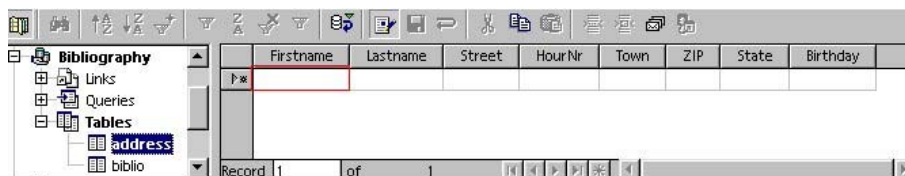


Illustration 53: The empty database table "address"

2. Click in the first column and enter the contents for the first field.
3. Press **Tab** to go to the next column and insert the contents for the second field.
4. When you press **Tab** while in the last column of a row the cursor moves to the beginning of a new line where you can enter another row of data.

Creating a Query

The Data Sources dialog provides filters for finding data in the database. However, when you use a filter its criteria are not saved. A query finds data and also allows you to save the search criteria.

1. Open the data source connection in which you want to create a new table as described in Chapter 10: *Working With Existing Databases*.
2. Select **Queries** and click the right mouse button to open the context menu (see).

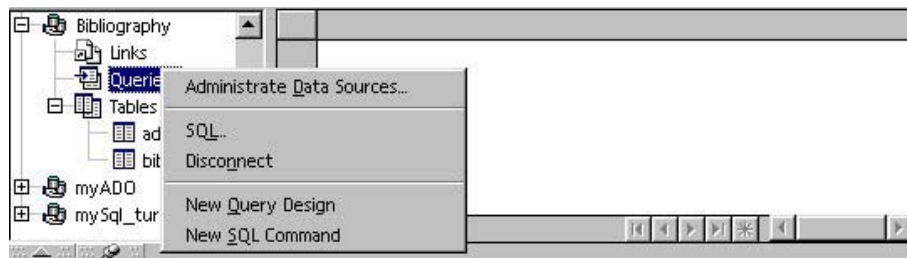


Illustration 54: Context menu to create a new database query

3. Do one of the following:
 - Choose **New Query Design** to open a dialog to create a query (see *Creating a Query With the Query Design Dialog* below).
 - Choose **New SQL Command** to create a query using SQL commands. SQL is a database query language and is beyond the scope of this guide. This is recommended only for experienced users.

Creating a Query With the Query Design Dialog

1. Choose **New Query Design** from the context menu to open the **Add Tables** dialog.



Illustration 55: Query design dialog to create queries

The Add Tables dialog displays all available tables of the current database.

2. Select the table you want to create a query for and click **Add**.

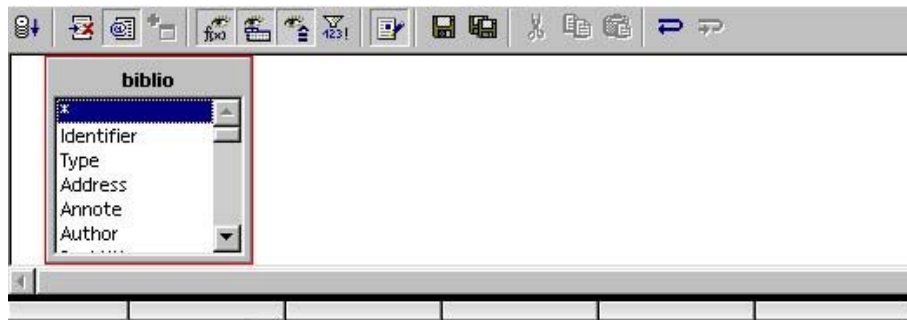


Illustration 56: Database table within the query design view

The selected table is displayed in the **Query Design** dialog. We have now defined the table to be part of the query. This example just includes one single table; usually larger databases will include more than one table per query.

- Specify the table fields to be included in the query.

You can either drag and drop the fields into the area below the database table (see), or double-click on the field name.

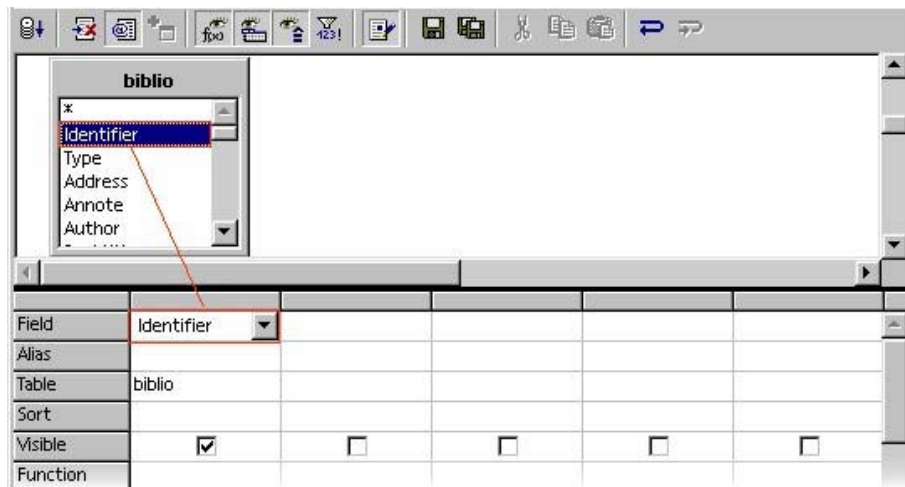


Illustration 57: Adding the fields to be displayed within the query

The database field appears in the **Field** row. Only this field will be displayed in the query.

The database table view includes * as the first field name in the list. If you drag this * into the field area below, all fields in the table will be displayed within the query.

- Click the **Run Query** icon to execute the query.



Run Query: Executes the current query and displays the result.

The **Query Design** dialog will be extended, and a list of data rows that fit the query conditions appears.

- Define the search criteria for the query.

The area below the database table provides the functionality to define search criteria (see).

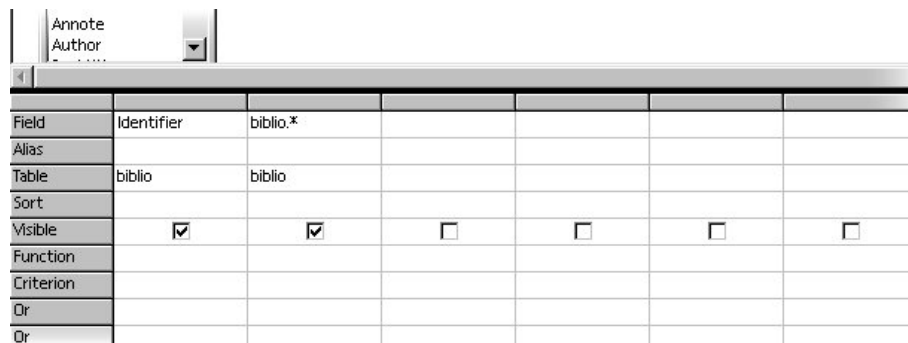


Illustration 58: Criteria design area

Field	Name of the database table field. “*” represents all fields of the database table.
Alias	Alias to be displayed instead of the database table name. This can be useful in creating more readable query output.
Table	Name of the table that includes the selected field.
Sort	Sort the values of the field in ascending or descending order.
Visible	Show the field in the database output. This is helpful for fields that are used to define criteria, but do not need to be displayed in the query output.
Function	Pre-defined set of functions to count the number of rows, etc. The list of available functions depends on the data source type.
Criterion	Defines a criterion for the query.
Or	All criteria that are located in the same column have an OR relationship. All criteria that are located in different columns have an AND relationship. The syntax of the criteria is described in the StarOffice help system.

6. Insert a search criterion in the **Criterion** row.

7. Click the **Run Query** icon in the toolbar.

The resulting data rows are displayed in the top section (see)

	Identifier	Identifier1	Type	Address	Annote	Author	Booktitle	Chapter
	STA99	STA99	1	München		Staas, Diet		
Record	1	of	1					

biblio								
<ul style="list-style-type: none"> Identifier Type Address Annote Author 								

Field	Identifier	biblio.*			
Alias					
Table	biblio	biblio			
Sort					
Visible	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function					
Criterion	'STA99'				

Illustration 59: Result of the query

Creating a Database Form

StarOffice includes flexible database form capabilities. A database form is a StarOffice document including a set of database controls. The **New Form AutoPilot** provides the fastest way to create a database form.

1. Open the data source connection in which you want to create a new table as described in Chapter 10: *Working With Existing Databases*.

2. Select **Links** and click the right mouse button to open the context menu.

Database forms are stored as StarOffice documents. The data source connection stores a link to a form document; this is why the item is called *Link* and not *Form* here.

3. Select **New Form** to open and then **AutoPilot**.

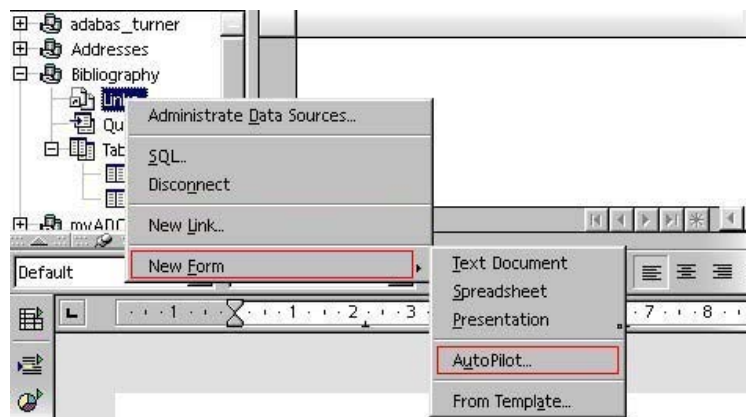


Illustration 60: The context menus to open the form AutoPilot in the “Bibliography” database

4. Choose the database table to be used as a data source from the **Tables or queries** list.

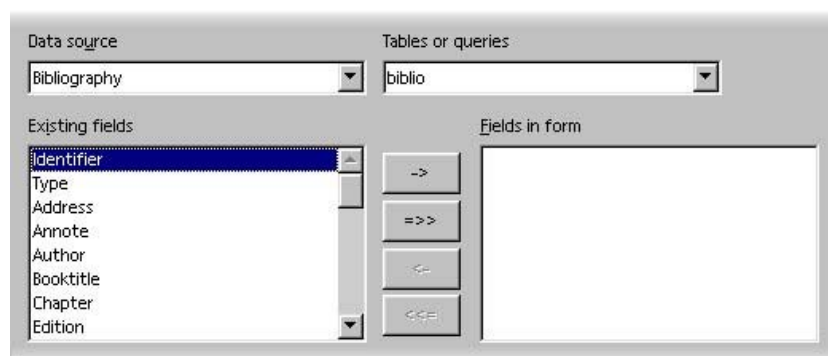


Illustration 61: Using the AutoPilot to choose fields for a database form

5. Choose the fields to be part of the new form.

Press -> to add the field selected in the **Existing fields** list, or press ==> to add all fields from the **Existing fields** list. You can use <- and <=< to remove selected fields from the **Fields in form** list.

6. Press **Next** once all required fields are added.

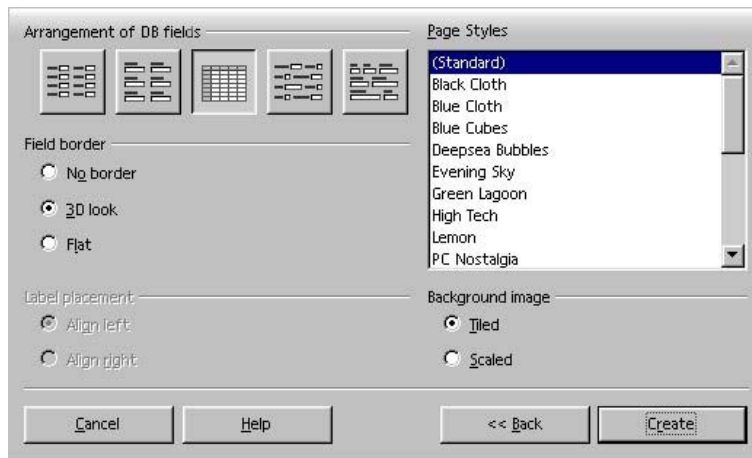


Illustration 62: Style definition in the database form

7. Select the layout of the form using the options in the dialog and press **Create** to create the form.
8. Enter a name for the form document. We recommend to keep the form documents in the same directory as the database tables.
9. StarOffice now displays the new database form.

Working With Database Forms

1. Open the data source connection in which you want to create a new table as described in Chapter 10: *Working With Existing Databases*.
2. Select **Links** to list all forms for the database.
If no form is listed you can create a new database form using the **New Forms AutoPilot** described in Chapter 14: *Creating a Database Form*.
3. Doubleclick a form name to open it.
A window with the form appears. You can use the **navigation bar** in the lower part of the window to create, edit, remove, and filter data rows:



Record 2 of 4

Displays the active row number. You can enter a row number to move to that row.



Moves to the first, previous, next, or last data row, respectively.



Saves the edited data values.



Undoes the data changes.



Creates a new data row.



Removes the current data row.



Refreshes the current data row.



Opens a dialog to define search parameters for the data table content.



Sorts the data table content in ascending and descending order. The selected data column is used as the sort condition.



Builds a filter condition from the currently selected item (AutoFilter).



Activates the form-based filter function. You can insert search criteria in the database form.



Opens a dialog to set up a complex sort order.



Removes all filter and sort conditions that are currently active.



Opens an additional window with a list of all available data rows.



Indicates if a filter condition is active; the button is pressed if a condition is active.

Editing a Database Form

The **New Form Autopilot** (see chapter 14) helps you to create a *new* database form. This section provides a short introduction on how to edit an *existing* form.

1. Open the data source connection in which you want to create a new table as described in Chapter 10: *Working With Existing Databases*.
2. Select **Links** to see the list of database forms associated with the database.
3. Select one of the forms and click the right mouse button and select **Edit Document** from the context menu.

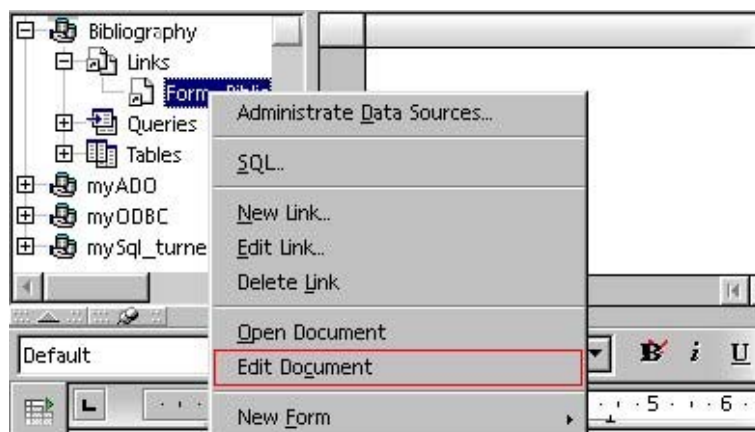


Illustration 63: Context menu to open a database form in the edit mode

A new window with the database form is shown.

To change a database form, you need to open the form in the edit mode. You can also switch to the edit mode in an opened database form by clicking on the

4. If you have already opened the database form read-only, click the **Edit File** icon to switch to edit mode.



Edit File: Switches between edit mode and read-only mode.







5. Once the database form document is in edit mode, click the **Show Form Functions** icon on the vertical toolbar to open a flyer with tools for the database form design.



Show Form Functions: Opens the database form functions toolbar.



Illustration 64: Form functions dialog with tools for editing forms

-
-  Selects a control in the database form.
 -  Lists all properties of the currently selected control.
 -  Lists all properties of the database form.
 -  Opens a window for changing the activation order when using **Tab** for navigating through the form.
 -  Provides an overview of the structure of the database form including a list of controls, forms, and sub-forms for the document.
 -  Activates and deactivates design mode.



A list of all possible controls for a database form.

Providing Feedback

We are constantly working on improving our documentation. Please send your suggestions, complaints, criticisms, or praise to

`staroffice-documentation-feedback@sun.com`

A confirmation that we have received your email will be sent to you. We care about your feedback and we will use it to further improve the StarOffice documentation. Please note that this email address is not for requesting technical support.