

LibreOffice
The Document Foundation

Tutorial

How to Access and Use Data Sources with Base

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Acknowledgments

This chapter is based on a portion of Chapter 8 of *Getting Started with LibreOffice 4.0*.

Publication date and software version

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Note for Mac users

Some keystrokes and menu items are different on a Mac from those used in Windows and Linux. The table below gives some common substitutions for the instructions in this chapter. For a more detailed list, see the application Help.

<i>Windows or Linux</i>	<i>Mac equivalent</i>	<i>Effect</i>
Tools > Options menu selection	LibreOffice > Preferences	Access setup options
<i>Right-click</i>	<i>Control+click</i>	Opens a context menu
<i>Ctrl (Control)</i>	⌘ (<i>Command</i>)	Used with other keys
<i>F5</i>	<i>Shift+⌘+F5</i>	Opens the Navigator
<i>F11</i>	<i>⌘+T</i>	Opens the Styles and Formatting window

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Introduction

In addition to creating a new database (*.odb file), LibreOffice allows existing data sources to be accessed and then linked into LibreOffice documents. For example, a mail merge links an external document containing a list of names and addresses into a letter, with one copy of the letter being generated for each entry.

Accessing a data source that is not a *.odb file

To access a data source that is not a *.odb file:

- 1) **File > New > Database** opens the *Database Wizard* window.
- 2) Select **Connect to an existing database**. Click the arrow next to the *Database type* field and select the database type from the drop down list. Click **Next**.
- 3) Click *Browse* and select the database. Click **Next**.
- 4) Accept the default settings: *Register the database for me*, and *Open the database for editing*. Click **Finish**. Name and save the database in the location of your choice.

Caution



One of the choices available when you select *Connect to an existing database* is *LDAP Address Book*. Beginning with LibreOffice 4.0.0, this option no longer works.

Accessing a spreadsheet as a data source

Accessing a spreadsheet is similar to accessing other databases:

- 1) Choose **File > New > Database**.
- 2) Select **Connect to an existing database**. Select **Spreadsheet** as the *Database type*.
- 3) Click **Browse** to locate the spreadsheet you want to access. If the spreadsheet is password protected, check the *Password required* box. Click **Next**.
- 4) If the spreadsheet requires a user's name, enter it. If a password is also required, check its box. Click **Next**.

Note

Using this method of accessing a spreadsheet, you cannot change anything in the spreadsheet. You can only view the contents of the spreadsheet, run queries, and create reports based upon the data already entered into the spreadsheet.

All changes in a spreadsheet must be made in the spreadsheet itself, using Calc. After modifying the spreadsheet and saving it, you will see the changes in the database. If you create and save an additional sheet in your spreadsheet, the database will have a new table the next time you access it.

Registering *.odb databases

Databases created by LibreOffice are in the *.odb (OpenDocument Base) format. Other programs can also produce databases in this format. Registering a *.odb database is simple:

- 1) Choose **Tools > Options > LibreOffice Base > Databases**.
- 2) Under *Registered databases*, click **New**.
- 3) Browse to where the database is located.
- 4) Make sure the registered name is correct.
- 5) Click **OK**.

Note

Sometimes when updating LibreOffice to a newer version, your list of registered database files disappears. When that happens, you need to use these steps to register your database files with your latest version of LibreOffice.

Using data sources in LibreOffice

Having registered the data source, whether a spreadsheet, text document, external database, or other accepted file type, you can use it in other LibreOffice components including Writer and Calc.

Viewing data sources

Open a document in Writer or Calc. To view the data sources available, press *F4* or select **View > Data Sources** from the pull-down menu. This brings up a list of registered databases, which will include Bibliography and any other databases you have registered.

To view each database, click on the triangle to the left of the database's name. Tables and Queries now show. Click on the triangle next to Tables to view the individual tables created. Now click on a table to see all the records held in it.

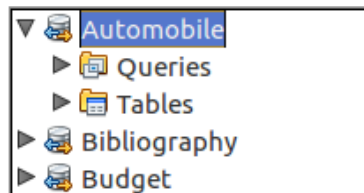


Figure 1: Databases

Editing data sources

Some data sources (but not spreadsheets) can be edited in the Data View window. A record can be edited, added, or deleted.

View a table's data

If you click on a table, its rows and columns of data appear on the right side of the Data Source window. Editing this data requires only a click in the cell whose data should be changed, change the data, and click in the row above or below it to save the new data.

Beneath the records are five tiny buttons. The first four move backwards or forwards through the records, or to the beginning or end. The fifth button, with a small star, inserts a new record.



Figure 2: View Data Sources navigation buttons

To delete a record, right-click on the gray box to the left of a row to highlight the entire row, and select **Delete Rows** to remove the selected row.

FuelID	Date	FuelCost	FuelQuantity	Odometer	PaymentType
	Friday, May 25, 2007	\$16.00	14.690	704.2	Kevin
	Friday, May 25, 2007	\$7.00	6.430	778.7	Dan
	Saturday, May 26, 2007	\$20.00	19.570	1032.3	Kevin
	Saturday, May 26, 2007	\$16.00	15.150	1239.4	Dan
	Saturday, May 26, 2007	\$16.00	15.144	1639.4	Dan

Figure 3: Deleting a row in the Data View window

Launching Base to work on data sources

You can launch LibreOffice Base at any time from the Data Source window. Just right-click on a database or its Tables or Queries icons and select **Edit Database File**. Once in Base, you can edit, add, and delete tables, queries, forms, and reports.

Using data sources in Writer and Calc

Data can be placed into Writer and Calc documents from the tables in the data source window. In Writer, values from individual fields can be inserted. Or a complete table can be created in the Writer document. One common way to use a data source is to perform a mail merge.



Figure 4: Toolbar for the Data Sources window

Tip

Choosing **Tools > Mail Merge Wizard** or clicking on the Mail Merge icon (circled in red) in the Data Sources window launches the Mail Merge wizard which steps you through creating a mail merge document. See Chapter 11 in the *Writer Guide*.

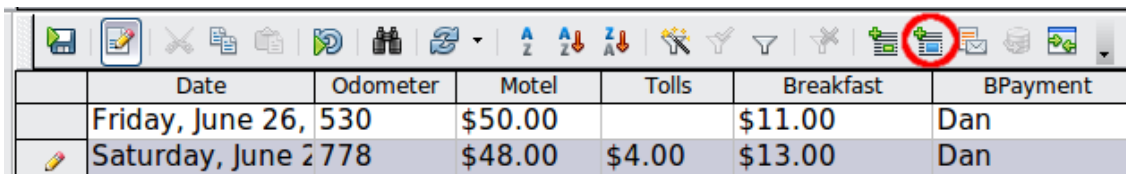
Writer documents

To insert a field from a table opened in the data source window into a Writer document, click on the field name (the gray square at the top of the field list) and, with the left mouse button held down, drag the field onto the document. In a Writer document, it will appear as <FIELD> (where FIELD is the name of the field you dragged).

For example, to enter the cost of meals and who paid for them on a certain date of a vacation:

- 1) Open the list of data sources (*F4*) and select the Vacations table in the Automobile database.
- 2) Use this sentence: "On (date), our breakfast cost (amount) paid by (name), our lunch cost (amount) paid by (name), and our supper cost (amount) paid by (name)." But only type "On , our breakfast cost paid by , our lunch cost paid by , and our supper cost paid by ."
- 3) To replace (date), click the field name Date in the data source window and drag it to the right of the word *On*. The result: On <Date>. If you have Field shadings turned on (**View > Field shading**), <Date> has a gray background. Otherwise it does not.
- 4) To replace first (amount), click the Breakfast field name and drag it to the right of *our breakfast cost*. Make sure you have the proper spacing between the field names and the words before and after them. Result: breakfast cost <Breakfast>.
- 5) To replace the first (name), click the Bpayment field name and drag it to the right of *paid by*. Result: paid by <Bpayment>.
- 6) In the same way, fill in the rest of the fields in the sentence.
 - Use <Lunch> and <LPayment> for the second set of (amount) and (name) in the sentence.
 - Use <Supper> and <SPayment> for the third set of (amount) and (name) in the sentence.
- 7) Final result: On <Date>, our breakfast cost <Breakfast> paid by <BPayment>, our lunch cost <Lunch> paid by <LPayment>, and our supper cost <Supper> paid by <SPayment>.
- 8) Add data to the fields of the sentence:
 - Click the gray box to the left of the row of data you want to add. That row should be highlighted like the second row of Figure 5.

- Click the *Data to Fields* icon (circled). This should fill the fields with the data from the row you chose.
- Click another row and then click this icon again. The data in the sentence changes to this selected row of data.
- Save the document if you want to use it as an example later.



	Date	Odometer	Motel	Tolls	Breakfast	BPayment
	Friday, June 26,	530	\$50.00		\$11.00	Dan
	Saturday, June 27	778	\$48.00	\$4.00	\$13.00	Dan

Figure 5: Selected row in data source window

Adding data in table format is a little easier and takes perhaps fewer steps. Some of the steps will be quite similar.

- 1) Navigate to the place you want to place the table and click the location.
- 2) *Control+Click* the gray box to the left of each row of the data source that you want to be a row in your table if the rows are not consecutive. To select consecutive rows, click the gray box to the left of the top desired row and *Shift+click* the bottom desired row.
- 3) Click the *Data to text* icon to open the Insert Database Columns dialog (Figure 6). (The *Data to text* icon is to the left of the *Data to Fields* icon in Figure 5.)

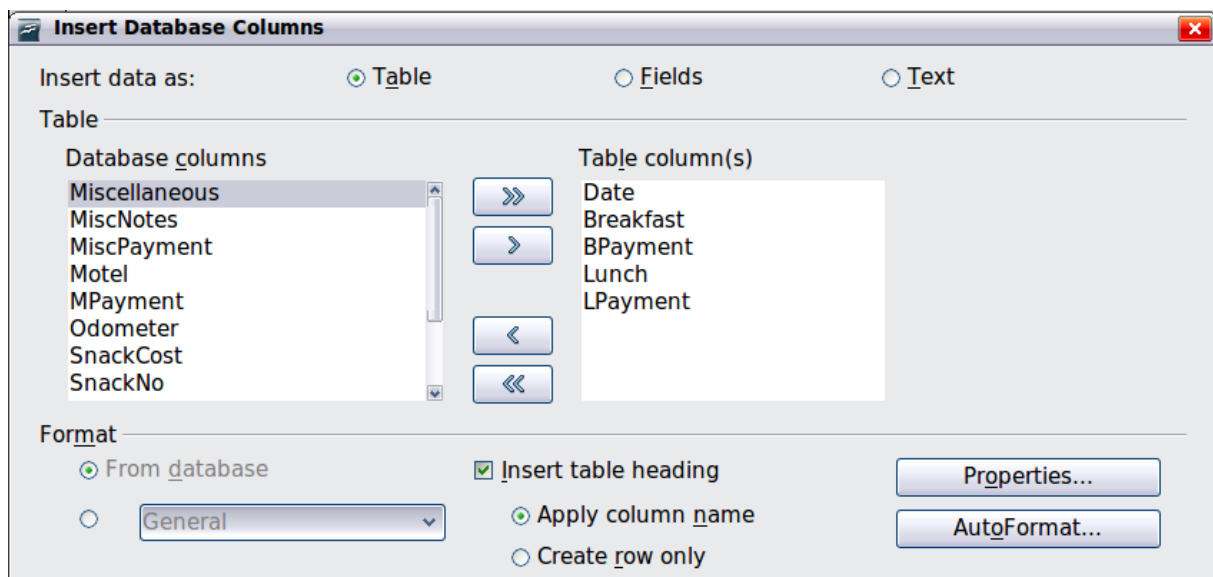


Figure 6: Insert Database Columns dialog

- 4) Move the fields you want in your table from the *Database Columns* list to the *Table column(s)* list.
 - To place the fields in the order you select, click the field and use the *single arrow* to move the fields in the order you desire. You can also limit the fields you use to less than all of the fields available.
 - If you want to use all of the fields, use the *double arrow* pointing to the right to move all of them at one time. The order of the fields in the table you create will be the same as in the data source table.
 - To remove a single field from the *Table Column(s)* list, click the field and use the *single arrow* pointing to the left.
- 5) To start over, click the *double arrow* pointing to the left.

- 6) Select the settings for your table. Use the default settings as in Figure 6.
- 7) Click **OK**. Save the document.

Calc spreadsheets

There are two ways to transfer data into a Calc spreadsheet. One enters the data into the spreadsheet cells. The other creates complete new records in the spreadsheet. While you can directly access the data inserted into the spreadsheet cells, new records created in the spreadsheet are read-only.

Entering data directly to the spreadsheet cells uses the *Data to Text* icon as when making a table in a Writer document. But there are certain differences.

The steps are straightforward.

- 1) Click the cell of the spreadsheet which you want to be the top left cell of your data, including the column names.
- 2) Use *F4* to open the database source window and select the table whose data you want to use.
- 3) Select the rows of data you want to add to the spreadsheet:
 - Click the gray box to the left of the row you want to select if only selecting one row. That row is highlighted.
 - To select multiple rows, hold down the *Control* key while clicking the gray box of the rows you need. Those rows are highlighted.
 - To select all the rows, click the gray box in the upper left corner. All rows are highlighted.
- 4) Click the *Data to text* icon to insert the data into the spreadsheet cells.
- 5) Save the spreadsheet.

Adding records to a spreadsheet is fairly easy. You need to have the Data Source window open, your spreadsheet open, and the table you want to use selected.

- 1) Click the gray box containing the field name for the table's ID field.
- 2) Drag and drop the gray box for the table's ID field to where you want the record to appear in the spreadsheet.
- 3) Repeat until you have moved all of the fields you need to where you want them.
- 4) Name and save the spreadsheet.
- 5) Click a row of the table in the Data Source window.
- 6) Drag the data in the ID field in the selected row onto the ID field in the spreadsheet. The Save icon should activate.
- 7) Click the *Edit File* button to make the spreadsheet read-only. Click **Save** when asked if you want to save the file.

The Data Sources window goes blank, the fields in the spreadsheet are populated with data from the row you selected, and the Form Navigation toolbar appears at the bottom of the spreadsheet.

- 8) Click the arrows on the Form Navigation toolbar to view the different records of the table. (The arrows are circled in red.) The number in the box changes when you change the record number by clicking an arrow. The data in the fields changes correspondingly to the data for that particular record number.

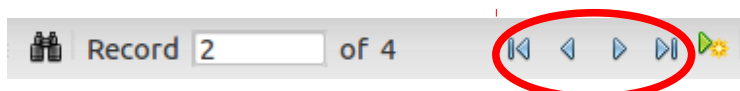


Figure 7: Navigation arrows of a form