

LibreOffice

## Base



Get Familiarize  
with the Working  
Environment

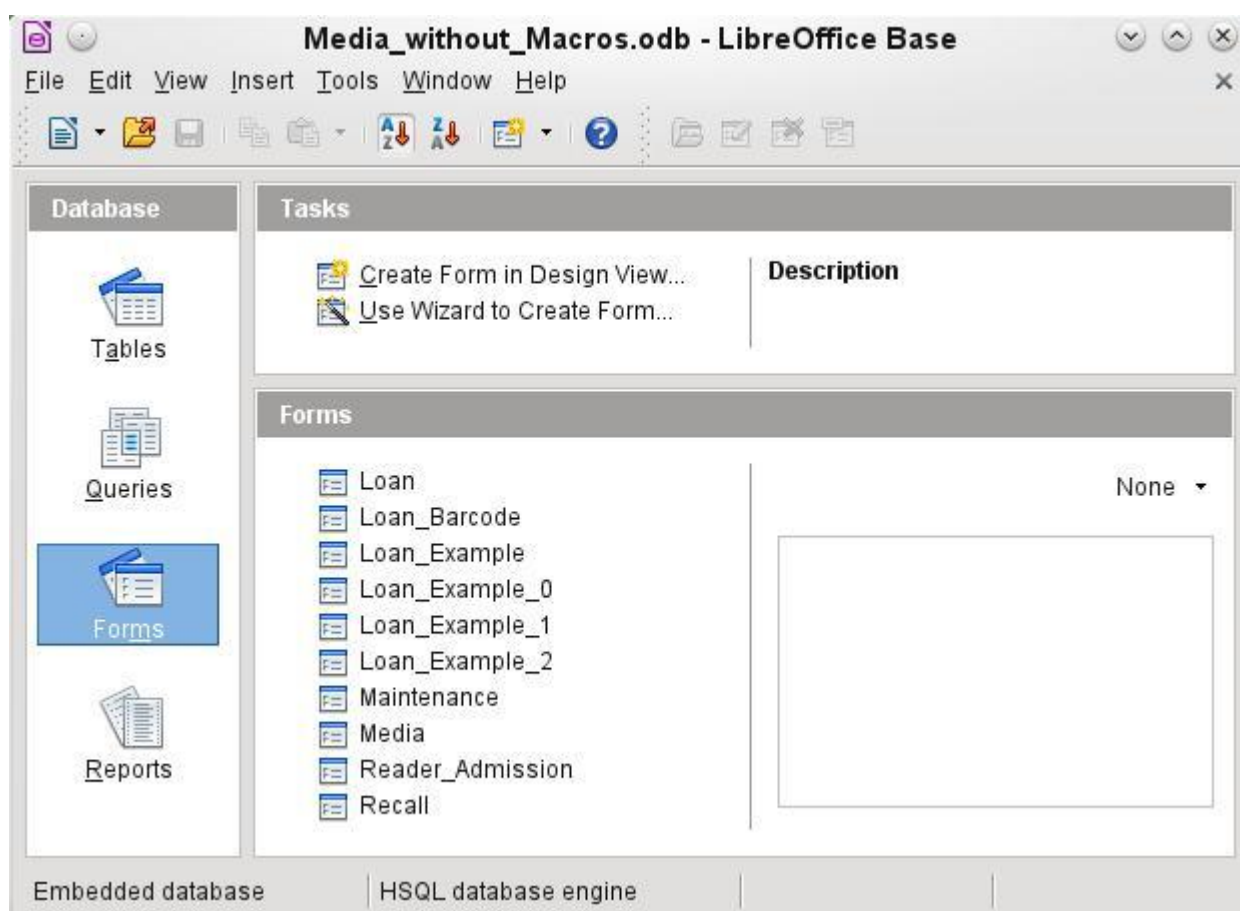
## Introduction

In everyday office operation, spreadsheets are regularly used to aggregate sets of data and to perform some kind of analyses on them. As the data in a spreadsheet is laid out in a table view, plainly visible and able to be edited or added to, many users ask why they should use a database instead of a spreadsheet. This handbook explains the differences between the two, beginning with a short section on what can be done with a database.

This chapter introduces two database examples and the entire Handbook is built around these. One database is named `Media_without_macros.odt` and the other, extended with the inclusion of macros, is named `Media_with_macros.odt`.

## Base – a container for database content

A Base file is a compressed folder that contains information for the different work areas of Base. In daily use, Base initially opens with the following view.



The Base environment contains four work areas: Tables, Queries, Forms, and Reports. Depending on the work area selected, various tasks—creating new content or calling up existing elements—may be carried out.

Base starts with the Form view, because forms are the elements most commonly used when working with databases.

## Data input using forms

Simple forms show just one table as in the upper part of the *Loan* form.

**Media\_without\_Macros.odb : Loan - LibreOffice Base: Database Form**

File Edit View Insert Format Table Tools Window Help

**Loan**

	First Name	Last Name	ID
	Annelise	Blau	5
	Greta	Garbo	6
	Lisa	Gerd	2
	Hein	Keindurchblick	4
	Bert	Lederstrumpf	0
	Monika	Mirinda	3

Record 2 of 10 (1)

Filter (Last Name)  OK

Record 2 of 10

**Loan for Reader Garbo, Greta**

Loan Date:

**current Loan**

	Medium	Loan Date
	4 - Die neue deutsche Rechtschreibung - by Hermann, Ursula	04.04.13

Record 1 of 1

**Return**

	Medium	Loan Date	Return Date	Extension	Loan Days	Balance Time
	3 - Traditionelle und kritische Theorie - by Horkheimer, Max	01.04.13			3 Days	4 Days

Record 1 of 1

Page 1 / 1 Default STD 75%

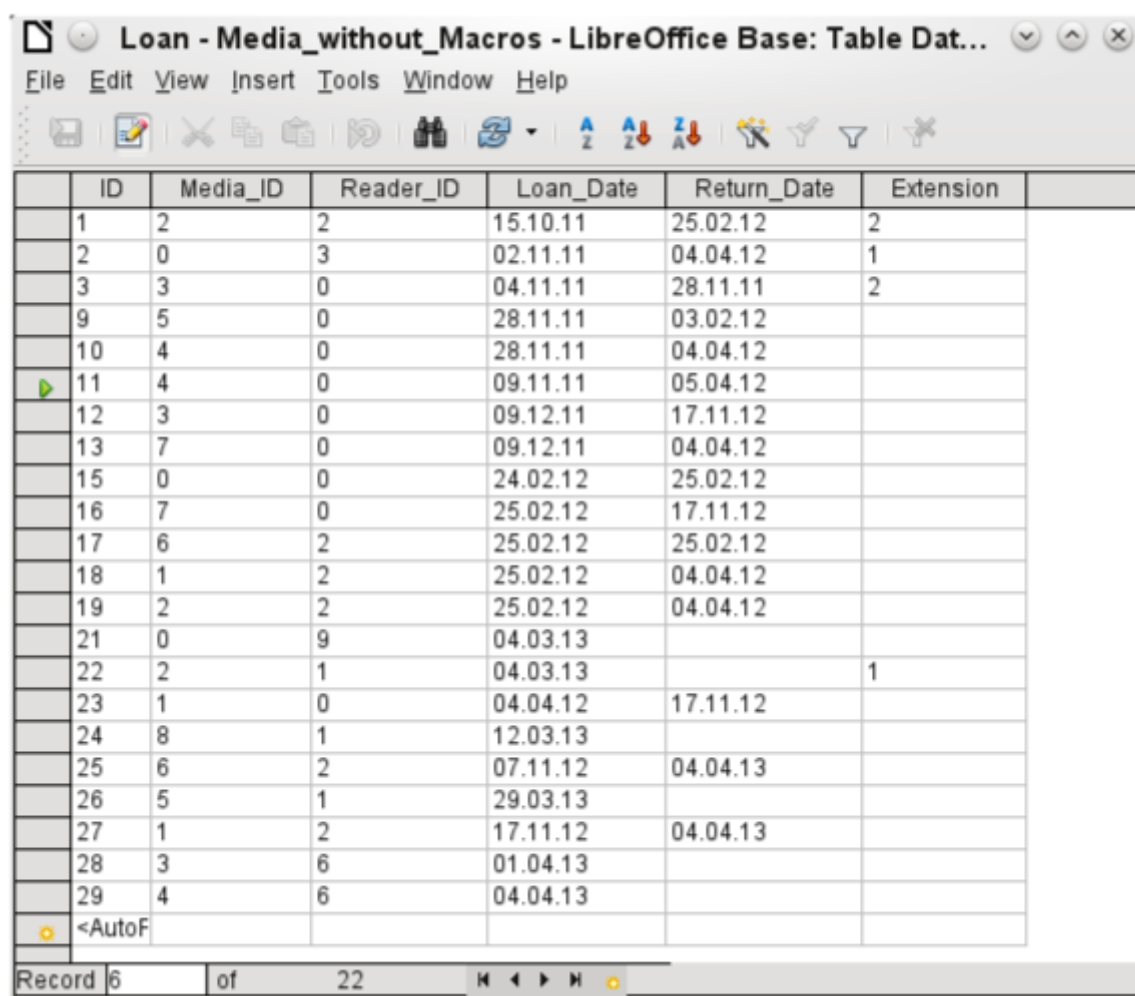
The Loan form has been extended to show additional information:

- The range of persons shown can be filtered on last name to limit the detail shown. If a user inputs the letter "G" in the Filter (Last Name) field at the right of the Loan table, only persons whose last name begins with "G" will be shown.
- New borrower information can be input directly into the table fields of the form.
- Details of items to be borrowed are input and shown in the area in the middle of the form. If a previously borrowed item is overdue and must be returned this area is blocked (no input possible) and the title will indicate "Loan temporary locked!".
- Items on loan are shown in the lower area of the form. The date for returning each borrowed item is compared with the current date and the remaining loan duration shown.

- The borrowing date is set as the current date. In the pull-down field at the right of the Loan Date are the media items which can be borrowed. Items which are already on loan to the selected borrower are not available for selection.
- Media items selected for loan are added to the current loan details by clicking the **Refresh** button.
- In the lower section of the form (Return) it is not possible to delete a data row. Only the fields Return Date and Extension can be edited. If a borrower was previously locked and has subsequently returned the overdue item(s), the lending area can be unlocked by clicking the **Refresh** button.

All these functions can be carried out without using macros, when the form is set up and filled in the manner described.

## Data input directly into a table



	ID	Media_ID	Reader_ID	Loan_Date	Return_Date	Extension	
	1	2	2	15.10.11	25.02.12	2	
	2	0	3	02.11.11	04.04.12	1	
	3	3	0	04.11.11	28.11.11	2	
	9	5	0	28.11.11	03.02.12		
	10	4	0	28.11.11	04.04.12		
	11	4	0	09.11.11	05.04.12		
	12	3	0	09.12.11	17.11.12		
	13	7	0	09.12.11	04.04.12		
	15	0	0	24.02.12	25.02.12		
	16	7	0	25.02.12	17.11.12		
	17	6	2	25.02.12	25.02.12		
	18	1	2	25.02.12	04.04.12		
	19	2	2	25.02.12	04.04.12		
	21	0	9	04.03.13			
	22	2	1	04.03.13		1	
	23	1	0	04.04.12	17.11.12		
	24	8	1	12.03.13			
	25	6	2	07.11.12	04.04.13		
	26	5	1	29.03.13			
	27	1	2	17.11.12	04.04.13		
	28	3	6	01.04.13			
	29	4	6	04.04.13			
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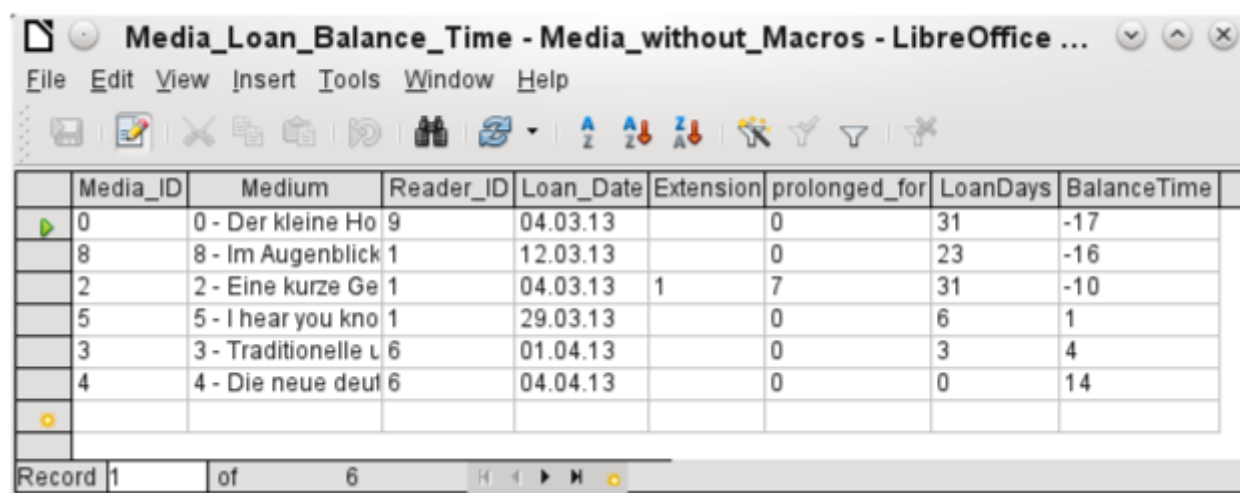
The table structure for such a form is relatively basic and easy to set up. In the table shown above, the same data can be directly input in the rows and columns of the table as when using the form.

- The first field shows a primary key ("ID") which is automatically generated. More on this topic can be found in the chapter on Tables.
- The second field, Media\_ID, stores the primary key of the Media table, a number which refers to the Media. In the form the media id, title and author are shown in the drop-down menu.

- The third field, Reader\_ID, stores the primary key of the Reader table. This key is a number which refers to the reader. In the form the Last name and First name of the reader are shown.
- The fourth field stores the loan date. If this date is present and is later than the current date, the corresponding data set for the reader is shown in the bottom table of the form under Return.
- The field marked Extension contains information about extensions of the loan for an item. The meaning of the values 1, 2 and so on is explained later. The database contains a special table called Settings for this type of information.

The input of this data permits the management of a simple library.

## Queries – getting information on data in tables



Media_ID	Medium	Reader_ID	Loan_Date	Extension	prolonged_for	LoanDays	BalanceTime
0	0 - Der kleine Ho	9	04.03.13		0	31	-17
8	8 - Im Augenblick	1	12.03.13		0	23	-16
2	2 - Eine kurze Ge	1	04.03.13	1	7	31	-10
5	5 - I hear you kno	1	29.03.13		0	6	1
3	3 - Traditionelle L	6	01.04.13		0	3	4
4	4 - Die neue deut	6	04.04.13		0	0	14

The query shown above lists all media which are currently out on loan. It calculates for each item how long it has been on loan and the balance of the loan period.

- All media for which the Return\_Date field is empty is listed. As an additional overview, the medium name is included in the query together with the Media\_ID.
- The reference to the Reader is established with the primary key of the Reader table.
- The value of the LoanDays field is calculated as the difference between the Loan\_Date and the current date.
- The number of LoanDays is subtracted from the Loan Time to give the remaining number of days in the loan period. The Loan Time can vary with different media types.
- In the Settings table a value of '1' for Extension corresponds to an extension of the loan period of 7 days. In the data set above, the line with Media\_ID '2' shows an extension of 7 days.

## Reports – presentation of data

Before an actual report in the form of a recall notice can be printed, the recall information must be entered into the Recall form. The table in the form shows all persons who have borrowed items with a negative remaining loan time.

For each media item to be recalled, the recall date and recall notice number is entered. The recall date defaults to the current date. The recall number is an integer incremented by 1 with each successive recall notice for a particular lender/media.

This form, in the current database example without macros, requires user input to create recall notices. In the macro version, the date is automatically entered and the recall notice printed.

**Media\_without\_Macros.odb : Recall - LibreOffice Base: Databa...**

File Edit View Insert Format Table Tools Window Help

First Name Reader	Last Name Reader
Greta	Garbo
Heinrich	Müller
Terence	Nobody

Record 2 of 3 (1)

Record 2 of 3

**Recall for Reader Müller, Heinrich**

Medium	Loan Date	Extension	Loan Days	Balance Time
8 - Im Augenblick - by van Veen, Herman	12.03.13		23 Days	-18 Days
2 - Eine kurze Geschichte der Zeit - by Hawking, Steven W.	04.03.13	1	31 Days	-10 Days

Record 2 of 2 (1)

**Medium: 2 - Eine kurze Geschichte der Zeit - by Hawking, Steven W.**

Recall Date	Recall No.
04.04.13	1

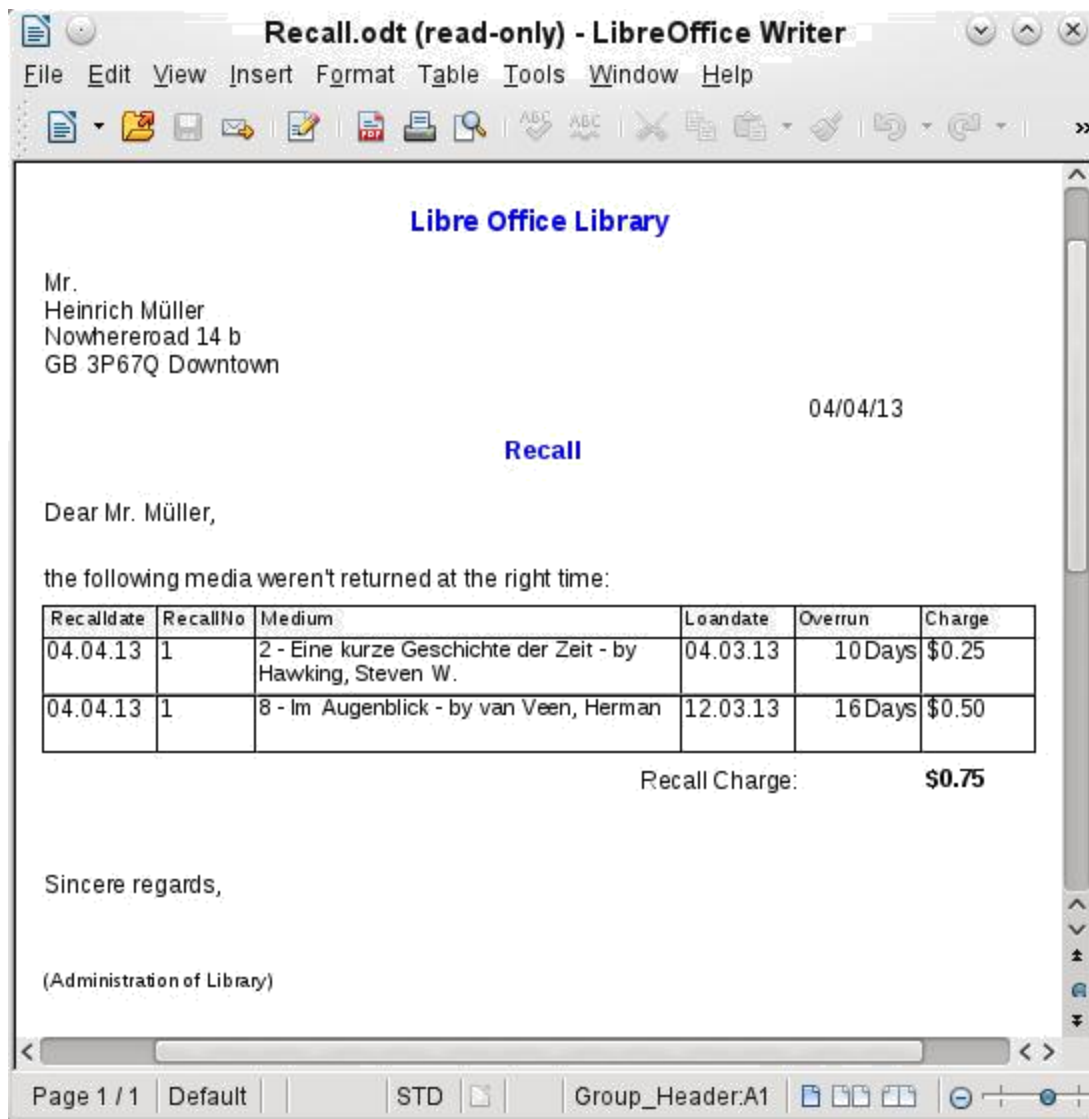
Record 1 of 1

Page 1 / 1 Default STD 75%

The recall notice is generated by means of a query from the previously input data. The user of the database needs only to choose the Recall report and a recall letter can be printed out and sent to all persons who have a recall entry made in the form on the previous page.

In such a report there may be multiple entries (overdue items) for a particular person. If the table containing the items for this person exceeds the space on a page, it is extended to cover a succeeding page.

Such a report is more encompassing than a mail merge letter produced with Writer. It automatically gathers together the data sets for printing and arranges the necessary accompanying text accordingly.



Source: - Libre Office Base Handbook Version 4.0

<https://documentation.libreoffice.org/assets/Uploads/Documentation/en/BH4.0/PDF/BH40BaseHandbook.pdf>