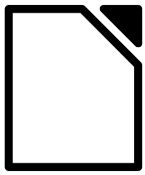

LibreOffice
The Document Foundation

Base Guide

# *Chapter 3*
# *Data input and removal*

*Tables and Forms*

## Copyright



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## Feedback

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# Contents

# Introduction

Chapter 1 introduces Base using a simple flat database. Then chapter 2 discusses the planning and designing stages of database creation. This is a very important part of the Base Guide because poor planning and designing result in a poor database. Appendix A contains the planning and designing of the relational database mentioned in chapter. This serves as an example of the principles contained in this chapter.

This chapter, *Data input and removal*, builds upon the plan and design created in Chapter 2. Here we use the plan and design to create the tables and forms.

Chapter 4, *Data output*, also builds upon the plan and design of Chapter 2. We discuss how to create the queries and reports for the database.

Chapter 5 discusses how Writer, Calc, Impress and Base can be used together. In some cases, two or three of these components may be used at one time to accomplish a task.

Later chapters address more advanced uses of Base. This includes customization of Base and using Base in a work environment.

Included in this chapter, chapter 4, we introduce a different type of database with which Base can connect. It is a little faster and less prone to loose data under a variety of circumstances.

# Create the database

After chapter 2, you have your plan and design for the database. It is time to use them to create it. But remember that plans are not always perfect. So changes may have to be made to improve it.

## Create the database file

How you do this depends upon the circumstances. One method that works regardless of whether you are at the splash screen or have opened any of the components of LibreOffice (Writer, Calc, Impress or Base). Another method works when any of the components are open. And finally, the splash screen has another.

Use this method when you are at the splash screen or have a component open.

- Select **File > New > Database**

When you have one of the components open, use this one

- Click the *New* icon's arrow (red circle) and select **Database** from the menu.

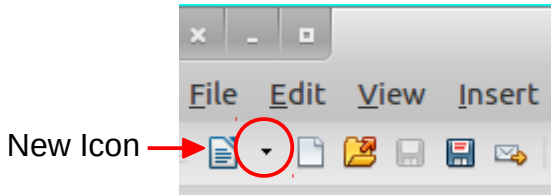



*Figure 1: Opening Base using the New Icon*

When the splash screen is open, use this one.

- Click the Database icon or use Alt+A.


*Figure 2: Opening Base using the splash screen*

When any of these methods are used, the Database Wizard opens with 2 steps listed on the left. The first step is selected by default. Here you have three choices:

- Create a new database.
- Open an existing database file
- Connect to an existing database.

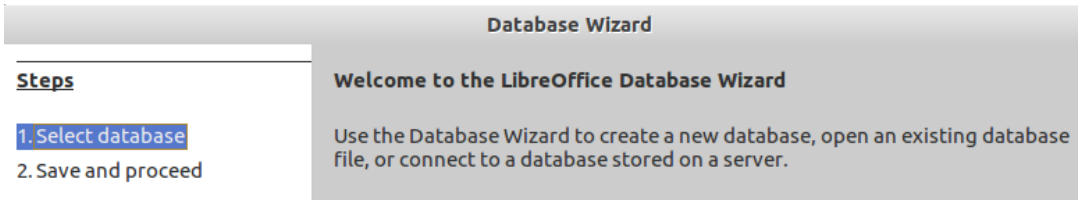
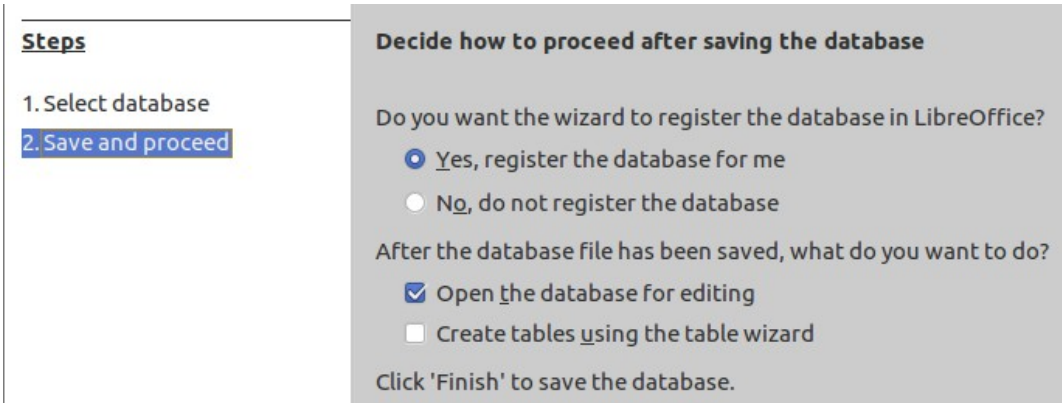



*Figure 3: Database Wizard window*

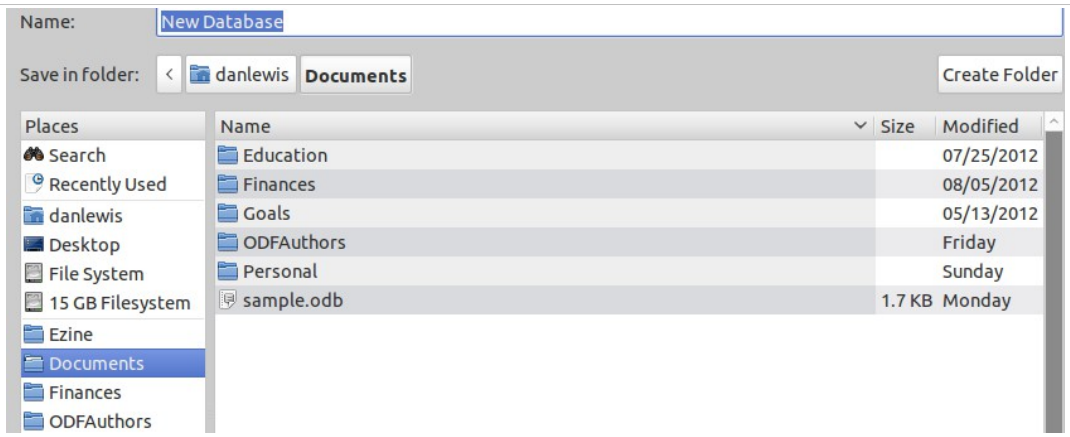
What you select in this step determines what appears next. Creating a new database has a second step, opening an existing database file closes the wizard, and connecting to an existing database will have additional steps depending upon what type of database is accessed.

Step 2 of the Database Wizard opens.



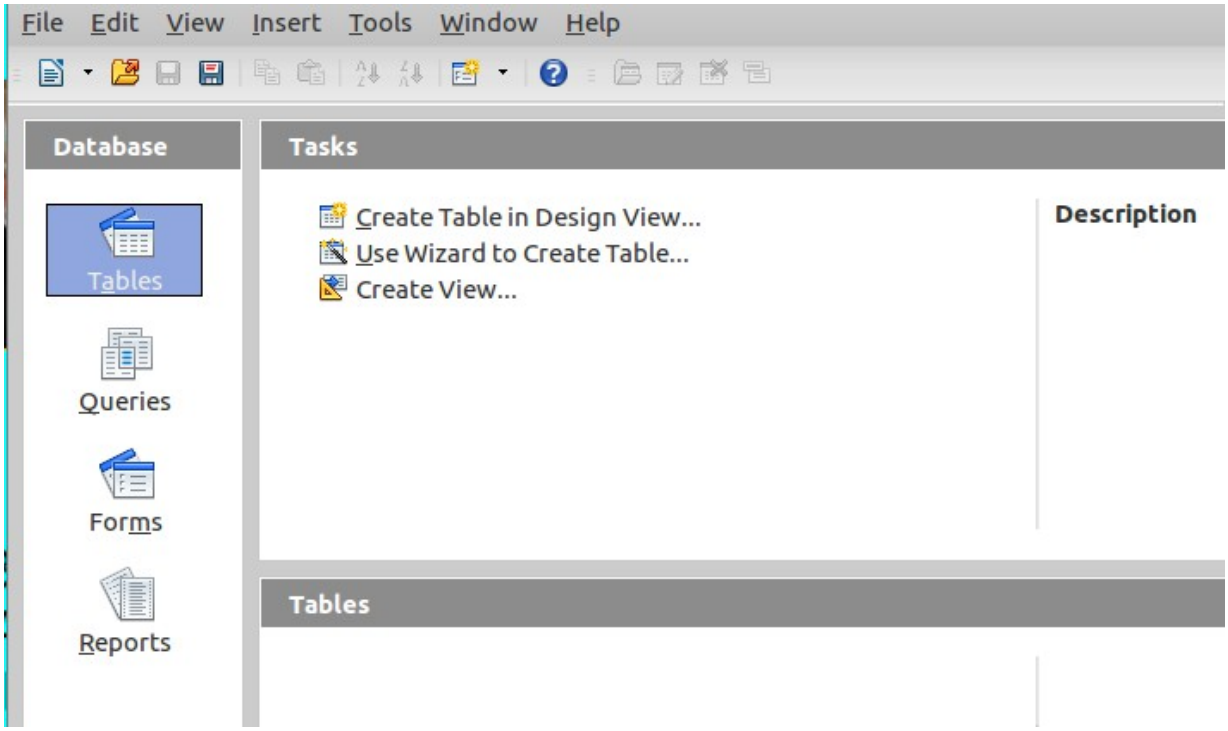

- Click **Finish** to register the database and open the database for editing, leaving the default selections as they are.

The *Save* window opens:




- Replace *New Database* in the Name box with the name of your new database (to follow the learning example, create one now and name it *Budget)*.
- Verify the the file type is listed as *ODF Database* in the bottom right corner.
- Browse to the location where you want to save the new database file.
- Click *Save.*

Once you have created a new database and saved it, the *main database window* opens. Opening a database file will open this same window. It contains three sections: Database, Tasks, and List section. The latter's name matches the name of the database object selected in the Database section. Click another in the Database section, and the name in the List section changes.  Below is a screen shot of a Database File Window when a new database is first created.



| Tip | The first time a database is opened, the Tables database object is highlighted in the Database section. Every time thereafter the Forms database object is selected. The reason for this is that the first thing you should do with a database is create one or more tables. But after the initial steps of creating the tables, queries, forms, and reports, you are most likely to open the database to enter or remove data from a form. |
|---|---|

The *Database* section allows you to select which part of the database to use. This chapter uses the Tables icon to work with the tables or the Forms icon to work with the forms. Later chapters demonstrate the uses of the Queries and Reports icons.

The *Task* section shows the tasks available to the user based on which icon was selected in the Database section. In Figure 5, the Tables object is selected, so the Tasks sections shows the two ways to create a table and one way to create a view. Had we clicked the Forms icon, three tasks would have appeared. Click the Queries icon, and three tasks appears. Click the Reports icon, and two task appears.

The right side of the Tasks section is labeled Description. Move your cursor over any of the tasks listed to see a description of it.

The *List* section will vary in content depending upon which icon is selected in the Database section. Click the Tables icon to see a list of all your tables. Click the Queries, Forms, or Reports icons to see a list of all your queries, forms, or reports respectively.

In the right-hand side of the List section is an drop down menu offering three choices *None*, *Document information*, and *Document*. *None* is the Default setting, and nothing appears below this menu. If *Document information* is selected, the window contains information about the selected form or report. (When Tables or Queries are selected in the Database section, *Document information* is not an available option.) If *Document* is selected a thumbnail appears of the selected, table, query, form or report. (The thumbnail will only show part of the table, query, form, or report if there is not room to show it all.)

| Tip | Viewing a Document thumbnail requires you to make two selections: a document object in the Database section, and an item in the List section. |
|---|---|

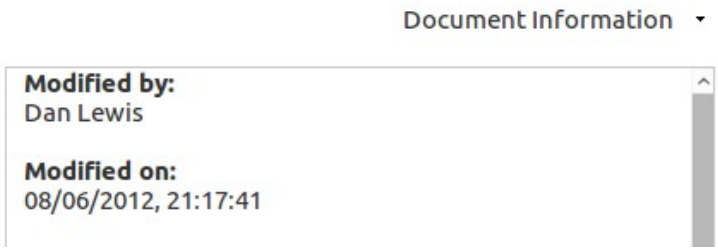



*Figure 4: Document information for a selected Form*

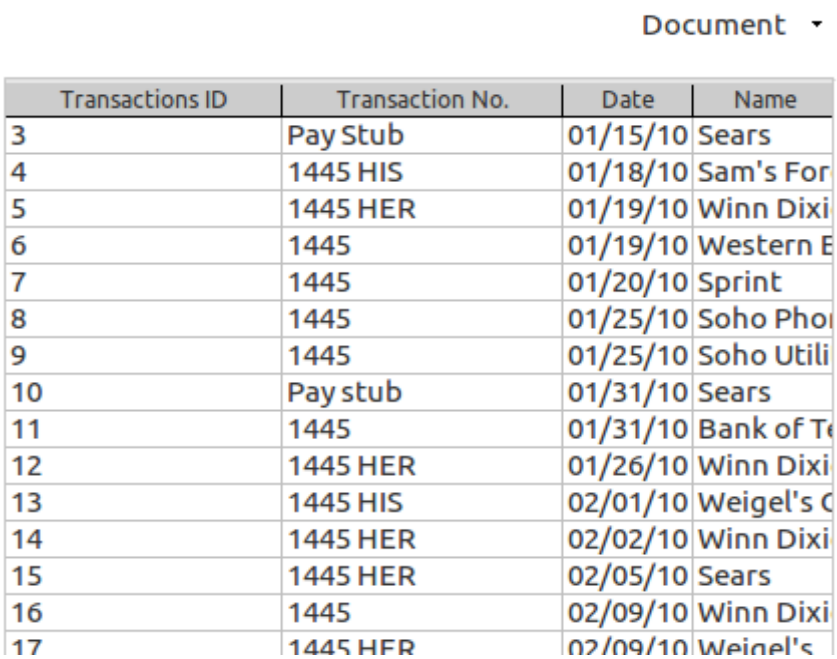



*Figure 5: A table's Document thumbnail*

## Create the tables

As discussed in previous chapters, databases are made up of one or more tables. Have your database design ready with the list of fields and field types you will need for each of your tables. You already have the database open. If not, open the database in which you want to create a table.

There are two ways to create a table: using the Table Wizard, or using Design View. Chapter 1 of the Base Guide, Introducing Base, describes how to use the Table Wizard. So if you are going to use this method for creating the entire table, follow the instructions in Chapter 1.

In this chapter we describe how to use the wizard for a special situation: creating part of a table whose primary key contains two or more fields. This is a task that the wizard can do, but the Table Design dialog can not.

If you do not need to create a multiple field primary key for a table, go to the next section: Create a table in design view.

### *Using the Table Wizard*

When a table's design requires a multiple field primary key, use the Table Wizard to create the fields of the primary key. Then edit the table to add the rest of the fields.

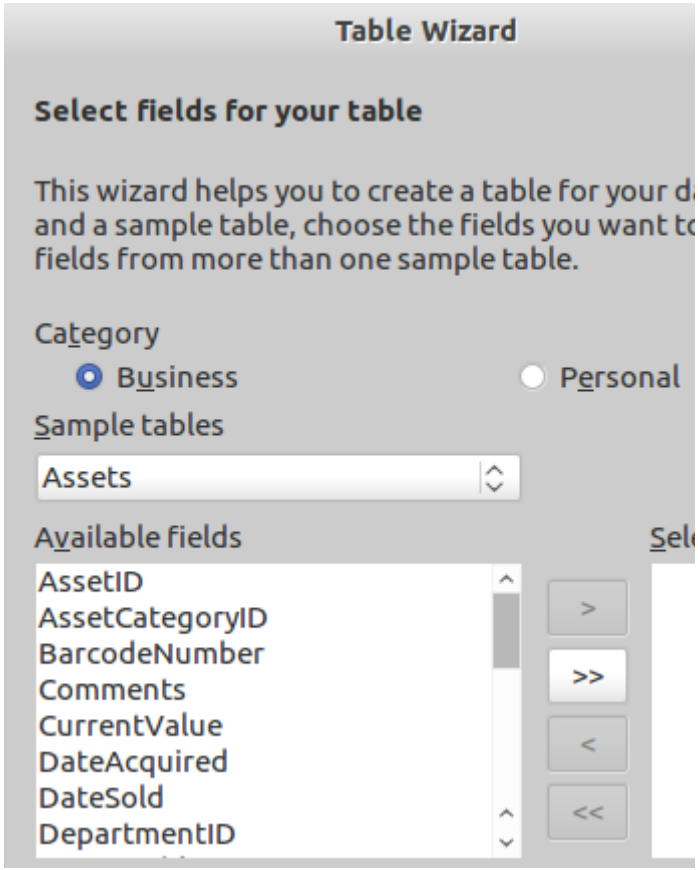



*Figure 6:*

The sample tables is a drop down list. Any of these tables will serve our purpose, so we will use the default table, Assets.

1) Click *Use Wizard to Create Table*.
2) Click *AssetID* and then click the right arrow to move it into the Selected fields list.
3) Click **Next**.

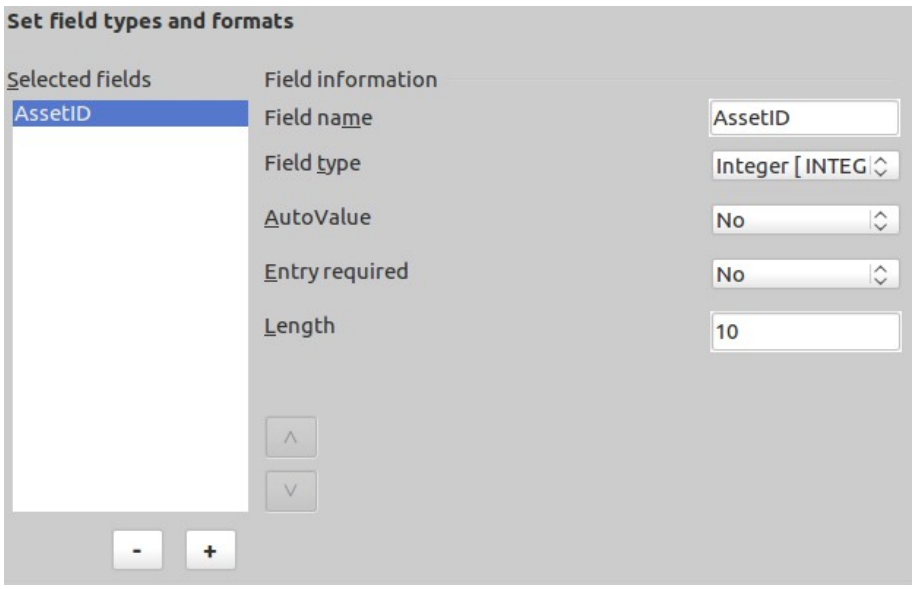
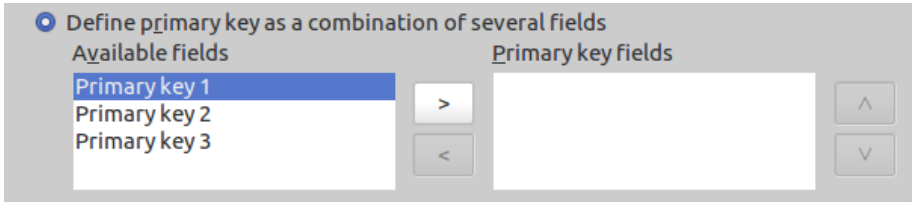



*Figure 7: Step 2 of the Table Wizard*

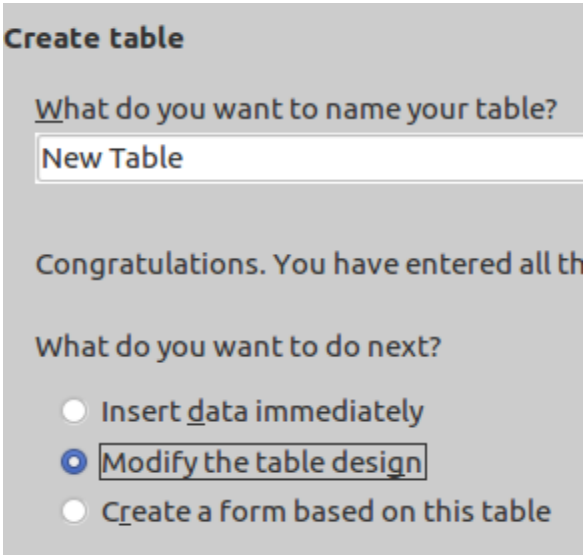
The next step is to remove the AssetID field and add the primary key fields.

1) At the bottom of the Selected fields list, there are two buttons: a + and a – . Click the – to delete AssetID.


2) Create the fields:
   a) Click the + button. *Field* appears in the Selected fields list and the Field name box.
   b) Replace *Field* in the Field name box with the name of the first field for the primary key, *Primary key 1*.
   c) You will selecting the Field types and properties later, so ignore them for now.
   d) Repeat steps a) and b) for each field in the primary key.
3) Click **Next**.




4) Set the primary key:
   a) Select *Define primary key as a combination of several fields*.
   b) Click each field and then the right arrow to move all the fields to the *Primary key* list.
   c) Use the up or down arrow to change the order of the fields if necessary.
5) Click **Next**.



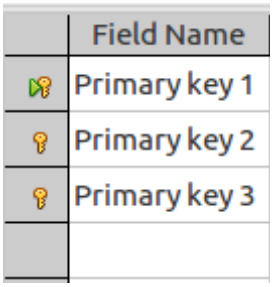

6) Create table:

a) Enter the name of your table as the name you want to use (I used *new* Table as an example.)

b) Select *Modify the table design*.

7) Click **Finish**. (The Table Design dialog opens.)

| Tip | When the dialog opens, you will see a key to the left of each one of the fields for your primary key. This key identifies that the field belongs to the primary key. |
|---|---|




Follow the instructions of the following section to modify the primary key fields and to add the rest of the fields for the table. The only difference between modifying a field and adding one is that the field has already been given a name, a Field Type, and Field Properties. Changing any of these values is basically doing the same thing as selecting them for a new field.

### *Create a table in design view*

The Table Design dialog has three labeled columns at the top: Field Name, Field Type, and Description. Below them is the Field Properties section. To the left of the Field Name column is the column where the primary key is designated by one or more key icons. In the snapshot above, the primary key consists of three fields. In many cases, a table's primary key will contain only one field. After you select a field to be the table's primary key, this key will in front of this field.

The Field Name column is where you enter the field names, and the Field Type column contains drop down lists for each field where you will be selecting what you listed in the database design. The Description is for any notes for yourself or for others. Finally, The Field Properties give you more choices as to each field's properties.

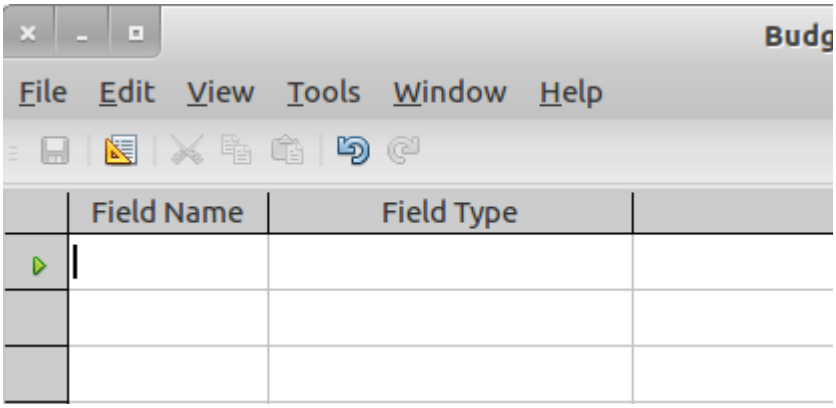



*Figure 8: Top of the Table Design dialog*

To create a new table using Design View, you need to have the database open to the main database window. In the Database section, the *Tables* object should be selected. Now you have three choices in the Tasks section: two choices of how to create a table, and one choice of how to create a view.

- Click **Create Table in Design view**. (The Table Design dialog opens.)

| Tip | A table can be opened for editing (to add fields, remove fields, or change field properties). To do so:<br>1) Click the *Tables* icon in the Database file Window,<br>2) Click the name of your table in the Tables section, and choose **Edit > Edit** in the menu bar and the table will reopen in the Table Design dialog.<br>3) Or, right click the table's name, and select Edit from the context menu. The table also opens in the Table Design dialog. |
|---|---|

### Name your fields

Creating a table involves a series of steps: naming a field, selecting its Field Type, entering a description of it, and selecting its properties. You go through these steps for each field of the table. Next to last you define what field will be the primary key. Finally, you name and save the table.

Each one of these steps will be discussed in its own section and in sequence. I have also used a link in the last section that will bring you back to this section. This way you can follow the steps for a field from beginning to end, click on the link, and return to here so you can follow them for the next field if necessary.

Use Field Name column to create a field, modify a field name, or delete a field.

- To create a field:
  1) Click the top cell that is empty.
  2) Enter the name of the field to be created.
- To modify a field name, edit it.
- To delete a field, right click the gray rectangle before the field's name. Select Delete from the context menu.

### Setting the Field Type for each field

The field you correct or modify will have one of 21 field types. (See Table 1) By the time you finished the design of your tables, you wrote down the name of the fields and each of their field types. Now you will select the correct field type for each field of the table you are creating.

Each cell of the Field Type column contains a drop down list with the 21 field types, and selection of a specific field type is done the same as is done using any drop down list.

- Double click the cell where you want to select a Field Type to open the drop down list.
- Click the file type to select it.

| Tip | You can move from one cell to the next by using *Enter* or *Tab*. The use of either moves your cursor from Field Name to Field Type, to Description with successive uses of one of them. Use of either in the Description will move the cursor to the Field Name in the next row. |
|---|---|

### *Adding a Description*

This allows you to make notes about the fields of the table that might refresh your memory sometime in the future. For example, You could identify the table for which the field is a foreign key. Or, you could use abbreviations for the field's name and enter the full name here. Also, you could state what purpose the field serves.

- Click the Description cell.
- Enter anything in this cell that will provide information that you or someone else might need.

### Setting Field Properties in the Table

These permit you to further define a field's characteristics beyond its field type. The Field Properties have a section of their own at the bottom of the Table Design dialog. What is contained in this section depends upon what is first selected as the field type. The following table will contain the properties available for each field type.

*Table 1: Field Types and their Field Properties*

| Field Type | Field Properties |
|---|---|
| Tiny Integer | Entry required, Length, Default Value, Format example |
| BigInt | AutoValue, Entry required, Length, Default Value, Format example |
| Image | Entry required, Length, Default Value |
| Binary | Entry required, Length, Format example |
| Binary (fix) | Entry required, Length, Format example |
| Memo | Entry required, Length, Default Value, Format example |
| Text (fix) | Entry required, Length, Default Value, Format example |
| Number | Entry required, Length,Decimal places, Default Value, Format example |
| Decimal | Entry required, Length,Decimal places, Default Value, Format example |
| Integer | AutoValue, Entry required, Length, Default Value, Format example |
| Small Integer | Entry required, Length, Default Value, Format example |
| Float | Entry required, Length,Decimal places, Default Value, Format example |
| Real | Entry required, Length,Decimal places, Default Value, Format example |
| Double | Entry required, Length,Decimal places, Default Value, Format example |
| Text | Entry required, Length, Default Value, Format example |
| Text (ignore case ) | Entry required, Length, Default Value, Format example |
| Yes/No | Entry required, Length, Default Value |
| Date | Entry required, Default Value, Format example |
| Time | Entry required, Default Value, Format example |
| Date/Time | Entry required, Default Value, Format example |
| OTHER | Entry required, Default Value, Format example |

*AutoValue* appears as a field property for the field types, BIGINT and INTEGER. Set this property to *YES* for only three conditions: the field is the table's primary key, the field type is one of these two types, and you want Base to auto-generate the values for this field.

*Entry Required* tells Base whether every row of the table must have an entry for this field or not. (This selection should have been made for every field in the design stage.)

*Length* defines how many characters or digits are permitted in an entry. But if you look at the Range column in the table below, you see that this is approximate. *Tiny Integer* has a length of 3 digits, but -999 to -129 and 128 to 999 are not accepted as entries. For this you should use *Small Integer*.

In the case of binary fields, it defines how long the data block can be.

*Decimal places* determines how many digits are permitted to the right of the decimal place. (LO calls this a decimal separator.) This combines with *Length* for numerical values. The maximum number of digits permitted to the left of the decimal place the Length value minus the Decimal places. For example, a Length of 5 and 2 decimal places limits the number of digits to the left of the decimal place to 3. (5-2=3).

*Default Value*: use this if you want to have a specific value present for the field until you change it.

*Format example* allows you select a rather specific format for field entries. For example, date formats, currency formats, and textual formats can be defined here. However, this formatting will only be seen when viewing the table. If the table will be contained in a form, formatting will have to be applied to the field in the form as well.

**Caution**

1) Be careful that your entries and selections match what is in your database plan and design. Each of the available properties for a field determine the characteristics of the field. Use the wrong value can create frustration. *Entry required* can prevent you from adding additional data to your table.
2) *Length* when not being long enough will limit the number of characters you can enter. When the field type is numerical if nature, exceeding the range of the selected field type will cause incorrect data to be entered into to the field. Take Small Integer for example which has a digit length of 5. But entering a number greater than 32,767 will change your entry to either a positive or negative integer or 0 depending upon the integer you enter. (32768 becomes -32768; -32769 becomes 32767; 65536 or -65536 both become 0.) **Make sure your likely entries will lie within the range of the field type you have chosen to use.**

Each row of the table in the dialog has information about a specific field. The left cell is its name, the center cell is its field type, and the right cell is its description. Each row also determines what appears in the Field Properties section, the properties that belong to the field of that row. Select the Field Name, Field Type, or Description cell of a row, you also select the Fields properties of that row.

*Table 2: Fields Types and their default lengths*

| ***Field Type name*** | ***Field Type*** | ***Length*** | ***Range*** |
|---|---|---|---|
| Tiny Integer | [TINYINT] | 3 | -128 to 127 (signed)<br>0 to 255 |
| BigInt | [BIGINT] | 19 | -9,223,372,036,854,775,808 to<br>9,223,372,036,854,775,807 |
| Image | [LONGVARBINARY] | 2147483647 | 2147483647 |
| Binary | [VARBINARY] | 2147483647 | 2147483647 |
| Binary (fix) | [BINARY] | 2147483647 | 2147483647 |
| Memo | [LONGVARCHAR] | 2147483647 | 2147483647 |
| Text (fix) | [CHAR] | 100 | 1 TO 8000 |
| Number | [NUMBER] | 100 | $-10^{38}$ to $10^{38}$ |
| Decimal | [DECIMAL] | 100 | $-10^{38}$ to $10^{38}$ |
| Integer | [INTEGER] | 10 | -2,147,483,648 to 2,147,483,647 |
| Small Integer | [SMALLINT] | 5 | -32,768 to 32,767 |

| Field Type name | Field Type | Length | Range |
|---|---|---|---|
| Float | [FLOAT] | 17 | $-10^{38}$ to $10^{38}$ |
| Real | [REAL] | 17 | $-10^{38}$ to $10^{38}$ |
| Double | [DOUBLE] | 17 | $-10^{38}$ to $10^{38}$ |
| Text | [VARCHAR] | 100 | 1 TO 8000 |
| Text | [VARCHAR_IGNORECASE] | 100 | 1 TO 8000 |
| Yes/No | [BOOLEAN] | 1 | N/A |
| Date | [DATE | N/A | N/A |
| Time | [TIME] | N/A | N/A |
| Date/Time | [TIMESTAMP] | N/A | N/A |
| OTHER | OTHER | 2147483647 | 2147483647 |

1) Double check as to which row contains the cursor. This is the field whose field properties you are selecting. The cursor should still be in the Field Type or Description cell of the field you have named and given its field type. If it is not there, click the Description cell for that field.
2) Carefully select each of the field properties that matches what you wrote for the database plan and design.
3) Check your settings in the Field Properties section once again to be sure you have the correct entries.

If you understand how to create the rest of the fields in the table, do so. Then you will be ready to define what field will be the table's primary key. Or, you can use this link Name your fields to help you create the rest of the fields one at a time.

| Tip | When you click to make a change to a Field Property, helpful notes appear at the right side of the window to describe what the chosen available properties do. |
|---|---|

## *Setting a Primary Key*

The Table Design dialog will create a primary key with only one field of the table. To create a primary key with multiple fields you must use the Table Wizard. A SQL statement can be used to do this as well, but the amount of space required to describe this is beyond the level of the present Base Guide.

### Using the Table Design dialog

You begin by selecting the field you want to use as the table's primary key. Then you change the Field Properties of this field. But you may have already done most of this when you created the fields for the table.

1) Right click the gray box to the left of the field name that you want to define as the primary key.
2) Select *Primary Key* in the context menu menu that appears.

| Tip | Base allows only one field to have the AutoValue *Field Property* set to *Yes*. Once a field has been named and given this field property, Base sets this field as the Primary Key as soon as you move the cursor from this field's row to another row. |
|---|---|

### *Saving the table*

1) Click the Save icon.
2) Enter the table name in the Save AS dialog.
3) Click OK
4) Close the table.

If you have more tables and their fields to create do so now. If you have a View or perhaps more, you can create them following the instructions in the Query section. (A View if very similar to a query.) The next part for creating a database is the Form.

## Create the form

This is done using the Form Wizard, Database Form dialog (Design View), or a combination of the two. The wizard offers you choices, and creates a form based upon what you select. The dialog provides you with a Writer document with several toolbars with which you can create all the form.

But before going any farther, you need to review the plan and design for the form. If it contains only one object (query, table, or view), your only concern is whether you use the dialog or wizard to create the form. But if you have two or more objects, You have to consider the relationships between the objects to be included in the form.

If the form has two tables with a primary-foreign key pair, it will have a main form and subform. The table with the primary key of this pair belongs in the main form, and the table with the foreign key belongs in the subform. And if there is another primary-foreign key pair, the form is further divided into a form and its subform. The wizard can create one main form and subform. For anything more complex, the wizard may be able to begin the form's creation, but the dialog will have to be used to finish it.

In most cases, use the wizard for the basics and the dialog to modify the form as needed to meet the design requirements. What part of the creation will be done by each part? It depends upon the complexity. The wizard is for the simpler part, and the dialog is for the more complex. For example, the wizard can only create a form with one relationship between 2 tables. The dialog can create a form with multiple relationships between tables.

### *Form Wizard*

In most cases, the layout of a form created by the wizard needs some modifications. It has created the basics for the form which saves some time. It provides 4 choices for the layout of each control in the form. The dialog has one layout for this: the rest you have to create yourself.

Whether you use the wizard or not is your choice. Some prefer to use the wizard as much as possible, and others prefer to use the dialog exclusively.

| Note | Forms are used to display, input, or remove data. The last two will be for tables only. Data can be displayed for queries, table and views. In fact, a form can display data from a combination of a combination of these three. It just requires the form to be properly planned and designed. |
|---|---|

There are 2 ways to open the Form Wizard.

1) Select the database object (query, table, or view) for the form.

a) In the Main Database window, click the Table or Query object in the Database section depending upon what is to be in the form.
b) Right click the object you want to use.
c) Select **Form Wizard** from the context menu.

2) Use the Task section of the Main Database window.
a) Click the Form object in it.
b) Select: **Use Wizard to Create Form**.

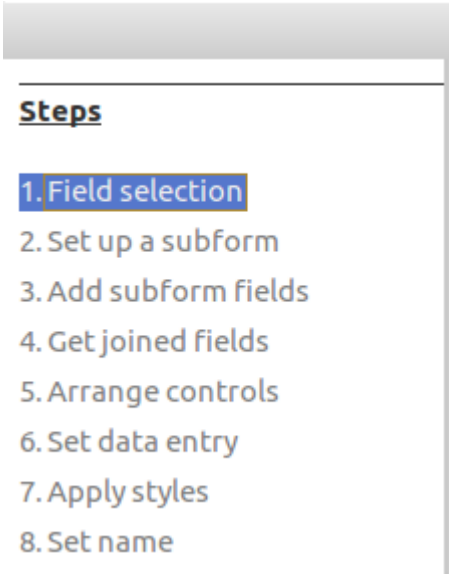



*Figure 9: 8 steps of Form Wizard*

| **Tip** | In the first page of the wizard, you will select the query, table, or view to be uses along with the specific fields. In the first method, right clicking the specific object selects it for page 1. Then you only have to select the fields for the form. |
|---|---|

**Step 1: Field selection**

If you had right clicked a query, table, or view to select **Form Wizard** from the context menu, the Tables and queries list will already have the selection you want to use. (Figure 10) Otherwise, you have to open this drop down list to select the one you want to use.

- If your form contains only one table, select it from the *Tables or queries* list.
- If your form contains two tables that have a primary-foreign key pair, select the table that has the primary key.

| **Caution** | When you place two tables with a primary-foreign key pair, one will be in the main form, and the other in the subform. The one containing the primary key of this pair must be in the main form. The one containing the foreign key must be in the subform. Otherwise only part of the data will be displayed. |
|---|---|

The *Available fields* list contains the names of the fields of the selected object. From this list you select the fields you will use in the form.

The database plan and design should contain what fields should be selected. As a review of why a field might not be needed, I have included the next two paragraphs.

In most cases, all of the available fields will be used in the form, but not always. If there is a primary key, it might not be used especially if it is part of a primary-foreign pair. Also look at **Tools**

**> Relationship**. If you have defined the relationship here and this pair has INTEGER as their field type, you do not need to use the primary key. The relationship you defined is applied by Base to the applicable tables and queries.

If you use a JOIN to define relationships in the queries instead of **Tools > Relationship**, you need to use all of the fields to make them available in Step 4 to define the relationship between the main form and subform. Figure 11 is an example of doing this. If I had defined the relationship using **Tools > Relationships**, Transactions ID would not be present in the *Fields in the form* list.

There are four types of arrows with which you can move the fields between the *Available fields* to the *Fields in the form* lists: single right arrow, double right arrow (default), single left arrow, and double left arrow. The single arrows move selected fields in the arrow's direction; the double arrows move all the fields.

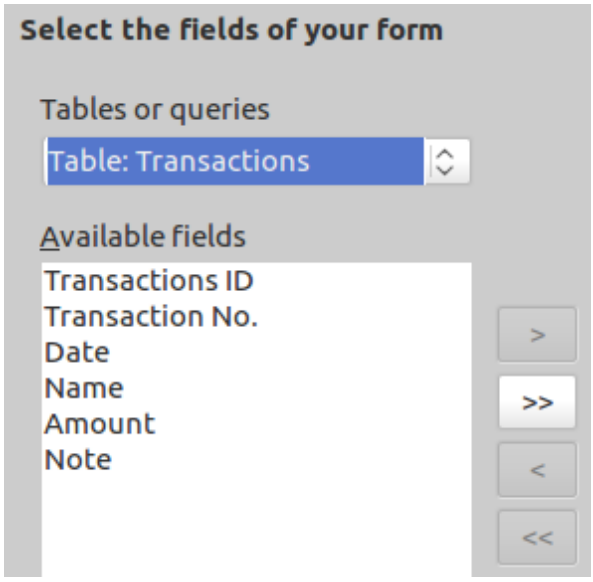



*Figure 10: Fields and their source*

- If all the fields are included, click the double right arrow to move them to the *Fields in the form* list.
- Moving some of the fields:
  - Click one of the fields follow by clicking the right single arrow. Do this for each field you want to move, one field at a time.
  - OR, Shift+click all the fields to be moved to highlight them. Then click right single arrow.

| **Tip** | If you move more fields than what you should, you can move the field back to the Available fields list by using highlighting the field and using the single left arrow. (You could use the double left arrow to move all the fields.) |
|---|---|

You may decide that you want to change the order of the fields that appear in the form. This is the purpose for the up and down arrows.

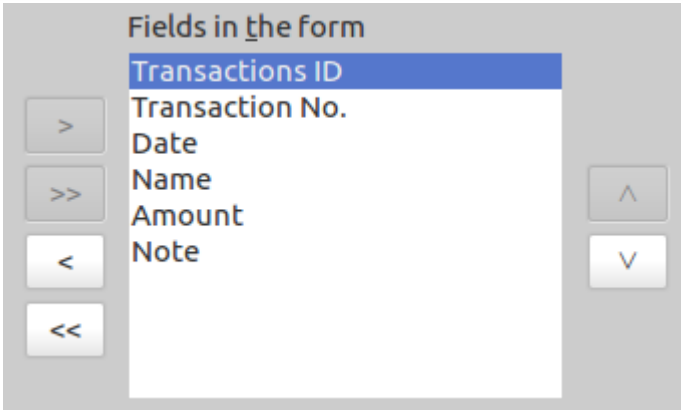



*Figure 11: Form fields and their order*

- To move a field higher in the list, click the field and then click the up arrow.
- To move a field lower in the list, click the field and then click the down arrow.

**Step 2: Set up a subform**

You only use this step if you have two tables with a primary-foreign key pair. Otherwise, you click **Next** to go to the next step.

You have chosen the table with the primary key and the fields to be used from it. For the subform, you will select the table with the foreign key (see the above caution).

When you have defined the relationship between the tables using **Tools > Relationships**, the wizard places the name of the second table in the box, *Which relation do you want to add*.

1)
2) Check the option button *Subform based on existing relation.*
3) Click the name of the table for the subform (Data in this example).
4) Click **NEXT**.

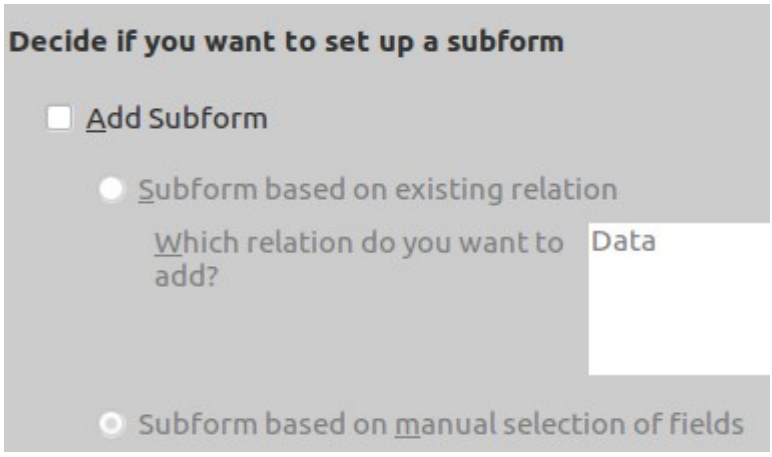



*Figure 12: subform using Tools > Relationships*

When you use a JOIN (INNER, OUTER LEFT, OUTER RIGHT), you only need to add the subform. Because the default option button is *Subform based on manual selection of fields*, you will have to select the fields to use in the JOIN in step 4.

1) Check *Add Subform*.
2)

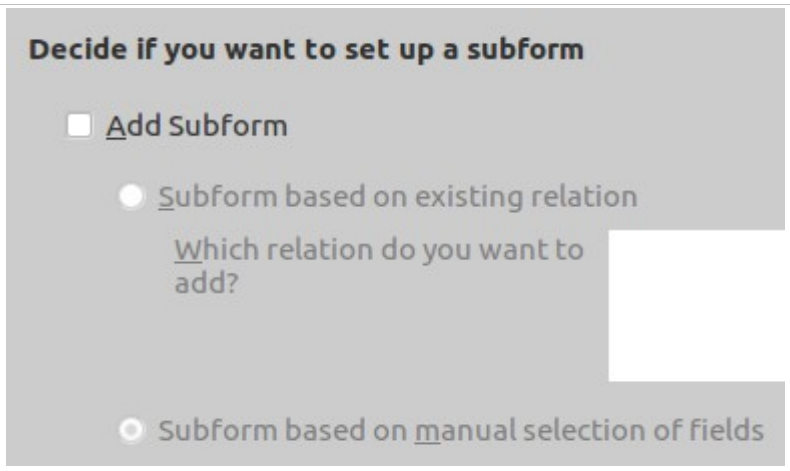



*Figure 13: subform using JOIN*

**Step 3: Add subform fields**

If you are using **Tools > Relationships**, the wizard displays the table name you selected for the subform and the list of its available fields. If you are using a JOIN, you will have to select the table containing the foreign key from one of the tables in the *Tables or queries* list.

Again your selection of the fields depends upon you are using a JOIN or not. If you are using it, you have to include the foreign key and the table's primary key. If you are not using a JOIN, these two are not required. The other choice which was made in the plan and design determines what field you add to the subform.

1) Proceed as you did in step 1 when you selected the fields for the main form.
2) Click **NEXT**.

Your selection in step 2 determines whether you go to step 4 or step 5. If you selected the option button, *Subform based on manual selection of field*, you go to step 4.

**Step 4: Get joined fields**

This steps defines the primary-foreign key pair. In the simplest pair, there are 2 fields, one in each table. In more complex pairs, both the primary and foreign key consists of at least two fields in each key. This is the reason for having more than one line of matching the fields in the foreign key with their corresponding fields in the primary key.

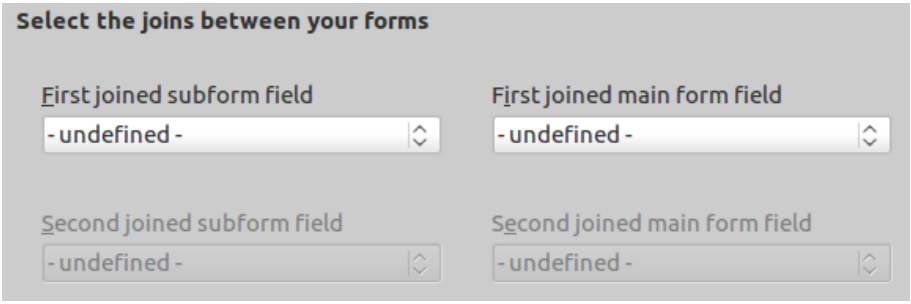



*Figure 14: Selecting the primary-foreign key pair*

1) Select the first field of the foreign key from the *First joined subform field* dropdown list.
2) Select the corresponding field from the *First joined main form field* dropdown list.
3) Select the rest of the fields of the foreign key and their corresponding primary key fields.
4) Click **NEXT**.

**Step 5: Arrange controls**

**Control**

A database object containing two parts: the label and field. The former can be the name of the associate field (default) or you can edit it. The latter is used to enter data into the field.

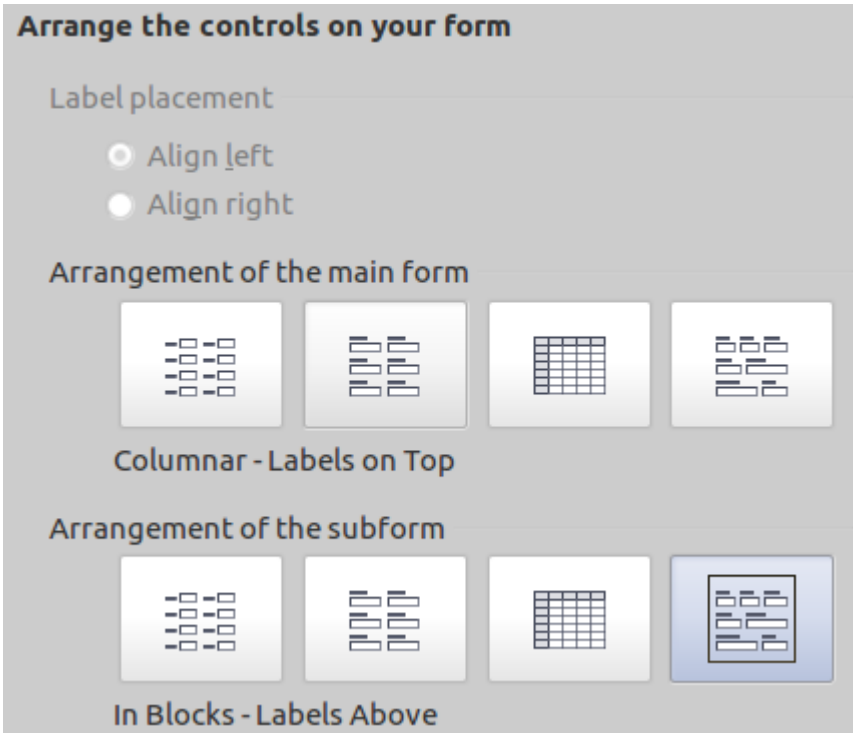



*Figure 15: Layout of controls*

The label placement choices are only available for the first arrangement choice, *Columnar – Labels on Top*. For the rest of the choices, the label is aligned left. (All field entries are aligned left.)

The controls of the form (and its subform) can have one of four layouts: columnar – labels left, columnar – labels on top, as data sheet, or in blocks – labels on top. The difference between columnar and in blocks is the order of the controls is the former arrange the controls by column. while the latter arrange the controls by rows. In columnar, the controls are placed in columns beginning with the top left. Each column is filled in from the top to bottom rows before going to the top row of the column to the right. In blocks also begins at the top left. The difference being that the rows are filled in from left to right columns from the top row and going down the rest of the rows.

When the form wizard opens, a new Writer document opens as well to show you what effects your selections have on the form. This really does not matter very much until now. Because the default layout is *As Data*, you first see two tables with the labels as the headings for each. Make another selection to change it.

1) Select the arrangement for the main form. Also select the label placement alignment if you have selected Columnar – Label Left.
2) Select the arrangement for the subform (if you have one). Also select the label placement alignment if you have selected Columnar – Label Left.
3) Click **NEXT**.

**Step 6: Set data entry**

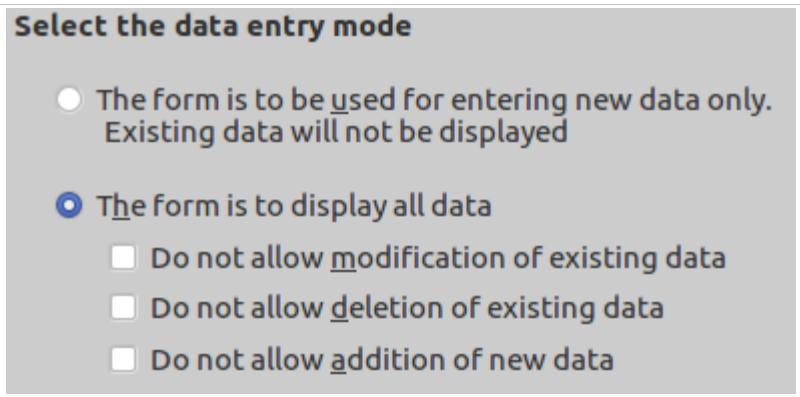



*Figure 16: What data can be seen, added, modified, or deleted*

This step has two options: displaying only new data or displaying all data. These are explanatory: selecting the top option will allow to only see the data you are entering. Selecting the bottom option will allow you to see all of the data.

Most often the form displays all data. Yet there are likely reasons for the form being used to enter new data only.

Three check boxes determine what you can do with the data. These too are somewhat explanatory. Once you have entered and saved data, you can not make any changes if you check the top box. Check the middle box, and you can not delete data that has been saved. Check the bottom box, and you will only be able to see previously entered data.

What check boxes you select depends upon the purpose of the form? For example, a database form that is available to the public might need all three boxes checked. This would prevent the public from modifying, deleting, and adding data.

- Select whether the form displays all data or it displays only data as it is being entered and saved.
- Select what check boxes should be checked to match your limitations on data entry when using the form.

| **Tip** | The default settings are shown in Figure 16. They are also the most used selections. |
|---|---|

**Step 7: Apply styles**

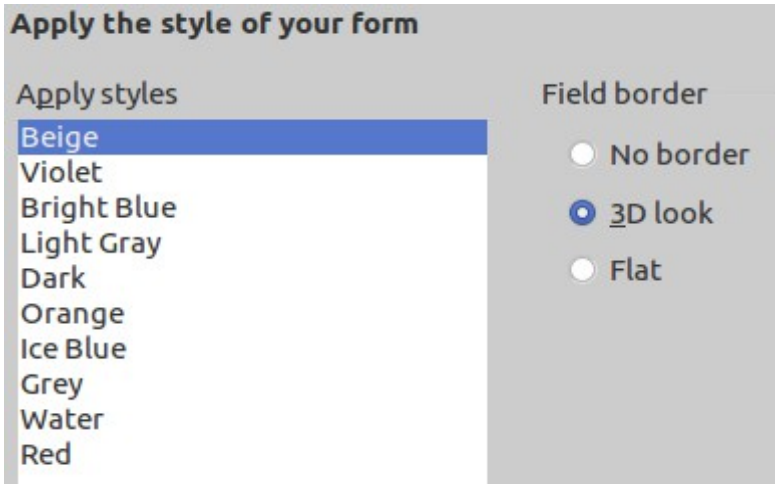



*Figure 17: Control border and Form background*

The Apply styles list contains some of the colors in the color palate included with LibreOffice. What you are selecting is a background color. (Beige is the color Orange 4.)

The Filed border comes in three choices. If you move the form wizard so that you can see some of the controls, you will see the different borders as you change your selection.

1) Select the background color for the form from the Apply styles list.
2) Select the field border you want to use.
3) Click **NEXT**.

**Step 8: Set Name**

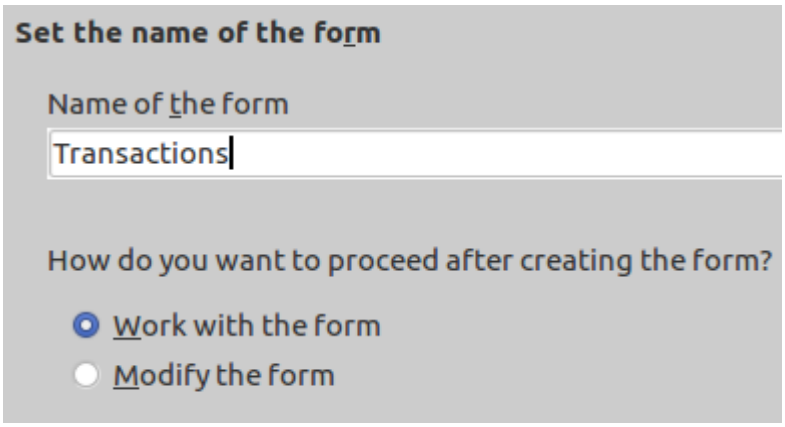



*Figure 18: Naming form and next step*

The wizard will suggest a name based upon the table, query, or view it contains. This form contains the table, Transactions. Accept the suggested name or change it.

This is the last step, so you have to tell the wizard what you want to do next. When you click **Finish**, the wizard closes and the default setting opens the form ready to receive data entry. Or, if you want to do some editing of the form, select *Modify the form*. Clicking **Finish** closes the wizard and opens the Database Form dialog.

1) Make sure the form name is what you want it to be. Make any changes necessary.
2) Select one of the option buttons depending upon what you want to do next.
   a) *Work with form* to open the it ready to enter data.
   b) Or, *Modify the form* to edit the form.
3) Click **Finish** to close the wizard and open either the form or the Database Form dialog.

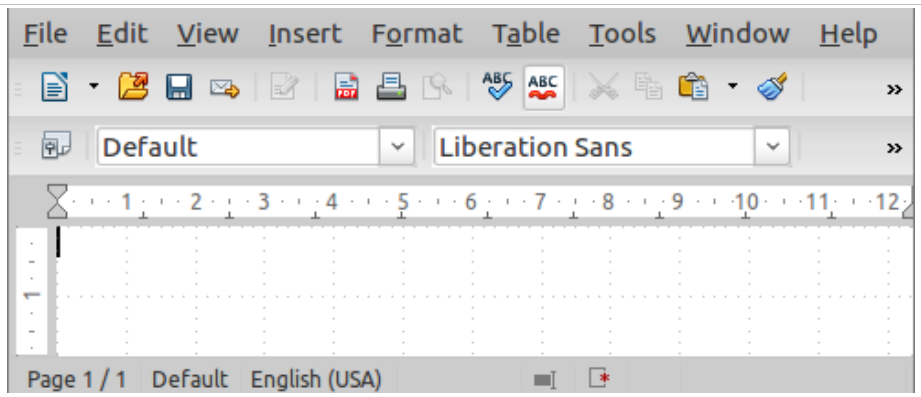
I recommend that you select modifying the form. This includes changing the size of the controls, their positions, their properties, the background, and some of them from visible to invisible. Text can be add to label the form and some of its parts.

The next section discusses how to create a form from scratch You can use these instructions to modify a form also.

### *Design View*

This is a much more labor intensive method for creating a form. It requires paying very close attention to the details of the database plan and design. The form wizard created the form based upon the information you gave it. Now you have to do all of this yourself.

There is a common statement “starting over with a clean sheet.” You will be starting with a new sheet (form) literally. It is a new Writer document with a visible grid.




When you create a form using Design View, you need to organize how you will proceed. Once you have opened the form in Design View, save the form. After that you are ready to create it.

Use of the Form Navigator dialog comes first because you need it to create the main form plus any subforms. The Form Properties defines the properties of the main form and any subforms, so this is second.

Third, create the controls for the form including the main form and any subforms. This includes placing the controls in the part of the form where you think they should be.

Next you should select the properties of each control. This can be a tedious task at times because of the number of properties or of the complexity of some of them.

Then you should arrange the controls according to the layout you designed earlier. This may require moving some controls, adjusting some of their sizes, separating parts of the form with lines or boxes, selecting the background, and using text to label the form or its parts among other possibilities.

I recommend adding sample data to the form to test it possible problems. For example, a date control might be shorter or longer than needed to display the date format you want. Also, a control might not be formatted correctly. Once the testing is over, remove the sample data and save the form.

## Needed toolbars

**View > Toolbars** produces a list of these. Most of the tools we use belong to 3 of the toolbars. Some of them may contain tools that no one uses, and some may have tools that are seldom used.

The available toolbars provide you with a wide variety of tools. Open the toolbar list (**View > Toolbars**) to see what is available.

The 3 most important toolbars are *Form Controls, Form Design,* and *More Controls*. Open the Form Controls toolbar first because it contains tools that open or close the *Form Design,* and *More Controls* toolbars. In fact, the latter can only be opened using the control in the Form Controls toolbar.

If you have used toolbars before, you may know how to dock them. You dock these the same way as you have done them before.

However, if you have not used toolbars and do not even know what docking a toolbar means, a few instructions are helpful. You select a toolbar the same way you select anything in a menu: **View > Toolbars >** (name of the toolbar). For example, **View > Toolbars > Form Controls** opens the *Form Controls* toolbar in a floating window. You can move this anywhere on the screen by dragging it. However, once you dock a toolbar, the next time it opens where you last docked it.

You can drag it to the bottom of the Database Form window where it will attach itself to the bottom frame. This is known as docking. You can also drag it to the left or right window frame where a vertical rectangle appears. This indicates where the the toolbar will be docked if you drop it there.

Finally, you can drag the toolbar to the top where a horizontal rectangle appears showing where the toolbar will dock if you drop it there.

| Tip | The top portion of a window containing its label is the *banner.* |
|---|---|

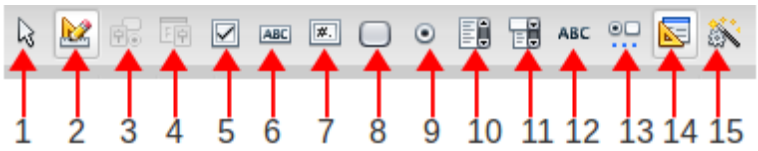
A shortcut exists to dock a toolbar. Place the cursor on the toolbar's banner and use *Control+double click*. Where the toolbar is docked depends upon a variety of factors. Usually, it will dock it where you docked it before. Apparently, LibreOffice keeps this information is a configuration file.

How to use all of these toolbars is discussed in detail in the Writer Guide. (Remember that LO uses Writer to create the forms.) We will discuss how to use the 3 toolbars mentioned as these directly affect the form contents.

## Design View steps

If you are not well acquainted with these 3 toolbars and their tools, they are below with their names followed by a description of each. You can also see the names or a brief description of what they do by moving your cursor over them. This requires a setting using the Tools menu. (**Tools > Options > LibreOffice > General**) If you check Tips, you will see the tool names. If you check Extended tips, you will see a brief description of what the tool will do. If you check both, you will see a brief description when they exist or the field name if they do not.

When working with a form, it is in one of two states: Design Mode On, or Design Mode Off. In the first state, you can create or edit the form, and these toolbars are available to use. But you can not add, delete, nor modify any of the field values. In the second state (Design Mode Off), is the opposite: you can add, delete, or modify any of the field values that allows this to be done. (One field property can prevent any changes to be made.) But you can not change the contents nor layout of the form.




| | | | | | |
|---|---|---|---|---|---|
| **1** | Select | **6** | Text Box | **11** | Combo Box |
| **2** | Design Mode On/Off | **7** | Formatted Field | **12** | Label Field |
| **3** | Control | **8** | Push Button | **13** | More Controls |
| **4** | Form | **9** | Option Button | **14** | Form Design |
| **5** | Check Box | **10** | List Box | **15** | Wizard On/Off |

*Figure 19: Form Controls toolbar*

1) *Select*: When you want to select a control or a group of controls, click this tool.
   a) If the cursor is an arrow, then it is in Select mode.
   b) If the arrow is any other shape, then clicking this tool will put the cursor in Select mode. (If you can not select what you want, click this tool and try again.)
2) *Design Mode On/Off*: This permits you to work between the two states of the form.
   a) This is only available if you edit the form. If instead you open the form, the Form Controls toolbar is not available (it is grayed out if present).
   b) Use this tool to see what effect the editing you have done has on the form and the values in the fields. For example, you have changed the date format. Using this tool will show you if the date field is the proper size.
3) *Control*: Clicking this tool opens or closes the Properties dialog for a selected control.
   a) The name in the Banner identifies the object to which the properties applies.

b) Use this dialog to define or modify the properties of the selected label or field.

c) Once the properties dialog is open, you can click another control to see its properties.

d) The properties dialog contains two or three pages (tabs) depending upon the circumstances. The third page contains the properties of the data when a field is selected. If a label is selected, it contains only two pages.

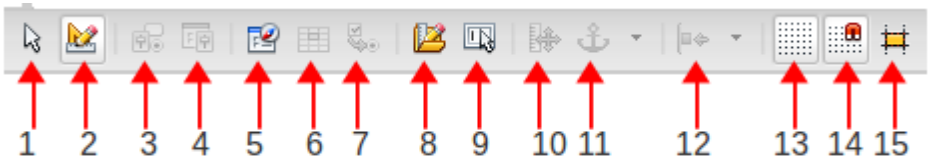
4) *Form*: Click this tool to open or close the Form Properties dialog for the selected form.

5) Tools used to create controls: When any of these tools are clicked, the cursor becomes a cross-hair. With them you can draw a rectangle for the object you have clicked. The first six listed are for fields, and the seventh produces the label for any of these fields.

- *Check Box (6)*
- *Text Box (7)*
- *Formatted Field (8)*
- *Push Button (9)*
- *List Box (10)*
- *Combo Box (11)*
- *Label Field (12)*

6) *Wizard On/Off (13)*: This is useful when using three tools: List box, Combo box, and Table Control. It will gather information needed to define necessary properties for these types of controls.

- If you are going to use any of these tools, make sure this tool is turned On. (The tool is highlighted.)




| | | | | | |
|---|---|---|---|---|---|
| **1** | Select | **6** | Add Field | **11** | Change Anchor |
| **2** | Design Mode On/Off | **7** | Activating Order | **12** | Alignment |
| **3** | Control | **8** | Open in Design Mode | **13** | Display Grid |
| **4** | Form | **9** | Automatic Control Focus | **14** | Snap to grid |
| **5** | Form Navigator | **10** | Position and Size | **15** | Guides When Moving |

*Figure 20: Form Design toolbar*

What is shown is most but not all off the tools in the Form's Design toolbar. Six tools between the Alignment and Display Grid tools: Bring to Front, Send to Back, Group, Ungroup, Enter Group, and Exit Group. The first two are applied to overlapping objects. The last two are most often applied to the label and field of a control. (There are other methods of doing what the 4 grouping tools do, and we will discuss both when we discuss these actions.)

1) *Select*: The same as in the previous list.

2) *Design Mode On/Off*: Also the same.

3) *Control*: Also the same.

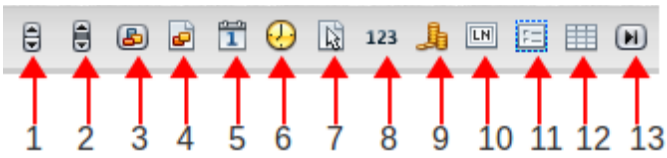
4) *Form:* Also the same.

5) *Form Navigator*: Click this to open or close the form navigator dialog which contains a hierarchical list of the form's contents. You can also use this dialog to create the main form and any subforms. This make it a very important tool.

6) *Add Field*: Click this to open or close a table list of fields. The Form Navigator settings determine what table's fields are listed. You can drag and drop these fields to any location.

7) *Activation Order:* Click this to open or close a dialog containing the list of fields in the order to which they are accessed. You can change the order of the fields.
8) *Open in Design Mode*: This tool does **NOT** work. When the form is opened, clicking this tool should give you the ability to edit the controls and layouts of the form. It does not for LO 3.4.6, 3.5.6.2, nor 3.6.1.2.
9) Automatic Control Focus: When this is activated, the first field is selected automatically when the form is opened. (The Activation Order dialog determines what is the first field.)
10) *Position and Size*: Click this to open the Position and Size dialog. With this you can change the size, how the control is anchored, protect the size and position, and enter its position.
11) *Change Anchor*: Click this to select how the control is anchored.
12) *Alignment*: Use this to align a group of selected controls. 6 choices are available from the down arrow with this tool: 3 for horizontal alignment, and 3 for vertical alignment.
13) *Display Grid*: Click this to turn the grid on or off.
14) *Snap to Grid*: Click to turn this on or off. When it is ON, the objects are moved from one grid point to another.
15) *Guides When Moving*: Click to turn this on or off. When dragging an object with this tool on, dashed lines appear along each side extending to the edge of the window. This permits you to align it with other object or to a location on the horizontal and vertical rulers.

| **Tip** | Use **Tools > Options > LibreOffice Writer > Grid** to define its properties. |
|---|---|




| | | | | | |
|---|---|---|---|---|---|
| **1** | Spin Button | **6** | Time Field | **10** | Pattern Field |
| **2** | Scroll Bar | **7** | File Selection | **11** | Group Box |
| **3** | Image Button | **8** | Numerical Field | **12** | Table Control |
| **4** | Image Control | **9** | Currency Field | **13** | Navigation Bar |
| **5** | Date Control | | | | |

*Figure 21: More Controls toolbar*

1) *Spin Button*: This is used for Calc and **not** Base.
2) *Scroll Bar*: This too is used for Calc and **not** Base.
3) *Image button*: Creates a button whose size you determine. You can select the graphic for the button and the macro associated with it using the Control tool in the Form Controls or Form Design toolbars.
4) *Image Control*: Use this to draw a control for an image field.
5) *Date Control*: Use this to draw a control for a date field.
6) *Time Field*: Use this to draw a time field. (This and the above field together is equivalent to a time stamp field.
7) *File Selection*:It creates a button that when clicked allows you to browse to a file's location and select it. (This is the same action as when you use **File > Open**.)
8) *Numerical Field*: This creates a numerical field.
9) *Currency Field*: This creates a currency field.
10) *Pattern Field*: This creates a pattern field. (The data entered have a specific pattern such as phone numbers, (123)456-7890, or zip codes, 12345-6789.

11) *Group Box*: Use this to create a frame to hold a group of option buttons.
12) *Table Control*: This creates a table control.
13) *Navigation Bar*: This has limited use. In Base it activates or deactivates the tools affecting text in the form.

**Open the Database Form dialog**

To create a form in Design View, you must first open the Database Form dialog. After that open the three toolbars that were just discussed.

1) With the main database window open, click the Forms object.
2) In the Task section, click **Create Form in Design View**.
3) **View > Toolbars > Form Controls** and dock this toolbar.
4) In this toolbar, (Figure 19)
   a) Click the *Form Design* tool. Dock this toolbar.
   b) Click the More Controls tool. Dock this toolbar.

I am listing a series of steps required to create a form that matches your database plan and design. If you have a simple form that uses one table, follow the steps as they are given. The more complex forms containing a main form and at least one subform allows some choices to be made. You could work on the whole form one step at a time, or you could work on the main form or a subform one step at a time.

Skip the parts of a step if it does not apply to your situation. For example, step 1 includes how to create a subform. If you don't have one, you skip it. Steps 3a, 3b and 3c are all methods of creating a control. Again, use the one you want and skip the other two when creating a control.

**Caution**

1) Creating a form using the Database Form dialog includes selecting the properties for each control. The database plan and design if done correctly will tell you what the properties are for each database object. Even so, diligence is necessary when verifying you have selected the proper properties.
2) Name and save the form when you first open the Database form dialog. You need to also save the main database window. When you click the *Save* icon in the dialog, you save the form to memory (RAM). Saving the main database window writes the form design to the hard drive.
3) As you work on the form, save it rather often using the method I just mentioned. If you do not do this, you may have to recreate parts or all of the form.

### Step 1: Creating the main form and any subforms

We begin using the Form Navigator tool of the Form Design toolbar. With this we select the table for the main form and its properties in the form. Next the Add Field tool gives us a list of the available controls for our selected table. After adding we want from this list, we use several tools to modify the layout of the main form as well as define the properties of the fields.

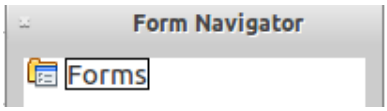



*Figure 22: New Form*

Name and save the form.

1) Click the Save icon in the database form dialog.
2) Select the main database window to activate it.
3) Click the Save icon in it.

Create a main form in Form Navigator:

1) Click the Form Navigator tool. (#5 in Figure 20) The Form Navigator dialog opens.

2) Right click *Forms* and select *New > Form* from the context menu. A table icon and the word *Form* appear below Forms.

| Tip | You can change the name of the main form or subform when you create it. Right after *New > Form,* the name, *Form,* is highlighted. Type the name you want such as the name of the table used in the form or subform. |
|---|---|

Subforms are created similar to a form. Right click the table icon for Form is the only difference. An arrow appears before the top Form showing that it has a subform.

Can you create a form with more than one main form? Yes you can by right clicking the table and folder icon another time. You can also create another subform of a main form. Finally, you can create a subform of a subform. All of these can be done by right clicking the approximate icon and selecting *New > Form*.

Create another main form or subform in Form Navigator:

- Another main form:
  a) Right click *Form*.
  b) *New > Form.*
  c) *Form1* with a table icon appears below Form.
- A subform:
  a) Right click the *Form* icon for which it is to be a subform.
  b) *New > Form*
  c) An arrow appears before the selected Form icon, and *Form* with a table icon appears below it.

3) Leave the Form Navigator open as you select the form properties. You will need it open when you add the controls to the main form or subform which is the next step.

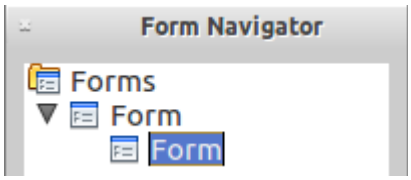



*Figure 23: New Subform*

**Step 2: Form Properties for the main form or subforms**

We define the table to be used by the main form using the Form Properties dialog. We can open this using one of two methods. Use the Form Properties tool. (This is to the left of the Form Navigator tool.) The second method uses the Form Navigator. Right click the form whose properties you want to modify. Then select *Properties* from the context menu.

This dialog has 3 tabs. In the General tab, only the Name properties is useful to us. The Data tab has the properties listed in the figure above. This is the most useful to us. The Events tab contains the events of the form for which a macro can be assigned.

The Events tab contains events to which you can assign macros. (This is discussed in Chapter 7 of the Base Guide.)

| Tip | If you click the *General* tab, you see the Name property at the top. If you changed the name earlier, it will appear in the Name property. |
|---|---|

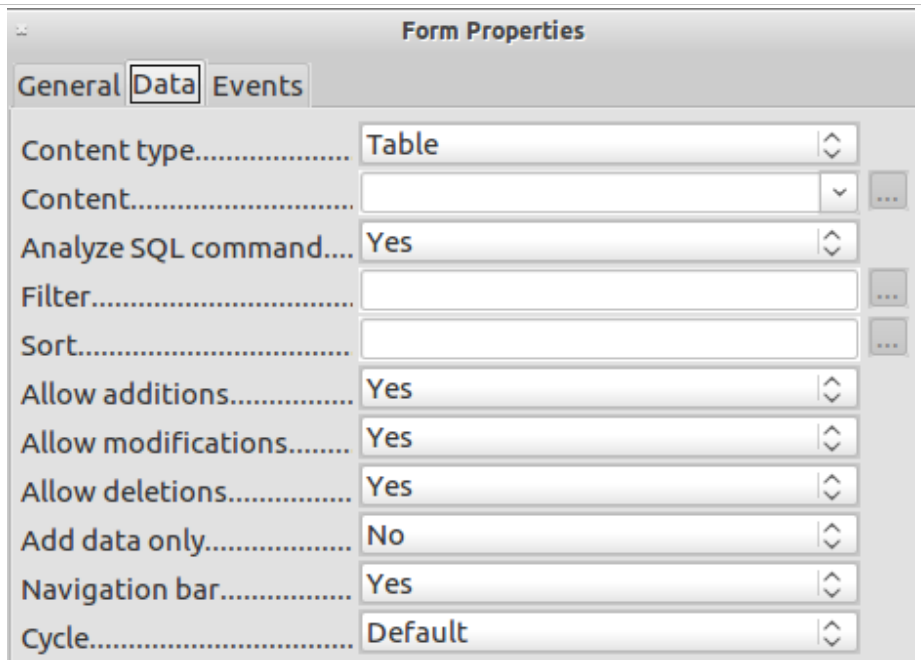



*Figure 24: Form Properties dialog (Data tab)*

1) Open the Form Properties dialog and click the Data tab.
   - Click the Form Properties tool.
   - OR, right click the Form's table icon and select Properties from the context menu.
2) Select the *Content type* from the dropdown list depending upon what you need to use (Table, Query, or SQL command). Table is the default value.
   a) When Table is selected, the Content property contains a list of the created tables of the database. If you select Table, also select the table you will use for this form.
   b) If you select Query, the Content property contains a list of the created queries. If you select this, select the query to be used.
   c) If you select SQL command, you must enter a SQL command in the Content property. (The ellipse (…) for this property opens the Query Design dialog that you can use to create it.) If you use this, enter the SQL command in the Content property.
3) *Analyze SQL Command*: This is useful only if you selected *SQL Command* in the Content type property.
   - Select Yes if the Content type property is *SQL Command.* Otherwise it does not matter.
4) *Filter* property: There are two ways to enter the filter property that you want:
   - Enter the filter requirements in the Filter box if you know how to do so.
   - Or, Click the ellipse (…) to open the Filter dialog. Enter the field name, condition, and value for each field used for filtering. And if using more than one field, use the Operator (AND, OR) that is needed.

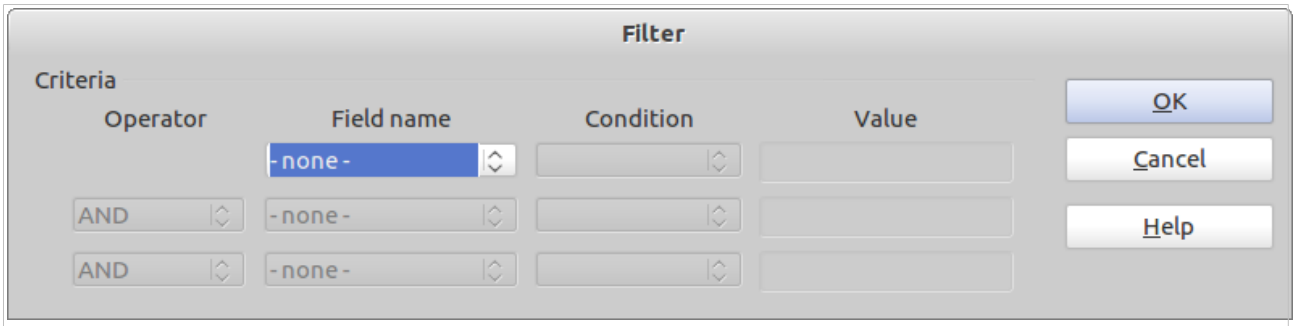



*Figure 25: Filter dialog*

5) *Sort* property: If you want to sort the records of the form, you have two ways to do so.
   - Enter the table names and the order of the sorting in the the Sort box.
     i) Enter the first field to be sorted followed by ASC (sort ascending) or DESC (sort descending).
     ii) Enter the next field and how it is to be sorted. Repeat if necessary until you have listed all the fields used for sorting the data.
     iii) If more than one field is used in sorting the data, enter a comma between the ASC or DESC or one field and the name of the next field.
     iv) Click **OK**.
   - OR, Click the ellipse (…) for this property to open the Sort dialog.
     i) Enter the first field and its Order (ascending, descending) in the dialog.
     ii) Enter the next field and its Order if there is one. Repeat if necessary.
     iii) Click **OK**.

The final 4 properties in the Data page (tab) govern data entry for the form.


*Figure 26: Data entry properties*

The first three properties determine what is allowed. The first one allows you to add new data. The second one allows you to make changes to an entry but not to make the entry NULL (delete the entry). The third property is the only one that allows you to delete an entry. The fourth property allows you to add new data but nothing more. The default values for these properties are Yes, Yes, Yes, No respectively.

6) Select the data entry properties that meet your needs.

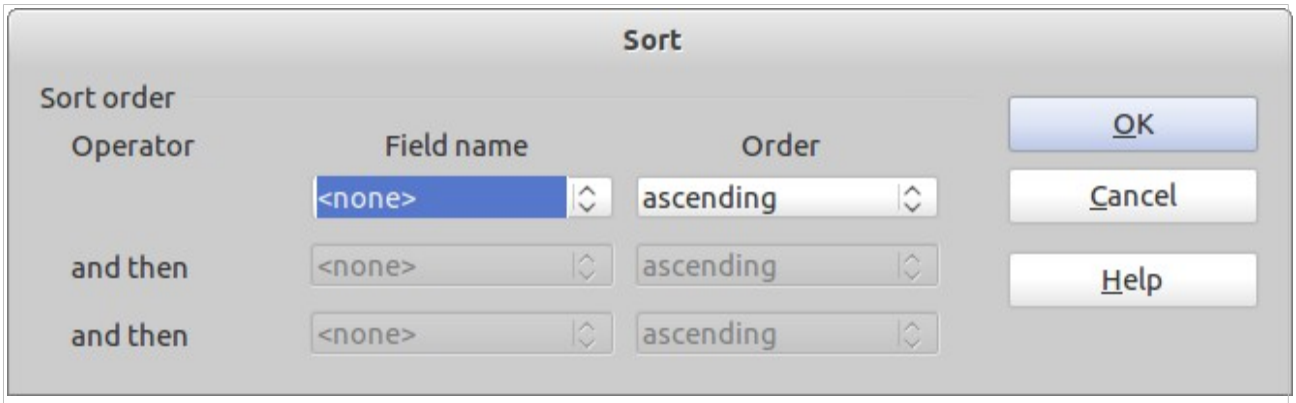



*Figure 27: Sort dialog*

7) Repeat these 6 steps for each additional form or subform.

**Step 3: Creating controls**

This is when you place the controls onto the form. You have tools to help you do this. Use the Add fields tool (Form design toolbar), Table Control tool (More Controls toolbar), or the specific tools (Form Controls or More Controls toolbars). The latter create controls with specific field types.

We begin by discussing the Table Control tool because it puts the fields of a table, query, or view into a table format (rows and columns). Next comes the Add field tool because you can insert all the fields of a table, query, or view one at at time. The last will be the specific tools as these create the labels and fields separately. Then you have to group the labels with their fields.

Once you create a control, you should determine the properties for it. Use the Control tool in the Form Control or Form Design toolbar (it is in both). This tool opens the Properties dialog whose list of properties depends upon the field type of the selected control. Because of this, I will combine the creating of specific controls with the defining of their properties.

After using the Table Control or Add field  tool, go to the Specific tool section for the instructions to define the properties of the controls. I will have a link to help you do this.

When creating controls, you should use the structure you have already created for the form. If you have a simple form that used only one table, query, or view, You can work on the entire form at one time. But when you have a complex form with a main form and subforms, you should be working in one of them at a time.

**Step 3a: Table Control tool**

This tool creates a table containing two or more controls, usually most if not all of the controls in a query, table, or view. The field labels become the headings of the columns, and the field entries become the data in the rows of the table.

When the tool is clicked, the cursor becomes a cross-hair. With it placed where you want a corner of the table to be, drag it to where the opposite corner should be. How large should you draw it? This depends upon how many fields you will place in the table and how many rows of data you want to be visible. The more fields the wider the table should be. Similarly, the more rows of data, the taller it should be.

Clearly, a large number of fields in the table is going to make it rather long. What you can do is create two tables: one has approximately half the fields, and the other has the rest of them. Or you might even divide the fields into three or more tables if necessary.


*Figure 28: Table Control and Wizard On/Off tools respectively*

1) Make sure the Wizard On/Off tool (circled in brown) is selected. This is in the Form Design toolbar. Click it if it is not highlighted as shown.
2) Click the Table Control tool (circled in red) in the More Controls toolbar.
3) Move the cross-hair to where you want the top left corner of the table to appear.
4) Drag and drop it to the location for the bottom right corner of the table. (The *Table Element Wizard –Field Selection* opens.)
5) Move the fields in the Existing fields list to the Selected fields list.
   - To move all the fields, click the double right arrow.
   - OR, to move a single field, select it and click the single right arrow.
6) Click **Finish**.

You can also create a table without using the *Table Element Wizard –Field Selection*. Instead you can use the Add field tool. If you want to do this, the instructions are below Figure 30.

Now the controls in the table need to have their properties selected. To do this go to Select the properties for each control.

**Step 3b: Add field tool**

*Figure 29: Useful tools*

The Add field tool (blue circle) opens a small window. It will be empty unless you have selected a specific table, query, or view. To create a list in this window, you must select a main form or subform in the Form Navigator. Click one of them and a list of fields appears in the window that belong to the table, query, or view associated to the main form or subform you selected. Change you selection in the Form's Navigator, and the list changes.

Using this tool, you can create controls on the form in 2 ways. First of all you can double click a field in the list to place it centered in the form. Since double clicking a field places them in the same place on the form, you should move the first field created this way to where you want it before clicking on another field. Secondly, you can just click a field in the list to select it. Then drag and drop it to its location.

1) Open the Form Navigator dialog if it is not open (red circle).
2) Select the form or subform that you want to work with.
3) Click the Add list tool (Blue circle) to open the field list .
4) Select one of the fields in the list to create it.
   - Double click the field.
     i) The field appears on the form.
     ii) Use the cursor to move the control to where you want it.
     iii) Repeat I and ii until you have entered all the controls for the main form or subform.
   - OR drag and drop the desired fields from the list to where you want each to be.

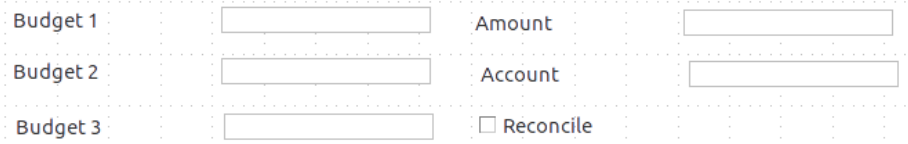
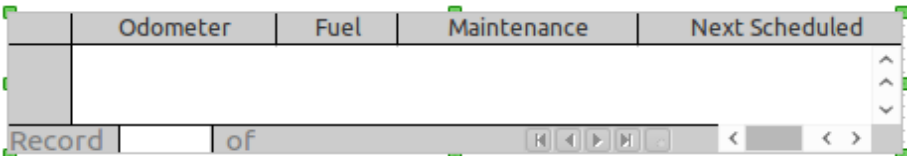



*Figure 30: Controls created by Add fields tool*

The label and field are both approximately 1.5” which is usually too wide. Also the label and fields will each have half of that length. These will be changed when modifying the layout for the main form or subform.

This tool can also be used to place the fields in a table created by the Table Controls tool.

1) Have the Form Navigator open and select the form or subform that will contain the table control.
2) Use the instructions in step 3a to create the table. (A *Table Control* appears below the form or subform in the Form Navigator.)
3) If the Table Element Wizard opens, click Cancel to close it.
4) Click the Add field tool which opens with a list of fields.
5) Drag and drop the fields onto the heading row in the order you want them to appear.




You may want to select the properties for the control you just created or wait until you have created all the fields for a given main form or subform. To select the properties, go to Select the properties for each control.

**Step 3c: Create individual controls using specific tools**

Using these are similar to using the Table Control tool. The tool is clicked, the cursor becomes a cross-hair, and you draw a rectangle, with its approximate dimensions, where you want the label or field.

A control consists of a label-field pair with few exceptions. (Check Box Option Button have their own label, so they don't need one.) But all the rest of the fields should have one for identification purposes. So, you should use a tool to create a field and the Label Field tool to create the label as a pair. Then group this label-field pair before creating the next pair. And this is how the controls for a main form or subform are created one label-field pair at a time.

When you create a label or field using these specific tools, it appears in the Form Navigator under the main form or subform you have already selected. **This is done in the order that the label or field was created.** This is why the controls should be created one label-field pair at a time: they will be listed together. Probably, you should create all the controls in only one way for consistency: the label followed by its field, or the field followed by its label. (I personally prefer to create the label first and its field second.)

| **Caution** | When creating individual controls, almost always create a label-field pair (label first and field second). Then join the pair into a single control before creating another. The exceptions to this occur for a check box or group box. These 2 have their own labels built-in while the other controls do not. |
|---|---|

Grouping a label-field pair requires clicking one of them and *Shift + click* the other. The green handles appears around the pair. Two ways to complete the grouping: click the *Group* tool, or right click one of them and select *Group* from the Context menu.

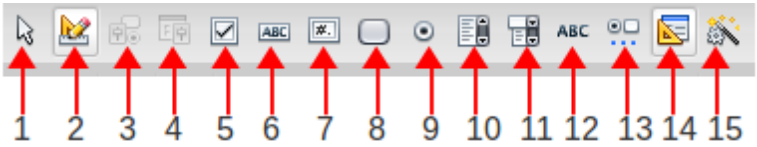
The Group tool is one of 4 tools which are not visible in the Form Controls toolbar. To make them visible, right click any of the tools in this toolbar and then click *Visible Buttons*. Select *Group*. Repeat this for *Ungroup, Enter Group,* or *Exit Group* if you think you may need to use it. If you

decide to use *Enter Group*, you should make *Enter Group* and *Exit Group* visible. (If you enter a group, you also need to exit it.)

- If you are going to use these tools, make them visible in the Form Controls toolbar using the directions in the above paragraph. (I will use the Group tool in the instructions in this step.)

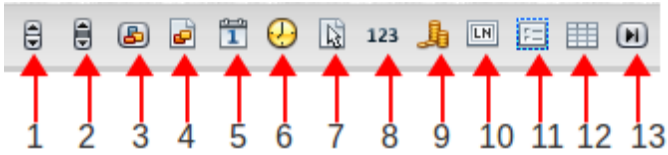
Below are the 4 Group tools in the Form Controls toolbar. (Group, Ungroup, Enter Group, Exit Group) Two are grayed out and two are available. This is because when the snapshot was taken, a control had been selected. When this is done, you can only ungroup or enter the group. Similarly, if two objects had been selected, all but the Group tool would be grayed out.

Here are the toolbars containing tools to create tools. (Some tools serve other purposes.)




| | | | | | |
|---|---|---|---|---|---|
| **1** | Select | **6** | Text Box | **11** | Combo Box |
| **2** | Design Mode On/Off | **7** | Formatted Field | **12** | Label Field |
| **3** | Control | **8** | Push Button | **13** | More Controls |
| **4** | Form | **9** | Option Button | **14** | Form Design |
| **5** | Check Box | **10** | List Box | **15** | Wizard On/Off |

*Figure 31: Form Controls toolbar*




| | | | | | |
|---|---|---|---|---|---|
| **1** | Spin Button | **6** | Time Field | **10** | Pattern Field |
| **2** | Scroll Bar | **7** | File Selection | **11** | Group Box |
| **3** | Image Button | **8** | Numerical Field | **12** | Table Control |
| **4** | Image Control | **9** | Currency Field | **13** | Navigation Bar |
| **5** | Date Control | | | | |

*Figure 32: More Controls toolbar*

There is some overlap in these tools. For example, consider the Formatted Field tool (Form Controls tool). A field created by it can be made into a Date, Time, Numerical, or Currency field by changing one of its properties.

| **Tip** | If you have a numerical or currency field in which you want negative values to be red and positive values to be black, you have to use the Formatted Field tool. It will also enable you to select a different currency than the one used by your locale. |
|---|---|

1) Have the Form Navigator open.
2) Select the form or subform for which you will create controls.
3) Create the label.
   a) Click the Label Field tool.
   b) Draw a rectangle where you want the label to be.
4) Create the field.

a) Click the tool needed to create your field.
b) Draw a rectangle where you want the field to be.

5) Group the rectangles.
   a) Click the label rectangle.
   b) *Shift* + *click* the field rectangle. (The green handles surround the label and field.)
   c) Click the Group tool.

| **Tip** | Instead of 5c, you can *right click* either the label or field. Then select Group from the context menu. |
|---|---|

This outline tells you how to create a label-field pair and group it. How you proceed at this point depends upon you. You can follow #3-5 until you have created all the controls for the form or subform. Then select the properties for them one at a time. Or, you can select the properties for the control you created before creating another control. The choice is yours.

**Step 3d: Select the properties for each control**

Each field type has its own properties. While all of the controls share many properties, each control with a specific field type will have some properties that controls of another field type will not have. For example, a date field will have a date format while a currency will have the currency symbol property. Both will have the properties of position and size as well as the font used.

As a result, we will divide this step into the different field types and their properties. Each one will be listed in bold font.

*Figure 33: Useful tools*

The Control tool (circled in magenta above) opens or closes the Properties dialog which contains a large number of properties for the selected label or field of a control. The properties listed depends upon what it selected as are the number of tabs. Below are the Properties dialogs for a label and field. These show most of the properties but not all. (Use the vertical scrollbar to see the rest of them.)

As mentioned before, a control consist of a label grouped with its field. But we need to work with them individually. The Form design has the 4 grouping tools which we could use. This requires using the Enter Group tool before modifying the properties, and using the Exit Group tool when completed.

We can also use keyboard shortcuts to access individual labels and fields. This requires selecting a control, clicking the Control tool, and *Control* + *click* the label or field. The green handles surround the selected label or field. The Properties dialog changes to show its properties.

| **Tip** | When making changes to a property, you can apply it to the label or field by doing one of three things.<br>• Type *Tab.*<br>• Type *Enter.*<br>• OR, click one of the other properties. (For example, click the property above or below the property you just changed. |
|---|---|

Index of tools

- Check Box
- Text Box

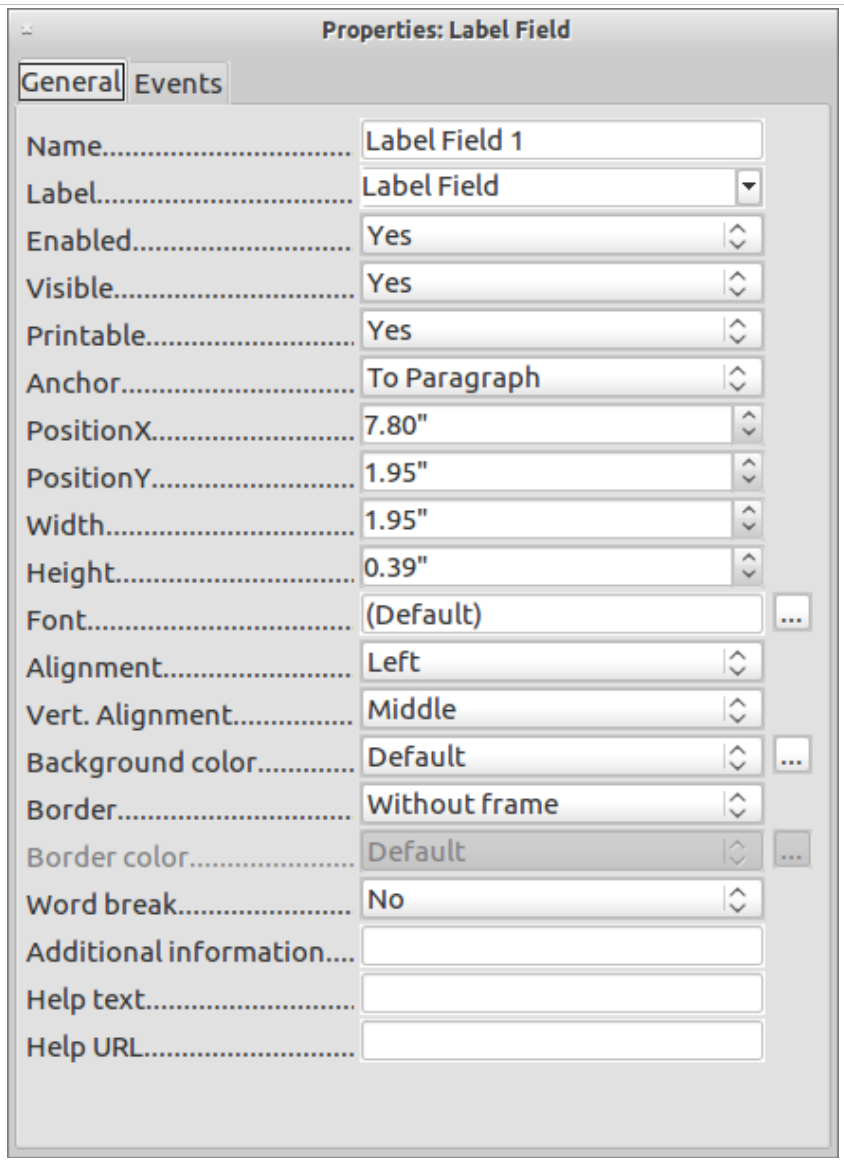
- Formatted Field
- List Box
- Combo Box
- Date Field tool
- Time Field
- Numerical Field
- Currency Field
- Pattern Field
- Group Box
- Option button
- Push Button

**Label Field**

There is a difference between the Label Field tool and the Text Box tool. Look at Figure 31. Number 6 is the Text Box tool and its icon has a box around the ABC. Number 12 is the Label Field tool whose icon only has the ABC. (It is easy to confuse them until you use them several times.)

Two of the last four properties are useful for the average Base user: Word break and Help text. Additional information is for leaving a note about the label to someone editing the form at a later time. Help URL is for entering a link to a location to a part of LO's help. The URL is written in UNO.

- *Name*: This is the name given the label by Base. You do not change this.
- *Label*: This name appears in the label. Usually, you replace *Label Field* with the name of the field in this box.
- *Enabled*: Default is Yes. If No is selected, the label is grayed out and not usable.
- *Visible*: Default setting is Yes. This property is useful for fields in primary-foreign key pairs. If you don't need to see them, use this property to make them invisible. They are invisible when you open the form to enter, remove, or view the data. But they are visible when you edit the form so you can make any changes needed to them.
- *Printable*: If you want the label to print, accept the Default (Yes).
- *Anchor*: Choice of how to anchor the label. Default is *To Paragraph*. Other choices are *As Character, To Page, To Frame,* and *To Character*.
    - *As Character* or *To Character*: Use one of these if you want anchor a label on at a specific point on a specific line in the form. Be aware that either of these requires more work than the next pair of choices.
    - *To Page* or *To Paragraph*: The horizontal and vertical distances of a control are measured from where it is anchored. If it is anchored To Page, these distances are measured from the top left corner. If it is anchored To Paragraph, these distances are measured from the beginning of a paragraph, the left side of the form.
        - If you have a complex form, you can create multiple paragraphs. Then select one of the paragraphs for each part of the form. Then you can enter a heading at the top of a paragraph for each part. Then anchor its controls to the beginning of its paragraph.
    - If, like most people who accept the default setting (To Paragraph) but do not add any more paragraphs, the results are the same as anchoring the controls To Page. This is because the beginning of the only paragraph is at the upper left corner.




- Position and Size properties: (*Position X*, *Position Y*, *Width*, and *Height*) The position properties show the horizontal and vertical distance from the anchor.
  - These properties have spin buttons that change by .01 of what measure you are using (.01” in the snapshot). So this is a rather fine change you will be making. You can also highlight any of these properties and enter the value you want.
  - The label will not be moved until adjustments are made when working with the form's layout. But write down both position values as you will need them when creating the label's field.
  - Change the Width if the label is too narrow or wide.
  - The labels created by the Form Wizard have a height of 0.20” (0.50 cm). Change the height to the one that applies to your locale.
  - When the changes have been made, type *Enter* or *Tab* to apply the changed property to the label.

**Caution**

1) Be very careful when using Position X or Y when working with multiple labels and fields. You are selecting this property for all of them at once. This can be very useful if you want to align some fields or labels vertically or horizontally. For the former, select the ones you want, enter the Position X value, and type *Enter*. For the latter, selects you want, enter the Position Y value, and type *Enter*.
2) **Never use both Position X and Y when working with multiple labels or fields.** This moves all of them to the same position on the form, one stacked on the other. Then unless this is what you wanted to do, you have to move all of them back to where they should be. This could take a little time.

- *Font*: You can change fonts to any font that has been added to your system. To change the font, click the ellipse (…) for the Font property. The Character dialog opens. Select the font, the font style, and font size from the Font tab; select the Font Effects tab to select what you need from there. If you want to change the fonts properties of several labels or fields at one time, you can select them and make the changes at the same time.
- *Alignment*: There are four choices, Default, Left, Right, and Center. The Default is what is used by the locale you have selected. For some people this will be left, and for others this would be right.
- *Vert. Alignment*: This is vertical alignment. If the label or field is tall enough, you can use this to place the text or an entry at the top, middle, or bottom. The following control demonstrates a horizontal alignment of Center and vertical alignment of Middle.


*Figure 34: Center alignment for label and field*

- *Background color*: You can select a background color from its dropdown list, or you can click the ellipse (…) to open the Color Picker dialog. From it, any color can be created and used.
  - The top choice of the dropdown list is Default which is no color at all with my operating system.
- *Border*: (Without Frame, 3-D, or Flat) Select these choices to see which one you prefer and then select it.
- *Border color*: When you select Flat Border, a line is drawn around the label or field. This property permits you to select the color of that line. You have the same dropdown list and ellipse (…) as for Background color.
- *Word break*: This is for the labels. When they contain more than one word, you can use this property to display the words on multiple lines. Use *Enter+Shift* to create the additional lines, but first you have to use the Height property to make the label tall enough.
- *Additional Information*: Here you can leave yourself or others a note about the selected control. It is only available when the form is edited, the control is selected, and the Properties dialog is opened.
- *Help text*: Use this to enter instructions or descriptive information about this control.
- *Help URL*: Written in UNO. This is used in documents , and the link points to a part of the Help files.

The label properties are contained in 2 tabs: General and Events. What we have written applies to to the General tab only. (The Events tab is used when including a macro to the form. This is discussed in chapter 8 of the Base Guide.)

The rest of these are field properties, and they are contained in 3 tabs: General, Data, and Events. The Data tab contains a few properties that refer to the data contained in the field. The General tab for fields has many of the same properties as for the Label Field. A few additional properties are added that are specific to the field type of the selected field.

| Tip | Since many of the General properties are the same, we will discuss only the additional properties that a specific field type adds to it. Use the guidelines in *Label Field* for the common properties. |
|---|---|

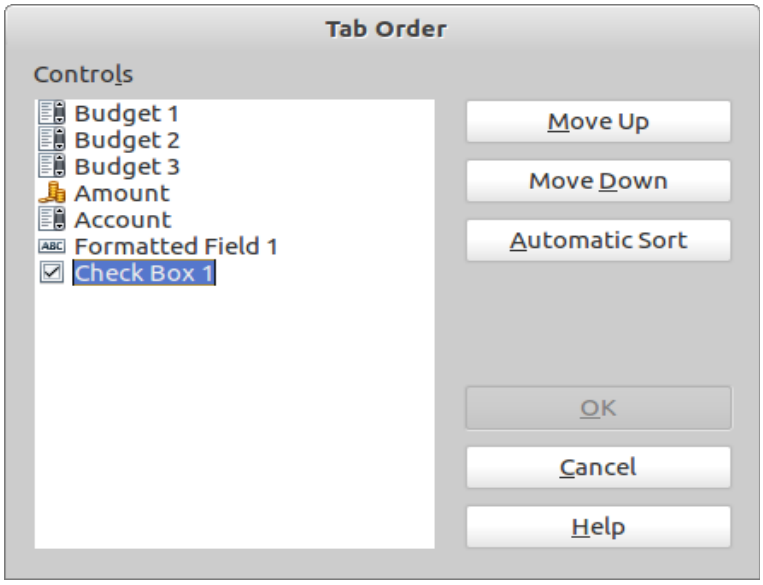
**Common field properties**

**Tab Order**

As the form is created and each field added, the Form Navigator adds it to the list of fields in the main form or subform, and they are ordered from first one created to the last. From this Base creates an ordered list of the fields in the main form or subform. If you have entered on of these fields, you can move to the next field in this ordered list by using the *Tab* or *Enter key*. When you reach the last field in the list, using one of these keys will take you back to the top of the list and to the next record. If you came from the last record, the use of one of these keys will open a new record.

You can move up the ordered list by using the key combination, *Shift + Tab*. When you reach the top of the list and do this, you are taken to the last field of the list and to the previous record. Once you reach the first field of the first record, you can not go any further.

- *Tabstop*: (Yes/No) Yes is the default value, and you can navigate though the fields to this field. If you select No, this field will be skipped as you navigate through the fields.
- *Tab order*: This only works when the Tabstop property is Yes. If you want to do so, you can use this property to number the tab order for all the fields. If you only have a few fields, it might not matter, but numbering 70 fields from 1 through 70 is unnecessary time consumption (personal experience). A better way: click the ellipse (…). This opens the Tab Order dialog.




- *Move Up button*: Select the name of a field to be moved in the list. Click the Move Up button to move it up one place at a time. To move a field 3 places, you have to click

this button 3 times. If you select more than one field, you can move both at the same time.

- *Move Down button*: This works the same way: select a field and then click the button to move the field further down the list.
- *Automatic Sort*: The sorts the fields according to their position on the form. Sometimes this works well, and sometimes it does not.

**Mouse wheel scrolling**

The Mouse wheel scroll property determines what happens when the cursor is in the field and you scroll the mouse wheel. For many fields, scrolling the wheel will increase or decrease the value contained in the field. The choices are Never, When focused, and Always.

Click this link to return to Index of tools used to create labels and fields.

| Caution | I recommend that you use the Never choice. Then the mouse wheel will not change any data. And considering that you could have the cursor in one part of the form but your attention is drawn to another part, you could change the data without even noticing it. |
|---|---|

**Check Box**

- General Tab:
  - *Label Field*: Since the Check Box has a label, you can leave this property blank.
  - *Tab stop* and *Tab Order*: see Common field properties.
  - *Default Status:* The choices are Selected or Not Selected. Selected will place a check in the box until it is changed; Not Selected will cause the box to be empty until it is checked.
  - *Style*: The choices are flat or 3D. It does not really matter for this field as there is no noticeable difference.
  - *Graphics*: Use this to add a graphic to the Check Box field if you want. To do this, click the ellipse (…) and browse to the graphic file. Use a thumbnail or very small graphic. (Below is an example.)


  - *Graphics Alignment*: This determines where the graphic will be placed. In reality, unless you want the Check Box field to be large enough to hold the graphic in a portion of field, changes in alignment very seldom produces a visual effect. Graphics Alignment should be used with Alignment and Vert. Alignment. (The above example has Alignment (Left), Vert. Alignment (Default), and Graphics Alignment (Centered).
  - *Tristate:* In the past, a check box could have 1 of 2 values: Yes or No. Now, 3 values are possible: True, False, or 0 (zero). Visibly in a check box you see dark check, a grayed out check, or an empty box respectively. If you want three values, change the dropdown list to Yes. (Normally you would use an option button instead of a check box for three values.)

The Data tab has 4 properties: Date field, Input required, Reference value (on), and Reference value (off).

- *Date field* has a dropdown list of fields based on the main form or subform selected in the Form Navigator. So, select the field that needs a check box.

- *Input required* determines whether you must enter data immediately in this field or not. Sometimes we require data be entered into the field before you can go to the next field. In this case, select Yes. Other times the data needs to be added later. For example, a form that contains financial transactions, and it includes a check box we use to check the entries against a financial statement.
- *Reference value (on)* and *Reference value (off)*: Enter the value when the box is checked and not checked respectively. These values can be Yes and No, True and False, or 1 and 0. Or, you can use any pair of text phrases that you will understand. **Place values in both properties.**

Click this link to return to Index of tools used to create labels and fields.

**Text Box**

Use this any time you need to enter text into the database. Most of the uses contain only one line of text. Fields whose field type is Memo, can have multiple lines and scrollbars (usually vertical).

Here we discuss only the properties that differ from the Label Field. Use this link, Label Field, to return to that section. Make sure you write down this page number so you can return here.

- *Max. text length*: Default is 0. Usually, this requires no adjustments as the field properties in the field's table defines the text length for text. And if you need to increase the possible text length, edit the field's table to correct it. However, you can change this property if necessary. Just remember that the field will not store a longer text string longer than what is defined in the field's properties.
- *Read only*: The default is No. But if you have text that you do not want to be changed, change the setting to Yes. For example, you have a primary key that is auto-generated which you also want to make visible. This is a value that you do not want anyone to change.

| **Note** | The Read only and Tabstop properties can be used together. Setting both to No means that the data can not be modified nor deleted nor can anyone navigate to this field using the *Tab* or *Enter* key. |
|---|---|

- *Default text*: This serves the same purpose and it does in the field properties: you can enter the default text in either property. But you do not want to enter text in both of them. What you enter in the field properties when you created the field in its table is what appears in the field in the form. If you were to enter something in the Properties dialog after entering something different for the field, the latter will appear in the field in the form.
- *Border*: There are three types of borders: without frame, 3D, and flat. The first choice has an invisible frame, 3D has a designed frame, and the last choice has a visible frame. Select the border you want to use. (I prefer 3D since this accents the fields in my forms.)
- *Border color*: This is only available when you select the flat border. This has a dropdown list containing the color table, and the ellipse (…) opens the Color Picker dialog where you can create any custom color you want.
- *Text type*: single-line, Multi-line, and Multi-line with formatting
  - *Single-line*: Select this to require the text fit on one line only.
  - *Multi-line*: Select this if you allow entries involving multiple lines.
  - *Multi-line with formatting*: Use this when you are copying formatted text to the field. The amount of formatting that is accepted is limited. Bold and italic text copy well. First line indent style does not, nor do bullets copy. But if you copy and paste a list with bullets, the text does maintain the indentation of the list.
- *Text line ends with*: In multi-line text, this determines what goes in each line. Select the one that matches the OS running the computers on which they run this database.

- *LF (Unix)*: This is a line feed that Unix and Linux use.
- *CF and LF (Windows)*: This is a combination of a carriage return immediately followed by a line feed. This is for databases that are used on Computers with a Windows OS.

- *Scrollbars*: Choices are None, Horizontal, Vertical, and Both. This in only available when you have selected Multi-line in the Text type property. (2 properties up)
- *Password Character*: Use this property for a field that contains a password. Enter the character that you want appear instead of the password when it is entered. The most common character used is an asterisk (*). However, you can use any character that you want to use (letters, digits, punctuation).

The Data tab contains four items: Data field, Empty string is NULL, Input required, and Filter proposal. Be careful how you used the middle 2 properties. If you select Yes in *Empty string is NULL*, you must select No in *Input required*.

Click this link to return to Index of tools used to create labels and fields.

**Formatted Field**

This is a somewhat generic field. You can create a variety of fields with different fields types (date, time, numerical, currency). What you select in the Properties dialog determines the field type that the field will accept.

Here we discuss only the properties that differ from the Label Field. Use this link, Label Field, to return to that section. Make sure you write down this page number so you can return here.

*Formatting*: The selection of the the formats to be used in the field is done in the Number Format dialog. The top contains two lists: Category and Format. Below them is the Options section where you can modify the format to be used. And at the bottom is the Format code box.

The language used partially determines the format for the field. So, if you have a field that requires using a format based upon the language, this dropdown list permits you to select it.

To help you as you make your Category, Format, and Language selections, you have a box showing the format that you have selected. This is directly below the Language dropdown list.

The Option section contains 4 choices. You can use the Decimal places box to change this number.

The Leading zeroes box is useful useful if you want all the numbers to have the same number digits to the left of the decimal point. You can enter this number in this box. Then for numbers with fewer digits, zeroes are added at the beginning of the number until it has the required number of digits. For example, I enter 3 in the box. 1 would be shown as 001, 23 as 023, 999 as 999, and .25 as 000.25. Now all these numbers have three digits to the left of the decimal point. If the number has as many or more digits than the number you listed, the number appears without any change in appearance made.

The other two options are self-explanatory. Check the first check box, and negative numbers appear in red font. Check the second; click the second and thousands separators appear in numbers large enough to need them.

When you select a category and format in the lists at the top, their code appears in this box. You can modify this code to modify the format. If you select the User-defined category, you can enter code in this box to define the format you want to use. (Use the codes listed in Help.

| Tip | LO's help section contains list of different format codes you can use. If you have LO online help, open Help using the *F1* key. Enter *Common/Number Format*. If you have downloaded and installed the Help files, type *F1* to open Help. Click the Index tab and enter *number format* which highlights this phrase. Click *Code* just below it and then click the *Display* button at the bottom of the Help window. |
|---|---|

The *spin button* places a spin button at the right side of the field. This is used only when a numerical category has been selected in the Number Format dialog. Click the up arrow to increase the value in the field, or click the down arrow to decrease it.

*Repeat:* This changes the properties of the spin button. Select Yes if you want to hold the spin button down to continue to increase or decrease the value in the field.

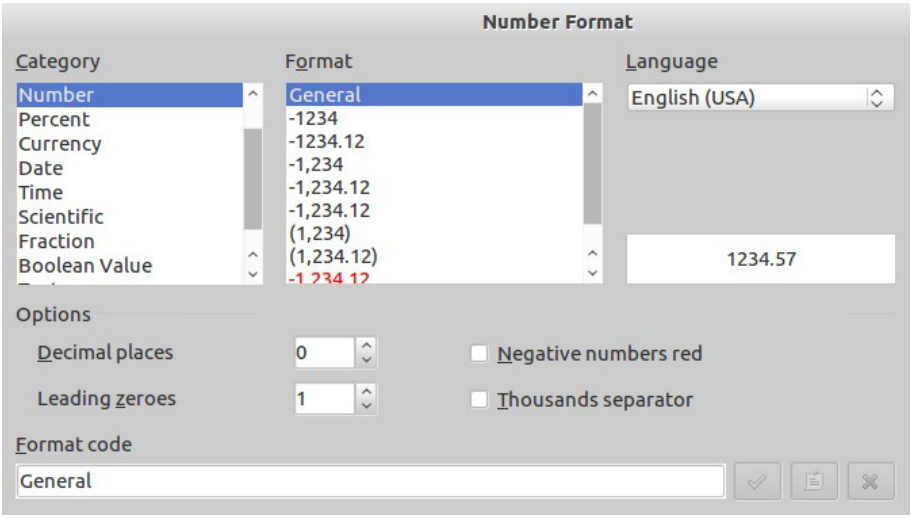



*Figure 35: Number Format dialog*

- *Formatting*: In the Formatting property, click the ellipse (…). Select the category and then format that the field should have.
  - Change the language if needed.
  - For number formats,
    - Enter the number of decimal places and leading zeroes needed.
    - Select whether you want negative numbers to appear in red or thousands separators added when needed.
  - Format code:
    - Number Format codes: Numbers consist of columns of digits, each one having a specific place value. Use a 0 in a column if a 0 should be used as a place holder. Use # in a column if a digit should only be used if it is in this column of the number.
      - *Decimal places*: Use a 0 or # in columns to define the maximum number of decimal places that will be shown. Any number containing a greater number of decimal places will be rounded to the decimal places you set. If a number has fewer, then the field shows the number as it is when the # is used. Use the 0 instead, and zeroes will be put in the decimal places that are not contained in the number. (.5 becomes .5 when using `#.##`, or .50 when using `#.00`, or 0.50 when using `0.00`.)
      - *Thousands separators*: Add them to the number's code. #,### or 0,000 or combinations of them define this format. The first code will add a comma before every third digit to the left of the decimal point of a number. The

second code will do the same thing. It also adds the requirement that the thousands and hundreds places must have a digit. If the number does not have one of these a 0 is used as a place holder.

- *Special thousands separator*: It can be used to reduce the number digits of the displayed number by 3. Each additional one added further reduces the digits of the displayed number by an additional 3. ( `#,` reduces 1,234,567 to 1,235. `#,,` reduces it to 1.)
- Text and numbers: You can add a text prior to or after the number. This is useful when putting a measurement label with a number. When using this, make sure you include any spaces that you want between the number and text. Use double quotes around the text or use a back slash before it. This only put text where you want it. You have to also use the format code for the number as well. (`#.## "inches"` is the same thing as `#.## \inches`.) If you need to use a phrase containing at two words, you should use the double quotes.
- *Spaces*: You can define the size of the space you use in the field. Different letters have different widths. Placing an underscore (_) before a letter creates a space that has its width. `_w` gives you one of the wider spaces, and `_i` will give you one of the narrower spaces.
- *Color*: You can select red for negative numbers in the Options section. You can select additional colors as well. You put the name of the color in brackets [] to do this. Your choices are colors are CYAN, GREEN, BLACK, BLUE, MAGENTA, RED, WHITE, and YELLOW. There is a reason why I used capital letters for these colors: you use them when entering their name in the brackets. (`[RED]0` will produce red numbers; `[GREEN]0` will produce green numbers.
- *Conditional brackets*: (Producing colored numbers is an example of this. The color name in the brackets defines what will happen to the number format that follows.) You can use any combination of numbers and the <, <=, >, >=, = and <> operators to define your condition. If you have more than one condition, you separate them using a semi-colon. For example, we want positive numbers and 0 to be green and negative numbers to be red. `[GREEN][>=0]0` gives you green digits for non negative numbers. `[RED][<0]0` gives you red digits for negative numbers. Combine these with a semi-colon to get non negative numbers in green and negative numbers in red. `[GREEN][>=0]0;[RED][<0]0.`
  - *Currency*: This is usually set by the language selected in the dropdown list at the top. But you can also use conditional brackets to do this. Use `[$xxxnnn]`. The $ specifies that this is a currency condition, the `xxx` *is the currency symbol, and the* `nnn` is the country code.
  - `0.00;[RED]-0.00` This is another code for positive and negative numbers. In this case, they have 1 leading zero, 2 decimal places, default color (black) for not negative numbers, and red color for negative numbers.
  - When using multiple conditions for numbers, the first one applies to positive numbers, the second one applies to negative numbers, and the third one applies to 0. You can change this by using a pair of brackets to define what numbers are included. `[<30.2]` This includes all numbers less than 30.2.

- *Text and conditions*:
  [BLUE]"plus";[RED]"minus"0;[MAGENTA]"null"0.
  8 will be **plus 8**; -8 will be **minus 8**, and 0 will be **0**.

- *Percent*: annex the percent sign to the format code. For example, the latter is `#0.00`. To change this to percent, the code becomes `#0.00%`.

- *Date formats*: The Format list has many entries, so you may not need to create the format code you need. If you do need a special date format, study the format codes for the entries that have part of what you need. Often you can combine parts from existing codes to create yours.

  - You can also use brackets for a condition to define the calendar to be used. A couple of the most common calendars are Jewish and Arabic. The format code for this is [~language]. Help has a list of the choices you have. Also, near the bottom of the Format list, there are some entries which use this code.

For example, My date format should be Sun Oct 22, 2013. In the list I see the following codes: NNN is the 3 character code for the day of the week, MMM is the 3 character code for the month, DD is the 2 character code for the day of the month (I could use D instead of DD so day 2 appears as 2 rather than 02), a comma to place after the day, and YYYY is the 4 character code for the 4 digit year (I could use YY to display the last 2 digits of the year).

| **Tip** | The formatted field tool will create a field with a variety of field types depending upon what you select in the Number Format dialog. This usually will define more properties for the field than the equivalent special tool. These may or may not be significant depending upon your needs. For example, using a format code is not available in any of the special tools. For the number field type fields, different colors are not available for positive and negative numbers. You can only select this using the formatted field tool. |
|---|---|

Click this link to return to Index of tools used to create labels and fields.

**List Box**

Use this tool when you want the field to contain a dropdown list from which you select an entry. The source for the dropdown list can be a database table or query, or you can list its entries in the *General* or *Data* tab in the List entries property.

There are two types of dropdown lists that you can create. In one you want to select from the list the entry that will be made in the field. In the other, what you select from the list determines what is entered. In this case what is selected is **not** what is entered.

For example, the field which has the dropdown list contains an identification number. The list table contains people's names and identification numbers. Using this table, we can select the person's name from the dropdown list and enter his identification number in the field at the same time.

We discuss the creating of a list box with the same selection in the dropdown list as entered in the field. At the end we discuss how to have select one value from the dropdown list while entering the associated value in the field.

This is one of the times when having the Wizard On/Off tool selected. After drawing the outline for the list box field, the list Box Wizard dialog opens. Using this, you can select the table or query and a specific field to be used as the data source for the field you just created.

With the Wizard On/Off tool turned off, you can use the Control tool to define the properties for the list box. This requires making selections in both the General and Data tabs.

There is another possibility that must be considered when the main form or subform use the Data Sheet format which looks like a table with the fields being its column headings. When any of these

need to be a list box, the field has to be replaced with a list box field. You can not use the wizard to do this, but you can use the process described in the previous paragraph.

This list describes how to create a list box field and define its properties using the wizard. The next list describes how to do this without using the wizard.

1) Open the Form Navigator and select the form or subform that will contain the list box.
2) Make sure that the Wizard On/Off tool is selected (highlighted).
3) Click the List Box tool (Form Controls toolbar) and draw the field's outline where you want it. The List Box Wizard dialog opens.

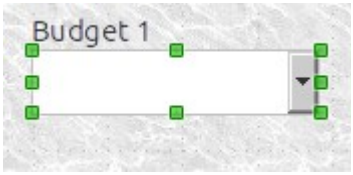
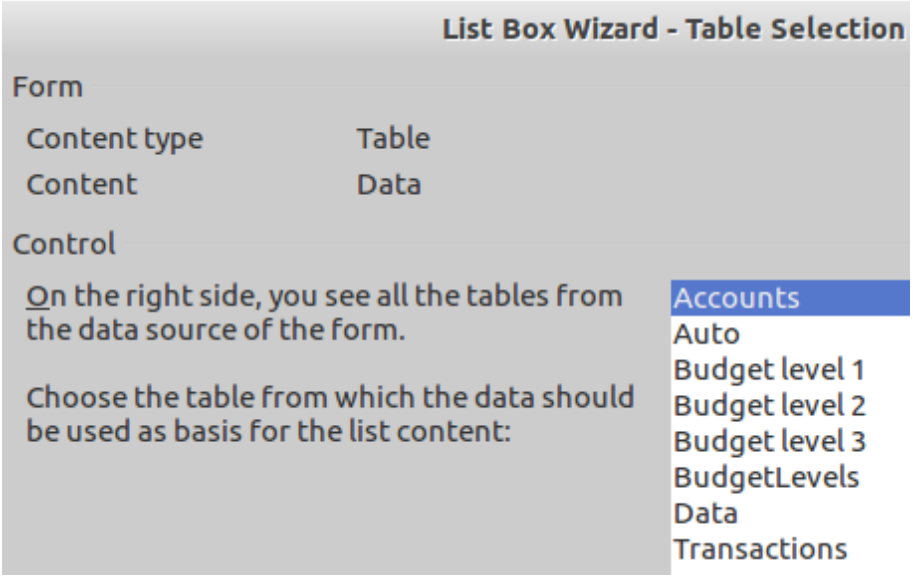


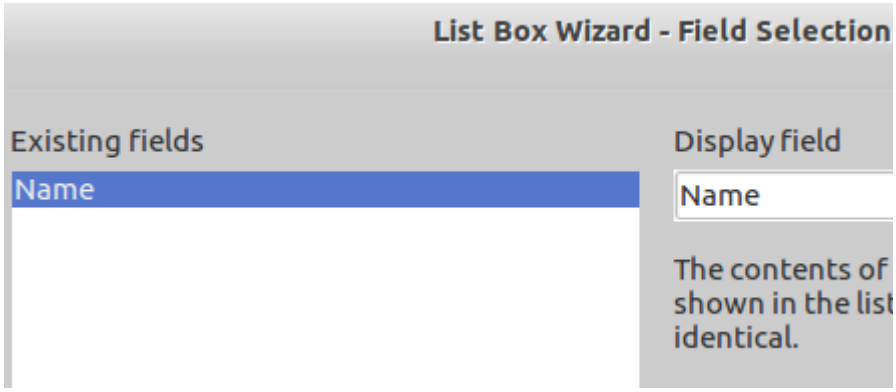

*Figure 36: Label and Field for a list box*

4) Selecting the list box properties:
   a) Click the table or query that provides the data source for the list box field. (The Form Navigator selection determines what tables or queries appear in the dialog.)
   b) Click **Next**.




| **Note** | When we created the tables to be used as the data sources for list boxes, they each contained one field. This is why the Field Selection page only has one field listed. This arrangement also guarantees that the dropdown lists will always be in alphabetical order. |
|---|---|

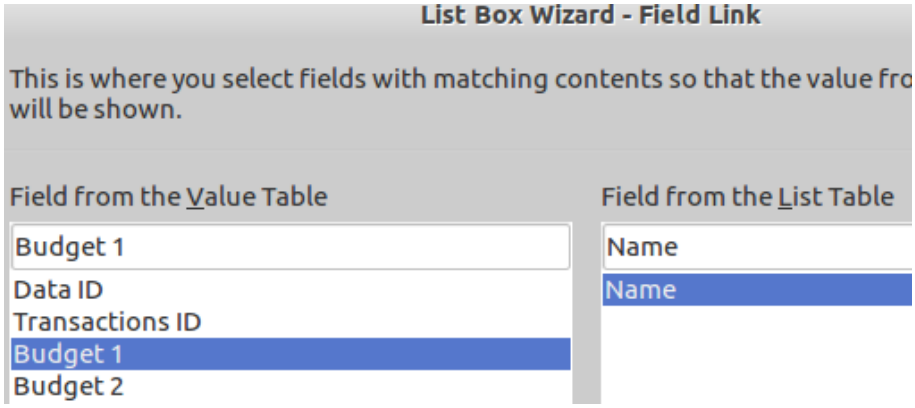
   c) From the list of fields of the selected table or query, click the field that contains the data source for the dropdown list. This enters the field's name in the Display field box.
   d) Click **Next**.




e) In the left list, click the field name that matches the label for this list box.
   i) This is the name of the field into which the data of the list box will be entered.
   ii) The field name appears in the box above the list.

f) In the right list, click the field name to place its name in the box above this list.

g) Click **Finish**.




It always pays to verify what you have done. In this case, you should look at the properties of the list box field to see is everything is accurate.

5) Verifying that the list box field properties are correct.
   a) Click the Control tool to open the Properties dialog (Properties – List box).
   b) Click the Data tab.
      i) *Input required*: Select *Yes* or *No* according to your plan.
      ii) *Type of list content* should be Sql.
      iii) *List content* should be `SELECT "field name" FROM "table name". If it has SELECT "field name","field name" FROM "table name",` change it to what it should be.
      iv) *Bound field*: Since the list table contains only one field, it does not matter what is in this box. (It will probably have the number 1.)

| **Tip** | For the Bound field property: If the list table has 2 or more fields, number its fields to get the number for the field used for the dropdown list. Subtract 1 from this number, and enter the result in the Bound field property box. |
|---|---|

Instead of using the list box wizard, we can define the properties using the Control tool to define the elements of the dropdown list.

1) Open the Form Navigator and select the form or subform that will contain the list box.
2) Make sure that the Wizard On/Off tool is **not** selected.

3) Click the List Box tool (Form Controls toolbar) and draw the field's outline where you want it. (If the wizard opens, click Cancel.)
4) Click the Control tool.
    a) Click the Data tab.
        i) *Data field*: Select the field for the list box.
        ii) *Input required*: Select Yes or No depending upon your plan.
        iii) *Type of list contents*: It should be *Value list*. Change it if it is not.
        iv) *List contents*: Enter the list of names for the dropdown list using *Shift+Enter* between names. When all names have been added use *Enter* to apply them.
    b) Click the General tab.
        i) *Mouse wheel scroll*: **Select Never**.
        ii) *List entries*: You can use this instead of the list contents property. The names are entered the say way here as in the Data tab.
        iii) *Dropdown*: Change this to Yes and use *Enter*. This places the arrow at the right end of the field indicating it contains a dropdown list.

If you have created main form or subform using the Table Control tool, you can also create a list box. The type of field has to be changed to a list box, and its properties defined. This time we are going to use SQL to define the field that provides the elements of the dropdown list. The SQL statement tells Base what table ("table name") and which of its fields ("field name) to use for the dropdown list.

| **Note** | The List entries property has an ellipse which you can click. This opens the Query Design dialog which you can use to select the field. This is discussed in the query section of chapter 4 of the Base Guide, Data Output. |
|---|---|

1) Right click the field to be made into a list box field.
2) Select **Replace with > List Box**.
3) Click the Control tool to open the Properties dialog (Properties – List box).
    a) Click the General tab.
        i) *Mouse wheel scroll*: **Select Never**.
        ii) *Dropdown*: Change this to Yes and use *Enter*. This places the arrow at the right end of the field indicating it contains a dropdown list.
    b) Click the Data tab.
        i) *Data field*: Select the field for the list box.
        ii) *Input required*: Select Yes or No depending upon your plan.
        iii) *Type of list contents*: Change this to *Sql*.
        iv) *List contents*: Enter the following: `SELECT "field name" FROM "table name".`
        v) *Bound field*: Since the SQL statement defines the field, do not make any changes.

So far, our list box field contains the same value as is selected in the dropdown list. This guarantees a uniform entry when we enter specific values repeatedly. It also guarantees that our reports containing a list box field will have the same values as found in the dropdown list.

There is another possibility of repeated values that we need to consider. We may be entering the same data repeatedly, but the data may differ very little making it difficult to select the correct entry from the dropdown list. For example, we have a field, Student ID with a dropdown list. The latter

contains Student Identification numbers. These are several digits long and can differ by only one digit. If we have a table that contains all the student names and their identification numbers, we can use the names to select the corresponding numbers. To do this we use the *Bound field* property.

To accomplish this, you first create the list box using any of the methods mentioned above. Then enter a modified SQL statement in the list contents property. Finally enter the digit 1 in the bound field property.

1) Create the list box using any of the methods already mentioned. This includes selecting the properties as outlined in the method you use. Leave the properties dialog open.
2) Click the Data tab if it is not already selected.
3) Modification to be made in the Data tab:
    a) *Type of list contents*: Change this to *Sql* (if it is not already selected).
        i) *List contents*: Enter the following: `SELECT "field name1", "field name2" FROM "table name"`.
        ii) *Bound field*: Set this property to 1

There is a reason for the SQL statement to be worded the way it is. Base uses the first named field for the dropdown list, and the second named field for the list box field.

Using our example that involved in the Student ID field. The list box table, Identification, contains two fields: ID, and Student Name. We want to select a student name in the dropdown list and to enter the corresponding Student ID in the Student ID field. The SQL for that would be: `SELECT "Student Name", "ID" FROM "Identification"`. Then we set the bound field to 1.

Base then uses the first field, Student Name, for the dropdown list and the second field, ID, for the corresponding values for the Student ID field.

Click this link to return to Index of tools used to create labels and fields.

**Combo Box**

A combo box is very similar to a list box. The main difference is that a list box permits you to select only predetermined values from the dropdown list. With a combo box you can enter values that differ from the elements of the dropdown list.

| **Note** | A combo box can be made to behave just like a list box by changing the Read only property from No to Yes. |
|---|---|

A combo box can not display one value from the dropdown box and enter the corresponding value in the list box field. This is because it does not contain a bound field property. List boxes can do this because the do have this property.

A combo box is created is the same way as a list box, and you can use any of the methods mentioned in List Box. A couple of differences are listed here. One involves the Combo Box Wizard, and the other involves the Data tab of the Properties dialog.

If you have the Wizard On/Off tool highlighted (Form Controls toolbar), drawing the outline of a combo box opens the Combo Box Wizard. In the first page select the table that contains the field for the dropdown list.

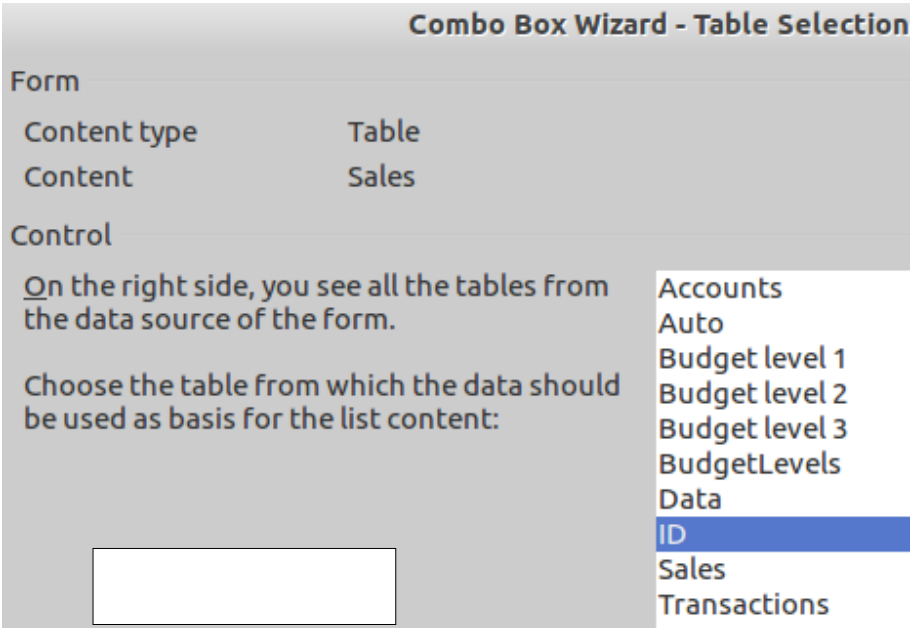
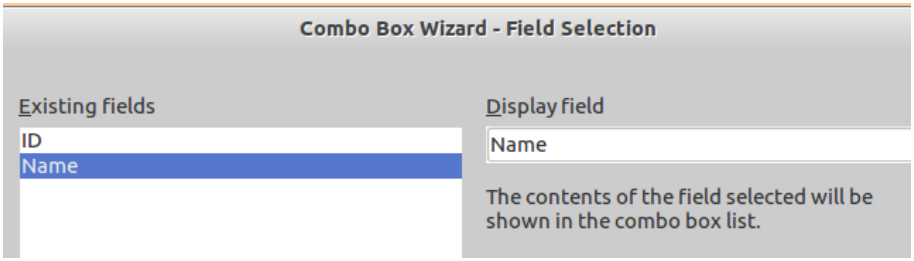



*Figure 37: Selecting the table for the dropdown list in a combo box*

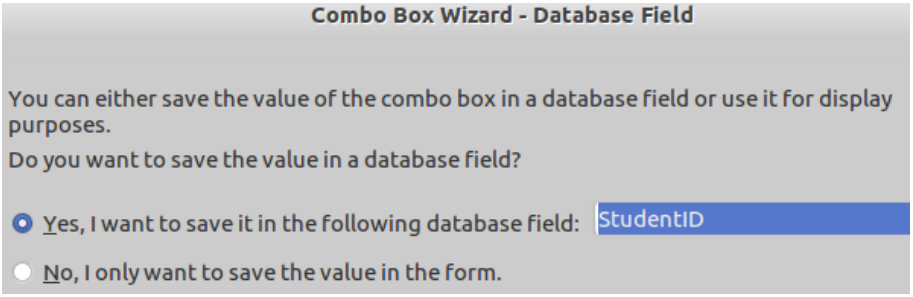
In page 2, click that field to select it. Its name appears in the Display field box.




On page 3, you have a choice of what you want to do with the combo box. This is because a combo box can serve two purposes: to enter data from the dropdown list into a field (top choice), or to only show a selected value (bottom choice).

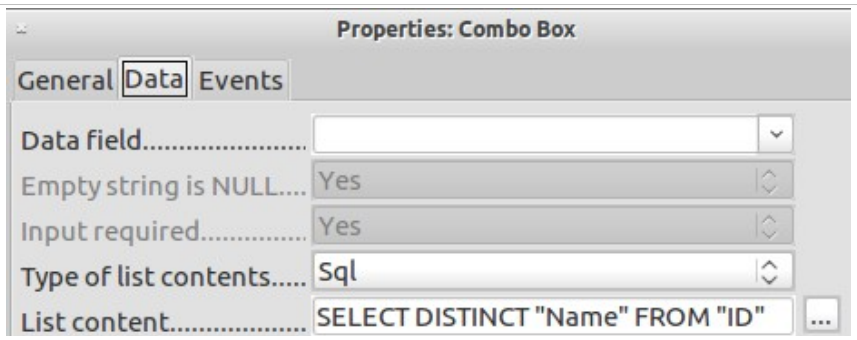
Select the top choice to save the selected value in a database field just as is done in a list box. With this selection, you have to also select the field from a dropdown list.

Select the bottom choice only if you want a dropdown list as a label in a part of the form. If this is the case, you also want to change the the Tabstop property from Yes to No. Whatever value you then select from the list remains until you change it.




The final difference is the SQL statement. But for most of them, the dialog will be too narrow to hold it all on one line. So first widen the dialog and then write the SQL.

The format for it is `SELECT DISTINCT "field name" FROM "table name"`. The reason for the keyword `DISTINCT`: fields can have the same value multiple times with the exception of the primary key. To make sure the list has only distinct values, this keyword is used in the SQL.




Click this link to return to Index of tools used to create labels and fields.

**Date Field tool**

There are 5 properties you can modify in the General tab and 2 properties in the Data tab. These permit you fewer choices and selections than are available when using the Formatted Field tool. So, you need to decide which tool will benefit you the most. Fields with a timestamp field type should be created with the Formatted Field tool.

The 5 properties are *Date min, Date max, Date format, Default date, Spin button* and *Dropdown*. *Date min* and *max* together determine the range of dates permitted in the field. All dates have to be on or before the date max entry; all dates have to be on or after the date min entry. *Date format* has a dropdown list containing many of the date formats. The *Default date* is the date that appears in the field until you change it. The *Spin button* allows you to change the date forward of backward. The *Dropdown* property for a Date field is similar to a list or combo box. When you click the arrow in the field, the latter 2 produce a dropdown list. When you click the arrow in the field, a date field produces a calendar from which you can select a date.

In the Data tab, you select the field that contains dates first. Then select whether the field must have a an entry in every record or not.

1) Have the Form Navigator open and the main form or subform selected that you are working in.
2) Have the Properties dialog open. (Click the Control tool to do this if it is not already open.
3) Click the *Date field* tool and draw the outline of the field where you want it.
4) Click the General tab if it is not already selected.
5) In the Label field property, click the ellipse (…) to select the label that belongs to the field.
6) Date properties:
   a) *Date min*: Modify this date if necessary to the oldest date permitted in the field.
   b) *Date max*: Modify this date if you want all dates to be on or before the date you enter here.
   c) *Date format*: Select the one you prefer from the dropdown list.
   d) *Default Date*: If you have a date that should appear in the field until it is changed, enter it here.
   e) *Spin button*: Enter Yes if you want to change the date using it.
   f) *Repeat*: Select yes if you want the spin button to repeat for a long as you hold it down.
   g) *Dropdown*: If you want a calendar to appear when you click the field's arrow, change this to Yes.
7) Click the Date tab
8) *Date* field: Use the dropdown list to select the the field.
9) If you want to require an entry for this field in every record, accept the default setting (Yes). If an entry is not always required, change it to No.

Click this link to return to Index of tools used to create labels and fields.

**Time Field**

This has 5 properties in the General tab and the same two in the Data tab (the same ones as for a date field). This tool creates fields that contain time only. For a timestamp, use the Formatted Field tool. Also use it if you want format time more than is available using this tool. (See below for the choices available.)

The The General tab properties are *Tim min, Time max, Time Format, Default time*, and *Spin button*. *Tim min, Time max* refer to the range of time permitted. *Time Format* has 4 formats: hours and minutes; hours and minutes with AM/PM; hours, minutes, and seconds; and hours, minutes, seconds and AM/PM. *Default time* is used for the time to appear in every record until it is changed. With the spin button, you can change the time using a spin button.

1) Have the Form Navigator open and the main form or subform selected that you are working in.
2) Have the Properties dialog open. (Click the Control tool to do this if it is not already open.
3) Click the Time *field* tool and draw the outline of the field where you want it.
4) Click the General tab if it is not already selected.
5) In the Label field property, click the ellipse (…) to select the label that belongs to the field.
6) Time properties:
   a) *Time min*: Modify this date if necessary to the oldest date permitted in the field.
   b) *Time max*: Modify this date if you want all dates to be on or before the date you enter here.
   c) *Time format*: Select the one you prefer from the dropdown list.
   d) *Default Time*: If you have a date that should appear in the field until it is changed, enter it here.
   e) *Spin button*: Enter Yes if you want to change the date using it.
   f) Select yes if you want the spin button to repeat for a long as you hold it down.
7) Click the Date tab
8) *Data* field: Use the dropdown list to select the the field.
9) If you want to require an entry for this field in every record, accept the default setting (Yes). If an entry is not always required, change it to No.

| **Tip** | If you use the spin button with this field, you can change the hours, minutes, or seconds by clicking in the specific parts of the time and one of the spin buttons. |
|---|---|

Click this link to return to Index of tools used to create labels and fields.

**Numerical Field**

This tool creates a field with the following special properties: *Value min, Value max, Incr./decrement value, Default value, Decimal accuracy, Thousands separator, Spin button,* and *Repeat*.

Together *Value min* and *max* define the range of possible numbers the field will accept. The selection made in the field properties when its table was created also affect what can be used. The stricter property will be used.

*Incr./decrement value* (increment/decrement value): this determines how much of an increase or decrease occurs in the entered value when the spin button is clicked. This value can be positive or

negative. It is limited to Integers though; for example, you can not use 0.1 or .0009 for this property.

*Default value*: If you have a value you want the field to have until you change it, enter it here. You could have entered this value in the Field properties of this field when you created it in the Table Design dialog.

*Decimal accuracy* and *Thousands separator*: The former determine how many digits will appear to the right of the decimal point. The latter groups the digits to the left of the decimal point into threes. The locale you selected when you installed LibreOffice will determine what will be used as the decimal point and thousands separator.

*Spin button,* and *Repeat*: The former creates a spin button at the right end of the field with which you can change the entered value by clicking. The latter affects the behavior of the spin button. Selecting Yes for this property causes it to continue to increase (up button) or decrease (down button) the entered value for as long as the spin button is held down. (The value will not exceed the Value min nor max though.)

1) Have the Form Navigator open and the main form or subform selected that you are working in.
2) Have the Properties dialog open. (Click the Control tool to do this if it is not already open.
3) Click the *Numerical field* tool and draw the outline of the field where you want it.
4) Click the General tab if it is not already selected.
5) In the Label field property, click the ellipse (…) to select the label that belongs to the field.
6) Numerical properties:
    a) *Value min*: Modify this date if necessary to the oldest date permitted in the field.
    b) *Value max*: Modify this date if you want all dates to be on or before the date you enter here.
    c) *Default Value*: If you have a date that should appear in the field until it is changed, enter it here.
    d) *Spin button*: Enter Yes if you want to change the date using it.
    e) *Repeat*: Select yes if you want the spin button to repeat for a long as you hold it down.
7) Click the Date tab
8) *Data* field: Use the dropdown list to select the the field.
9) If you want to require an entry for this field in every record, accept the default setting (Yes). If an entry is not always required, change it to No.

Click this link to return to Index of tools used to create labels and fields.

**Currency Field**

When a field is created with this tool, its properties are identical to those of a numerical field. The only difference is the Currency symbol property which shows the symbol that will be used. This is based on your local. If you want to change that use **Tools > Options > Language Settings > Languages**.

- Follow the steps for selecting the currency properties in Numerical Field.

Click this link to return to Index of tools used to create labels and fields.

**Pattern Field**

Use this tool when you want to a specific format to appear in the field. For example, telephone numbers [(555) 555-5555], zip codes [11111-1111], or social security numbers [111-11-1111].

The pattern field property contains two properties that define the appearance of it: *Edit mask and Literal mask*. The Edit mask consists of codes, and the Literal mask consist the actual layout in characters.

A given code determines what is permitted in the position of the code. By entering codes in a sequence you determine what appears in the field.

There are 8 codes used in the Edit mask:

- L: This is a text constant. This is for the placement of characters used for formatting.
- a: Use this when you want to see a-z and A-Z in this position. (A-Z only)
- A: Use this to see all capitals regardless of the case typed.
- c: Use this to show a-z, A-Z, and 0-9 in its position
- C: Use this to show A-Z and 0-9 only.
- N: Use this to show 0-9 only.
- x: Use this if you want to include all possible printable characters regardless of case.
- X: Use this to show all possible printable characters with upper case used wherever possible.

The Literal mask uses an underline ( _ ) for each allowable character to be entered.

Perhaps a few examples will help with this formatting concept:

- LNNNLLNNNLNNNN with (___) ___-____ shows (123) 456-7890. The first L matches the opening parenthesis. The first NNN require 3 digits to be entered. The second L matches the closing parenthesis. The third L matches a space. The next NNN requires 3 digits to be entered. The fourth L matches the hyphen. The NNNN requires 4 digits to be entered.
  - The entry in the pattern field for this phone number is 1234567890.
- LNNLLNNLLNNNNN with +__ __ _____ shows +12 34 56789. The first L matches the +. The first NN require 2 digits to be entered. Both LL match the double spaces uses within the phone number.
  - The entry for this phone number is 123456789.
- Postal code examples:
  - NNNNNLLNNNN with _____--____ shows 12345-6789. The NNNNN requires 5 digits, and the NNNN requires 4 digits. The LL matches the double hyphen. (In the field on the form, they appear as a m dash.)
  - NNNNNLLNNNN with _____--0000 shows 12345-0000. The NNNNN requires 5 digits, and the NNNN requires 4 digits. The LL matches the double hyphen. (In the field on the form, they appear as a m dash.)
  - CCCLLCCC with ___--___ shows AB1 2CD. Both CCC require three letters or numbers, and the LL match the double hyphen. Also, using the C requires only capital letters and 0-9 be used.

The next property, *Strict format*, is very important for this field. It should be Yes because you want the entries to exactly follow the two masks that you have entered. Otherwise what is entered by someone may or may not be what you want.

With this consideration, you should also have a short text near the field showing the format you are expecting. This will make things easier for the person entering the data. For example, every time I see a database form requesting my phone number, I wonder how they want me to enter it. Some prefer 10 digits, others format it in various ways. This will be mentioned when we discuss how to layout a form.

1) Have the Form Navigator open and the main form or subform selected that you are working in.

2) Have the Properties dialog open. (Click the Control tool to do this if it is not already open.
3) Click the Pattern *field* tool and draw the outline of the field where you want it.
4) Click the General tab if it is not already selected.
5) In the Label field property, click the ellipse (…) to select the label that belongs to the field.
6) *Edit mask*: Enter the code for each character for this mask.
7) *Literal mask*: Enter an underline ( _ ) for each character to be entered and any characters that will be shown in the field but not entered. (Compare the first 2 postal codes.)
8) *Strict format*: Change this to Yes if it is not.

Click this link to return to Index of tools used to create labels and fields.

**Group Box**

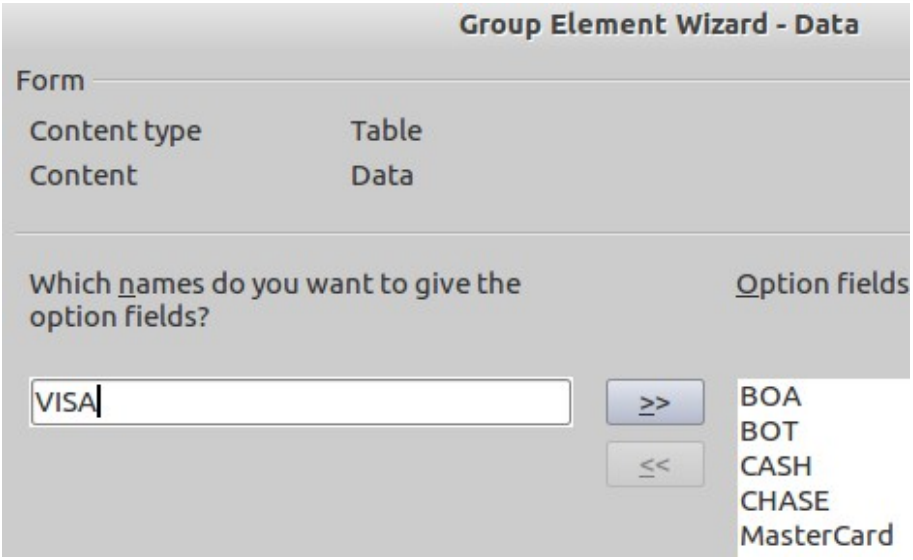
This tool will create a field that contains option buttons. By clicking one of these, an entry is made in a field. (Option buttons are mutually exclusive selections whereas using multiple check boxes are not.)

This does not require a label since the second property in the Properties dialog will give the group box a label. Also, the label options are added if you use the wizard for selecting the the options and the values they have when selected.

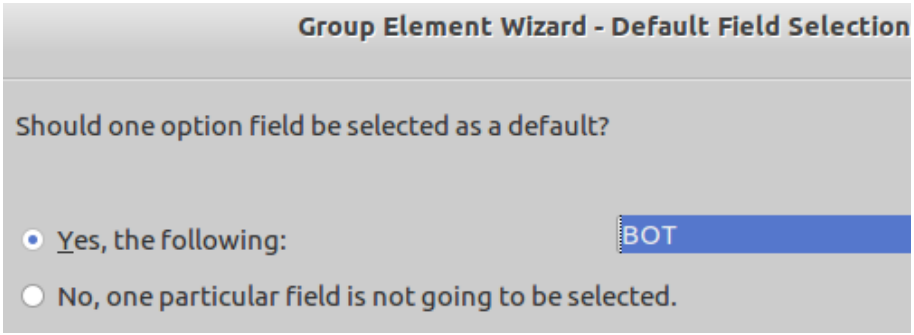
You can create the same field with option buttons by creating the individual option buttons and grouping them together similar to grouping a label-field pair. However, using the wizard is quicker and requires fewer steps.

This is how you use the wizard to create a group box.

1) Click the Wizards On/Off tool at the right end of the Form Controls toolbar. 
2) Click the Group Box tool in the More Controls toolbar. 
3) Create the Option fields:
   a) Enter a name in the box.
   b) Click the right double arrow (to the right of the box). This adds the name to the Option fields list.
   c) Repeat a and b until all the option names are created.
   d) To remove a name from the Option fields list, click it and then click the left double arrow.
4) Click **Next**.



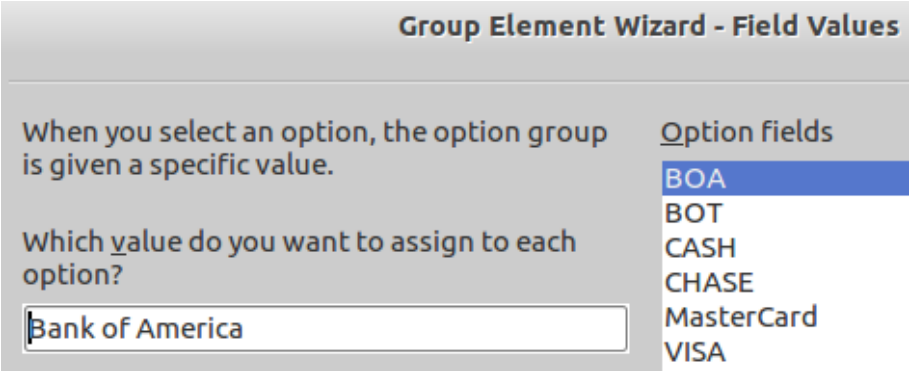

5) Select the default field (if any):
   - If you want to have an option as the default, click the Yes option button and select the name in the dropdown list.
   - If you don't want a default option, click the No option.
6) Click **Next**.




The wizard by default assigns a number to each Option field beginning with 1 at the top. Feel free to change the numbers to whatever you need.

Usually your selection of an option button enters its value in a database field. Its field type determines what values you can use in the box. In most cases, the field uses text, but this is not a requirement.

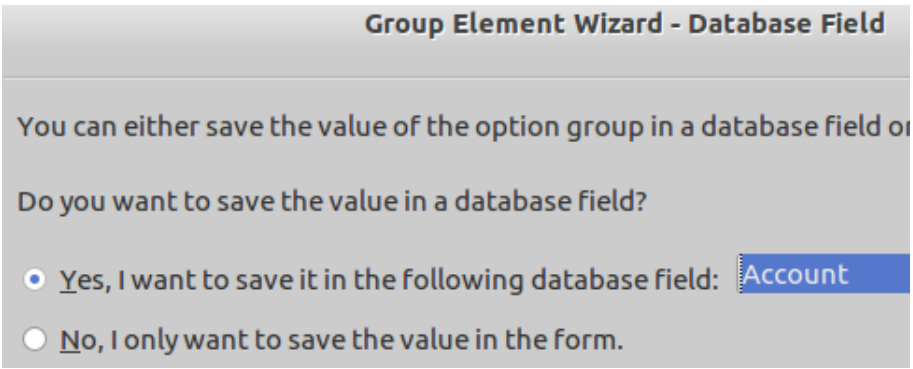
7) Setting the values for the members of the Options fields list:
   a) If you want to use the default values, go to 8.
   b) For each member of the listed
      i) Select it.
      ii) Change the number in the box to the value you want.
8) Click **Next**.




The next question is whether you want to enter these values into a database field, or save it as part of the form. When a form is part of a database, the selected value is most often saved in a database field. Group boxes in a Writer form may want to save the selection as part of the form.

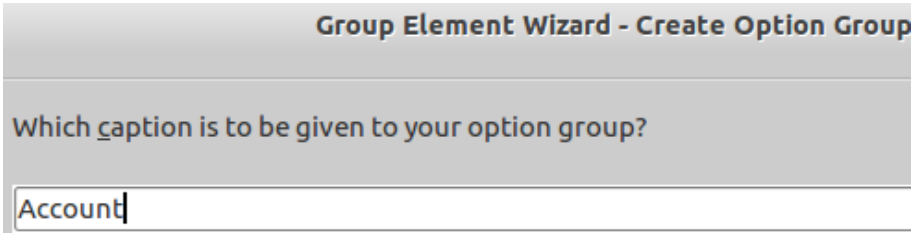
If you are going to save the value in a database field, you select its name in the dropdown list.

9) Selection of a database field into which the value is entered:
   - If your selection is Yes, also select the name of the field from the dropdown list.
   - Or, select No.
10) Click **Next**.

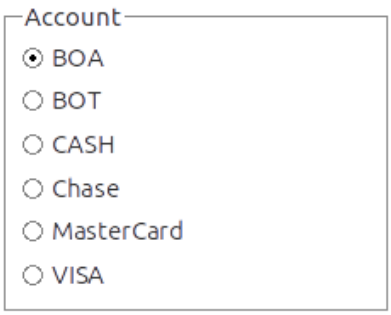



This is why you do not need a label group box when using the wizard to create it: it gives the box a caption (label).

11) Enter the name for the Option group (Group Box).
12) Click **Finish**.



This is a snapshot of what the wizard has created:




This can be done using a label field and 6 options created one at at time. That discussion is next.

Click this link to return to Index of tools used to create labels and fields.

**Option button**

The option button can be used by itself, or multiple option boxes can be used in a group as in the graphic above. The former has two possibilities: either it is selected or it is not. The latter provides a multiple choice of mutually exclusive options.

A single option button does not need a label because it has a label property. With a group of option buttons, this is used to label (caption) each option button. So, the group needs a label to identify the group.

To create a single option button:

1) Have the Form Navigator open and the main form or subform selected in which you are working.
2) Click the Option Button tool in the Control toolbar. 
3) Draw the Option button where you want it. Make sure it is wide enough for its label.

The specific properties that apply to options buttons are in the General and Data tabs. The former only has 2: *Label*, and *Default status*. The latter has 4: *Data name, Input required, Reference value (on),* and *Reference value (off)*.

Usually, in the General tab you enter the name of the field to which option button is linked in the Label property. Otherwise, use whatever name you need. Make sure you also set the default status property.

In the Data tab, select this field from the dropdown list. And select whether an input is required or not. Finally, the reference values determines what is entered into the field. What you enter in the *Reference value (on)* is entered when the option button is selected. What you enter in the *Reference value (off)* is entered when the option button is deselected.

For example, the database associated with the Base Guide has a field for reconciling financial transactions to bank statements. Setting *Reference value (on)* to Yes and *Reference value (off)* to No, we accomplish our purpose. The form shows whether a transaction has been reconciled or not, and the Reconcile field has a Yes or a No as to whether a specific row has been reconciled or not. (Each row contains one transaction.)

4) Open the Properties dialog if it is not open. (Use the Control tool to do this.
5) Click the option to select it.
6) Click the General tab.
   - In the *Label* property, enter the name you want to follow the option button.
   - *Default status* property: Select from the dropdown list whether the button is *Selected* or *Not Selected*.
7) Click the Data tab.

a) If you are going to use the option button to enter data in a database field, select it from the Data field property.
b) Select whether an input is required or not.
c) *Reference value (on)*: What you enter here will also be entered into the field when this button is selected.
d) *Reference value (off)*: What you enter here will also be entered into the field when this button is **not** selected.

Creating a group of option buttons involves many of the same steps with a small addition: creating a label for the group. There is one exception though. With a group, you only enter a value for *Reference value (on)* for each option button. You will have no need for *Reference value (off)*.

When creating the label field, you will be only drawing the outline of it using the Label Field tool. The properties or the label and the individual options buttons will be defined after the outline of each is drawn.

| **Tip** | When you use a tool to draw the outline of a control, the cursor remains a cross-hair. This means you can continue to draw additional controls with the same field type as the previous ones. Specifically, you can click the Option Button tool one time and draw several option buttons one after the other. |
|---|---|

1) Have the Form Navigator open and the main form or subform selected in which you are working.
2) Click the Label Field tool, and draw the approximate sized outline for the label.
3) Click the Option Button tool in the Control toolbar. 
4) Draw the Option button where you want it. Make sure it is wide enough for its label.
5) Draw the rest of the option buttons you need for the group of buttons. (Where you place them with respect to the previous buttons depends upon how you want to them placed together.)

The properties for the buttons are assigned individually. The Label property will contain the caption (label) for the individual button and the default status is selected. Finally, selections are made for the top three properties in the Data tab. With the Properties dialog is open, you can select a option button and assign its properties. Then select another button, and the Properties dialog changes to the properties from the previous selection to the present.

| **Tip** | Any time you have several options buttons you are assigning properties to, you need to have a plan as to how you will select all of them, one at a time. Selecting them from top to bottom works in a column or from left to right or right to left works in a row. It is your choice. Once you have your plan, you can define the properties of all of them selecting them one at at time. |
|---|---|

1) Have the Form Navigator open and the main form or subform selected in which you are working.
2) Have the Properties dialog open. (Use the Control tool if necessary to do this.)
3) Create the Label for the group.
   a) Click the Label Field tool and draw the outline of the label field where you want it. (See Label Field if you need help.)
   b) In the Label property, enter the name for the group of option buttons. Make any additional modifications to the properties in the General tab you want.
4) Select the option buttons.
   a) Click the Option Button tool. 

b) Draw the outline of the option button field. Draw it below the label field and wide enough to contain its caption.

c) Repeat b) drawing each below the previous one until you have drawn all of the option buttons needed for the Group Box.

5) Select the properties for each option button.

a) Click the first option button according to your plan.

i) General tab:

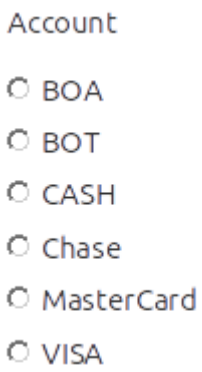
- In the Label property, enter the caption for the button.
- *Default status* property: Select from the dropdown list whether the button is *Selected* or *Not Selected*. (At most only one of the option buttons can be selected.)

ii) Data tab:

- *Data field*: Select the field into which the option button will enter data.
- *Input required*: Select Yes, if an input is required.
- *Reference value (on):* What you enter here will also be entered into the field when this button is selected.

b) Repeat the steps in a) until you have done them for each option button.

The below figure shows the partially created group box consisting of one label, and 6 optional buttons. To be done yet: arrange the parts so they are aligned horizontally, standardized the distance between them, group them into one control, and draw a box around them all using the Drawing toolbar. All of this will be done when we complete the layout of the form.




Click this link to return to Index of tools used to create labels and fields.

**Push Button**

This is used for running macros which are not discussed until chapter 8 of the Base Guide. The push button is created the same way as the others are: click the tool and draw the outline. Then select the properties you want for it.

The Label property is shown centered in the button, and a graphic can be placed inside it. You will need to modify the font property to make sure the label can be read over the graphic.

## Form layout

This involves three objects: any text, separate areas for the main form or subforms, the controls, and the background. This is the general pattern I suggest you follow. However, as you progress, you may see the need to make some adjustments in what you have already done. This is normal.

You may find that you have to make adjustments several times before you are satisfied. After everything else is done, a background can be added from the Gallery or a graphic file. (I periodically use a digital photo as a background for a form.)

### *Added text to a form*

Text can be used for a variety of purposes. You can give the entire form a title. You can also give the main form and any subforms titles as well. You may want to write an explanation for a part of the form. If you have any Pattern fields, you should use text to demonstrate the format used in them.

Each form is a text document created by Writer. So, it depends upon styles to determine its properties.

| **Tip** | The Writer Guide contains detailed instructions on how to apply styles. While we do not have the space to describe all of these, you can use the guide to learn how to apply the styles we do not discuss. Then experiment with an form used as an example. |
|---|---|

When you create a form, it contains one empty paragraph at the top of it. You create additional paragraphs by repeatedly using the *Enter* key. This permits you to vertically place a title where you want it. With the use of the *Space* key, you can horizontally place title as well.

With multiple paragraphs in the form, you can anchor controls to one of them instead of anchoring all to the top paragraph. Then the controls of the main form (or a subform) can all be linked to the same paragraph. The title can be placed in it as well. Then you can move the title and all of the controls associated with it at one time by moving the paragraph.

### Styles and Formatting window

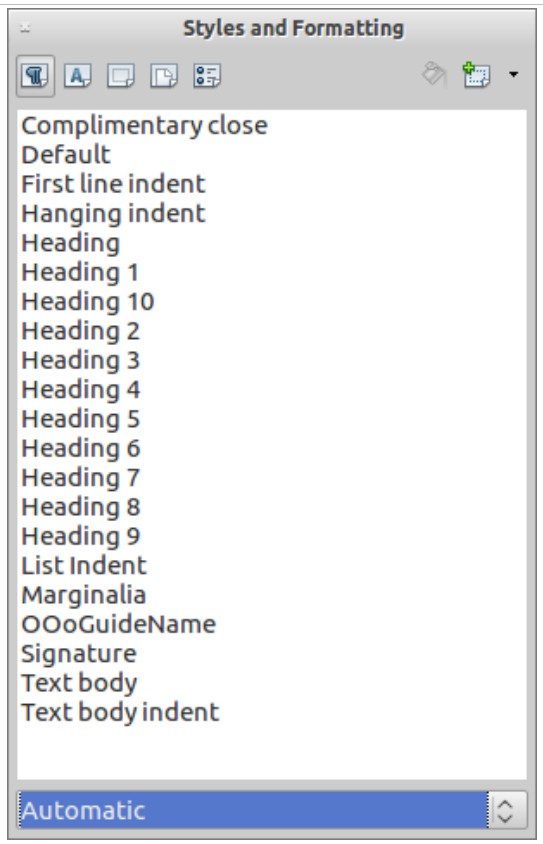
Whether you are creating a title or placing text in the form, you should use this to define the properties of the styles you use for either. It has lists of styles for each one of these categories: paragraph, character, frame, page, or list.

| **Note** | It also contains the format paintbrush with which you can apply a style by selecting an area with the cursor. And for the person who would like to use some styles from another document, it has *New Style from Selection*. Both are explained in the Writer Guide. |
|---|---|

To open this, use the *F11* key. This opens a floating window. You can dock this by holding down the *Control* key while double clicking between these two icons:  The window docks on the left side of the LibreOffice window. When you don't need it, use the *F11* key again to close it. And if you no longer want it docked, you can put the cursor between these two icons and drag the window to wherever you need it. This includes dragging it to the right side of the LibreOffice window to dock it there.

Some people work well with it being a floating window, and others prefer to dock it. The choice is yours. I use it so often that I have mine docked.

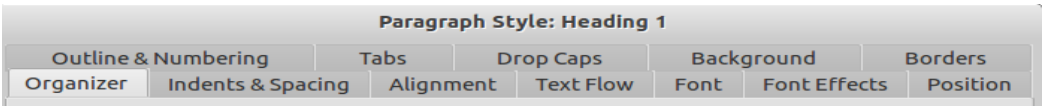
At its bottom you see a dropdown list. The default value is *Automatic*. Its lists contain the styles that most people will probably use. There are 11 other choices in this list, and each has its own set of styles.




This window is opened with Paragraph Styles selected (the left icon is highlighted). For any titles we need in the form, the Heading styles numbered 1-10 will work well. The Heading style, itself is only used to define the properties that all headings have. The numbered Heading styles are linked to it which gives each of them these properties. For normal text, *Text body* is a good choice.

Each style can be modified by right clicking it and selecting **Modify** from the context menu. This opens a dialog containing several tabs of style settings. The title on the dialog's banner tells you whether it is for a paragraph, character, frame, page or list style and its name.

The dialog has 12 tabs. The ones we will discuss are *Indents & Spacing, Alignment, Font,* and *Font Effects*. You may find a use for some of the others as well. *Background* and *Borders* can be used when organizing the parts of the form (main form and any subforms).




Entries in the *Indents & Spacing* tab determines

## Titles

Included in these are one for the form, one for the main form (if there is a subform), for the subforms, and for an area you want identified. For example, a grocery list form might contain titles for the vegetables, meats, dairy products, vitamins, frozen foods, … Each of these may have different font sizes, colors, alignments, and different spacing. Some of them may have the same properties. In our example, you might want the titles for types of food to use common properties. Or, you might want each to differ from the others to call attention to the differences.

The form contains one empty paragraph that begins at the upper left corner.

1) Text in the form
    a) Titles
    b) explanations
2) Dividing the form into parts (main form, subforms)
    a) including separating lines
    b) box surrounding a part
3) Controls
    a) Anchoring controls within their part
    b) Changing the size of a control
    c) Changing the location of a control
    d) Changing the location of a group of controls for centering purposes.
    e) Modifying control background and border
    f) modifying relative positions of a control's label and field
4) Background
    a) Gallery
    b) Graphic file

**Step 6: Test the form with sample data**

***Background of form (colors, picture, items from gallery)***

## Create a database with Base and then Connect to it using Base

10/18/12