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HOW-TO

Written by Elmer Perry

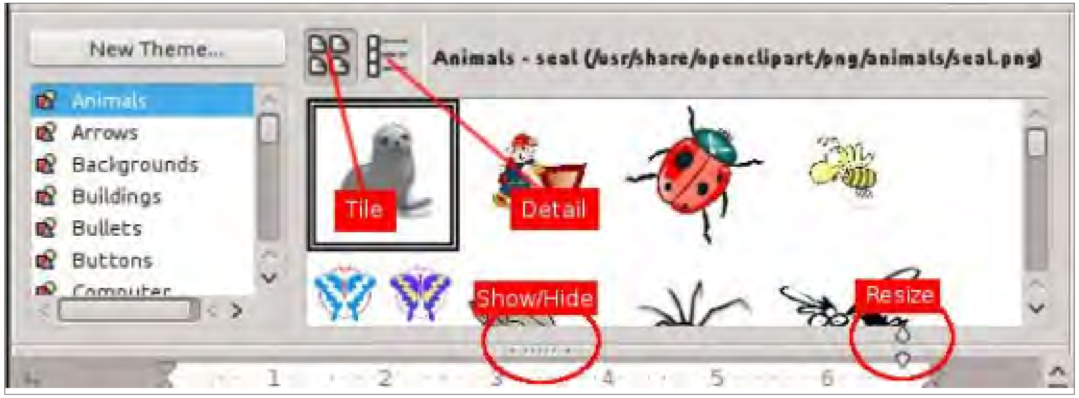
LibreOffice Pt35: The Gallery

Collecting clip art for use in your newsletter, spreadsheet, presentation, or other document can become a timely task. Especially when it comes to organizing – and later finding – the image you want to use. LibreOffice provides a built-in Gallery for collecting and organizing images, sounds, and videos. The Gallery collects files into categories called themes. You can add files from the Gallery directly into your document. Creating new themes allows you to add your own files into the collection.

The Gallery

You can access the Gallery in three different ways, through the menus (Tools > Gallery); by a button on the standard toolbar; and through a panel on the experimental sidebar. By default, the Gallery is docked under the formatting toolbar. You can undock and dock the Gallery with the combination of CTRL + double-click on the border of the Gallery. Use the hide/show button on the lower border to display and hide the Gallery while it is docked. If you hover over the lower border, your mouse cursor will turn to a double arrow, and you can resize the docked Gallery's height.

On the left side of the Gallery is the themes list. Selecting a theme changes the files which display in the main panel. The main panel shows the files available in the currently selected theme. Above the main area are two buttons for displaying the files – in tile or detail view. Beside the buttons, it shows the theme name, file name, and path for the selected file.



Using the Gallery

The Gallery allows you to insert a file as a copy, a link, or a background. When you insert the file as a copy, the file is embedded into the current document and is not reliant on another file. If you insert the file as a link, a reference to the file is created in the document. If you opened a document with linked files, the files will show only if they are in the location referenced in the document. If the file needs to travel among multiple computers, insert a copy. If the document will reside on only one computer, you can safely insert a link.

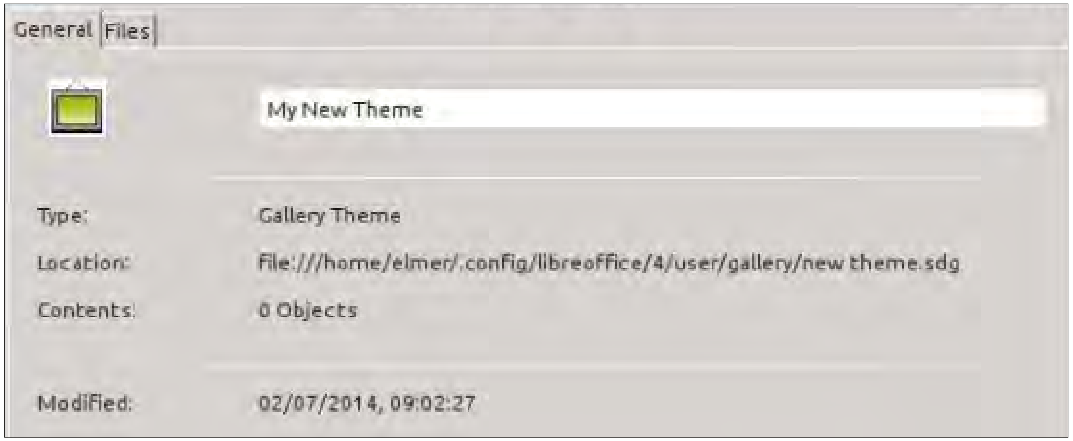
To insert a copy of a file from your Gallery into the document, select the theme containing the file and select the file. You can then drag and drop the file into your document, or right-click the file and Insert > Copy.

To link a file from your Gallery into a document, select the theme and file. Hold down SHIFT + CTRL while dragging and dropping the file into the document, or right-click then Insert > Link.

Sometimes, you will want to use an image as the background for a page or a paragraph. To set an image as the background for a page, select the theme and image. Right-click the image and Insert > Background > page. To set the image as the background for the current paragraph, right-click the image and Insert > Background > Paragraph.

Managing the Gallery

A nice feature of the Gallery is the ability to add your own files to the collection. You cannot, however, add to, remove from, or delete the default themes. In order to add your own files to the Gallery, you will have to create your own themes. You add your own theme by clicking on the “New



My New Theme

Type: Gallery Theme

Location: File:///home/elmer/.config/libreoffice/4/user/gallery/new theme.sdg

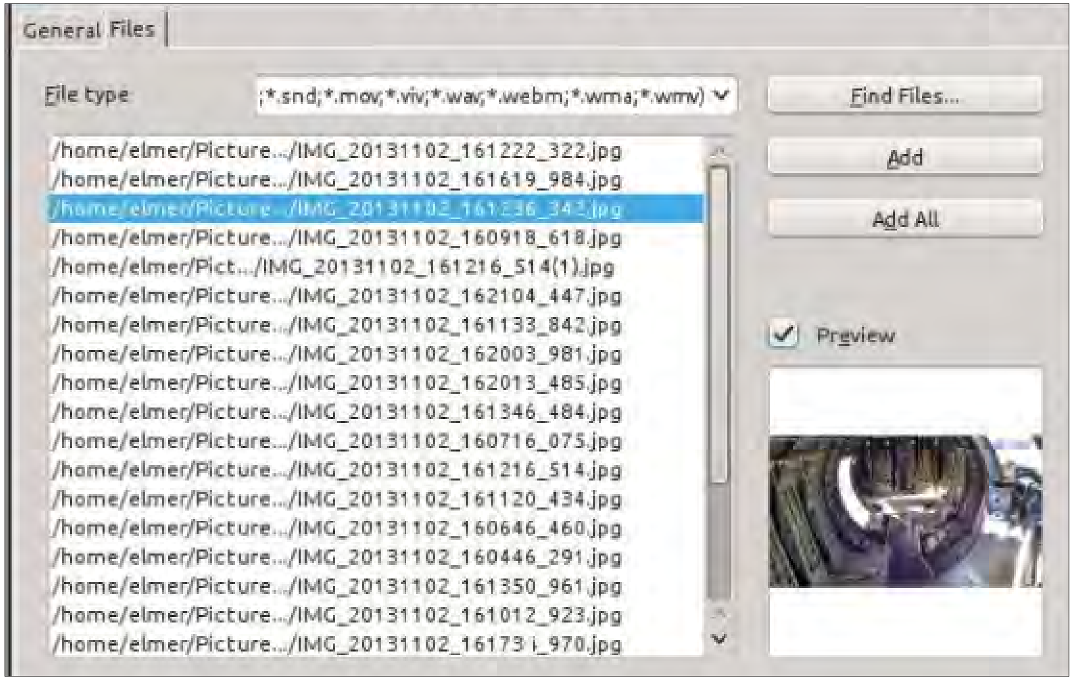
Contents: 0 Objects

Modified: 02/07/2014, 09:02:27

Theme” button, which opens the “New Theme” dialog. In the “General” tab, enter the name for your new theme. You can now add files to your theme in the “Files” tab or just click “OK” to save the theme.

Adding files to the theme you just created is easy. You can add files one at a time by dragging and dropping them into the main panel with your theme selected. To selectively add files or to add an entire folder, right-click on the theme title and click “Properties.” A theme “Properties” dialog will display. This is the same dialog you get when adding a theme, so you can use this method to add files when you create a new theme. Select the “Files” tab, then click “Find Files.” Use the file dialog to navigate to the folder containing the file(s) you want, and click “Select.” A list of files in the folder will display in the list box. Use the drop-down box above the list to filter the files if needed. Take time to scroll through the filter list to get an idea of the many file formats the Gallery accepts. For image files, you can get a preview by checking the “Preview” check box. Once you find the file you want, you can select it and click “Add” to add it to the theme, or click “Add All” to add all the files in the list box.

You won't always add files to the Gallery with the intention of keeping them there indefinitely. You may want to just add them while working on a certain project. Once the project is done and you no longer need them, you will want to delete the files and themes



File type ;*.snd;*.mov;*.viv;*.wav;*.webm;*.wma;*.wmv)

```
/home/elmer/Picture.../IMG_20131102_161222_322.jpg
/home/elmer/Picture.../IMG_20131102_161619_984.jpg
/home/elmer/Picture.../IMG_20131102_161236_342.jpg
/home/elmer/Picture.../IMG_20131102_160918_618.jpg
/home/elmer/Pict.../IMG_20131102_161216_514(1).jpg
/home/elmer/Picture.../IMG_20131102_162104_447.jpg
/home/elmer/Picture.../IMG_20131102_161133_842.jpg
/home/elmer/Picture.../IMG_20131102_162003_981.jpg
/home/elmer/Picture.../IMG_20131102_162013_485.jpg
/home/elmer/Picture.../IMG_20131102_161346_484.jpg
/home/elmer/Picture.../IMG_20131102_160716_075.jpg
/home/elmer/Picture.../IMG_20131102_161216_514.jpg
/home/elmer/Picture.../IMG_20131102_161120_434.jpg
/home/elmer/Picture.../IMG_20131102_160646_460.jpg
/home/elmer/Picture.../IMG_20131102_160446_291.jpg
/home/elmer/Picture.../IMG_20131102_161350_961.jpg
/home/elmer/Picture.../IMG_20131102_161012_923.jpg
/home/elmer/Picture.../IMG_20131102_161731_970.jpg
```

created for the project. To delete a file from a theme, right-click the file and select “Delete.” You can also delete a theme with all its files by right-clicking the theme title and selecting “Delete.” Keep in mind that there is no undo for these actions, and that deleting a file from the Gallery does not delete it from the computer, just from the Gallery’s theme list.

LibreOffice provides a media library called the Gallery. The Gallery is divided in collections called themes. You can add your own themes and files to the Gallery. If a file or theme is added only for a certain project, you can delete them when the project is finished. The Gallery is available in all modules of the suite, and helps you to maintain consistency for newsletters, spreadsheets, presentations, databases, and reports.

Elmer Perry's history of working, and programming, computers involves an Apple][E, adding some Amiga, a generous helping of DOS and Windows, a dash of Unix, and blend well with Linux and Ubuntu.
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Written by Elmer Perry

LibreOffice Pt36: Base Views

If you work with Base long enough, you will run into a situation where you need a table structured a little differently, or you'll need the results of a query as a table you can use. The answer to these problems is 'Views'. A view is a query which acts like a table you can use in other queries, forms, or controls. Today, I will show you an example of how this is useful when creating forms.

Our Tables

We are going to create a simple database with two tables. The database will track projects for a company and allow us to assign a team member to each project. Below is the structure of the tables we will create.

Project Table

Field	Type	Properties
ID	Integer	Primary Key, Auto Increment
Title	varchar(50)	Not Null
Description	varchar(250)	
Due	Date	
MemberID	Integer	foreign key

TeamMember Table

Field	Type	Properties
ID	Integer	Primary Key, Auto Increment
FirstName	Varchar(25)	Not Null
LastName	Varchar(25)	Not Null

Shown right is the SQL to create the tables. Create a new database document, then go to Tools > SQL, and type the commands in by hand or copy and paste.

You can also get the above SQL commands on pastebin.com at http://pastebin.com/Wyb3R5Fz.

The key to our task is the foreign key "MemberID" in the "Project" table, which connects to the "TeamMember" table's "ID" field. When we create our form we will create a drop-down list for selecting the team member who is responsible for the project. Notice that the "TeamMember" table provides first and last name fields. The list control allows us to use only one field in the list. We could display just the last name in the drop-down list, but what if two team members have the same last name. We will solve this problem by creating a view that will combine the first and last name into one field called "Name". We will use our view to populate the drop-down list box.

```
drop table "Project" if exists;
drop table "TeamMember" if exists;

create table "TeamMember" (
   "ID" integer generated by default as identity
      (start with 1) not null primary key,
   "FirstName" varchar(25) not null,
   "LastName" varchar(25) not null
);

create table "Project" (
   "ID" integer generated by default as identity
      (start with 1) not null primary key,
   "Title" varchar(50) not null,
   "Description" varchar(250),
   "Due" date,
   "Member" integer,
   constraint FK_MEM foreign key ("Member")
      references "TeamMember" ("ID")
);
```

If the tables do not show in your table list after running the commands, Review > Refresh Table will populate the list.

Create Query / View

To create our view, we will use a two-step process. First, we create a query, then convert the query into a view. In our query, we combine the first and last name fields to create one field. We will also get the "ID" field, as we will need it to connect back to the "Project" table.

To create the query, we select the "Queries" option in the "Database" pane. In the "Actions" pane, select "Create Query in SQL View." The follow SQL command will create our query:

```
SELECT "FirstName" || ' ' ||
"LastName" AS "Name",
   "ID" FROM "TeamMember";
```

If you are familiar with SQL, this looks like a standard query except for the double pipe symbols "||". They are used to concatenate strings together. In the command, we select each "FirstName" and join it to a space, then take the result and join it to "LastName." Finally, we name this string "Name." We also get the "ID" as it identifies each record. You can test the query to make sure it works, but at this point your results are blank, but the query should run without error. Save the query as "QueryTeam".

Turning the query into a view is as simple as right-clicking the query name and selecting "Create as View." Name the view "TeamView." If you select "Tables" under the "Database" pane, you will see "TeamView" listed under the tables.

Create the Forms

We will create a team member form and a project form for data input. The team member form is the easiest, so let's make it first. Click on the "Forms" icon in the "Database" pane and select "Use Wizard to Create Form." The form wizard will display.

On the first screen, select "Table: TeamMember" from the drop-down box. Move the "FirstName" and "LastName" fields into the list box labeled "Fields in the form." Click the "Next >" button. There is no subform so just click "Next >" again. On step 5, use any of the options for arranging the controls except tabular. On step 6, just accept the defaults. With Step 7 pick a style that you like. When you get to step 8, name the form "TeamMemberForm" and leave it on "Work with the form." When you click the "Finish" button, the form will open for input. Add a few names for testing the project form when we finish it.

For the project form, we need about the same thing, except use "Table: Project" from the drop-down in step 1, and select all the fields except for "ID" for inclusion in the form. Name the form "ProjectForm" and select "Modify the form" on step 8. This time, instead of the form opening for input, it opens for editing.

When you create forms using the form wizard, the wizard groups a text box for most data types with a label for each field. In order to change the control for the data field, you have to ungroup the text box from the label. In our case, we want to change the "Member" field, so right-click the "Member" label and text box and select Group > Ungroup. Click on the form background to unselect both. Right-click on the text box and select "Delete." From the forms toolbar, select the list box. If the form toolbar is not showing then View > Toolbars > Form Controls to display it. Once you select the list box, your cursor will become a crosshair, +. Click and drag to create the list drop-down box. When you release the mouse button the list box wizard will pop up.

Select "TeamView" as your table and click "Next >". The field we want to fill the list box is "Name", so select "Name" and click "Next >". Finally, we need to match the fields from the two tables. For the "Value Table" select "Member". "ID" is the field to select for "List Table" as it is the primary key that matches up with the "Member" foreign key field in the "Project" table.

Save your changes and close the design window.

Now, if you entered names in "TeamMemberForm", you can open the "ProjectForm" and those names will appear in the drop-down list box we created. You will want to test creating several projects and assigning members to them to test the workability of your forms.

In this article, we discussed the use of a LibreOffice Base view to create a new table from an existing table. We used this view in the construction of a form that automated the retrieval and selection of records from that view.

Elmer Perry's history of working, and programming, computers involves an Apple][E, adding some Amiga, a generous helping of DOS and Windows, a dash of Unix, and blend well with Linux and Ubuntu.
He blogs at http://eeperry.wordpress.com

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HOW-TO

Written by Cork Marino

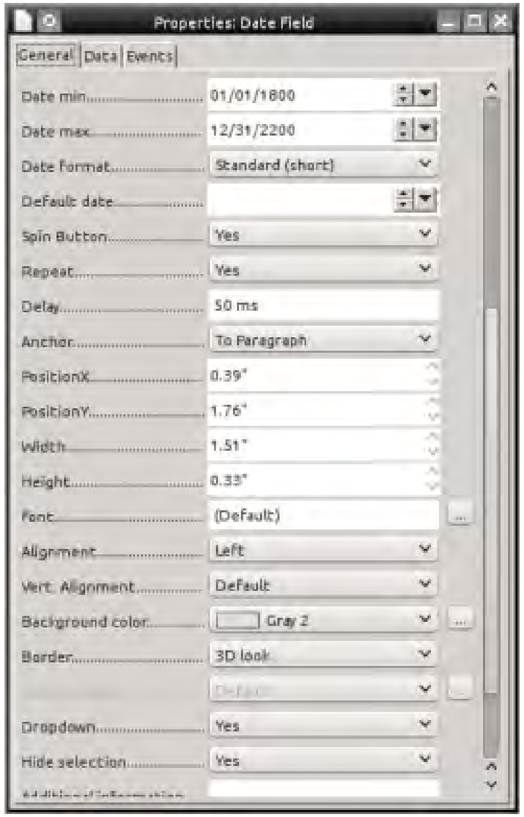
LibreOffice Pt.37 - Base Form Improvement

In my article in issue 83 of Full Circle Magazine, I walked you through creating a form that used a view, but I left things unfinished in the forms: I didn't do anything to format the controls to ensure data integrity. If you haven't already done so, read the article in Full Circle 83, and follow along to create the tables and forms. We will work with the "ProjectForm," and see how we can improve data integrity. I'll wait if you need to work through the How-To in issue 83.

Date and Time Controls

Now let's get down to work. On the "Forms" pane in the database file you created, right-click the "ProjectForm" and select "Edit". As I have said before, the wizard usually joins a label with an input box, but in the case of date and time fields, it actually pairs them up with date and time controls. Without any formatting, they just look like text input boxes, but trust me, they are date and time controls. We will need to ungroup the control from its label in order to work with the date control. Right-click the "Due" label or date control, then select Group > Ungroup.

Double-click the date control to bring up the control's properties dialog. On the "General" tab, you find all the adjustments you can make to the control. We are interested in the ones that create adjustments for date entry.

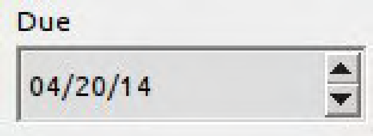


Date min	01/01/1800
Date max	12/31/2200
Date format	Standard (short)
Default date	
Spin Button	Yes
Repeat	Yes
Delay	50 ms
Anchor	To Paragraph
PositionX	0.39"
PositionY	1.76"
Width	1.51"
Height	0.33"
Font	(Default)
Alignment	Left
Vert. Alignment	Default
Background color	Gray 2
Border	3D look
	Default
Dropdown	Yes
Hide selection	Yes

Date Min / Date Max – These two options allow you to control the minimum and maximum date values allowed in the fields. These fields have default values of 01/01/1800 for minimum and 12/31/2200 for maximum. In general applications, these defaults should work, but if you have different needs, feel free to adjust. An example is an inventory database, where no shipping invoices dated before the inception of the company is necessary. You could set the minimum date to the opening day.

Date Format – There are 12 different date formats. This option determines how the control will display the date. Scroll through the options and see which one best suits your application.

Default Date – This is a default value for the field. If you have a date that users should use most of the time, then use that date. It will speed up data entry. It can also show the user the format in which to enter dates. Unfortunately, at this time, you cannot easily set the default to the (current) date the record was added.



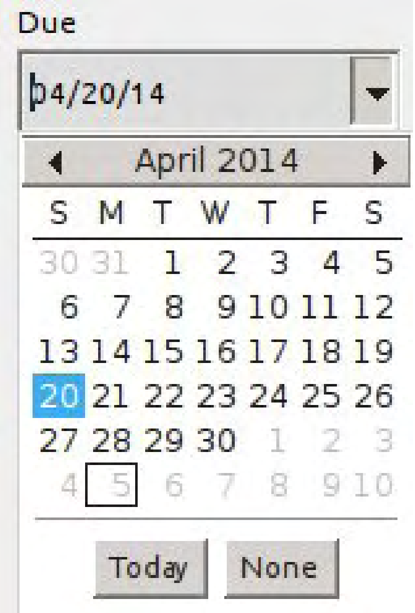
Due

04/20/14

Spin Button – Setting this option to Yes will put an up-and-down spin button on the control. The user can use this button to adjust the month, day, and year. The user clicks into the part of the date they want to adjust and makes changes by clicking on these buttons. Very handy for data entry.

Repeat – The Repeat option is related to the spin button option. It controls whether to repeat when you hold down the mouse button on the spin button. Use at your own discretion. Sometimes, it makes sense. Other times, not so much.

Delay – The Delay option controls the speed of the repeat option. A longer delay means you have to hold the button down longer before it will repeat. The default is "50 ms" (milliseconds).



Due

04/20/14

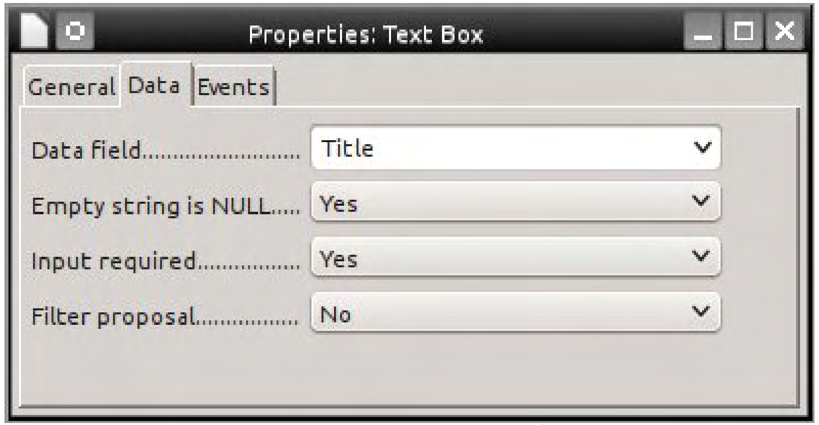
April 2014

S	M	T	W	T	F	S
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	1	2	3
4	5	6	7	8	9	10

Dropdown – Dropdown adds a listbox style arrow to the control. Clicking it displays a calendar where you can select the date you need.

NOTE: You can use the Spin Button and Dropdown options together to create a flexible control.

After you make your adjustments to the control, save the form and close it. Open the form and test your newly adjusted date control. Feel free to experiment with the different control options to get a better idea of how they work. The options for a time control are the same as the date control except you don't have the Dropdown option.



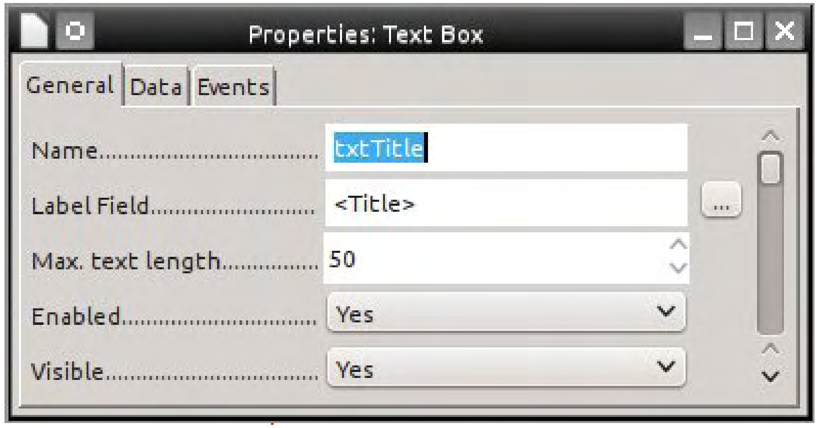
Properties: Text Box

Data Field: Title

Empty string is NULL: Yes

Input required: Yes

Filter proposal: No



Properties: Text Box

Name: txtTitle

Label Field: <Title>

Max. text length: 50

Enabled: Yes

Visible: Yes

Making the Title Mandatory

Now that we have set up the date control, let's tackle some possible issues with the "Title" field's input box. When we created the field, we set its maximum length at 50. However, as the input box stands now, we can type more than 50 characters into the box. Trying to save the record with more than 50 characters in "Title" results in an SQL insert error. Also, when we created the table, we declared "Title" as "NOT NULL." We want to make the "Title" a mandatory entry for each record. The "NOT NULL" status prevents the input box from being left empty, but it is still possible to type just a space and the form will accept the entry as valid. So, we have a few things to fix in our form.

Open "ProjectForm" for editing. Right-clicking the "Title" label or input box, Group > Ungroup. Now, double-click the "Title" input box to bring up its properties dialog. On the "General" tab, set the value for "Max Length" to 50. This will prevent the user from entering more than 50 characters. On the "Data" tab, make sure that both "Empty String Is NULL" and "Input Required" are set to "Yes." These two settings become a redundancy check for making sure there is a valid value in the input field.

However, we still have an issue with the fact that the user can just create a "Title" with spaces. To fix this issue, we will need to use a little SQL. I have looked for a graphical way to get the same result, but sometimes, when you work with databases, SQL is the best, if not only, choice. We will add a CHECK constraint to the "Project" table. Click on Tools > SQL. To enter the SQL, Tools > SQL... Use the following SQL command to add the constraint to the table:

```
ALTER TABLE "Project"

ADD CONSTRAINT NOSPACES_CK

CHECK(TRIM(BOTH FROM "Title")
<> '');
```

The ALTER TABLE command means we are making changes to the table, in this case the table "Project." To indicate the change we are making, we use the ADD CONSTRAINT command. NOSPACES_CK is the name of the constraint we are adding. It's not

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required that you make your constraint names all caps. I just do it as a matter of convention. The last line is the CHECK constraint. Using the built-in function TRIM, it removes all the spaces from both sides of the string and checks to make sure it is not equal to an empty string. Now, if someone tries to use a string of spaces for the "Title", an SQL constraint error is generated.

You can do the same thing for the "FirstName" and "LastName" fields in the "TeamMember" table. The "Max Length" for the name fields is 25. I suggest the following SQL for adding the constraints:

```
ALTER TABLE “TeamMember”

ADD CONSTRAINT
RNAME_NOSPACES_CK

CHECK(TRIM(BOTH FROM
“FirstName”) <> '');



ALTER TABLE “TeamMember”

ADD CONSTRAINT
LNAME_NOSPACES_CK

CHECK(TRIM(BOTH FROM
“LastName”) <> '');
```

Improving the View Query

The view we create for putting the names in the drop down list box in the "ProjectForm" is good, legal SQL, but there are a couple of problems. First, although we have prevented a name from being just spaces, the users can still add a legal name with spaces added to the beginning or end. Also, the names are not in any order.

Luckily, we can edit our view and make some additions to address these problems. Select "Tables" from the "Database" pane. Right-click "TeamView" and select "Edit in SQL View..." This brings up the SQL we used to create the view. Change the current SQL so it looks like the following:

```
SELECT TRIM(BOTH FROM
“FirstName”) || ' '
|| TRIM(BOTH FROM “LastName”)
AS “Name”, “ID”
from “TeamMember” ORDER BY
“LastName”, “FirstName”;
```

We already saw TRIM when we created our CHECK constraints. It removes all spaces from the beginning and end of "FirstName" and "LastName".

At the end, we tag on an ORDER BY command to sort the names by "LastName", then "FirstName." This means the names will first sort by "LastName", then if there is more than one of the same "LastName", it will sort by "FirstName."

With adjustments to the controls and a little SQL, we were able to make many improvements to our forms, making data input not only easier but more reliable. If you are interested in a better understanding of the SQL used in this How-To, I have a couple of resources for you.

My blog "What the Tech Am I Doing?" LibreOffice Base posts http://eeperry.wordpress.com/category/libreoffice/libreoffice-base/

W3Schools SQL Tutorial http://www.w3schools.com/sql/default.asp

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HOW-TO

Written by Cork Marino

LibreOffice Pt.38 - Contents and Indexes

Imagine a scientist, let's call him Doc Brown, who has just written a manuscript for a book describing his new theory on time travel. The manuscript is a few hundred pages long. He has broken it down into chapters and sections, but he needed to add a table of contents and an index that the other scientists, who will praise and adore his work, can use to navigate his book with ease. Luckily, he knew about LibreOffice and how to use Writer's indexes and tables tools to create a table of contents and an index. Let's see how he did it.

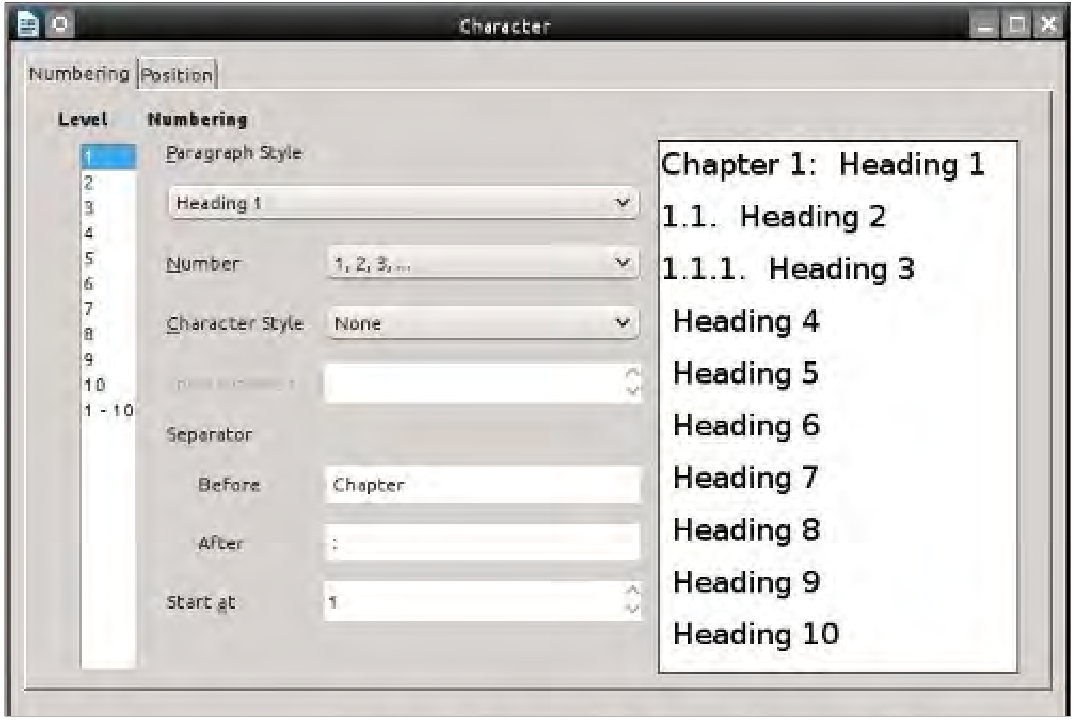
Setting Up the Styles

In many of my articles, I have emphasized the importance of using styles, but just in case you haven't got the message yet, “Using styles is the best way to save time and create uniformity in your documents.” Luckily, Doc Brown knew the importance of using styles, and he used styles to help simplify the creation of his table of contents. These are the heading styles “Heading 1[...10].”

He could edit the styles in any way he wanted for appearance, but we are interested in how he used them in the overall outline of the document.

To set up the overall outline of his document, Doc Brown opened the “Outline Numbering” dialog, Tools > Outline Numbering. Selecting each of the different levels, he noticed that each one was already assigned to a heading styles in order from 1 to 10.

Working with these defaults he selected level 1 with the paragraph style “Heading 1” assigned as its style. For the “Number” setting, he selected “1, 2, 3,...” For the “Before”, he entered “Chapter ” (note the space), and for the “After”, he entered a colon “:”. Using this method, each “Heading 1” inserted into the document would have the format of “Chapter N: Title”, where N is the chapter number.



Paragraph Style: Heading 1

Number: 1, 2, 3, ...

Character Style: None

Separator

Before: Chapter

After: :

Start at: 1

Chapter 1: Heading 1

1.1. Heading 2

1.1.1. Heading 3

Heading 4

Heading 5

Heading 6

Heading 7

Heading 8

Heading 9

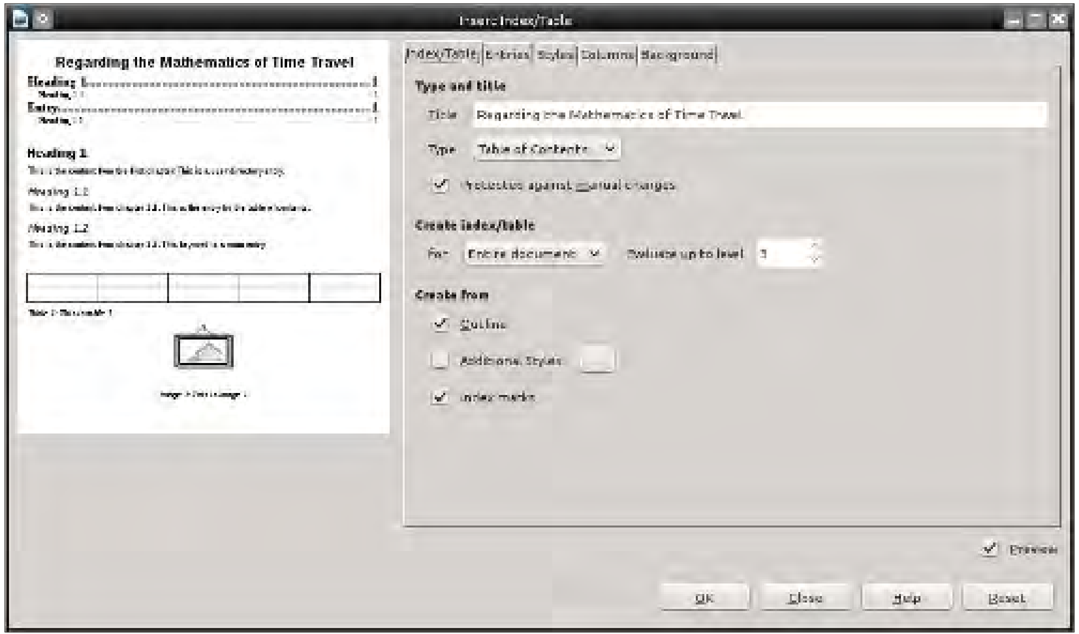
Heading 10

Doc Brown has also decided that the second and third levels needed a numbering scheme of 1.1 for the second level and 1.1.1 for the third level. On the second level, he changed “Number” to “1, 2, 3, ...”, set “Show sublevels” to 2, and added a period and space to “After.” For the third level, he set “Number” to “1, 2, 3, ...”, set “Show sublevels” to 3, and added a period and space to “After.”

With all the styles set, Doc Brown went to work on his document. He used “Heading 1” for all the chapter headings, and “Heading 2” and “Heading 3” for the subheadings within the chapters. Because he took the time to set up his styles, he could easily create his table of contents once his document was finished.

Create the Table of Contents

With the writing all done, Doc Brown was ready to create his table of contents. Placing the cursor below the last line of the



Type and title
Title: Regarding the Mathematics of Time Travel
Type: Table of Contents
☑ Protected against manual changes

Create index/table
For: Entire document
Evaluate up to level: 3

Create from
☑ Outline
☐ Additional Styles
☑ Index marks

☑ Preview

title page, he decided the table of contents should start on a new page. Insert > Manual Break brought up the “Insert Break” dialog. He selected “Page Break” and clicked OK. The cursor moved to the start of a new page.

Now, to create the table of contents. Insert > Indexes and Tables > Indexes and Tables. The “Insert Index/Table” dialog appeared. He changed “Title” to “Regarding the Mathematics of Time Travel.” For the “Type”, he made sure that “Table of Contents” was selected.

The “Create Table/Index for” gave him two options: “Entire Document” or “Chapter.” If he wanted, he could have placed a table of contents at the beginning of each chapter by inserting a table of contents after the chapter headings and selecting “Chapter” for the “Create Table/Index for.” However, he was creating the table of contents for the whole book, so he selected “Entire Document.”

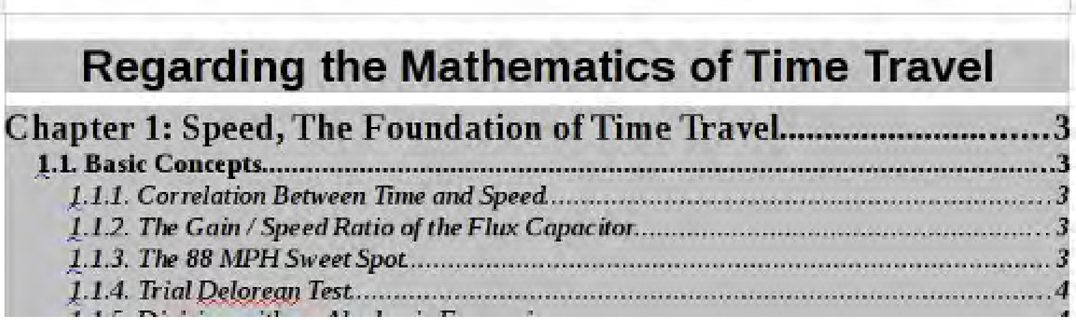
Finally, he had the “Evaluate up to level” option. Here he selected the depth of his table of contents. If he changed this to 1, only the chapter titles would show. He could then create a table of contents for each chapter to show the subheadings. In the end, he decided to show 3 heading levels in the table of contents and set this option to 3.

Doc Brown clicked OK, and the table of contents was created. Without any editing, the page numbers for the first three levels were added to the table of contents. Each new level was indented just a little to show that it was a lower level. Each title in the table of contents was a link to the heading in the document. This became handy when he converted the document to PDF and Ebook. He could have left his table of contents like this and it would have worked great, but he decided it needs just a few more added touches.

Edit the Table of Contents Styles

To change the appearance of the different levels in the table of contents itself, Doc Brown would need to edit the “Contents 1[...10]” styles. There was also the “Contents Heading” style which was used to style the table of contents title.

Doc Brown wanted the title centered, enlarged, and bold. He opened the “Styles and Formatting” dialog through the new sidebar (no longer experimental in version 4.2). He could also open the “Styles and Formatting” dialog by clicking on its button in the “Formatting” toolbar, or through the menus, Format > Styles and Formatting. He right-clicked the “Content Heading” style and selected “Modify”. On the “Font” tab, he selected bold and set the size to 20pt. He switched to the “Align” tab and selected “Center.” He clicked OK to save his changes.



Regarding the Mathematics of Time Travel

Chapter 1: Speed, The Foundation of Time Travel..............................3
1.1. Basic Concepts..............................3
1.1.1. Correlation Between Time and Speed..............................3
1.1.2. The Gain / Speed Ratio of the Flux Capacitor..............................3
1.1.3. The 88 MPH Sweet Spot..............................3
1.1.4. Trial Delorean Test..............................4

Since Doc Brown was only including the first three levels, he only needed to change the paragraph styles “Contents 1”, “Contents 2”, and “Contents 3.” The first level he wanted a little bigger and bold, since these were the chapter titles. He modified the “Contents 1” style by selecting bold and changing the size to 16pt on the “Font” tab. To distinguish the second level from the third, he set the second to bold but left the size at the default. For the third, he changed the font to italic but left the size at the default.

Doc Brown saved his document with its newly formatted table of contents. He was now one step closer to publishing his book and becoming world famous. He smiled as he imagined the raving peer reviews it would receive, but wait... what about the alphabetical index?

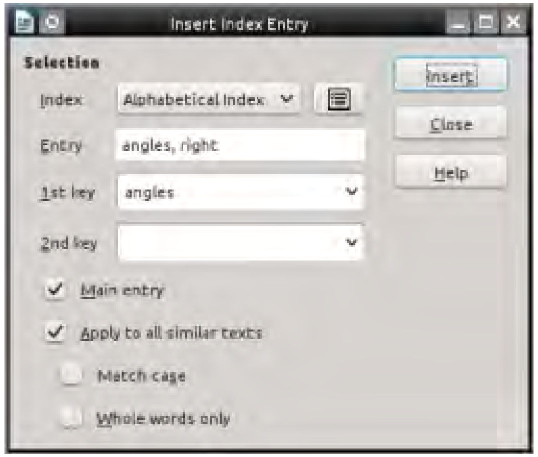
Create the Index Entries

In a book of such scientific importance, an index at the end would help researchers find a reference to certain scientific knowledge contained in the book. With the final edit completed, Doc Brown began reading through his manuscript to determine which words he would need to include in the index.

Before he created the index itself, he needed to create the index entries for the words he decided to include in the index. To get started, he selected the first word he wanted indexed; then from the menus, he selected Insert > Indexes and Tables > Entry. The “Insert Index Entry” dialog appeared.

He left the “Index” at the default, “Alphabetical Index.” If he had planned to create a custom index, he would create one using the button beside the dropdown list.

“Entry” is the word or phrase for the index, and it doesn't necessarily have to appear the same as in the manuscript. For example, he changed the term “supplementary angle” to “angle, supplementary”in the index. Even though the order of the words has changed, it continues to refer to the same place in the manuscript.



Index: Alphabetical Index
Entry: angles, right
1st key: angles
2nd key:
☑ Main entry
☑ Apply to all similar texts
○ Match case
○ Whole words only

Writer allows for two levels of “Keys” or categories for grouping indexes together. For example, Doc Brown decided that all indexes concerning angles should appear together in the index, as well as the different operators used. For the angle entries, he entered “angle” in “Key 1”, and for the operator entries, he entered “operators” in “Key 1.” Though he only created one key level in each case, he could have created two by entering a second value in “Key 2”.

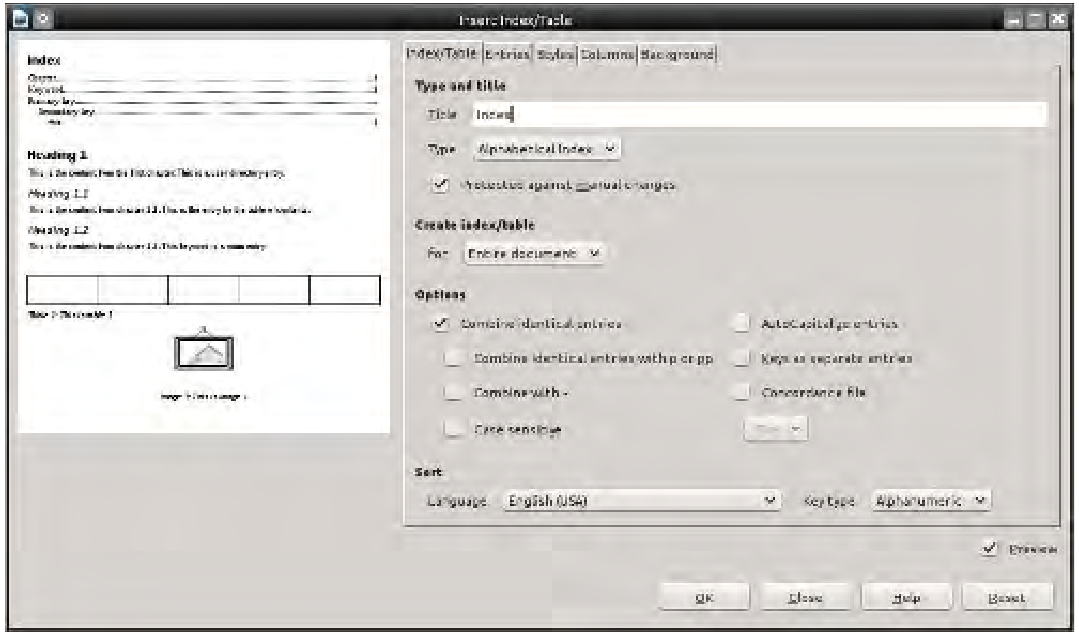
Whenever he was on the page where the main text for a topic appeared, he would check “Main Entry.” This makes the page number appear in bold numerals for that entry by default. (You can change the appearance of the main entry page number by editing the character style “Main index entry.”)

Doc Brown checked the entry “Apply to all similar text” as this creates an entry for every time the word or phrase appears in the manuscript. He left “match case” unchecked, as sometimes the word or phrase appears in a different case. He checked “Whole words only” as he does not want variations to the word or phrase indexed.

Once finished with a word, Doc Brown clicked “Insert.” Leaving the dialog open, he selected the next word or phrase in his document. When he clicked on the dialog, the new word or phrase appeared in the dialog's “Entry” field. He made the changes needed for this entry and clicked “Insert.” This ability to switch between the dialog and the manuscript makes creating the index entries quicker than if he had to open the dialog each time.

Creating the Index

Once Doc Brown completed creating his index entries, he was ready to create the actual index. He went to the last page of his manuscript, and deciding the index should start on a new page, inserted a page break (Insert > Manual Break; select “Page Break”; click OK).



Insert Index/Table

Index/Table | Entries | Styles | Columns | Background

Type and title
Title: Index
Type: Alphabetical Index
☑ Protected against manual changes

Create index/table
For: Entire document

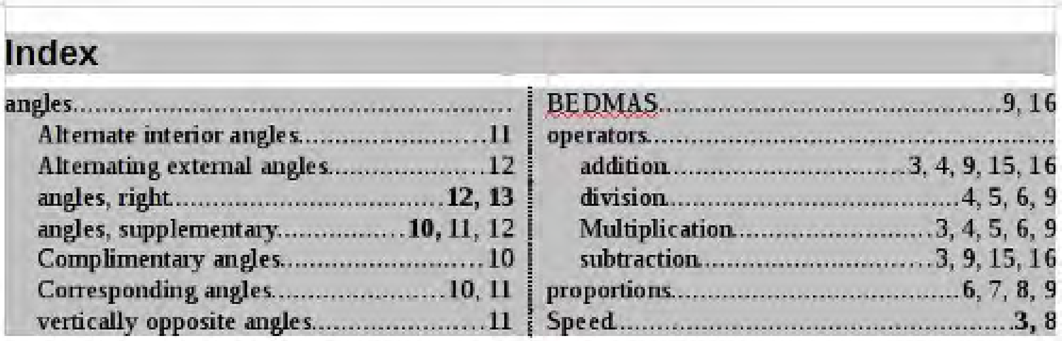
Options
☑ Combine identical entries
□ Combine identical entries with p or pp
□ Combine with -
□ Case sensitive
□ AutoCapitalize entries
□ Keys as separate entries
□ Concordance file

Sort
Language: English (USA)
Key type: Alphanumeric

☑ Preview

Insert > Indexes and Tables > Indexes and Tables, brought up the "Insert Index/Table" dialog. On the "Index/Table" tab, he selected "Alphabetical Index" for the "Type", changed the "Title" to "Index", and unchecked all entries except "Combine identical entries." This prevents the index from creating separate entries because of upper or lower case.

Doc Brown decided that the index should have two columns to conserve some space. On the "Columns" tab, he changed the number of columns to 2. To create some space between the two columns, he changed the spacing to 0.20'' (0.50cm).



Index

angles
Alternate interior angles........11
Alternating external angles........12
angles, right........12, 13
angles, supplementary........10, 11, 12
Complimentary angles........10
Corresponding angles........10, 11
vertically opposite angles........11

BEDMAS........9, 16
operators
addition........3, 4, 9, 15, 16
division........4, 5, 6, 9
Multiplication........3, 4, 5, 6, 9
subtraction........3, 9, 15, 16
proportions........6, 7, 8, 9
Speed........3, 8

Satisfied the index was set up the way he wanted it, he clicked on OK. The index then appeared on the page the way he formatted it.

Now, Doc Brown's manuscript was ready for publication. He began to dream of the raving peer reviews he would receive. Thanks to LibreOffice, he was able to add his table of contents and index rather quickly.

Elmer Perry's history of working, and programming, computers involves an Apple][E, adding some Amiga, a generous helping of DOS and Windows, a dash of Unix, and blend well with Linux and Ubuntu.
He blogs at http://eeperry.wordpress.com

Written by Elmer Perry

LibreOffice Pt.39 - Master Documents

When I was in school, I was very focused on writing, and I didn't see the value in many other subjects, especially mathematics. As I grew older, I began to appreciate and enjoy mathematics. Through the years, I have studied mathematics on my own. While I studied, I created many documents containing my mathematics notes. I decided it was time to put them all into one document with chapters, a table of contents, and an index. But how does one combine a bunch of documents into one?

I guess I could have just copied the text from one document into another big document, but this could get messy, especially since I wasn't sure about the best order for the documents. I wanted a method where I could work on the documents individually then combine them into one, and I wanted the ability to rearrange the order of the documents. In LibreOffice, you can do this with 'master documents'. You can think of a master document as a container that joins together separate Writer documents. Just the kind of thing I needed. So, I decided to use a master document.

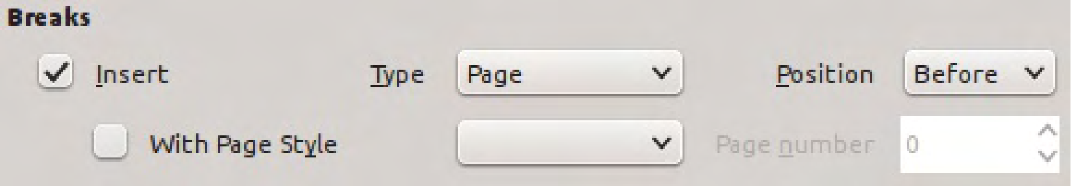
Preparing the Documents

Since the documents were scattered through several years, they were created with different versions of OpenOffice and LibreOffice. They had no style or template in common. I needed to create a template for consistency throughout all the documents and the master document.

To create my template, I started with a new blank document. While creating my template, there were a few things I took into consideration. I knew I wanted to create a table of contents, so I would need to edit the "Outline Numbering." I also wanted each chapter to start on a new page. Finally, I would need a unique title page style.

To edit the "Outline Numbering", I went to Tools > Outline Numbering. I edited the top level to put "Chapter" and the chapter number before the top level headings, just as I discussed in Part 38 of this series (Full Circle issue 85). I decided to leave the other levels bare, although I would probably include some of them in the table of contents.

To make each chapter start on a new page, I edited the outline top level style, "Heading 1." I opened the "Styles and Formatting" tab in the sidebar, right-clicked on "Heading 1" in the paragraph styles, and selected "Modify." On the "Text Flow" tab under "Breaks", I checked "Insert". For the type I selected "Page," and for the position, I selected "Before." OK saved the changes.



Breaks

☑ Insert   Type: Page   Position: Before

☐ With Page Style   Page number: 0

NOTE: You can also open the "Styles and Formatting" window from its button on the Formatting toolbar, the menus (Format > Styles and Formatting), or by pressing F11.

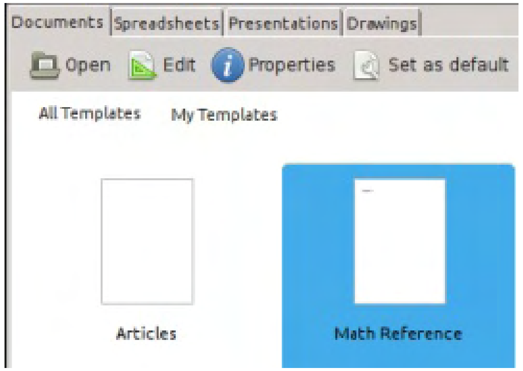
I created a page style named "Title Page" based off the "First Page" style. The only real change I made was to set the top to halfway down the page to center the title on the page vertically. I modified the "Title" paragraph style to a font and size of my liking. I also created the paragraph style "Byline" based on the "Subtitle" style. Not many changes here, just selected a font to go with the title font.

To save the template, File > Save as Template opened the Template Manager. I clicked on Save, and the program prompted me for a name for the template. I named it "Math Reference." I clicked OK, and I had a new template.

When you are creating a template, you may have other

contents ^

changes you want to make. These were the ones that I felt were a good starting point for me. You can go as far as you want with a template. In the end it is up to you. If you decide, while working on sub-documents, that you need to make more changes to styles, make the changes to the template rather than the individual document.



To make changes to my mathematics template, File > New > Templates. I selected the template and clicked the Edit button. This opened the template rather than a new document using the template. I made my changes and then saved it as though it was a normal document (Click the save button on the main toolbar, File > Save, or CTRL-S). When I opened one of the documents that uses the template, LibreOffice notified me that the template had changed and asked me to update the document with the new version of the template. I clicked “Update Styles”, and the styles updated in the document.

Now, I needed to apply my new template to my existing documents. I opened each of the documents and Edit > Select All. I then created a new document using my template, File > New > Templates. I selected my template and clicked Open. Edit > Paste and the text and objects from the original file were pasted into the new file. I closed the old document because I wanted to save it with the same filename. I saved the new document and I had the old file contents using the new template. I repeated this procedure for all the existing documents.

Creating the Master Document

To create my master document, I opened a new document using my “Math Reference” template. Selecting the “Title” style from the paragraph styles, I typed in my title. I then created the subtitle and byline. Once I had something in the document, I saved it as a master document, File > Send > Create Master Document. I gave the document a name and clicked Save. I then went to the page styles in the Styles and Formatting dialog and changed the page style to “Title Page.”

Inserting Documents

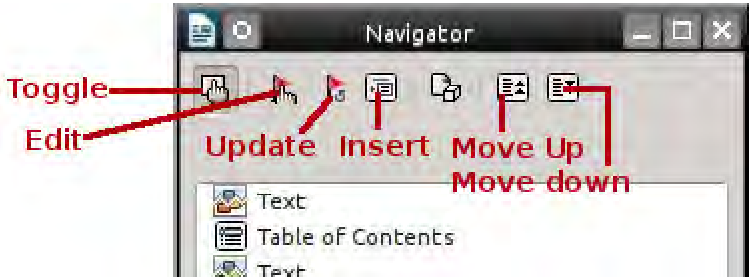
Once I had a master document, I could start adding files to it. When I saved the master document, it opened the Navigator in a floating window automatically. I could have worked in this floating window, but I closed it and used the Navigator panel in the sidebar. They are both the same, so it's your choice which one you use. The Navigator window is opened by pressing F5 on the keyboard, or from the menus, View > Navigator.

The Navigator in master documents is different from other documents. By default it is in document list mode. The first button in the toolbar is a toggle button that allowed me to toggle between the document list and a standard Navigator panel. While working in the master document, I did not see any reason for switching to normal mode, but it is there should you have a reason for navigating to an object or subheading in one of the sub-documents.

I noticed that one document was already in the list of files. This was the Text of the master document itself, at this point, my title page. I would add other Text blocks as needed in the master document using the insert button. To add my documents to the master document, I clicked and held on the Insert button <image>. Dragging down to the File selection, I released the mouse button. An insert file dialog appeared for me to find and select my file. I clicked open and the file was added to my master document. When adding a file to the master document, Writer always adds it above the currently selected file. I used the “Move Up” and “Move Down” buttons <image> to get my documents in the order I wanted them. All references and chapter numbers adjusted automatically as I moved the documents up and down in the list.

Editing from the Master Document

All documents linked to the



master document are read only in the master document. To edit a document from the master document, I selected the document in the Navigator list and clicked the edit button. A new window containing the document I wanted to edit opened. I made my changes to the document, saved, and closed it. In the master document, I clicked and held the Update button. Dragging I released on Links. A message window appeared asking me whether I wanted to update all the links in the document. I clicked Yes, and the document I just edited updated in the master document. I was also able to open the document through normal methods and edit it that way. The changes still appeared when I updated the master document's links.

I inserted a table of contents by inserting a page break after my title page and using the same methods discussed in Part 38 of this series (Full Circle issue 85). I did the same for an index, but I had to insert a Text block at the end of the master document through the insert button. This text block was needed to create an editable block at the end of the master document.

Master documents are a great way to create large documents. In my case, I wanted the flexibility to work on the individual documents and the ability to rearrange the order of the documents. A master document works best with a template shared by all the documents. Just like normal Writer documents, you can add a table of contents and indexes. While a master document is not always the best choice, it is a good choice if you need the ability to move the different parts around or have different people authoring the different parts. This was just one example of using a master document. If you plan things well, you can start from the very beginning before you even write the first document.

Elmer Perry's history of working, and programming, computers involves an Apple][E, adding some Amiga, a generous helping of DOS and Windows, a dash of Unix, and blend well with Linux and Ubuntu.
He blogs at
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HOW-TO

Written by Elmer Perry

LibreOffice Pt.40- Writer, Tracking Changes

It probably won't surprise you to learn that I use LibreOffice to write these articles. For the longest time, I would print out each draft of an article, mark it up with a red pen, then transfer my changes to the computer. This old-school method came from my years editing papers as a student and as a professional. As I began to write on a regular basis, I accumulated a growing stack of recycle paper from writing. I tried to use both sides of the paper, and even ripped some in quarters for use as note-paper. Before long I was burning through a lot of paper and ink.

At some point I decided I needed a digital solution. I already knew that Writer provided editing markup, but had never tried to use it for editing my documents. With some hesitation, I began to use it. The whole "old dog, new trick" issue. After using it for a couple of months, I began to wonder why I hadn't used it before. From right inside Writer, I can track my changes, make notes (comments), and accept or reject the changes. In many ways, it is quicker and even more efficient than the hard-copy method.

Preparing to Record Changes

Once I finish the first draft of my article, I save it as a version and turn on recording changes. (More on version control later.) 'Edit > Changes > Record' sets Writer to begin recording changes. Edit > Changes > Show sets Writer so it shows me the changes that have been made. I have debated with myself the wisdom of showing changes while I am actually editing. On the one hand, I can see the changes as I make them. On the other hand, showing the changes while I edit can make reading the text difficult. I have tried it both ways, and see some logic in not showing changes during the actual edit process, but waiting until the accept and reject process to actually show the changes. In the end, the choice is yours.

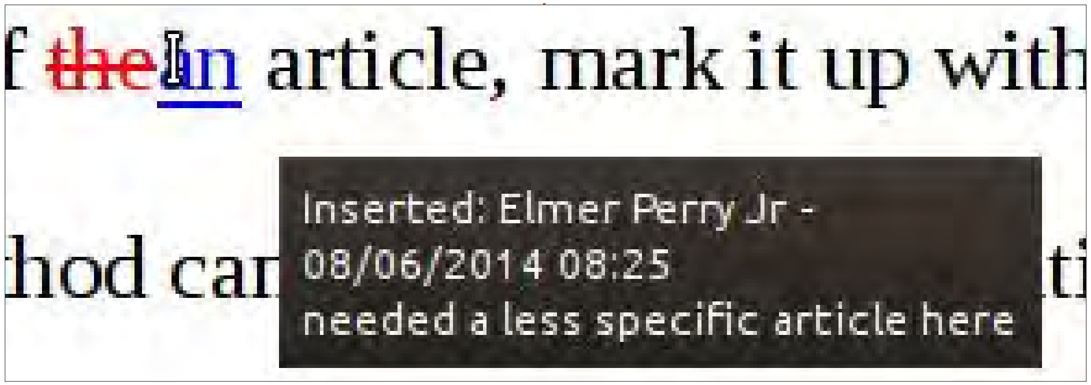
NOTE: If you are passing the document to someone else to edit, you might want to take some precautions. File > Properties; select the Security tab; check "Record Changes", and click on "Protect". Enter and confirm a password. This will prevent the other person from making changes and then accepting or rejecting them. When you get the document back with their changes, File > Properties, click on "Unprotect", and enter your password. You can now accept or reject their changes.

Recording Changes

If I set Writer to show changes, and I add text, it is underlined and changed to the color I have set. When I remove text, it is shown as struck-through just as I would when editing a hard copy. The strike-through text is shown in a different color from the added text. The colors used for added and deleted text are controlled by the settings at Tools > Options > LibreOffice Writer > Changes.

If I hover over a change, it will show the author, date, and time of the change in a tool-tip box. If I have "Extended tips" turned on in Tools > Options > LibreOffice > General, the tool-tip will show the author, date, time, and any comments attached to the change. The author's name is controlled by the information in Tools > Options > LibreOffice > User Data.

To add a comment to a change, I place the cursor anywhere within the changed text. Edit > Changes > Comment brings up the comment

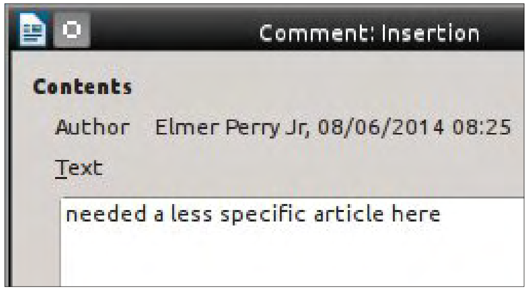


f ~~the~~an article, mark it up with

hod car ti

Inserted: Elmer Perry Jr - 08/06/2014 08:25
needed a less specific article here

dialog. I can then enter my comment for the change. This is sometimes useful to remind myself of why I made a certain change. Once I am finished, I click on OK and the comments are added to the change.



Comment: Insertion

Contents

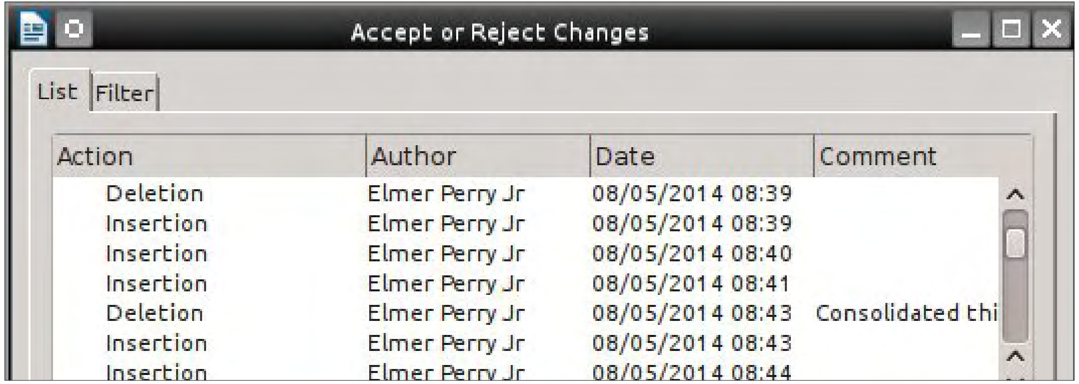
Author Elmer Perry Jr, 08/06/2014 08:25

Text

needed a less specific article here

Accepting / Rejecting Changes

After editing the draft, I am ready to review my changes. If changes are not currently showing, Edit > Changes > Show. Edit > Changes > Accept or Reject brings up the "Accept or Reject Changes" dialog, which displays a list of all my changes. Each listing shows the type of change, author, date, time, and any comments. Selecting any of the items in the list highlights the change in the document. If I want to keep the change, I click the Accept button. If I don't want to keep the change, I click the Reject button. If I know I want to keep all my changes, I can just click the Accept All button. However, if I decide to throw out all my changes, I can click the Reject All button.



Accept or Reject Changes

Action	Author	Date	Comment
Deletion	Elmer Perry Jr	08/05/2014 08:39	
Insertion	Elmer Perry Jr	08/05/2014 08:39	
Insertion	Elmer Perry Jr	08/05/2014 08:40	
Insertion	Elmer Perry Jr	08/05/2014 08:41	
Deletion	Elmer Perry Jr	08/05/2014 08:43	Consolidated thi
Insertion	Elmer Perry Jr	08/05/2014 08:43	
Insertion	Elmer Perry Jr	08/05/2014 08:44	

On the Filter tab, I can narrow down the kind of changes that are displayed in the list. There are four different filters for me to choose from: Date, Author, Action, and Comment.

The Date filter allows me to see only changes that were created earlier than, since, equal to, and not equal to a certain date. I can also select changes that occur between two dates. The buttons with the clock face at the end of the date entry fields allow me to set the date to the current date and time by clicking them. The last setting for the date filter is to show only the changes made since the last time the document was saved.

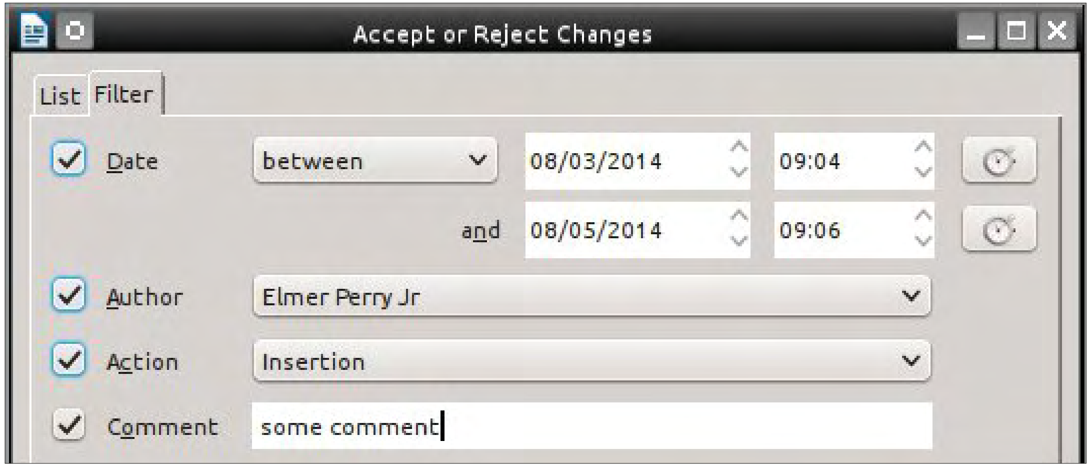
I never have much use for the Author filter, as I am usually the only one who is making changes. However, if I did have someone else editing for me, I could pick between my own changes and the changes made by another editor of the document.

The Action filter allows me to display just a certain type of change. The four change types are insertion, deletion, formats, and table changes.

If I feel the need to add a lot of comments to my changes, I can use the Comments filter to filter changes based on the text contained in the comments. I just check the Comment filter and enter the text I want to look for.

Marginal Notes or Comments

Sometimes, I need to make a note to myself. Using the hard copy method, I would just write a note in the margins. These usually don't represent an actual change, but an idea or action to act on at a later time. For example, needing to expand on an idea, or save an idea for a later article. Marginal notes are accomplished through



Accept or Reject Changes

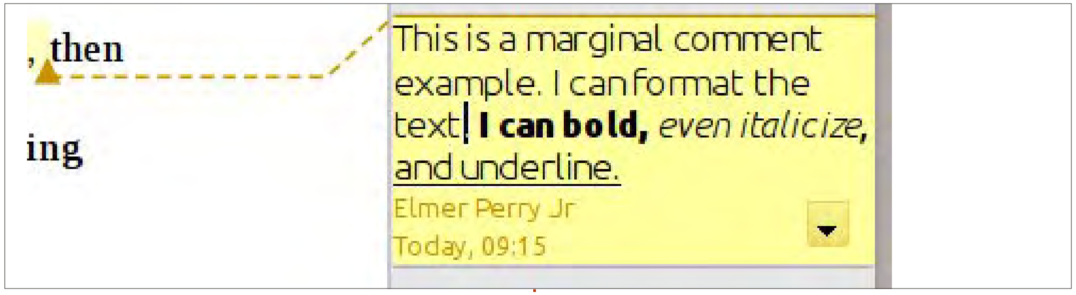
☑ Date between 08/03/2014 09:04

and 08/05/2014 09:06

☑ Author Elmer Perry Jr

☑ Action Insertion

☑ Comment some comment



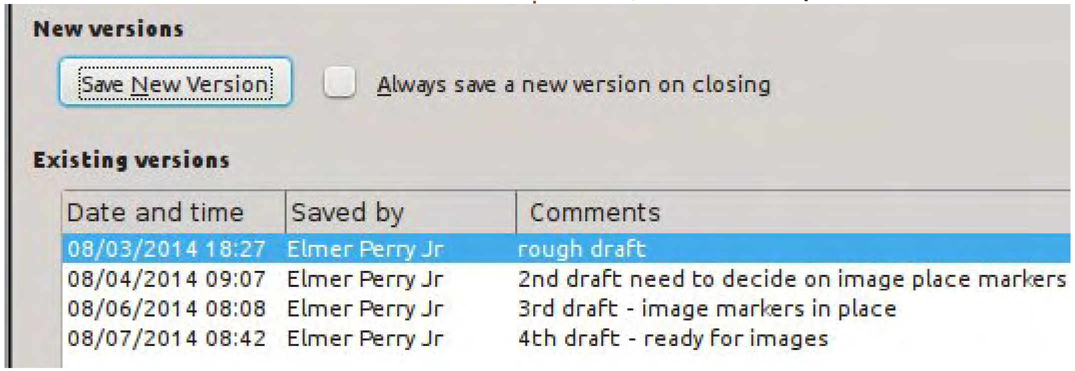
This is a marginal comment example. I can format the text **I can bold,** *even italicize,* and underline.
Elmer Perry Jr
Today, 09:15

Comments. Do not confuse these with change comments.

To create a comment, I highlight the information it applies to. Insert > Comment. A box in the color assigned to the author by LibreOffice appears in the right margin. The name that appears at the bottom of the comment is controlled by the data entered in Tools > Options > LibreOffice > User Data. Placing my cursor inside the box, I type my comment. I can even format the text within the comment box using the format tools in the formatting toolbar or the side-bar. I right-click or click on the down-arrow to get a menu that allows me to delete comments when they are no longer needed.

Saving Versions

After each cycle of changing and then accepting / rejecting, I like to save a version of the document in its current state. File > Versions opens the Versions dialog. I click on Save New Version and give the version a name like "Rough Draft", then maybe any comments I may need like "image markers in place." I click OK to save the version. If I ever need to go back to a version, I can open the Versions dialog, select the version I need, and click Open. For more information on version control, see my blog post at http://wp.me/pvwht-9k.



☐ Always save a new version on closing

Date and time	Saved by	Comments
08/03/2014 18:27	Elmer Perry Jr	rough draft
08/04/2014 09:07	Elmer Perry Jr	2nd draft need to decide on image place markers
08/06/2014 08:08	Elmer Perry Jr	3rd draft - image markers in place
08/07/2014 08:42	Elmer Perry Jr	4th draft - ready for images

NOTE: The version control in LibreOffice is okay for small to moderate size documents, but less than ideal for very large documents.

The editing tools built into Writer are useful for single-person editing or multi-person editing. I can have the program track my changes and allow me to later accept or reject the changes. I can add comments to the changes to help me remember why I made the change. I can also add margin notes to the document through the comment tool. After each edit, I can save a version of the document in case I decide to revert back to a previous version.

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HOW-TO

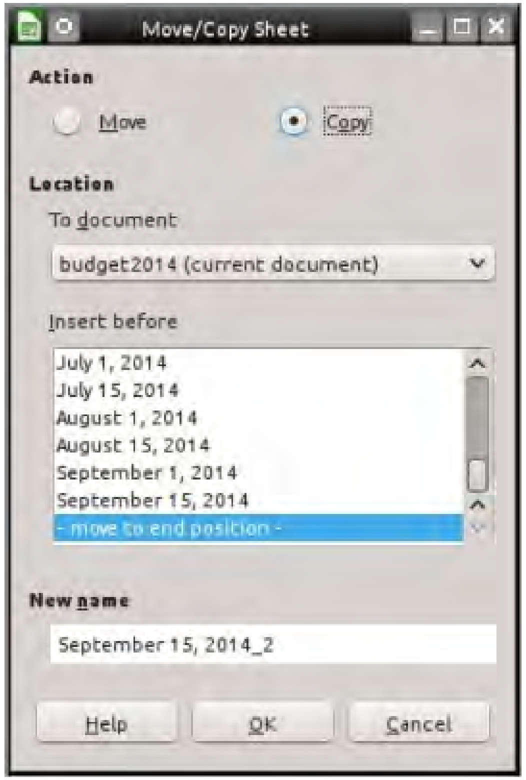
Written by Elmer Perry

LibreOffice Pt.41 - Copy Sheet Macro

Back in parts 8-12 (FCM issues 53, 55-58), I took you from a blank spreadsheet to a full working budget spreadsheet. Something similar is what I use twice a month to do my home budget. I keep a whole year of budget spreadsheets in one document, which means twice a month I copy the sheet, rename it, and make sure I get all the settings correct to put a copy of the current sheet at the end of the sheet tabs. Believe me, mistakes have been made. Curses have been breathed. Innocent computers have been threatened.

In time, I decided, since I was such a fallible, flawed human being, I needed to reduce the number of steps necessary to complete this task in order to lessen my chances for mistakes. The result was a macro where all I have to do is give the sheet a new name. The macro handles all the rest, making sure it is copied and placed at the end of the tab list. The task fits perfectly into the idea behind macros, a repeatable process that automation can speed up, or prevent mistakes. Today, I share it with you.

The Manual Method



Move/Copy Sheet

Action

○ Move ● Copy

Location

To document: budget2014 (current document)

Insert before:

July 1, 2014
July 15, 2014
August 1, 2014
August 15, 2014
September 1, 2014
September 15, 2014
- move to end position -

New name: September 15, 2014_2

In order to appreciate a macro, you really have to understand what it's doing for you, and the mistakes you can make. Therefore, I will start with the description of the manual process that the macro makes simpler. There is actually more than one way to copy a sheet in Calc, but I will show you the dialog method with all the options.

Right-click on the tab of the sheet you want to copy and select Move/Copy Sheet. The Move/Copy dialog appears. You then select Copy. One of the mistakes I have made is to forget this. I end up just renaming my sheet. Under "Insert Before" select the option at the end "-move to end position-". If I forget this one, the sheet is placed before the current sheet rather than at the end where I want it. Finally, I have to rename the sheet. There have been times while trying to remember to get the other settings right, that I have forgotten to actually change the name. When I do, the copied sheet gets the name of the current sheet with a "_2" appended to the end. Click OK to execute the settings.

I know, you're thinking that it's not that bad, but after a few times getting it wrong, your inner Hulk comes out and you want to smash things. Okay, maybe that's just me. Trying to balance the home budget is frustrating enough without the bonus of mistakes while copying the spreadsheet.

The CopySheet Macro

The macro is not very long (next page, top right) and you can easily type it in. You can also copy it from http://pastebin.com/s3iTGjN6.

The micro starts by declaring 3 variables used in the body of the macro. "Sheet1" and "Sheet2" are strings that will contain the names of the current sheet (Sheet1) and the new sheet (Sheet2). The "Doc" variable will hold a reference to the current document. It is declared as a type Object because the reference is to a LibreOffice API object.

```
Doc = ThisComponent
```

ThisComponent is the current active document in LibreOffice. In this case, the macro is looking for a Calc spreadsheet.

```
If NOT
Doc.supportsService("com.sun.star.sheet.SpreadsheetDocument") then
```

```
    MsgBox "This Macro Only
Works with Calc Spreadsheets"
    Exit Sub
End If
```

The “If” statements check to make sure that the current document is a Calc spreadsheet. It checks to see whether the document supports the SpreadsheetDocument service, identifying it as a Calc spreadsheet and not some other document type. If it is not a spreadsheet, the macro pops up a message box telling the user the macro works only with spreadsheets. The macro then executes an “Exit Sub” that exits the macro without running any more of the code.

```
Sheet1 =
Doc.CurrentController.ActiveS
heet.Name
```

The macro uses the Doc object to extract the name of the current sheet. The breadcrumb dot notation goes through a progression of getting more specific. CurrentController is a reference to the service that controls the document. ActiveSheet is a reference to the currently active sheet in the document. Finally, Name gets the name of the current sheet and this

```
Sub CopySheet
    dim Sheet1 as String
    dim Sheet2 as String
    dim Doc as Object
    Doc = ThisComponent

    If NOT Doc.supportsService("com.sun.star.sheet.SpreadsheetDocument") then
        MsgBox "This Macro Only Works with Calc Spreadsheets"
        Exit Sub
    End If
    Sheet1 = Doc.CurrentController.ActiveSheet.Name
    Sheet2 = InputBox("Enter Name for Copied Sheet:", "Copy Sheet", Sheet1)
    If Sheet2 = "" Then Exit Sub
    Do While Doc.Sheets.hasByName(Sheet2)
        Sheet2 = InputBox(Sheet2 + _
        " already exists, select a different name:", "Copy Sheet", Sheet2 + "2")
        If Sheet2 = "" Then Exit Sub
    Loop
    Doc.Sheets.CopyByName(Sheet1, Sheet2, Doc.Sheets.Count)
End Sub
```

is assigned to the variable Sheet1.

```
Sheet2 = InputBox("Enter Name
for Copied Sheet:", "Copy
Sheet", Sheet1)
```

To get the name of the new sheet, the macro uses an InputBox function. The InputBox takes 3 arguments:

- The prompt to show the user (“Enter Name for Copied Sheet:”).
- The title of the InputBox window (“Copy Sheet”).
- The default text (it just uses the name of the current sheet [Sheet1] as the default text).

If the user clicks the OK button, the InputBox will return the string entered in the text box or the default text when no changes are made. If the user clicks the Cancel button, a blank string is returned.

```
If Sheet2 = "" Then Exit Sub
```

```
Do While
Doc.Sheets.hasByName(Sheet2)
    Sheet2 = InputBox(Sheet2
+ _
    " already exists, select
a different name:", "Copy
Sheet", Sheet2 + "2")
    If Sheet2 = "" Then Exit
Sub
Loop
```

Now, the macro must use some logic to determine how to proceed. The “If” checks to see if the returned string is blank. If so, that means that the Cancel button was pressed, therefore the “Exit Sub” is executed. “Exit Sub” exits the macro without running any more of the remaining code.

The Do While...Loop checks to see if another sheet in the Calc document has the same name. The hasByName method checks the supplied name against the names of all the sheets in the collection. If a match is detected, the macro uses an InputBox to prompt the user for a new, unmatched name. The Do While...Loop will loop until the name in Sheet2 does not match the name of any other sheet. The "If" inside the loop exits the macro if Cancel is pressed. If the name is unmatched from the start, the loop never runs. This prevents two sheets from having the same name.

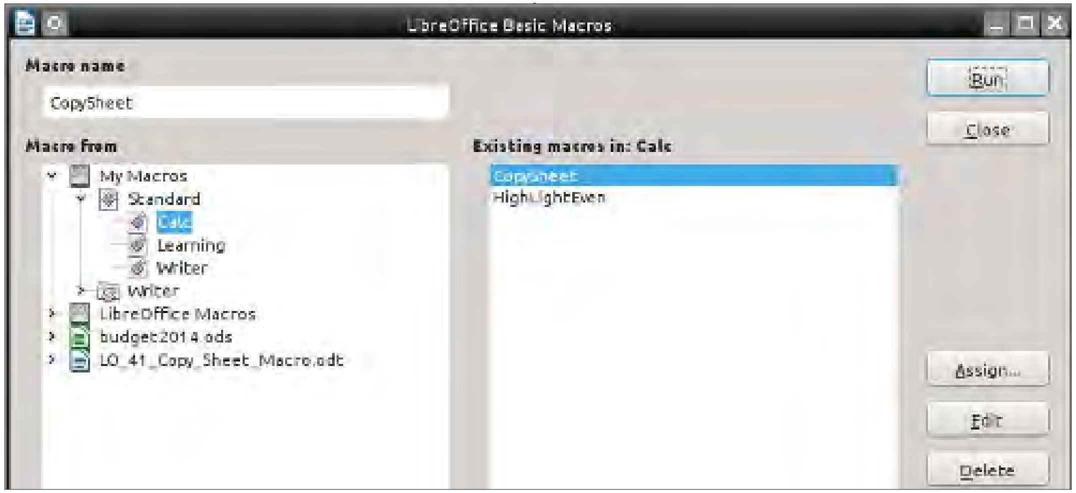
NOTE: The underscore (_) in the InputBox statement is used to break a long line up into shorter lines. LibreOffice Basic requires that the underscore is the last thing on the line. Nothing, not even a space, can follow it. When lines are joined in this way, LibreOffice Basic sees them as one line.

```
Doc.Sheets.CopyByName(Sheet1,
Sheet2, Doc.Sheets.Count)
```

The last line of the macro brings all this preparatory work together to finally execute the copy. Sheets is a reference to the collection of sheets in the document. CopyByName is the method that actually copies the sheet and moves it to the end of the sheet tabs. The CopyByName method has 3 parameters:

- The sheet to copy from (Sheet1).
- The sheet to copy to (Sheet2).
- The position of the new sheet (Doc.Sheets.Count).

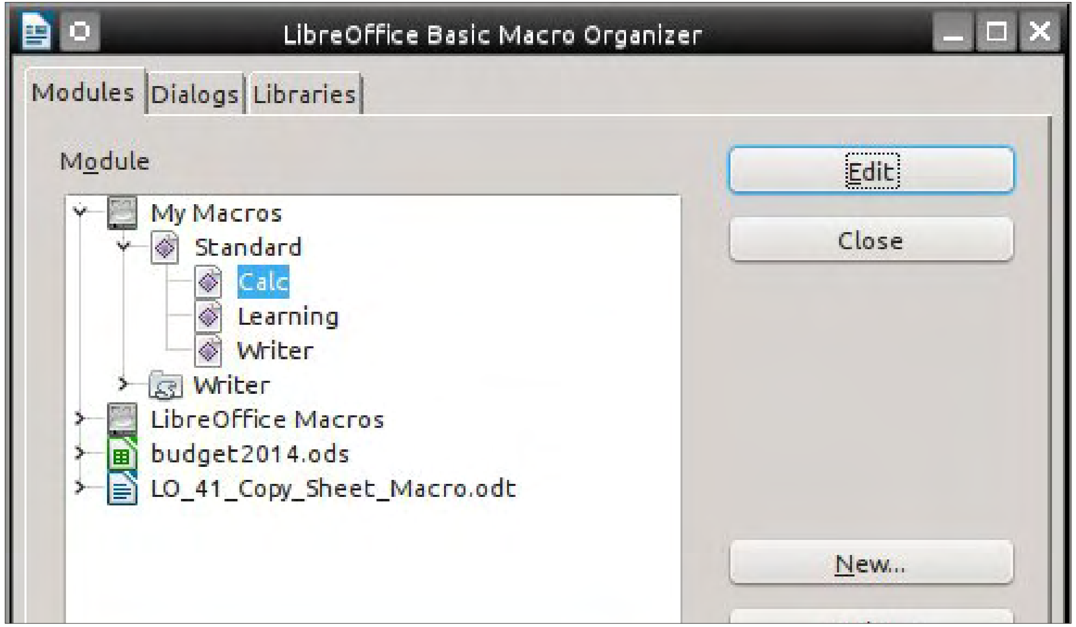
Count is the total number of sheets in the collection (Sheets). Since the sheet numbers are referenced starting with 0, the use of Count here puts the new sheet at the end.



Creating the Calc Macro Module

When I developed and wrote the CopySheet macro, I created a macro module for Calc. Here I could store this macro as well as any future macros designed for the Calc program. It's a good idea to group like macros together.

To create the module, Tools > Macros > Organize Macros > LibreOffice Basic. The LibreOffice Basic Macros dialog opens. Click Organizer to get the LibreOffice Basic Macro Organizer dialog. Under My Macros > Standard, there is a default module named Module 1. Select it and click Delete. With Standard selected, click New. Name the new Module "Calc" and click OK. Click Close.

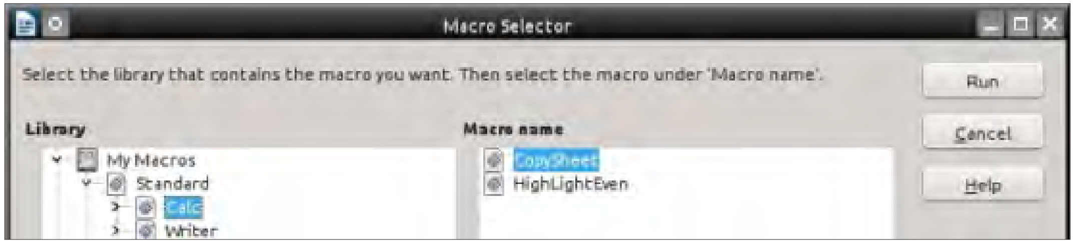


Now back in the LibreOffice Basic Macros dialog, select the new "Calc" module you just created and click Edit, opening the LibreOffice Macro Editor. Delete the automatically created "Sub Main" and "End Sub". Type in or copy and paste the SheetCopy macro into the editor. Save the module and close the editor.

Test the Macro

After typing in the macro and saving it, you will want to test it to make sure you typed everything correctly. First, open a Calc document or create a new one. You can then test the macro by going

contents ^



Select the library that contains the macro you want. Then select the macro under 'Macro name'.

to Tools > Macros > Run. Under Library, select My Macros > Standard > Calc. Under “Macro Name” select CopySheet and click Run. Enter a name for the sheet like “New Sheet.” Click OK. If all goes well, a new sheet is created with the name you gave it. You will want to repeat the test and not change the name to see if the macro prompts you to change the name. Also, test to make sure the macro stops when you click on Cancel rather than OK. For the final test, open a text document and run the macro. You should get the message telling you that the macro works only on spreadsheets.

Macros like CopySheet can speed up your processes and prevent you from making mistakes, which is the whole idea behind macros. This is just an example of something you can do with macros, but you can write your own macros that can expand the use or capabilities of any of the LibreOffice programs, or just reduce a task you do often. A Google search for “LibreOffice Basic” is a good place to start learning more.

NOTE: Back in Full Circle issue 64 (LibreOffice Part 17: Macros), I showed you how to create a menu shortcut to a macro. This is a good candidate for such a shortcut. Create the menu and shortcut in Calc.

Elmer Perry's history of working, and programming, computers involves an Apple][E, adding some Amiga, a generous helping of DOS and Windows, a dash of Unix, and blend well with Linux and Ubuntu.
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