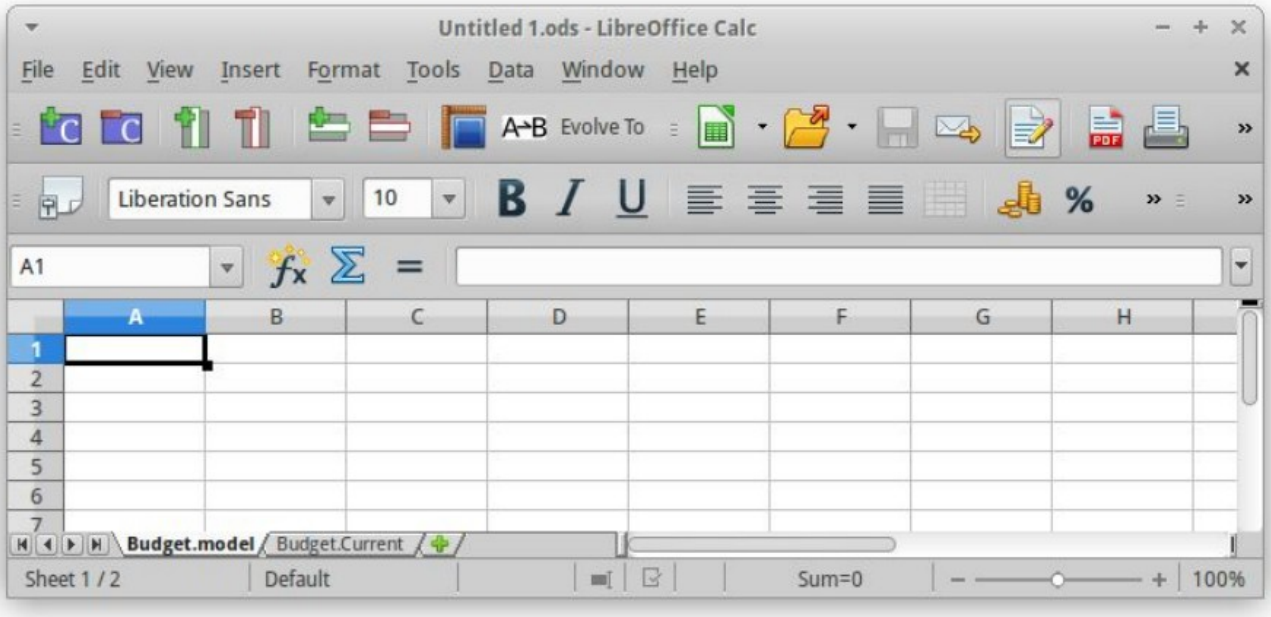
Usage

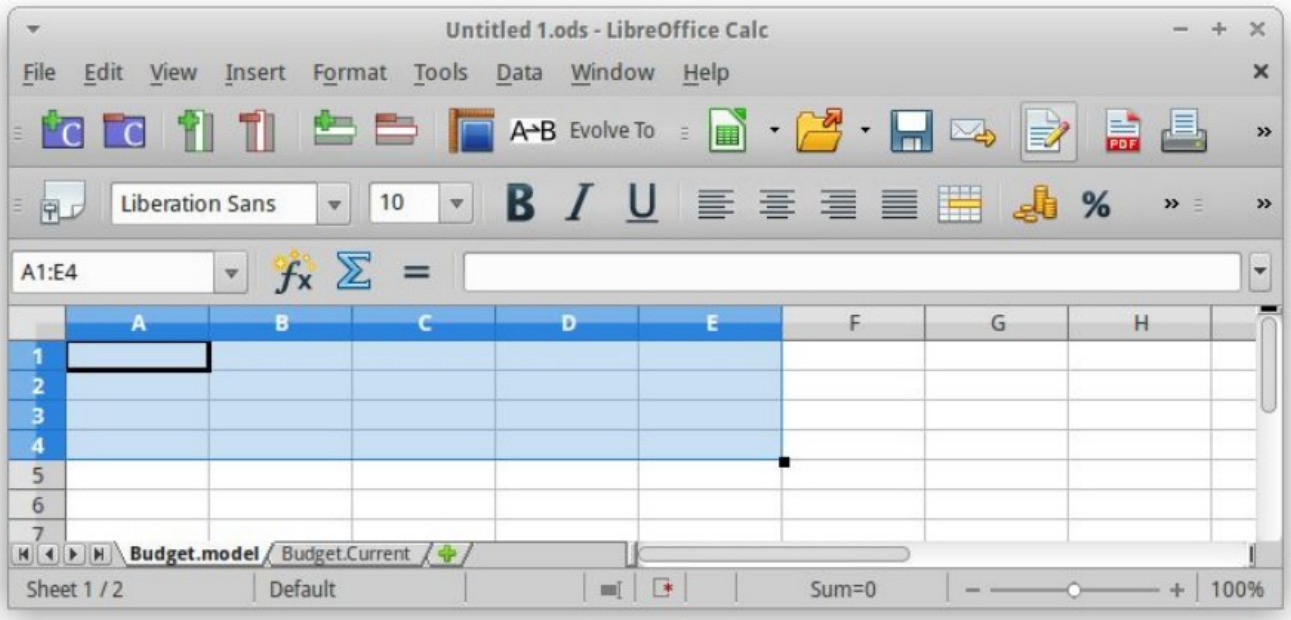
Here, an example is shown, which demonstrates how to use the MDSheet tool.

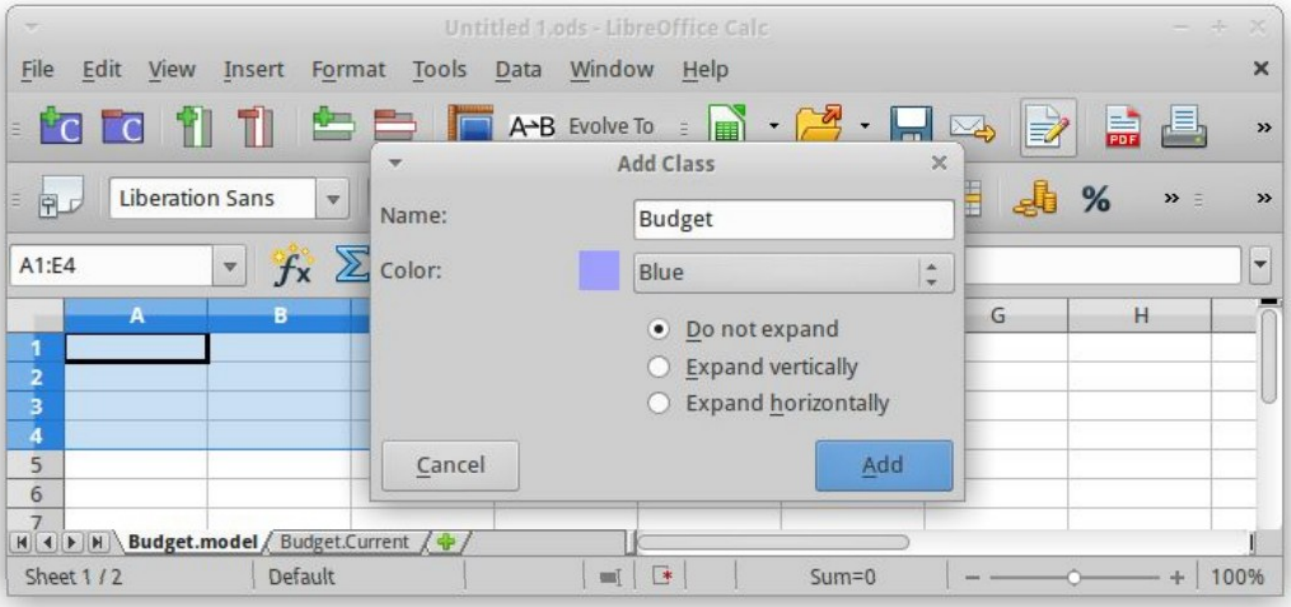
Model Creation:

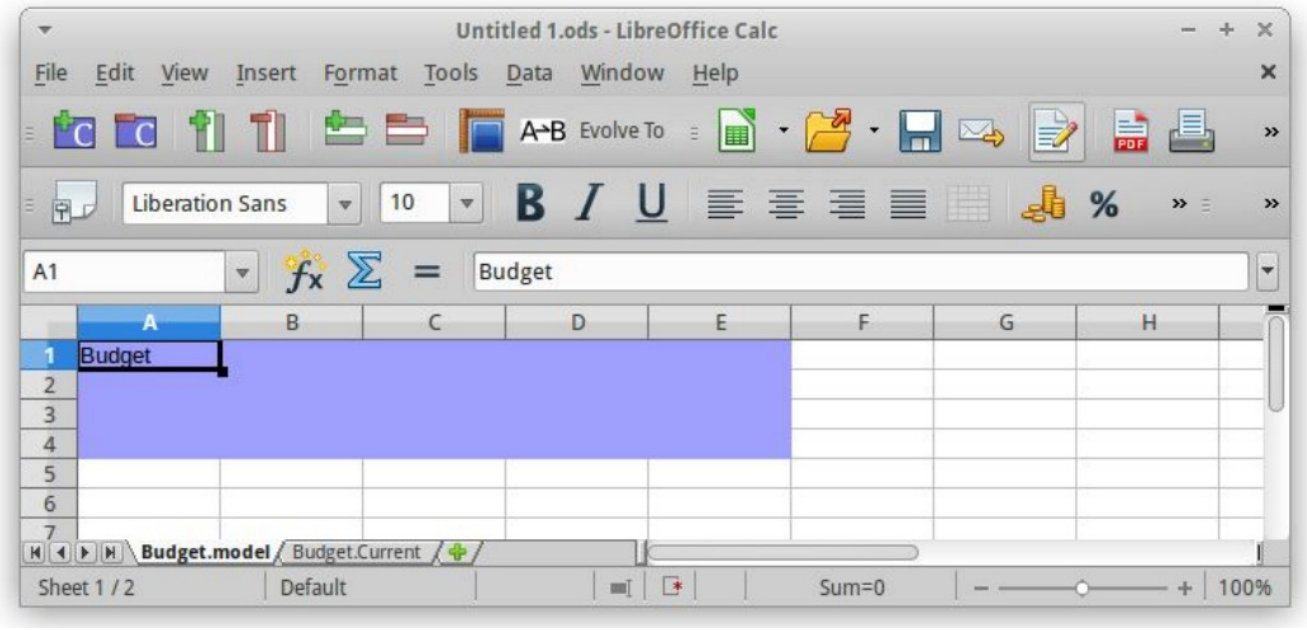
Create a new spreadsheet file and within that file create two worksheets. The name of one of the worksheets must end in ".model" (e.g., for a model named "Budget", the worksheet name is "Budget.model"), and the other one must start with the name name of the model and the name of the instance with a dot connecting them (e.g., for an instance of the model "Budget" named "Current", the worksheet name is "Budget.Current").



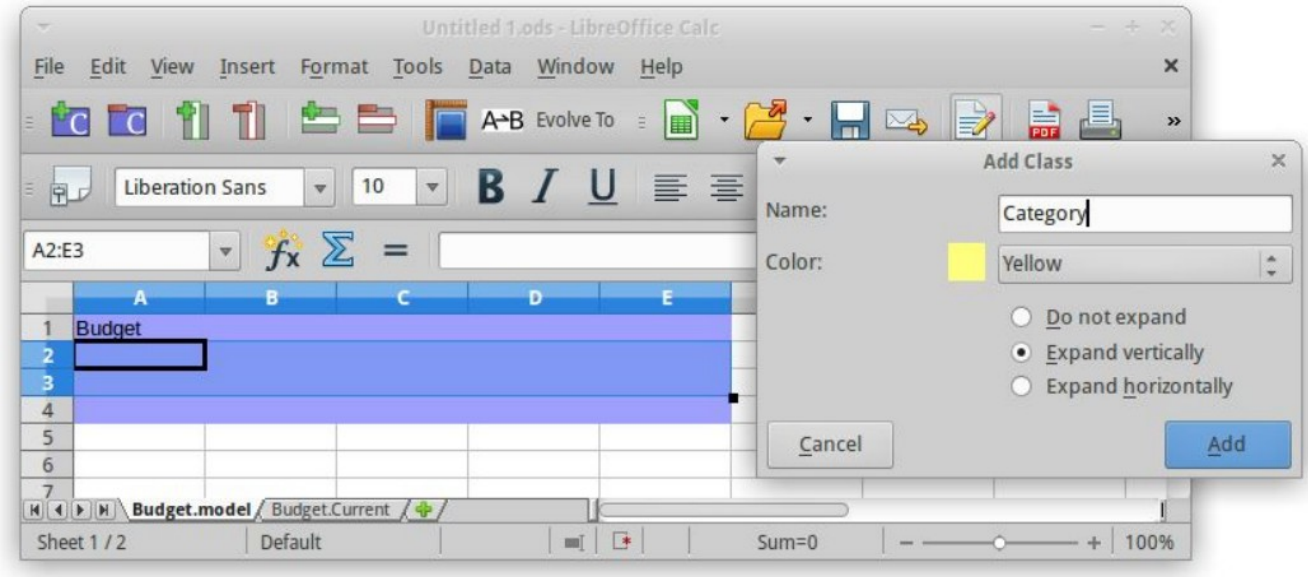
Then, a base class is needed to contain all the other classes and attributes. To create it, select the area that the class should use and press the "Add Class" (**+C**) button on the tool bar. Set the name of the class, select its color, and its expansion type. In the example below, a new class named *Budget* is added, it will be highlighted in *blue*, and the class will not expand.

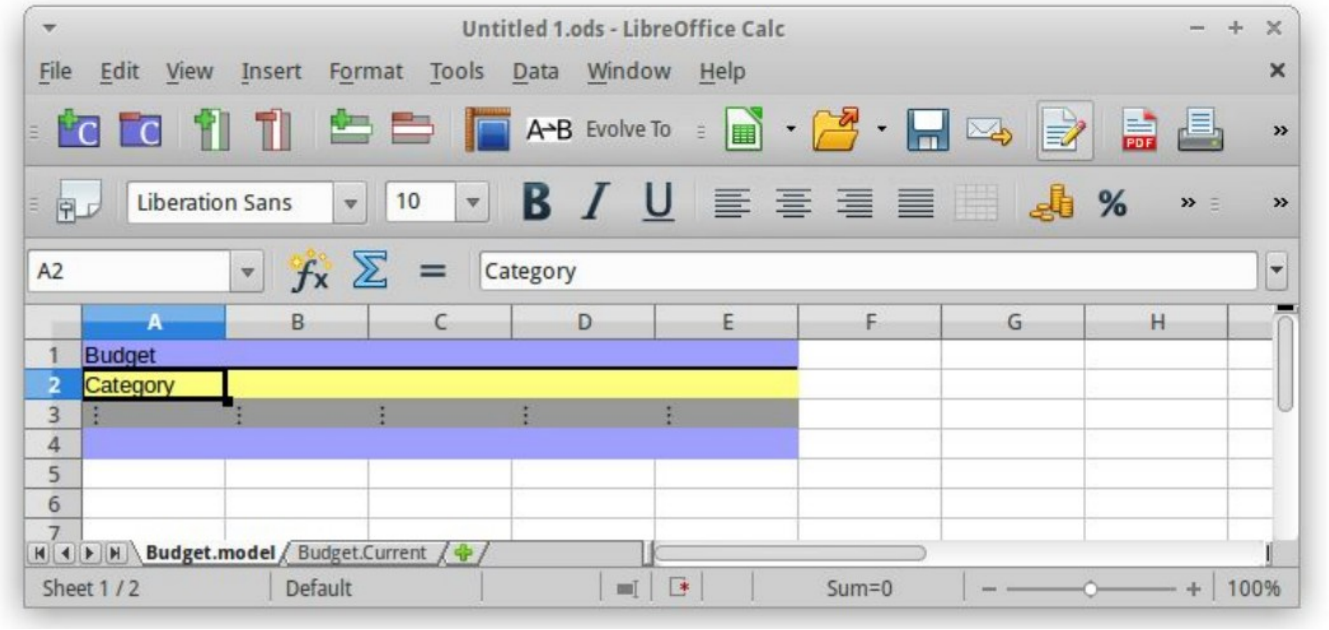

Untitled 1.ods - LibreOffice Calc
File Edit View Insert Format Tools Data Window Help
Evolve To
Liberation Sans
10
A1:E4
Budget.model
Budget.Current
Sheet 1 / 2
Default
Sum=0
100%


Untitled 1.ods - LibreOffice Calc
File Edit View Insert Format Tools Data Window Help
Evolve To
Liberation Sans
A1:E4
Add Class
Name:
Budget
Color:
Blue
Do not expand
Expand vertically
Expand horizontally
Cancel
Add
Budget.model
Budget.Current
Sheet 1 / 2
Default
Sum=0
100%

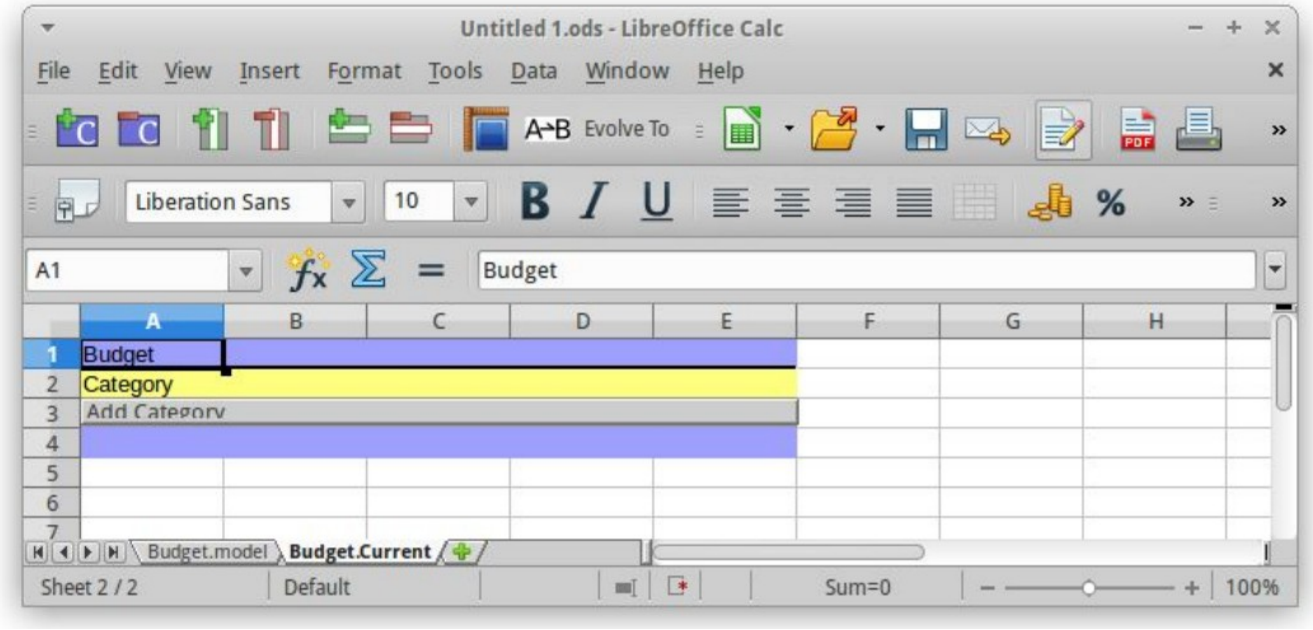


Then, other classes can be added. The classes must be either of the same width or of the same height of the base class. This rules ensures that no unwanted deformations will occur. Furthermore, if a class is of the same width (height) of the base class, a row (column) belonging to the outer class must be present above (on the left) and below (on the right) of the new class.

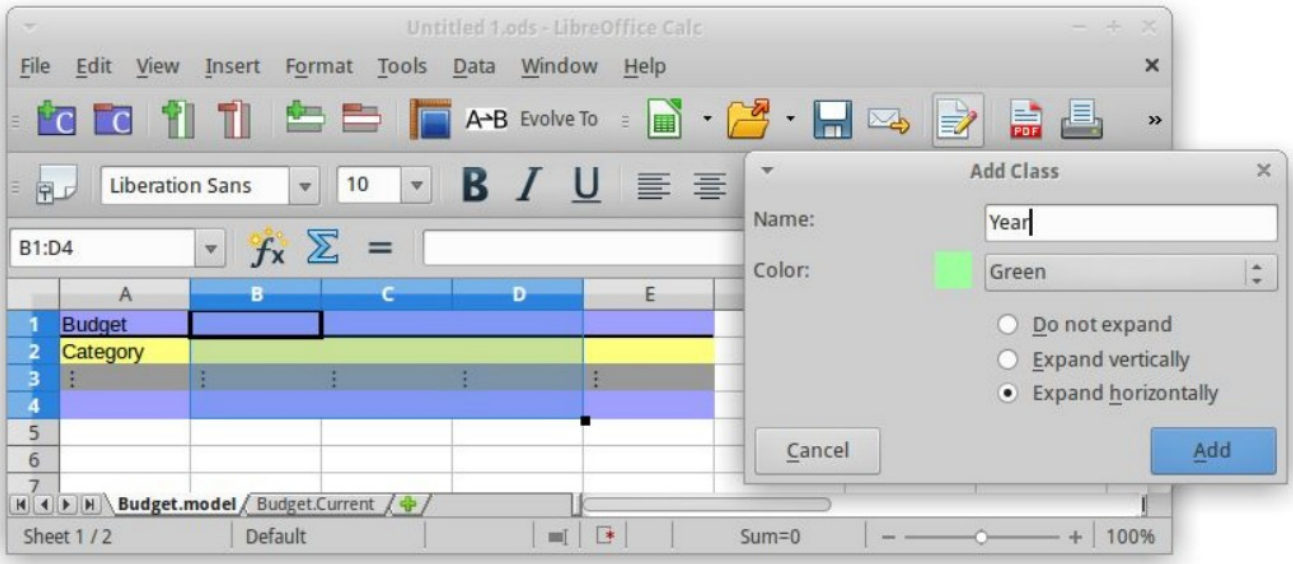




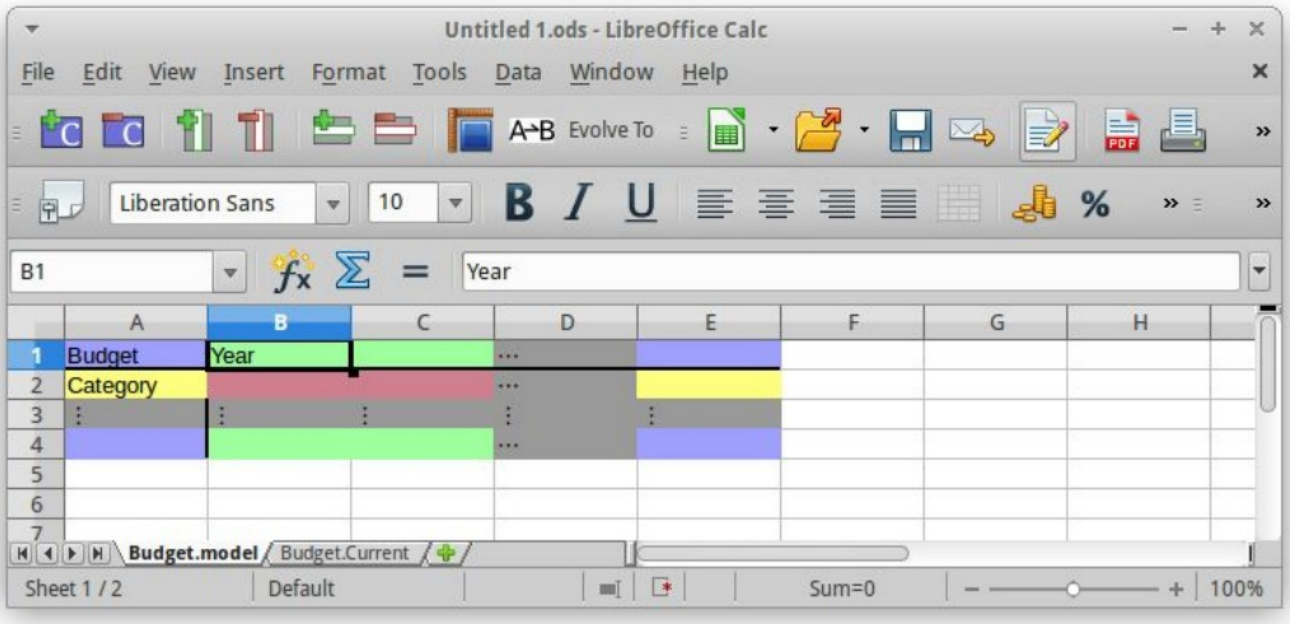
When an expandable class is added to the model, the same class is added to the instance, with the addition of a button that enables users to add instances of that class, as shown in the image below.



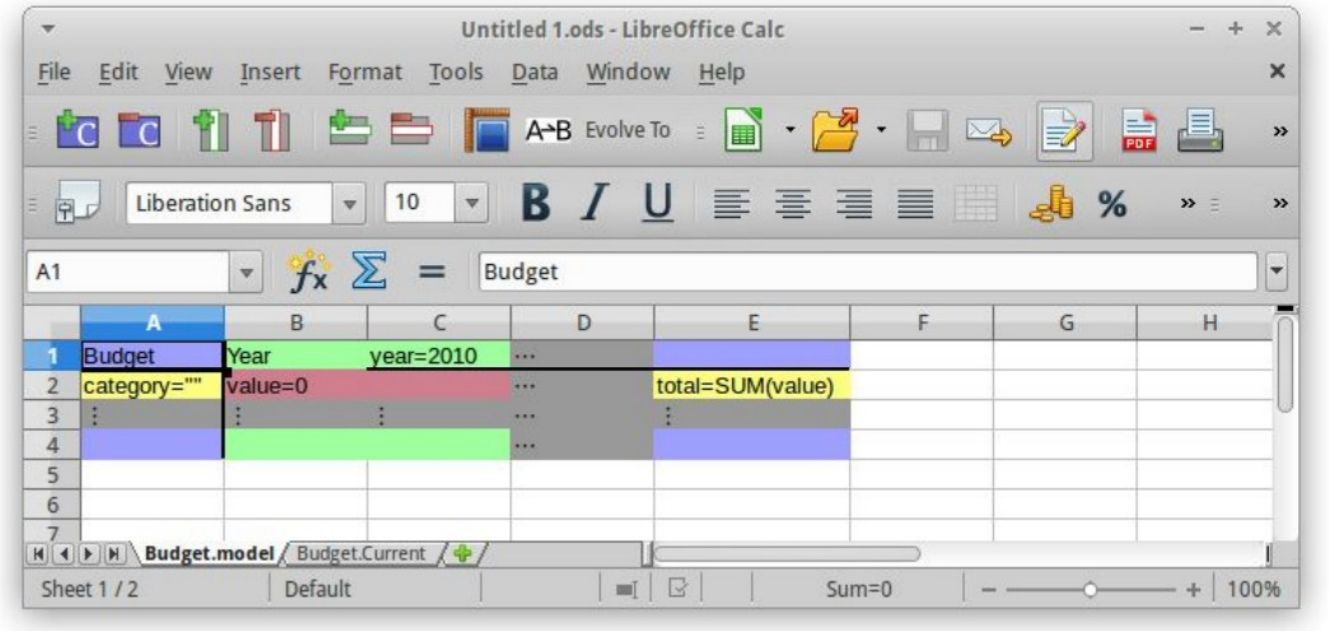
Inner classes can overlap if the previous rules are met.



When two classes overlap, a new class is added where both intersect, removing any ambiguities.

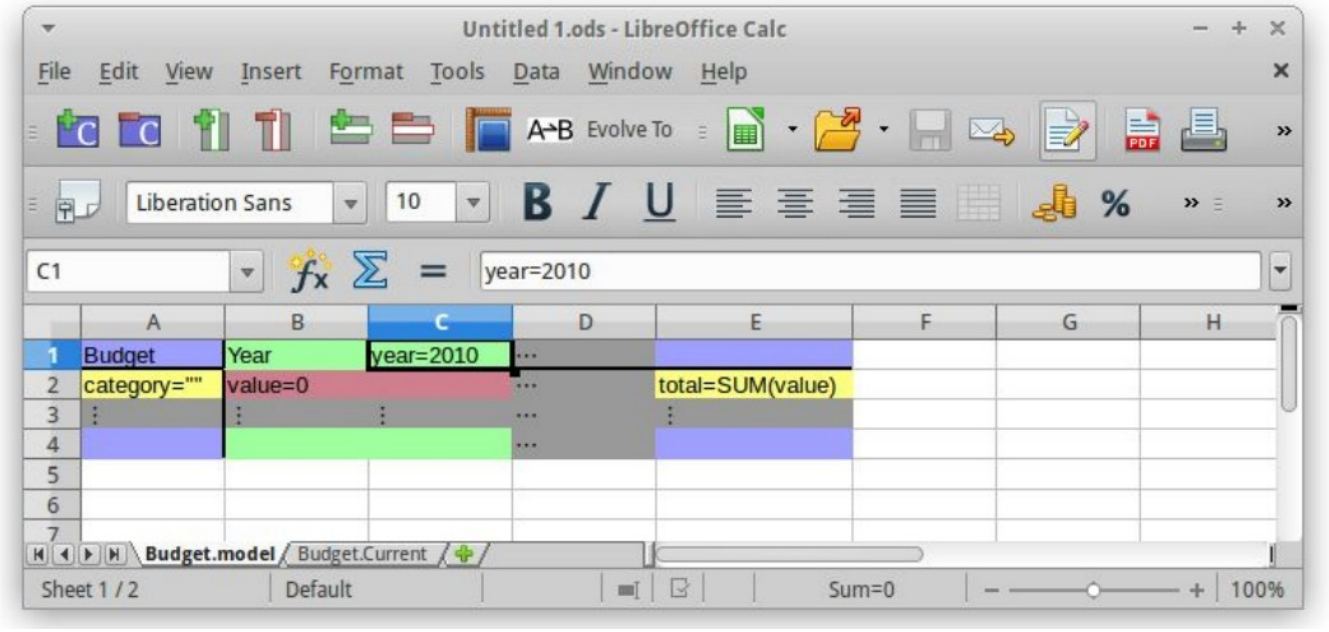


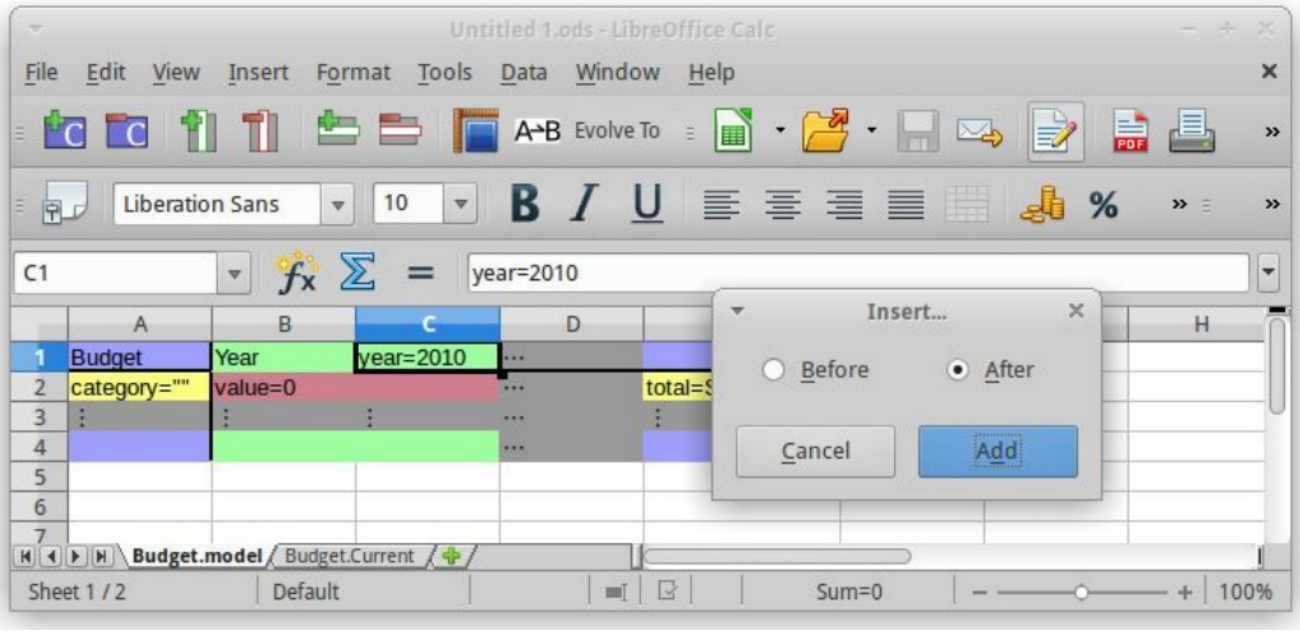
Cells in the data can be specified by simply writing in the corresponding cell in the model.



Model Evolution:

Models can be evolved by adding columns, removing columns, adding rows, and removing row. For that, a cell must be selected, and then just press the button on the tool bar for the desired action. The images below show the steps to add a new column after column C.

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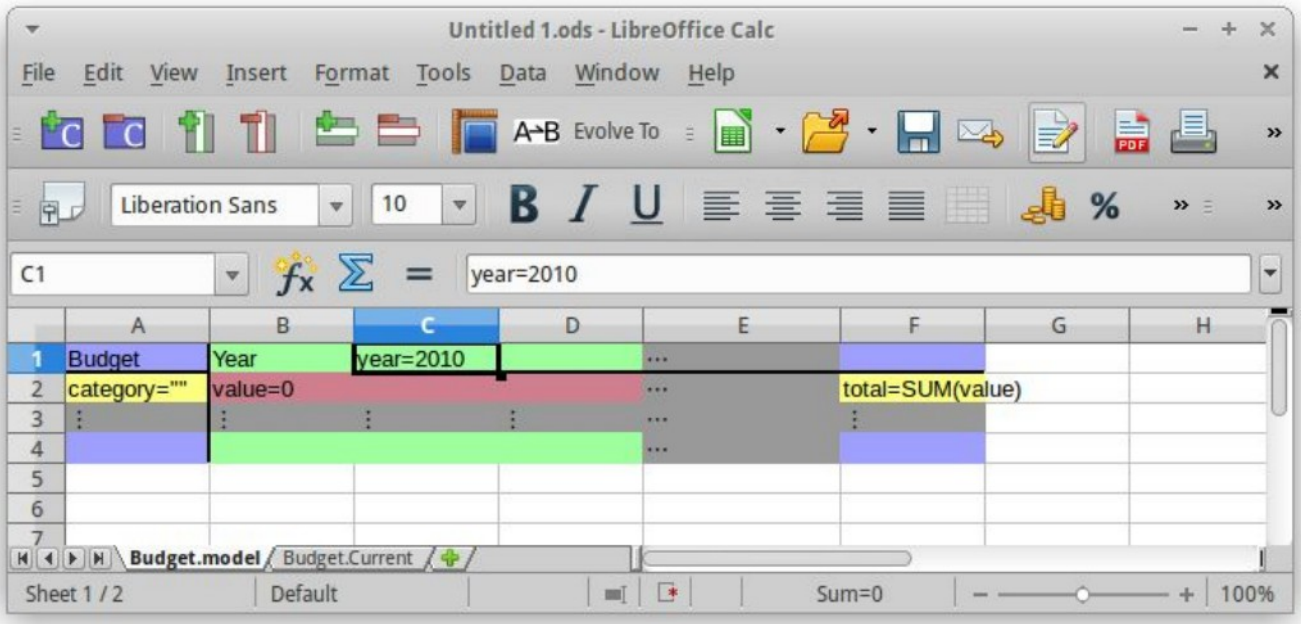
File Edit View Insert Format Tools Data Window Help
Evolve To
Liberation Sans
10
C1
year=2010
Insert...
Before
After
Cancel
Add
Budget
Year
year=2010
category=""
value=0
Budget.model
Budget.Current
Sheet 1 / 2
Default
Sum=0
100%


Untitled 1.ods - LibreOffice Calc
File Edit View Insert Format Tools Data Window Help
Evolve To
Liberation Sans
10
C1
year=2010
Budget
Year
year=2010
category=""
value=0
total=SUM(value)
Budget.model
Budget.Current
Sheet 1 / 2
Default
Sum=0
100%