Draw Guide

Chapter 6
Combining Multiple Objects

OpenOffice.org

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Contents

Grouping and combining objects

Using Draw, you can combine drawing objects together in two distinct ways: grouping and combining. These two methods allow you to treat multiple objects as one unit, or to merge objects to form a new shape.

Grouping is like putting objects in a container. You can move them in group and apply global changes to them. A group can always be undone and the objects that make up the group can always be manipulated separately.

A *combination* is a permanent fusion of objects leading to a new object. The original objects are no longer available as individual entities and the operation is irreversible.

TIP	To select multiple objects, click on each object while holding down the *Shift* key or click the **Select** icon (on the Drawing toolbar) and draw a rectangle around the objects.

Grouping objects

Group by common selection

When several objects are selected, any operations you carry out are applied to all of the objects. For example, you can rotate a group of objects in its entirety. Groups obtained through common selection of several objects are undone as soon as you click outside the group. However, you can group objects and keep those selected objects grouped together.

Maintaining groups and undoing groups

To group selected objects, right-click and choose **Group** from the context menu. You can also use the keyboard shortcut *Control+Shift+G* or choose **Modify > Group** from the menu bar.
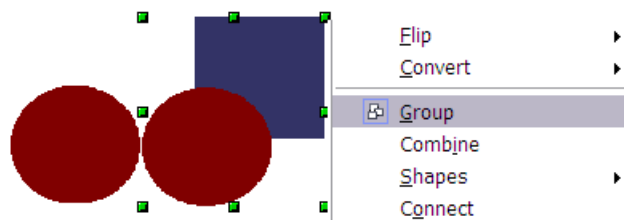

Figure 1: Grouping objects from the context menu.

When objects are grouped, any editing operations carried out on that group are applied to all members of the group. If you click on one member of the group, the whole group is selected.

The objects of a group maintain their individuality. To undo a group, right-click and choose **Ungroup** from the context menu or choose **Modify > Ungroup** from the menu bar.

Editing individual objects in a group

You can always edit a member of a group individually without breaking the group. To do this, right-click and choose **Enter group** or double-click on the group.
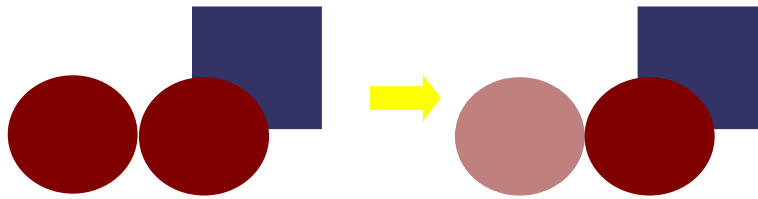
Figure 2: When you enter a group, objects outside the group can not be selected and are grayed out.

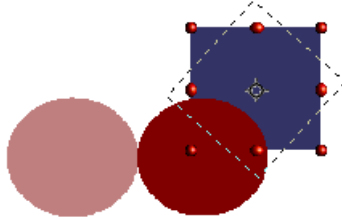Once inside the group, click on any object to edit it.

Figure 3: Editing an object inside a group.

To leave this mode, right-click and choose **Exit group** or double-click outside the group.

Nesting groups

You can create "nested" groups, or groups of groups. In this case, OpenOffice.org keeps the initial group hierarchy. If you ungroup a group made of other groups, you are left with individual groups that you can then ungroup further.

Combining objects

In contrast to grouping functions, combinations create a new object. Select a collection of objects, then right-click and choose **Combine** from the context menu. The result of this operation is shown below.
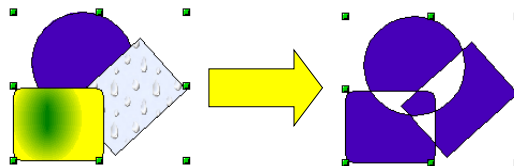
Figure 4: Combining objects

At first glance, this can seem rather surprising. Once you have understood the rules governing combination in OpenOffice.org, it will become clear.

• The attributes (for example, area fill) of the resulting object are those of the object furthest back. In this example, it is the circle.

• Where the objects overlap, the overlapping zone is either filled or empty depending on the number of overlaps. When the number of overlaps is even, you get an empty space; when the number is odd, you get a filled area.
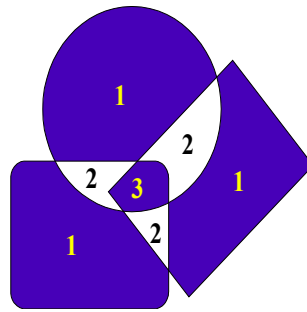
*Figure 5: Odd overlaps are filled, even overlaps are empty.*

TIP	How do I move an object so it is further back or closer to the front? See page 5.

Merge, subtract or intersect shapes

The functions Merge, Subtract, and Intersect can be reached though the group's context menu, under the heading **Shapes**.
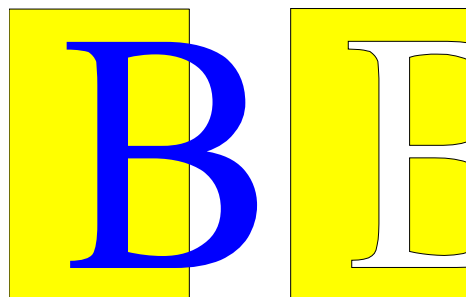
Merge

When you merge objects, the new object covers the entire surface of the original objects (it is the *union* of the objects).
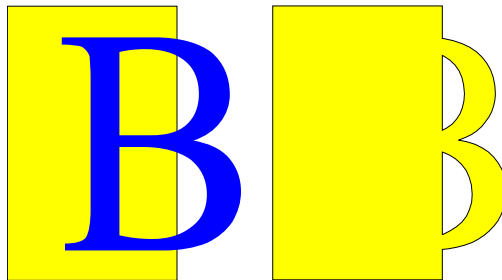
Subtract

When you subtract, the upper object is subtracted from the lower object.

Intersect

When you intersect two objects, you get the area covered by both objects.
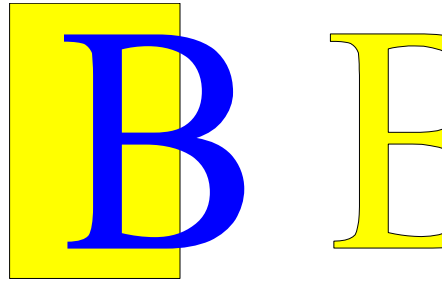
| **TIP** | How do I move an object so it is further back or closer to the front? See page 5. |

Practical example

The following example shows how one can use the shape merge functions to create a complex shape.

1) Draw an ellipse and then a rectangle overlapping half of its width.
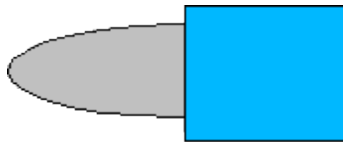
2) Select both shapes, right-click, and choose **Shapes > Subtract** from the context menu.
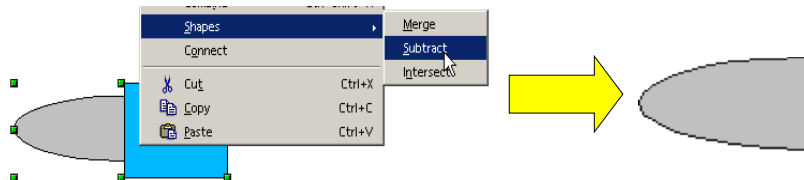
3) Draw another rectangle and put it over the top half of the ellipse. Then subtract again.
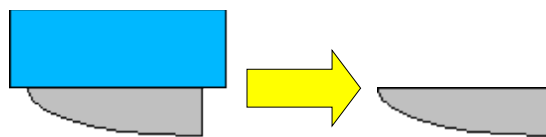
4) Draw a small ellipse covering just the lower corner and subtract again.
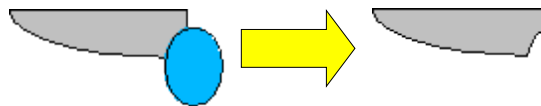
5) To make the handle, draw a rectangle and an ellipse as shown.

6) *Merge* the shapes together.
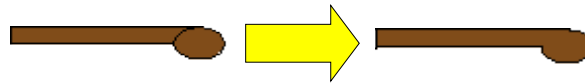
7) *Group* this image with the previous one.

Aids for positioning objects

Draw has various tools to help you arrange the objects with respect to each other. Here we explore some of the more important ones.

Moving an object to the front or to the back

When you combine or merge objects, the end result varies drastically depending on which object is "in front" and which one is "in the back".
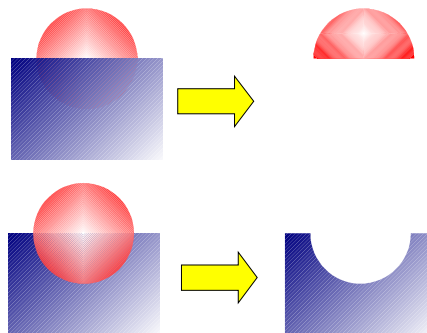
Figure 6: Subtracting objects: the result varies depending on which object is in front

First select an object, then click on to open the **Position** toolbar.
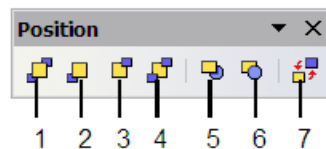
1	Bring to Front	**5**	In Front of Object
2	Bring Forward	**6**	Behind Object
3	Send Backward	**7**	Reverse
4	Send to Back		

brings the selected object to the front of the group.
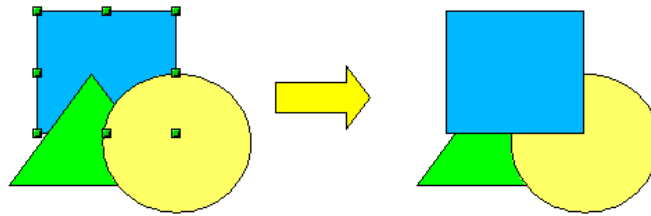
brings the selected object one step upwards.
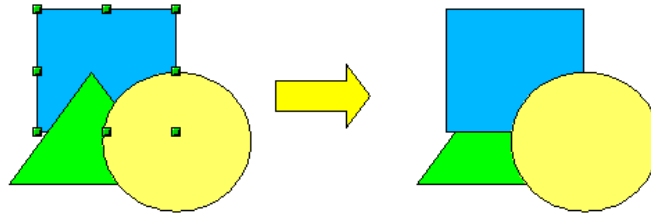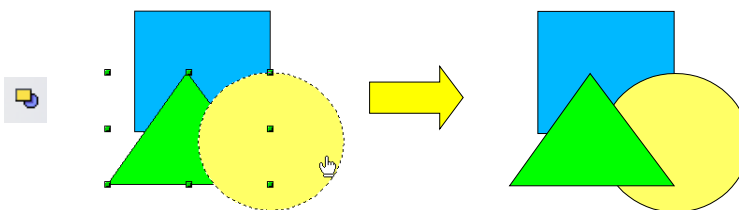
brings the selected object one step backwards.
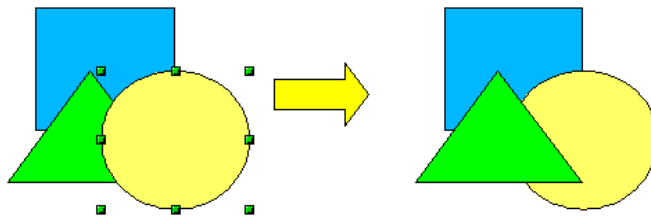
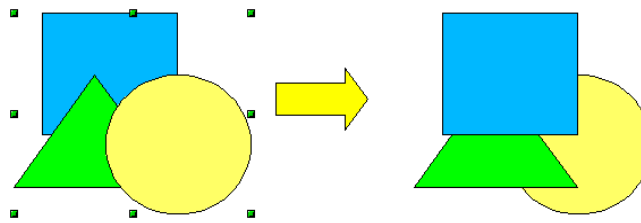brings the selected object to the back of the group.
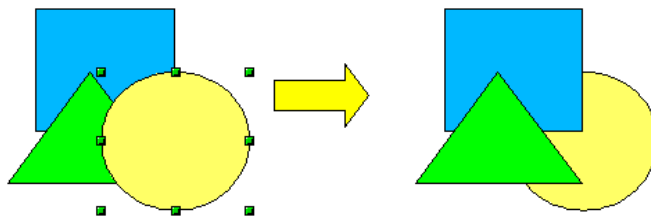
moves the selected object in front of another chosen object.

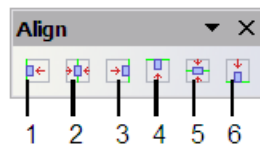moves the selected object behind another chosen object.

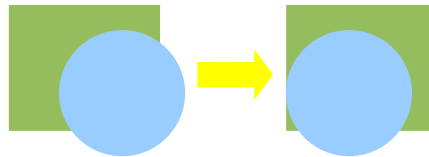 reverses the order of the selected objects.

Aligning objects

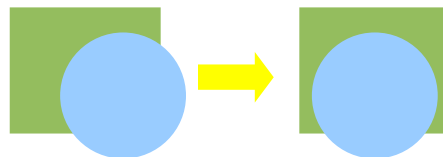Click on to open the **Align** toolbar. This toolbar helps you position an object with respect to another.

1 Align left
2 Centre horizontally
3 Align right
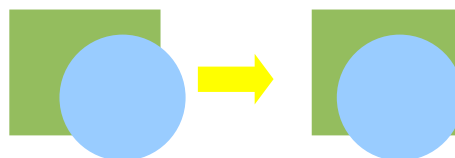**4** Align top
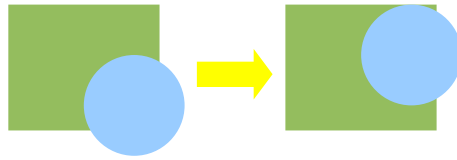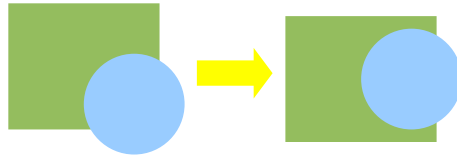**5** Centre vertically
6 Align bottom

 Align left.

 Center horizontally.

 Align right.

 Align top.

 Center vertically.

 Align bottom.