Qt DOCUMENTATION

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# 在 Qt 设计器中使用布局

在使用表单之前，需要将表单上的对象放置在布局中。这可确保在应用程序中预览或使用窗体时正确显示对象。在布局中放置对象还可以确保在调整窗体大小时正确调整对象的大小。

将微件插入到布局中后，无法单独移动它们并调整其大小，因为布局本身控制其中每个小部件的几何图形，同时考虑到垫片提供的提示。可以将垫片添加到布局中以影响微件的几何图形。

布局可以嵌套以形成层次结构。例如，若要实现具有水平按钮行的典型对话框布局，可以使用包含底部按钮的水平框布局的垂直框布局来布局对话框元素。有关 Qt 布局系统的介绍，请参阅布局管理。

若要中断布局，请按 **Ctrl+0** 或从窗体的上下文菜单、"**窗体**"菜单或主工具栏中选择"**中断布局**"。

## 设置顶级布局

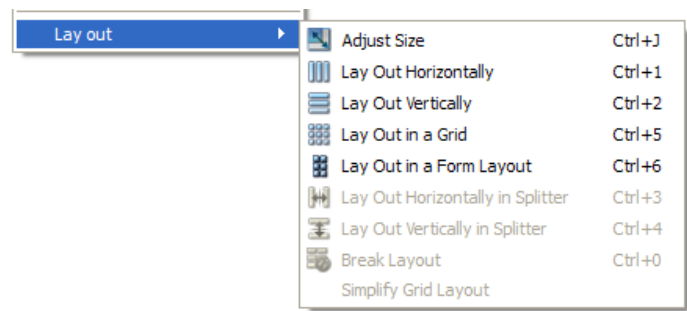可以通过清除所选内容（单击窗体本身上的鼠标左键）并应用布局来设置窗体的顶级布局。顶级布局对于确保在调整窗口大小时窗口大小时正确调整窗口大小是必需的。要检查是否已设置顶级布局，请预览小部件并尝试通过拖动大小夹点来调整窗口大小。



**应用布局**
要应用布局，您可以从左侧显示的工具栏或下面显示的上下文菜单中选择所选的布局。

同样，顶级布局分别设置在容器小部件（QGroupBox）或基于页面的容器小部件（Q选项卡密码，QToolBox和Q堆栈Widget）的页面上。需要选择容器小部件才能成功。

顶级布局在对象检查器中不显示为单独的对象。它们的属性显示在属性编辑器中主窗体、容器构件或容器构件页面的构件属性下方。



## 布局对象

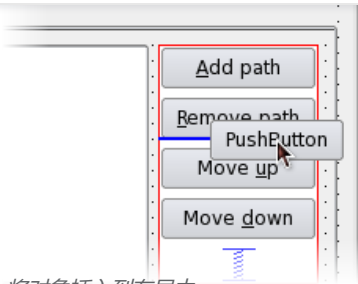布局对象是通过将布局应用于一组现有对象来创建的。这是通过选择需要管理的对象并使用主工具栏、"**窗体**"菜单或窗体的上下文菜单应用其中一个标准布局来实现的。

布局对象由窗体上的红色框架指示，并在对象检查器中显示为对象。其属性（边距和约束）显示在属性编辑器中。

可以选择布局对象并将其与其他构件和布局对象一起放置在另一个布局中，以构建布局层次结构。

选择子布局对象后，可以通过在单击其时按下 Shift 键来选择其父布局对象。这样就可以在层次结构中选择特定的布局，否则由于框架较小，这很困难。

## 将对象插入到布局中

通过将对象从其当前位置拖动到所需位置，可以将对象插入到现有布局中。当在布局上拖动一个对象以指示将对象添加到何处时，布局中将显示一个蓝色光标。
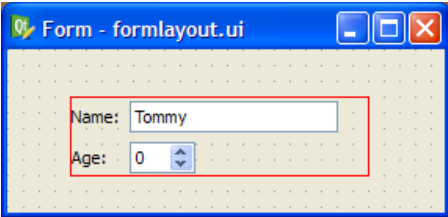
将对象插入到布局中

# 布局类型

## 水平和垂直（框）布局

在窗体上排列对象的最简单方法是将它们放置在水平或垂直布局中。水平布局确保其中的小部件水平对齐;垂直布局可确保它们垂直对齐。

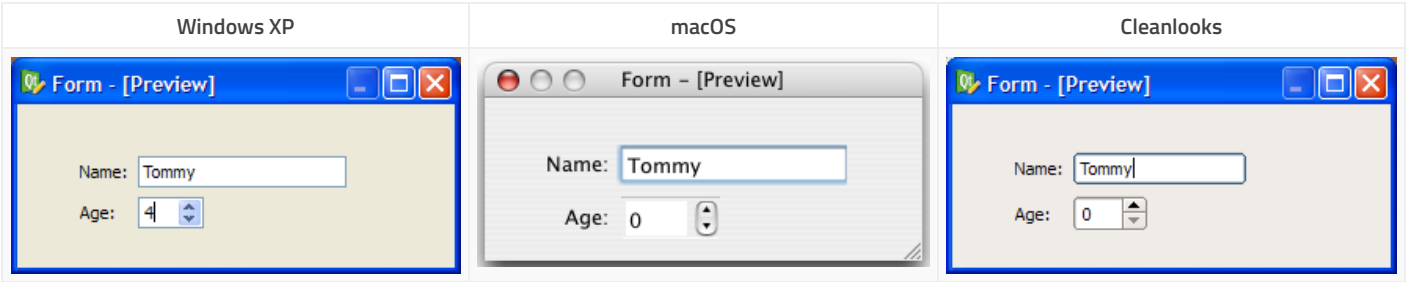水平和垂直布局可以组合并嵌套到任何深度。但是，如果需要更好地控制对象的放置，请考虑使用网格布局。

## 网格布局

Complex form layouts can be created by placing objects in a grid layout. This kind of layout gives the form designer much more freedom to arrange widgets on the form, but can result in a much less flexible layout. However, for some kinds of form layout, a grid arrangement is much more suitable than a nested arrangement of horizontal and vertical layouts.

### The Form Layout

The QFormLayout class manages widgets in a two-column form; the left column holds labels and the right column holds field widgets such as line edits, spin boxes, etc. The QFormLayout class adheres to various platform look and feel guidelines and supports wrapping for long rows.
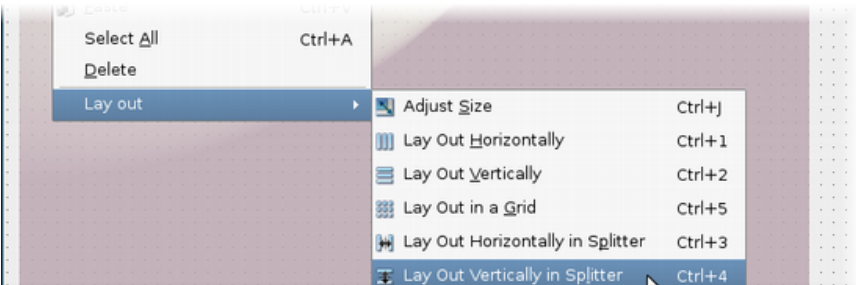


The UI file above results in the previews shown below.

| Windows XP | macOS | Cleanlooks |
|---|---|---|
|  |  |  |

### Splitter Layouts

Another common way to manage the layout of objects on a form is to place them in a splitter. These splitters arrange the objects horizontally or vertically in the same way as normal layouts, but also allow the user to adjust the amount of space allocated to each object.

Although **QSplitter** is a container widget, *Qt Designer* treats splitter objects as layouts that are applied to existing widgets. To place a group of widgets into a splitter, select them **as described here** then apply the splitter layout by using the appropriate toolbar button, keyboard shortcut, or **Lay out** context menu entry.

## Shortcut Keys

In addition to the standard toolbar and context menu entries, there is also a set of keyboard shortcuts to apply layouts on widgets.

| Layout | Shortcut | Description |
|---|---|---|
| Horizontal | **Ctrl+1** | Places the selected objects in a horizontal layout. |
| Vertical | **Ctrl+2** | Places the selected objects in a vertical layout. |
| Grid | **Ctrl+5** | Places the selected objects in a grid layout. |
| Form | **Ctrl+6** | Places the selected objects in a form layout. |
| Horizontal splitter | **Ctrl+3** | Creates a horizontal splitter and places the selected objects inside it. |
| Vertical splitter | **Ctrl+4** | Creates a vertical splitter and places the selected objects inside it. |
| Adjust size | **Ctrl+J** | Adjusts the size of the layout to ensure that each child object has sufficient space to display its contents. See QWidget::adjustSize() for more information. |

**Note: Ctrl+0** is used to break a layout.

‹ Qt Designer's Widget Editing Mode          Qt Designer's Signals and Slots Editing Mode ›

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