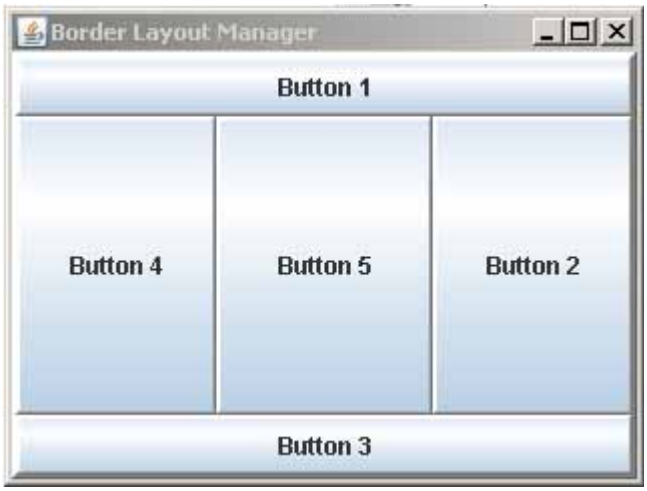
Demonstrations of Java Layout Managers

Java provides five layout managers for handling the layout of components in a GUI. This can be most useful if the window the GUI widgets are contained in is resized. The code shown will create a single window (Figure 1) with a number of buttons on it. This window was created with **null** layout manager, meaning that the size and location of all the buttons was defined in code. The window was also set so it cannot be resized. Clicking a button will bring up a sample window demonstrating a layout manager with five buttons placed in a panel. For more information check the Java Docs site.

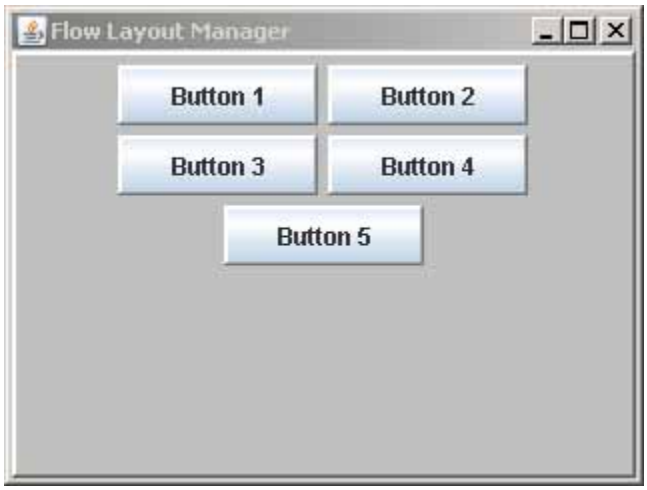
Border Layout Manager
This is the default layout manager. Items are placed at the positions: **NORTH, SOUTH, EAST, WEST** and **CENTER**.



Flow Layout Manager
The **Flow** layout manager places items all on one row from left to right. If there is not enough room on one row then multiple rows are used. Items on each row are centered in the frame.

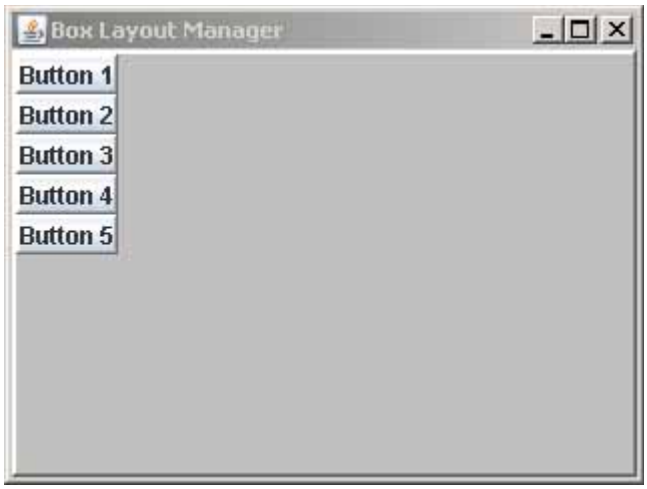
Box Layout Manager

The **Box** layout manager places items based on a set orientation pattern. This pattern can be: **X_AXIS** - components are laid out in one row, left to right; **Y_AXIS** - components are laid out in one column, top to bottom; **LINE_AXIS** - components are laid out like words in a line, i.e. left to right and in multiple rows as needed (like the Flow layout manager.); **PAGE_AXIS** - components are laid out vertically, top to bottom and in multiple columns, if needed, from left to right.



Grid Layout Manager

The **Grid** layout manager places items in rows (left to right) and columns (top to bottom). The number of rows and columns is defined when the Grid layout manager is created.



GridBag Layout Manager

The **GridBag** layout manager is, by far, the most complicated to use and the details are too involved to cover here. For more information check out the Java Doc link above, the Java Tutorial and the comments in the code demo.