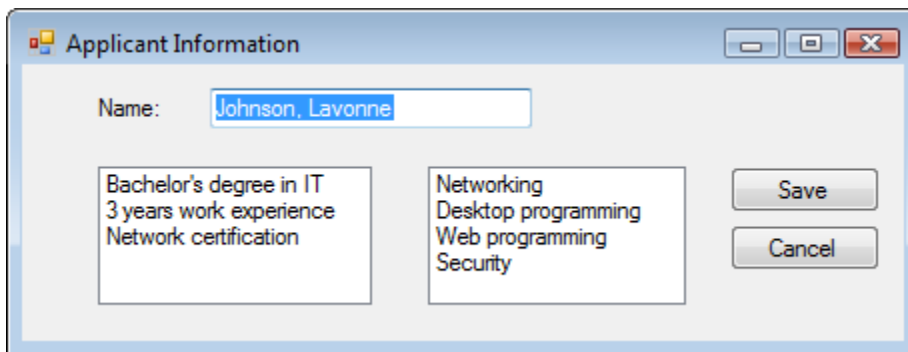


## Using the TableLayoutPanel Control

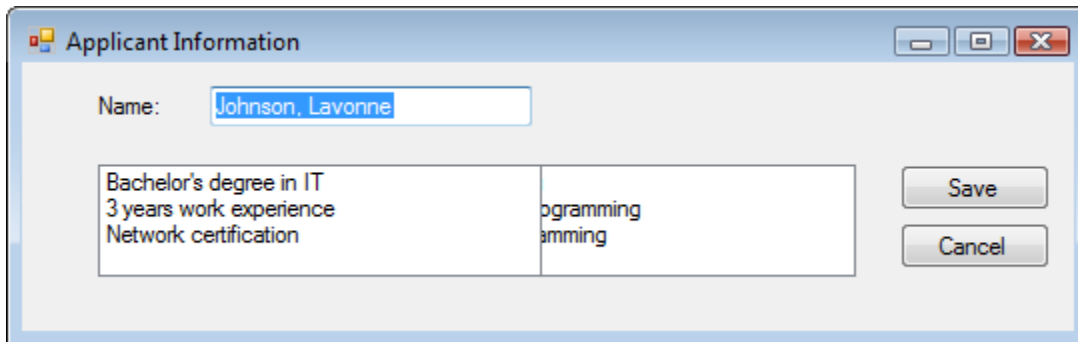
By Kip Irvine, (c) 2009  
Created 1/11/09

When running Windows Desktop applications, if you've ever tried to resize a form at runtime that contains a number of controls, you know that the results can be less than pleasing. When there are only a few controls, you might be able to anchor controls on all four sides, permitting them to expand and contract along with the form. But controls also have a way of covering up other controls on the same form.

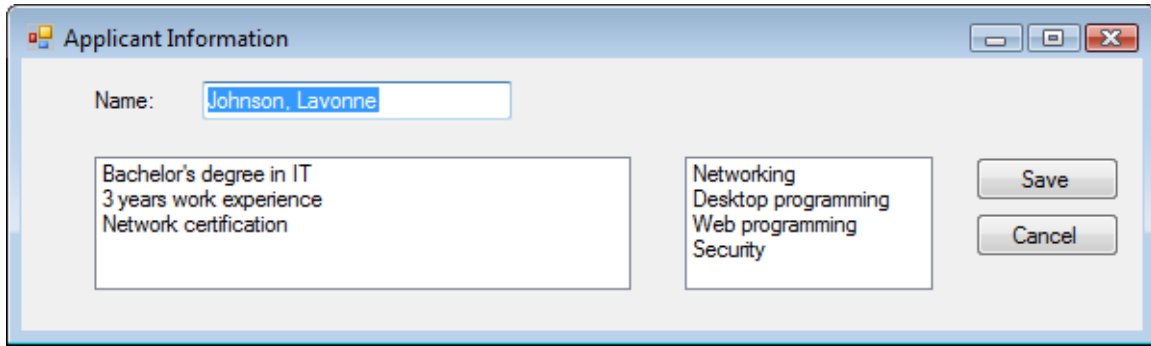
To illustrate, the following form contains a Label, a TextBox, two ListBoxes, and two buttons. We have set the Anchor property of the Save and Cancel buttons to Top, Right. The Anchor properties of both ListBoxes are set to Top, Left, Bottom, Right:



At runtime, we run into problems when the user stretches the form horizontally. The left-hand ListBox covers up the one on the right:



A possible compromise would be to un-anchor the left side of the right-hand ListBox. This permits the ListBox to float to the right and stay out of the way of the left-hand ListBox:



But we would like to stretch both `ListBox` controls, if we can. The solution to this problem is to use a `TableLayoutPanel` control, which allows controls to both float their positions and expand as necessary.

## TableLayoutPanel

The `TableLayoutPanel` control lets you accurately position items on a form using a table-oriented format with rows and columns. Each table cell in the panel can contain at most one control, which is oriented inside the cell using the control's `Anchor` property. The panel itself should be anchored on all four sides to permit it to follow the size of the form when resized at runtime.

We will build an example step by step:

Step 1: Insert a `TableLayoutPanel` control with 5 columns and 2 rows on a new form and set its `Anchor` property to top, left, bottom, right.

Step 2: Insert a `Label` in row 1 column 1, with the text "Name:". Anchor it to the right side of its enclosing cell.

Step 3: Insert a `TextBox` in row 1 column 3. Set its `ColumnSpan` property to 3 (this will permit the person's name to extend into the last two columns).

Step 4: Insert `ListBox` controls in row 2, columns 1 and 3. Anchor all four sides of these controls.

Step 5: Insert a `Button` control in row 2, column 5 and anchor it to the top and left of the table cell.

Step 6: Set `CellBorderStyle` to `Single`.

After some adjusting, your form should look like this:

Step 7: Select the Columns property of the TableLayoutPanel, which automatically opens the *Column and Row Styles* dialog. Set the values as shown here:

Member	Size Type	Value
Column1	Percent	37.50 %
Column2	Absolute	10
Column3	Percent	37.50 %
Column4	Absolute	10
Column5	Percent	25.00 %

Size Type

Absolute 20 pixels

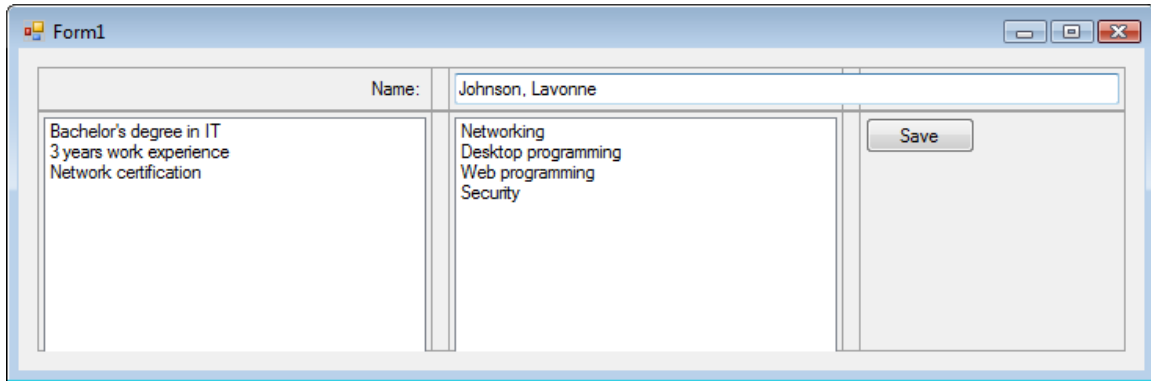
Percent 37.50 %

AutoSize

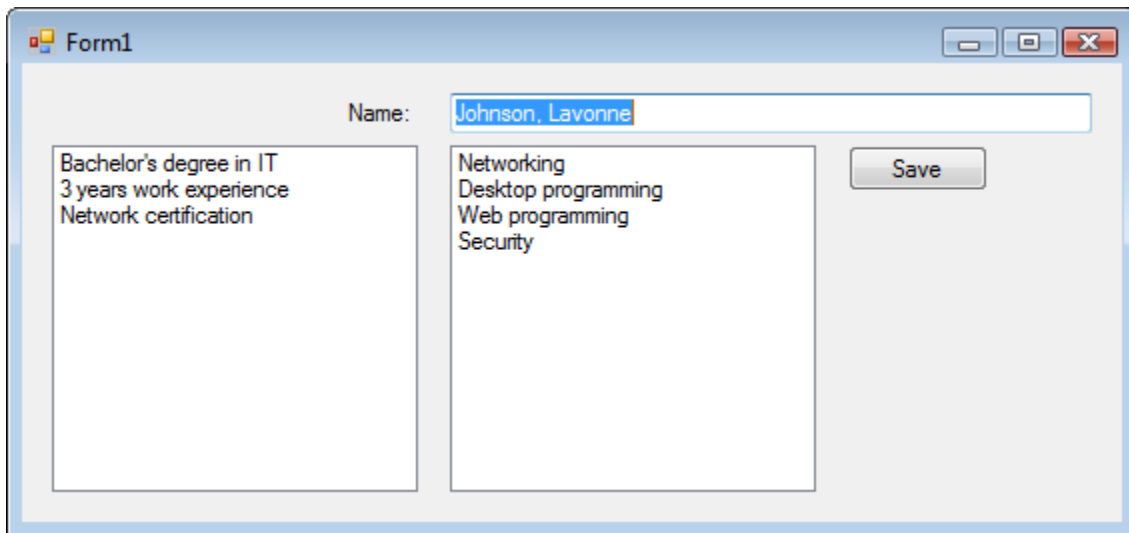
**i** Column and row spanning:  
If you want a control to [span multiple rows or columns](#), set the RowSpan and ColumnSpan properties on the control.

Notice that percentage widths are used for columns 1, 3, and 5. You have to do this so the columns can expand when the user resizes the form.

Step 8: Run the program and stretch the form to the right. Notice that the listboxes expand without interfering with each other:



If you want, you can remove the cell borders by setting the `CellBorderStyle` property equal to `None`:



You may be wondering how we can put two buttons in the last column, to duplicate the layout of our non-table example. The easiest way is to insert another smaller `TableLayoutPanel` control inside the cell that should contain two buttons. You can also use a `FlowLayoutPanel` control to insert controls that flow like text within a control.

## Embedding Other Layout Panels

If you want to put more than one control in a cell, you can insert a `FlowLayoutPanel` control, as shown in row 2 column 3 in the following figure. Inside the `FlowLayoutPanel`, we have inserted two `CheckBox` controls. We have also inserted a smaller `TableLayoutPanel` into row 3 column 5, containing two `Button` controls:

Applicant Information

Name: Johnson, Lavonne

Available immediately  Bilingual

Bachelor's degree in IT  
3 years work experience  
Network certification

Networking  
Desktop programming  
Web programming  
Security

Save

Cancel

