Step-by-Step Tutorials

It's time to jump into the database fast lane! By the time you finish the lessons in this tutorial you'll have a solid foundation in the basic techniques you'll need to use Panorama effectively.

This tutorial is divided into three lessons. Each lesson builds on the previous lessons and introduces more advanced topics. In "Lesson 1: Building Your First Mailing List Database" on page 2 you'll learn how to create and set up a simple mailing list database. In "Lesson 2: Building and Organizing a Checkbook" on page 82 you'll not only build a simple checkbook register file but also learn several techniques for organizing and summarizing the checkbook data. In "Lesson 3: Building an Invoice Database" on page 169 you'll create a simple invoice for creating and tracking orders. Finally, in "Lesson 4: Building a Price List" on page 186 you'll create a price list and link it to the invoice database. Each lesson should take from 30 minutes to an hour to complete. The lessons are designed so you can easily follow along and actually build each database as you read. There are plenty of illustrations to show what the screen will look like at each step, so you don't need to worry about getting lost.

Before you begin, you'll need to install Panorama on your computer. If you haven't done so already, see "Installing the Software" on page 97. It's not necessary to activate Panorama to complete the operations in this tutorial. If you haven't purchased Panorama yet you can try out the tutorials before you decide that you want to purchase Panorama (see "Using Panorama's "Demo Mode"" on page 113).

I hear the bell—class is about to begin. It's time to get started with your new Panorama career! I hope you have as much fun learning Panorama as we had creating it for you.

Sincerely,

Jim Rea, President

P.S. This tutorial teaches you how to work with Panorama. It assumes, however, you already are familiar with your computer and operating system. You should be able to point, click, and drag selections, and be able to make selections from menus, use scroll bars, and edit text. If you are not familiar with these skills, you should review the tutorial information supplied with your computer.

## Lesson 1: Building Your First Mailing List Database

A mailing list for storing names and addresses is one of the most basic database applications, and is very simple to create with Panorama. Start by launching Panorama and the **New Database Wizard**.
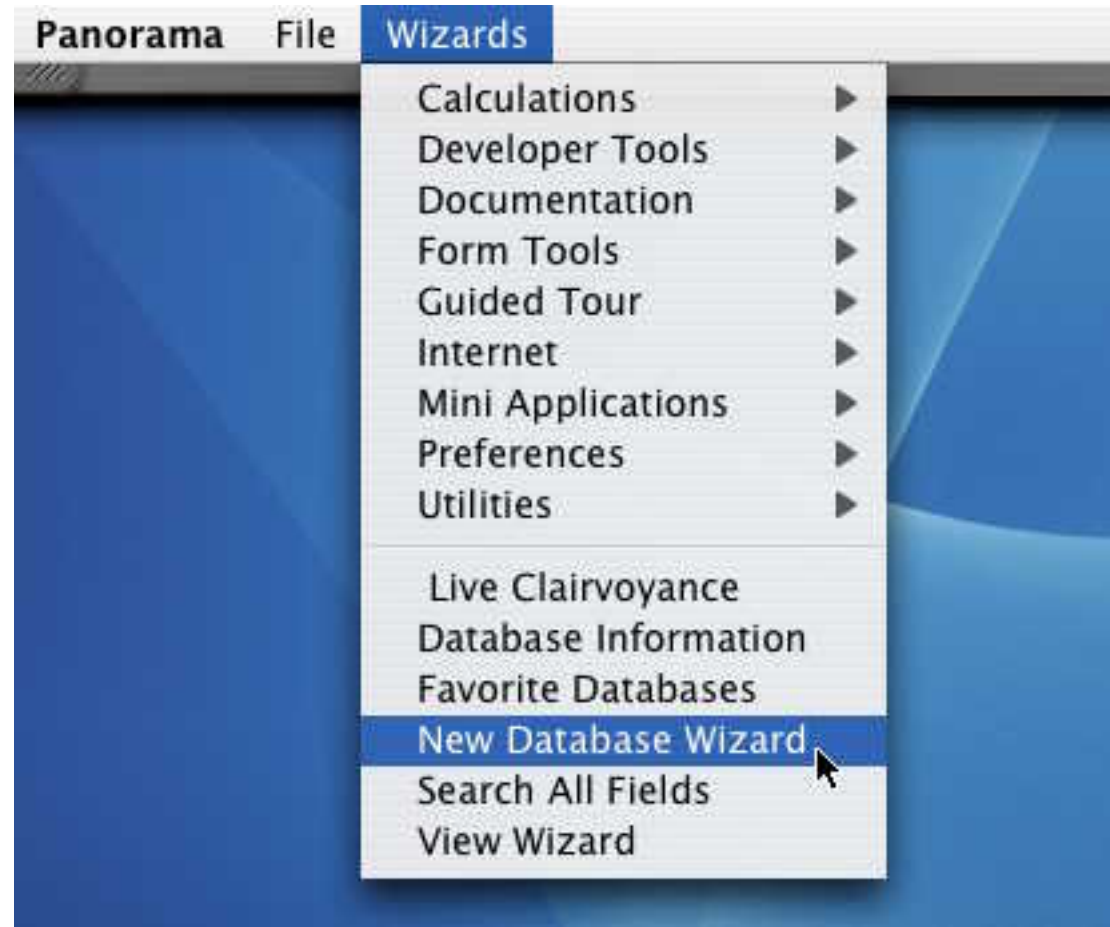
On Windows systems you can do this with the **Start** menu.
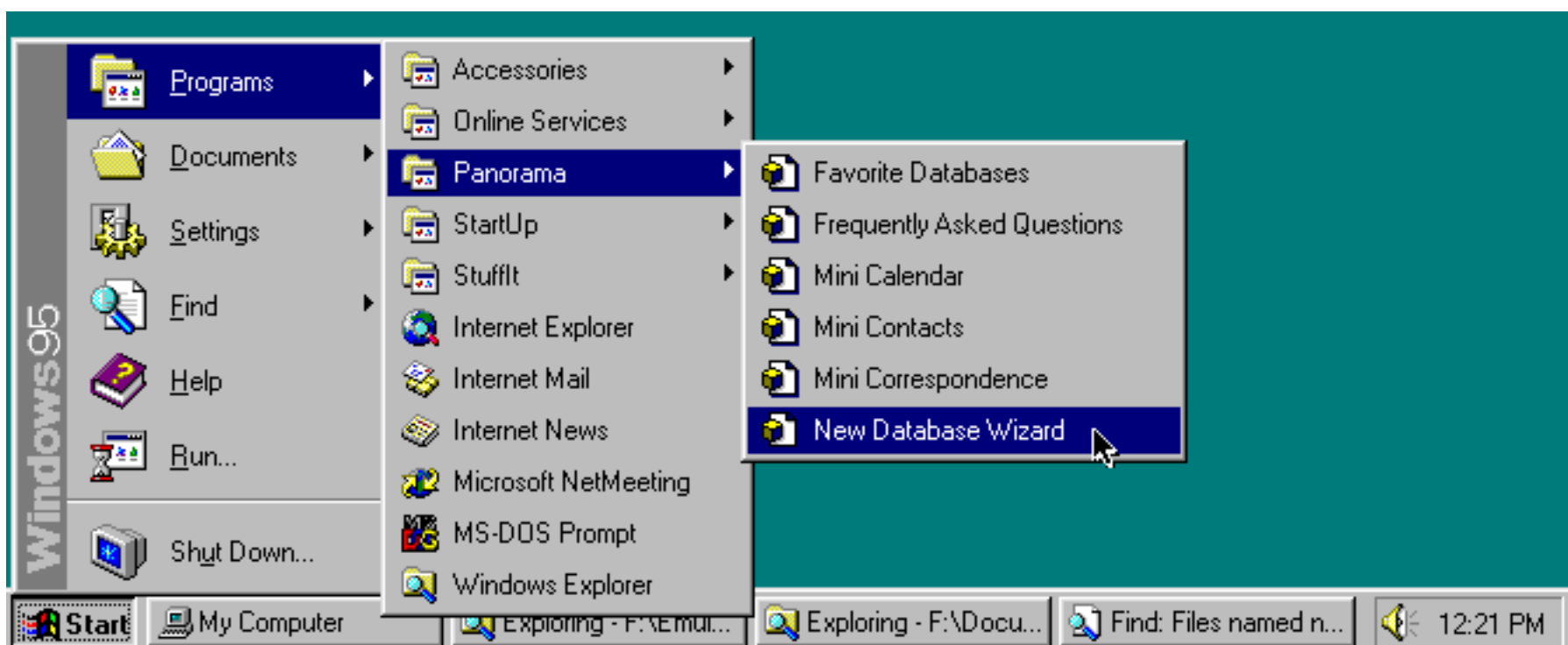
Your new mailing list database will have seven fields — First, Last, Address, City, State, Zip and Phone. (See "Fields" on page 375 for a complete explanation of fields.) Type in the name of each field into the wizard, with each name on a separate line (press the **Return** key to advance to the next line).
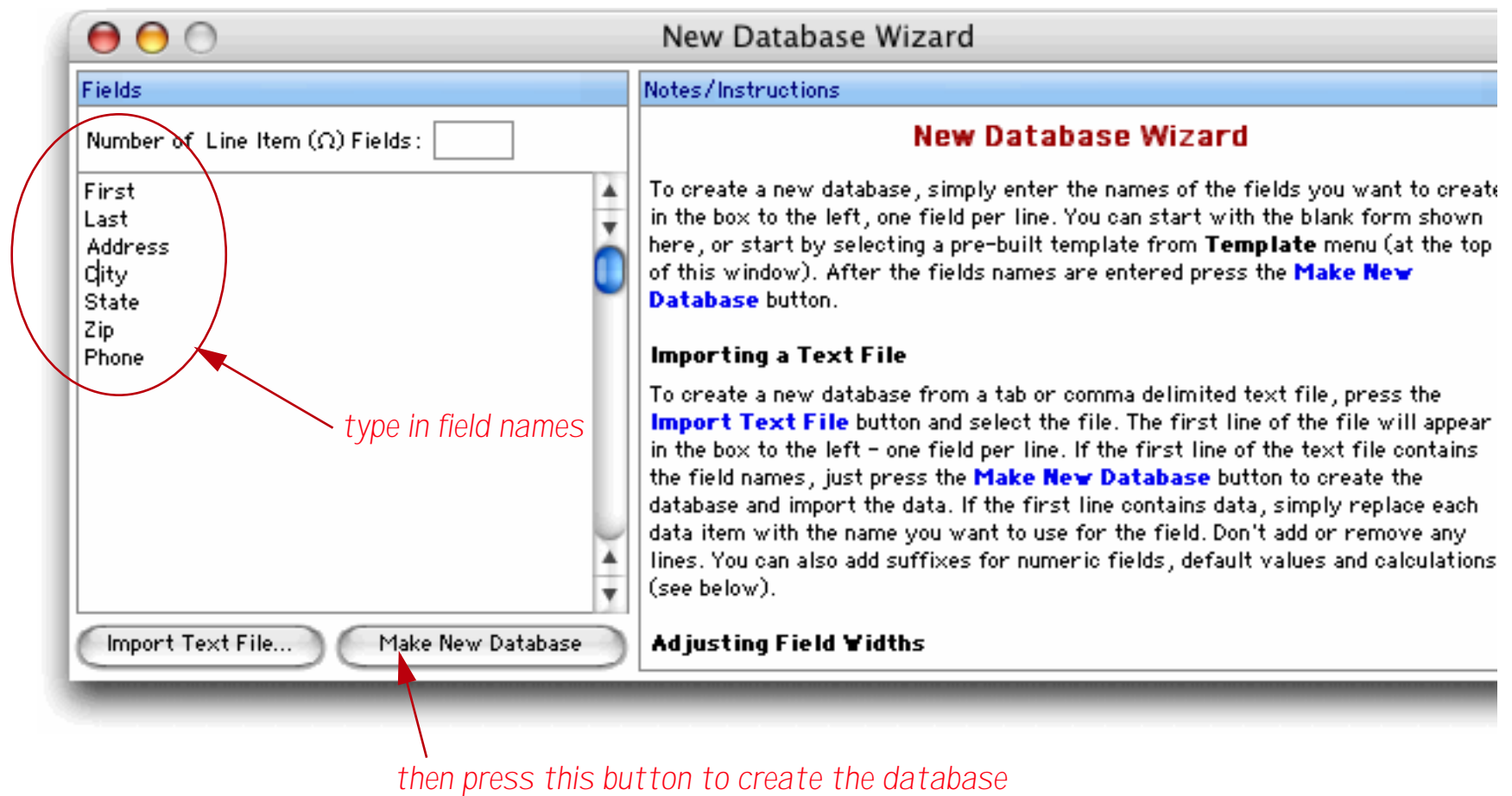
type in field names

then press this button to create the database

When you press the **Make New Database** button the wizard will create a new database for you. The database is displayed using a row and column format called the **data sheet**. The new database contains one blank record (line) and seven fields (columns).

Entering Data Into Your New Database

The new database is ready to use immediately — you can just start typing to enter data. For example, to enter the name Bob simply start by pressing the ⓑ key. A small pop-up window will appear over the current cell. This pop-up window is called the **Input Box** and is used for all data entry in the data sheet(see "The Input Box" on page 438).
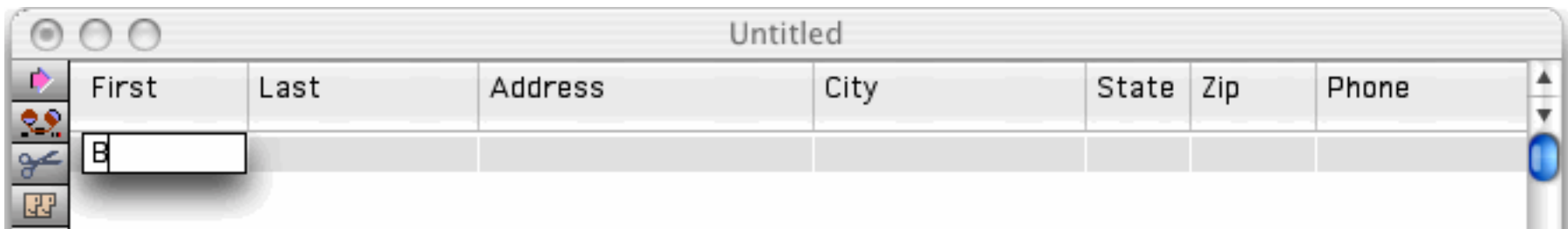
Complete the entry of the name by pressing ⓞ ⓑ. Notice that Panorama automatically capitalized the first letter of the name. We'll show you how to turn this feature on and off later (see "Automatic Capitalization" on page 447 if you can't wait).

When you've finished with the first name press the **Tab** key to move on to the last name.
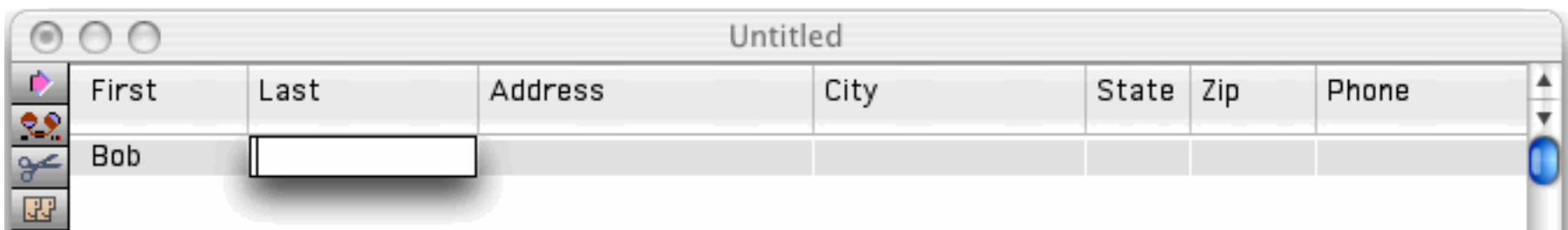
Continue typing and pressing the **Tab** key until you get to the phone number. When you tab into the Phone field you'll notice that Panorama automatically types in the (for you.

The **New Database Wizard** has set up an **Input Pattern** to make typing the phone number easier (see "Input Patterns" on page 455). All you have to type is the numbers, for example ⑦⓪②④⑧⑦⑨⓪②③. Panorama will type in the punctuation for you.

Panorama types in (,), space and - for you

Once you've finished entering the phone number you have a choice to make. Press the **Tab** key if you want to add another line and continue editing data.
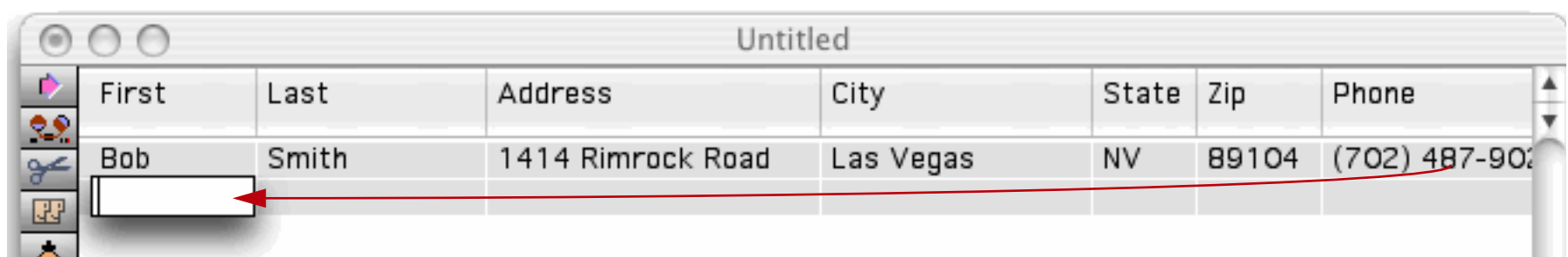
Press **Return** or **Enter** if you are done with data entry for the moment.

Making Corrections

It's easy to change the contents of any cell. Start by double clicking on the cell. This opens the Input Box, allowing you to type in a new value or to make corrections.

double click to edit cell

Press the **Enter** key or click on another cell when you are finished. (You can also press the **Tab** key if you want to skip to next cell and edit it too.)

Editing a Multi-Line Cell

If you need more room to enter your data, you can expand the size of the Input Box. For example, you might need to expand the Input Box to enter an address with more than one line. To expand the Input Box, move the arrow to the lower right hand corner of the box. When the mouse reaches the corner, the arrow will flip over so that it is pointed down instead of up.

mouse "flips over" in lower right hand corner
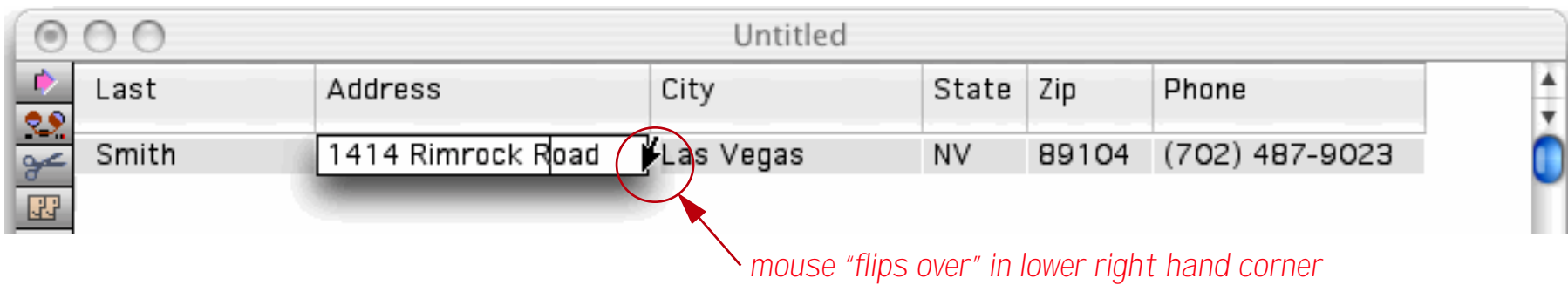
When you see the arrow flip over, press the mouse and drag the corner of the box to the size you want.
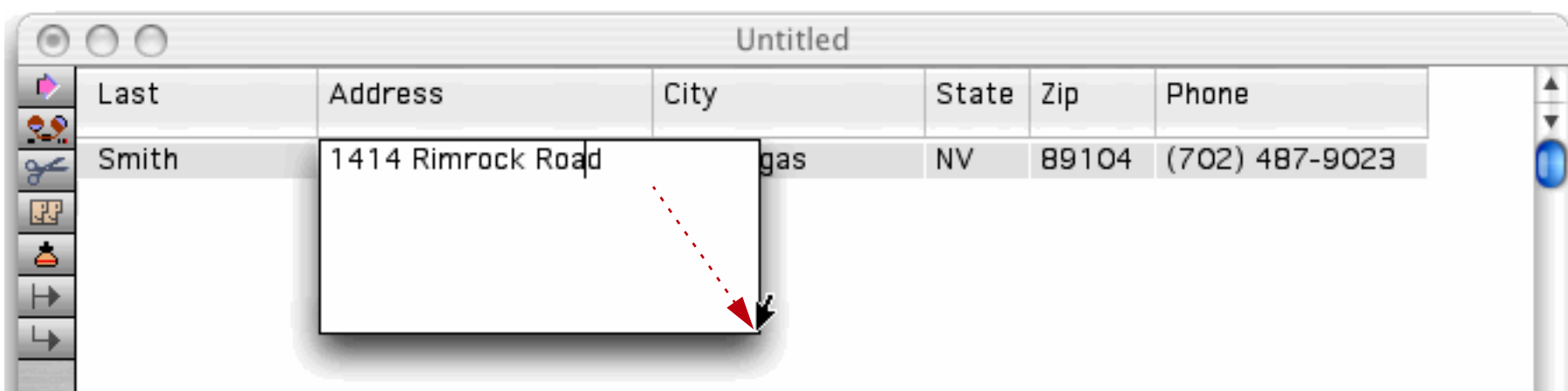
When you release the mouse the Input Box will expand to the new size.
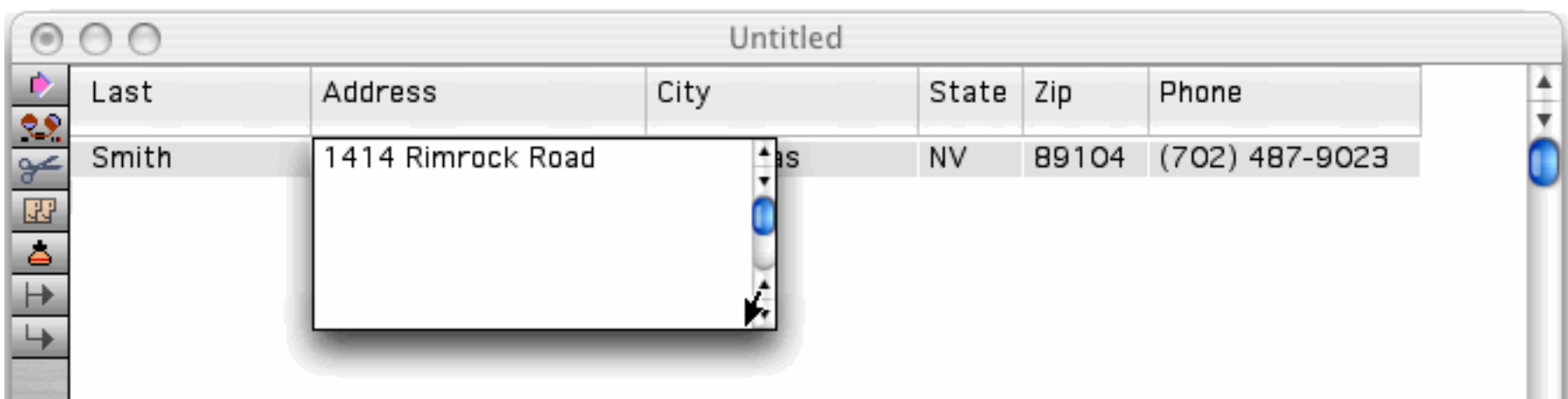
Now that the Input Box has been expanded you can use the **Return** key to add additional lines to the data cell. You can add as many lines as you like.
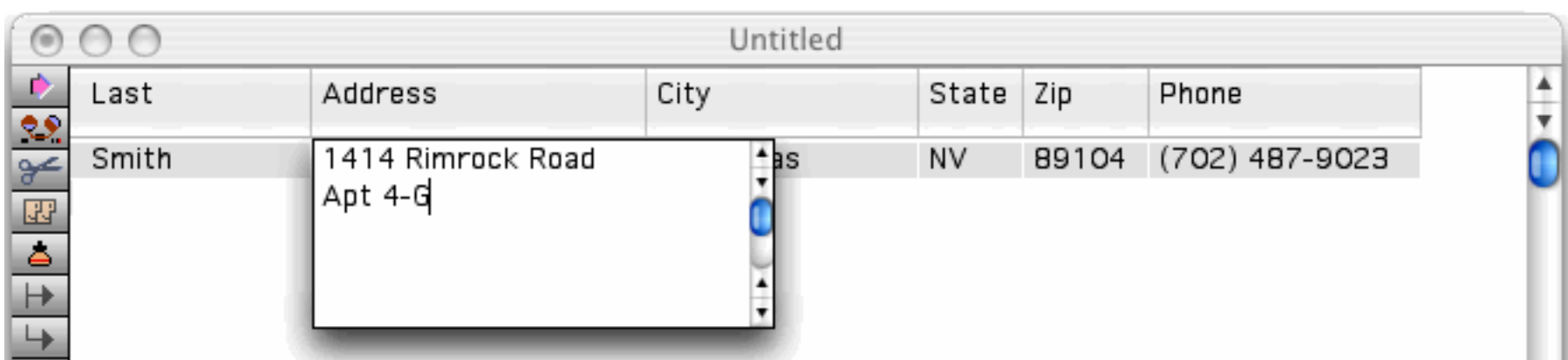
When you are finished editing the address press the **Enter** key. The Input Box closes and now you can only see the first line of the data. (If you want to see more than one line of data in a cell that is not being edited you must use a form, see "Displaying and Editing Text" on page 715).

only first line of text is visible in data sheet
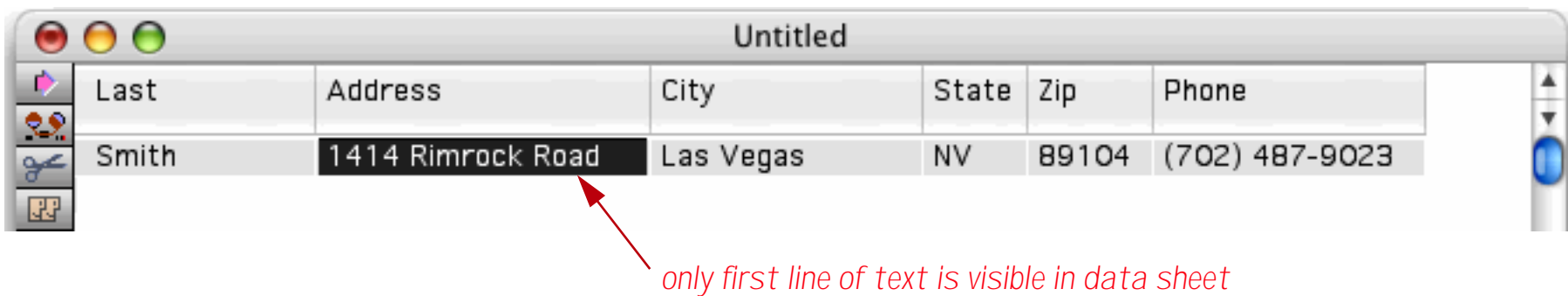
If you double click to edit the data cell again Panorama will remember the new size of the Input Box.
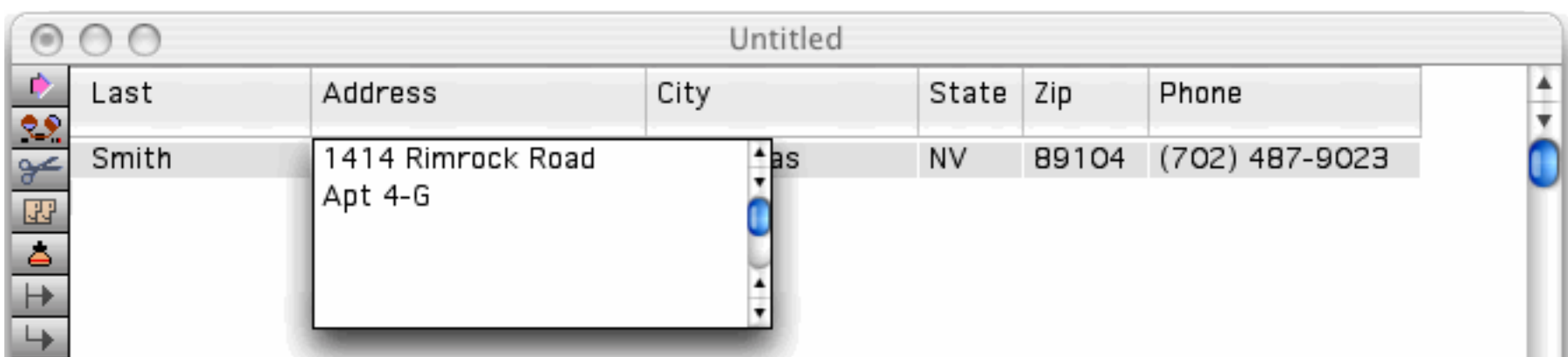
You can adjust the size of the Input Box any time it is open.
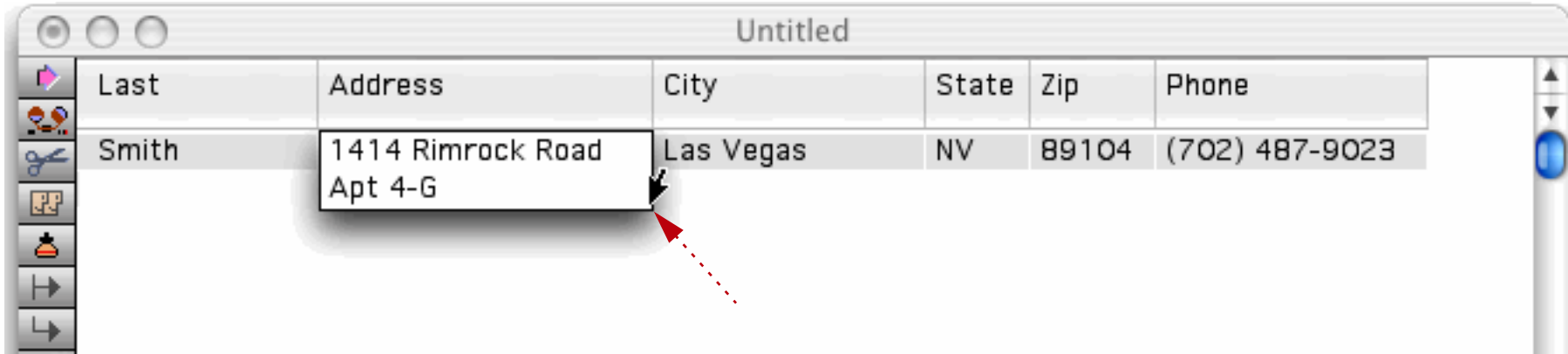
If the Input Box is less than one inch high it won't have a scroll bar.
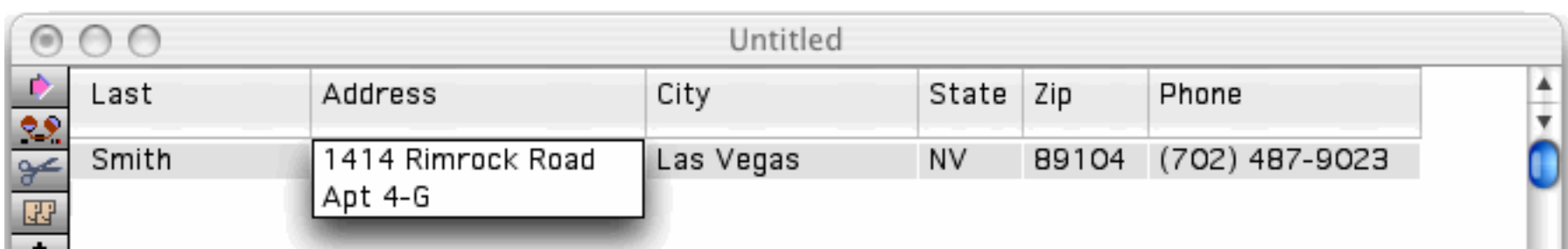
To learn more about expanding the Input Box see "Expanding the Input Box" on page 439

Saving Your Work

To permanently store your new database choose the **Save** command from the File menu. Using the dialog, choose the folder you want to save the database in. Type in the name of the file and check the Save Window Positions option (see "Saving Window Positions" on page 260). When everything is set up press the **Save** button.

type in name of file

select folder you want to save file in

tell Panorama to save window positions
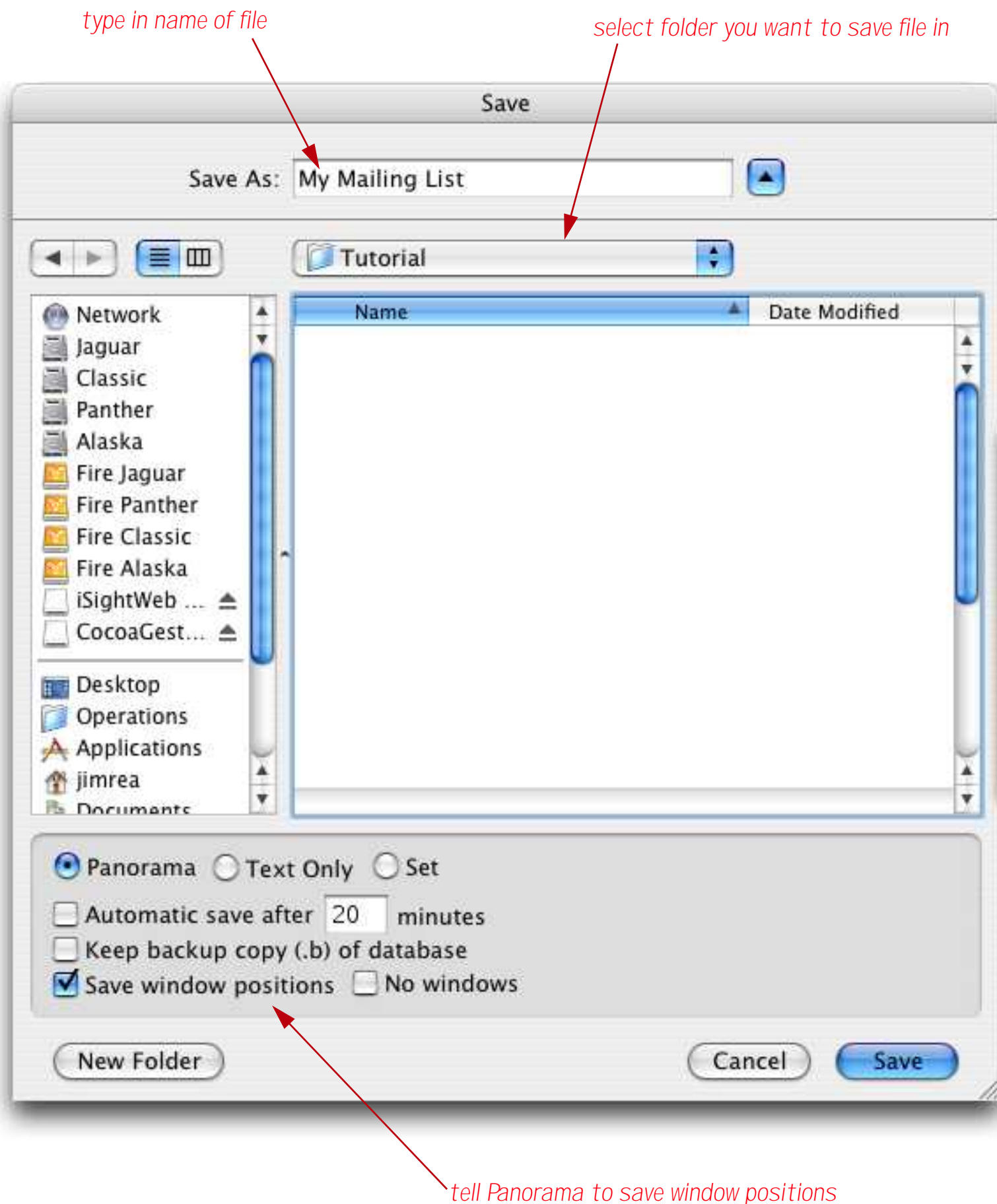
If you are using a Windows PC the dialog looks a little bit different but the procedure is exactly the same.

select folder you want to save file in

Save As

Save in: BASICSAMPLEFILES

Chart of Accounts.pan   Payables.pan
Checkbook.pan
Estimates.pan
Expense Log.pan
Flow Chart.pan
FormSize.pan

Type in name of file

File name: My New Database   Save

Save as type: Panorama Database File {*.pan}   Cancel

☐ Automatic save after 20 minutes
☐ Keep backup (.bak) copy of database
☑ Save Window Positions ☐ No windows

tell Panorama to save window positions

After the file is saved the name of the window will change from Untitled to the name of the file, in this case My Mailing List.

Last	Address	City	State	Zip	Phone
Smith	1414 Rimrock Road	Las Vegas	NV	89104	(702) 487-9023

My Mailing List

1 visible/1 total

Importing Data Into the Mailing List

If you already have data in another program (FileMaker, Access, Excel,etc.) you can transfer that data to Panorama by exporting it into a text file (tab or comma delimited) and then importing it into Panorama. Panorama includes some text files with sample data, so we'll import one of those files now. Start by choosing **Text Import Wizard** from the Utilities submenu of the Wizards menu. The wizard opens and lists the fields in your database on the right hand side.

name of database data will be imported into

fields in database
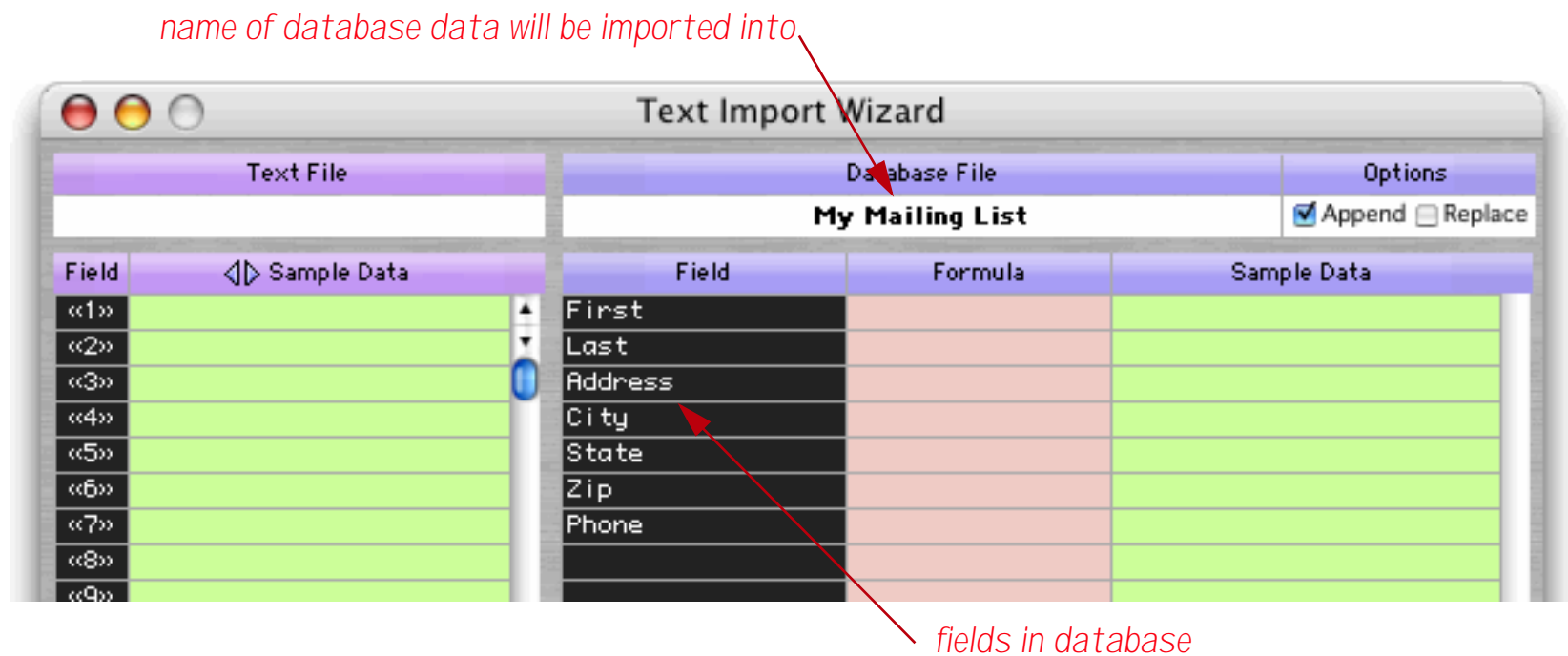
The next step is to select the text file that contains the data to be imported. Choose **Select Text File** from the Import menu. Then locate the 200 Sample People.txt file in the Utilities folder and press the **Choose** or **Open** button.

Once the file is selected the wizard will display the fields in the first line of the text file. The text file contains 15 fields, including name, address, phone, fax, email and birthday (not shown).

name of text file being imported

first line of data in text file
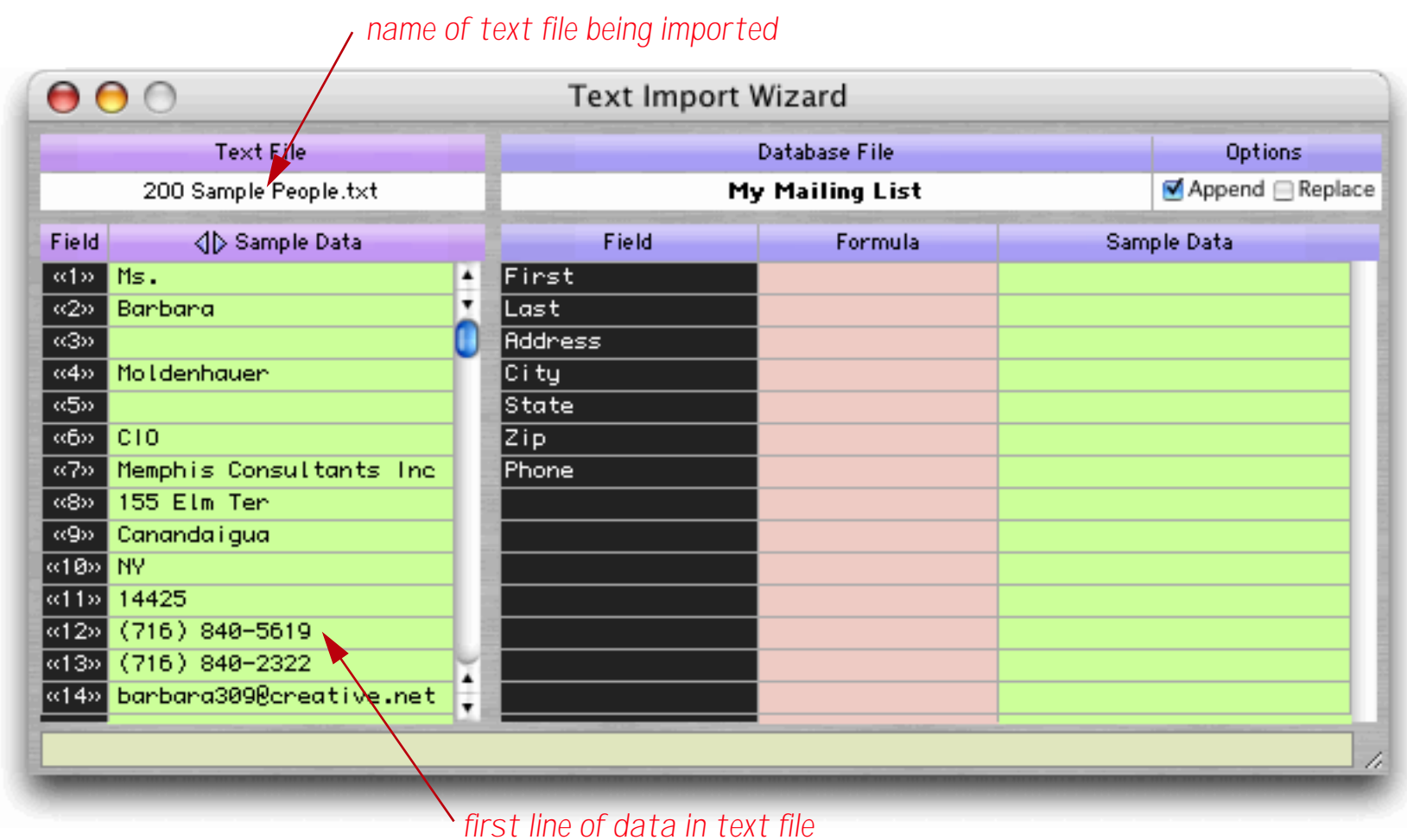
Before you can import the data you must assign the fields in the text file to fields in the database. Start by dragging Barbara to the First field.
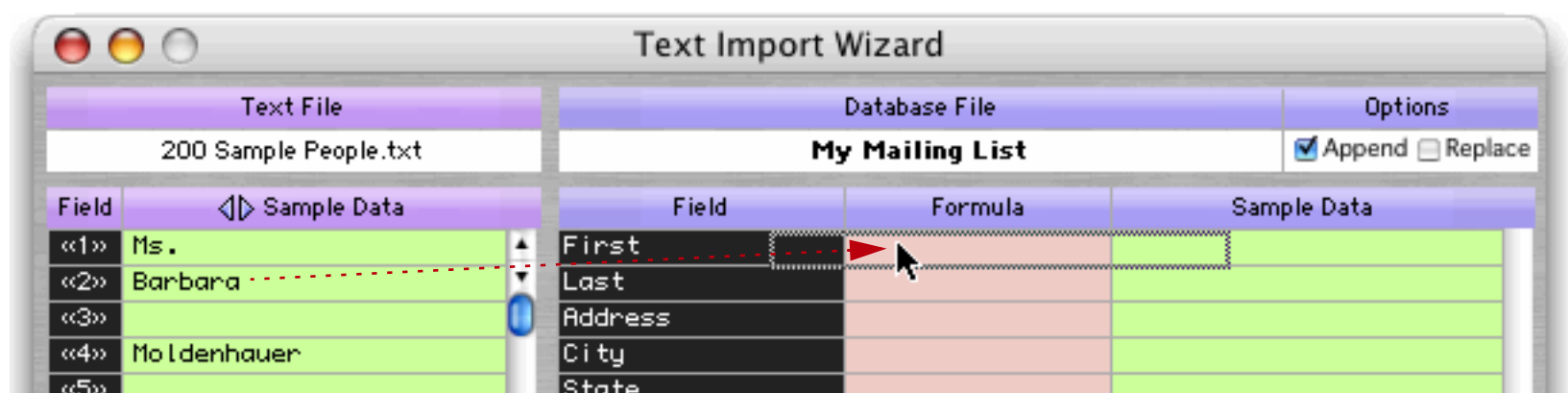
When you release the mouse the wizard will assign the second field from the text file to the First field.

second field of text file assigned to this database field
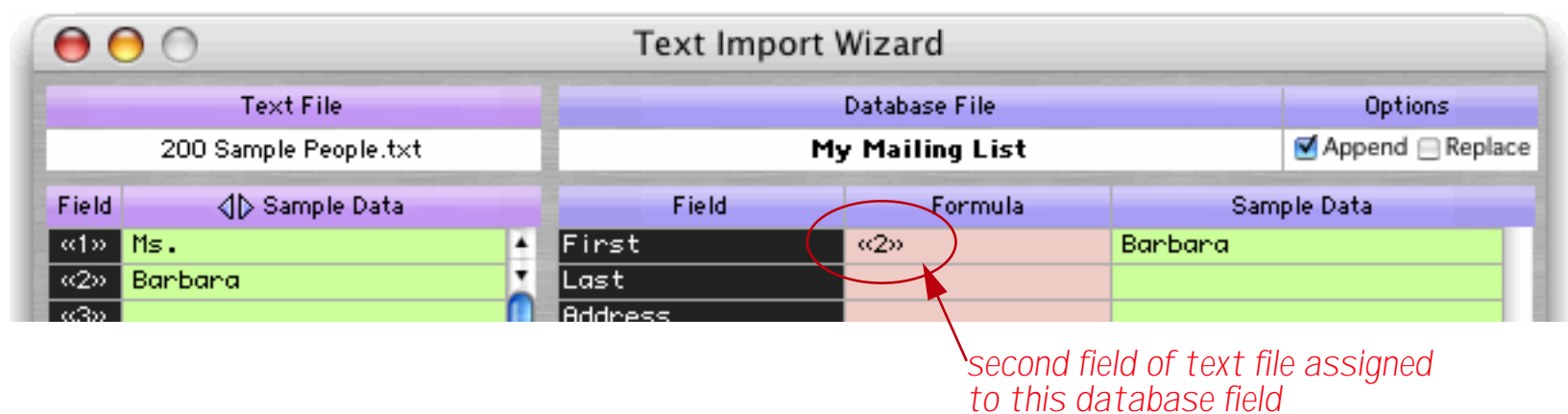
Drag each of the text fields you want to import onto the corresponding database field. You can check your work by looking at the Sample Data column.

Once all of the fields are set up choose **Import Data** from the Import menu.
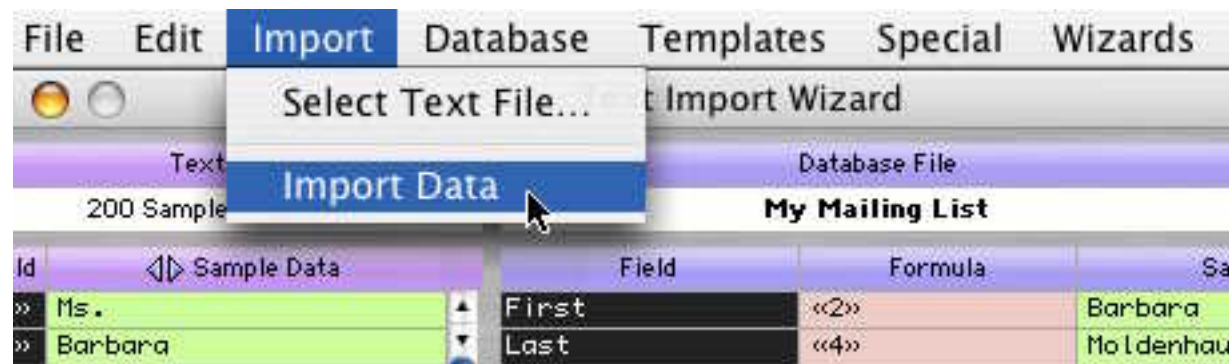
The wizard will import the data from the text file into the database.

Your database now contains 201 records — the single record you typed in plus the 200 records imported by the Text Import Wizard. The total number of records is displayed in the lower left hand corner of the window.

total number of records in the entire database
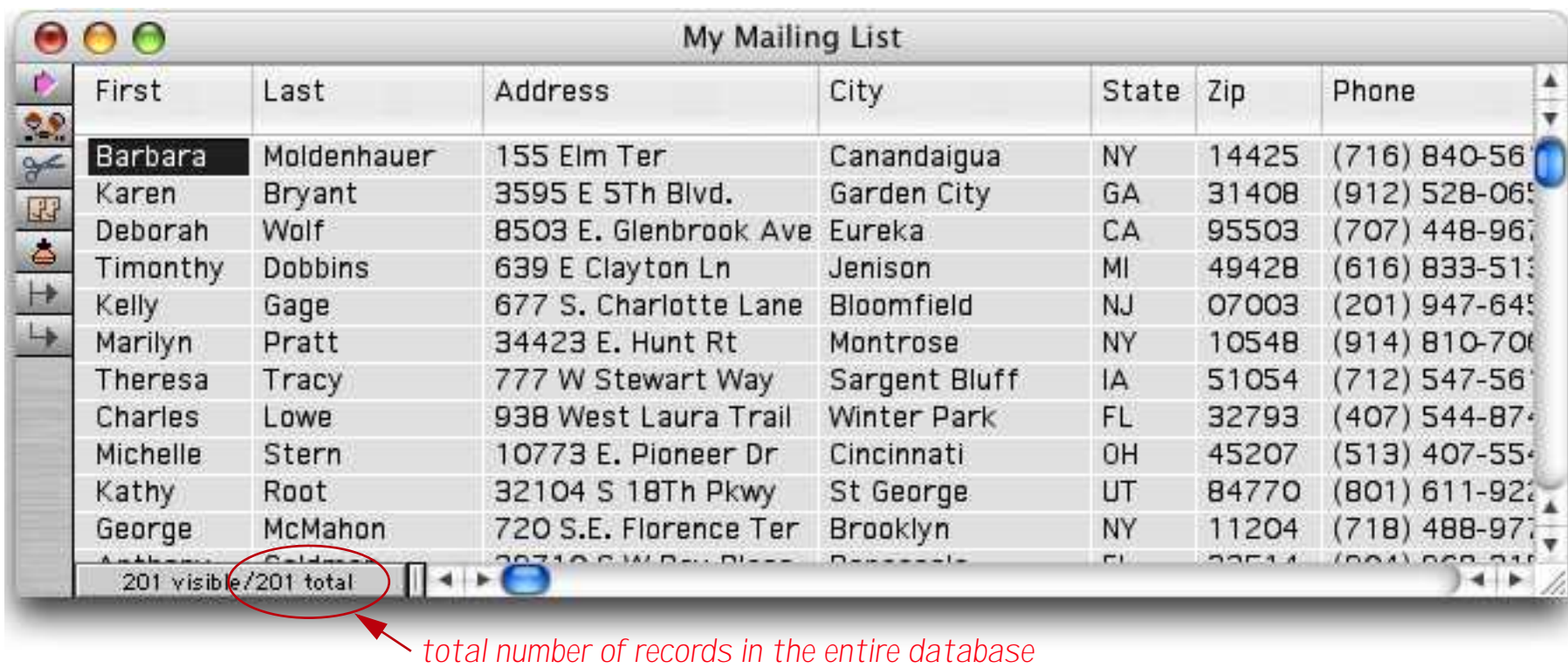
Before you go any further you should use the **Save** command (in the File menu) to save the new data in the database. Since you have already saved this file once and given it a name, Panorama will quickly save the file without asking you for the name and location again.

Since we're done with the **Text Import Wizard** for the moment, click on it's window to bring it forward and then close the window.

To learn more about the **Text Import Wizard** see "Using the Text Import Wizard" on page 285.

Adjusting Column Widths, Font and Size

To adjust the width of a column in the data sheet move the mouse anywhere over the column name. When the mouse is over the name it will turn into a double left/right arrow.

mouse turns into double left/right arrow
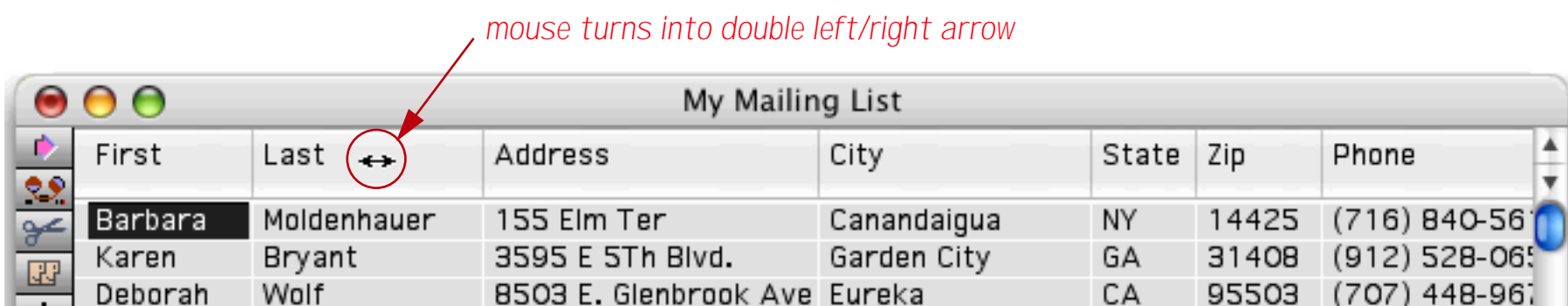
To adjust the column width press and drag to the left or right.

When you release the mouse the column width will be adjusted.

You can use this technique to adjust the widths of as many columns as you like (see "Changing the Width of a Field" on page 379).

Use the **Text** menu to change the font and size of the text displayed in the data sheet.
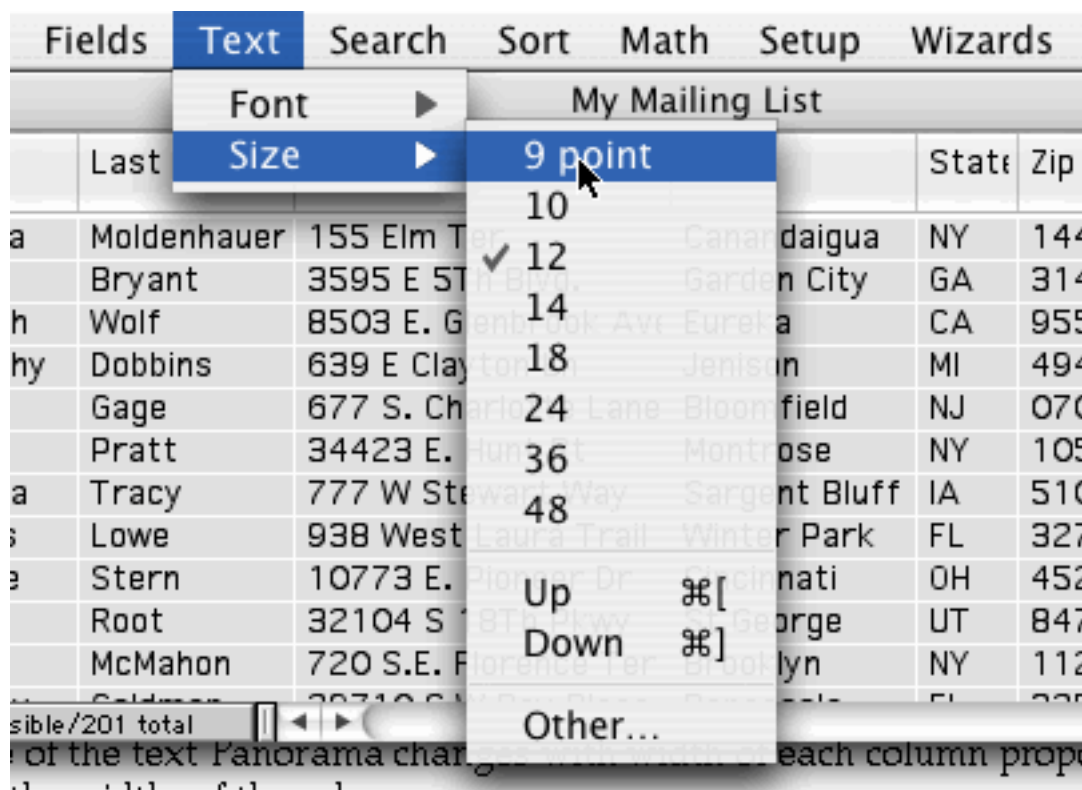
When you change the size of the text Panorama changes with width of each column proportionally, so that you do not need to adjust the widths of the columns.

Use the **Save** command (File menu) to save the new configuration.

Sorting the Database

Now that the database is filled with sample data you can try out Panorama's commands for organizing data. To sort by zip code start by clicking anywhere in the Zip column.

click anywhere in this column

Now choose **Sort Up** from the Sort menu.
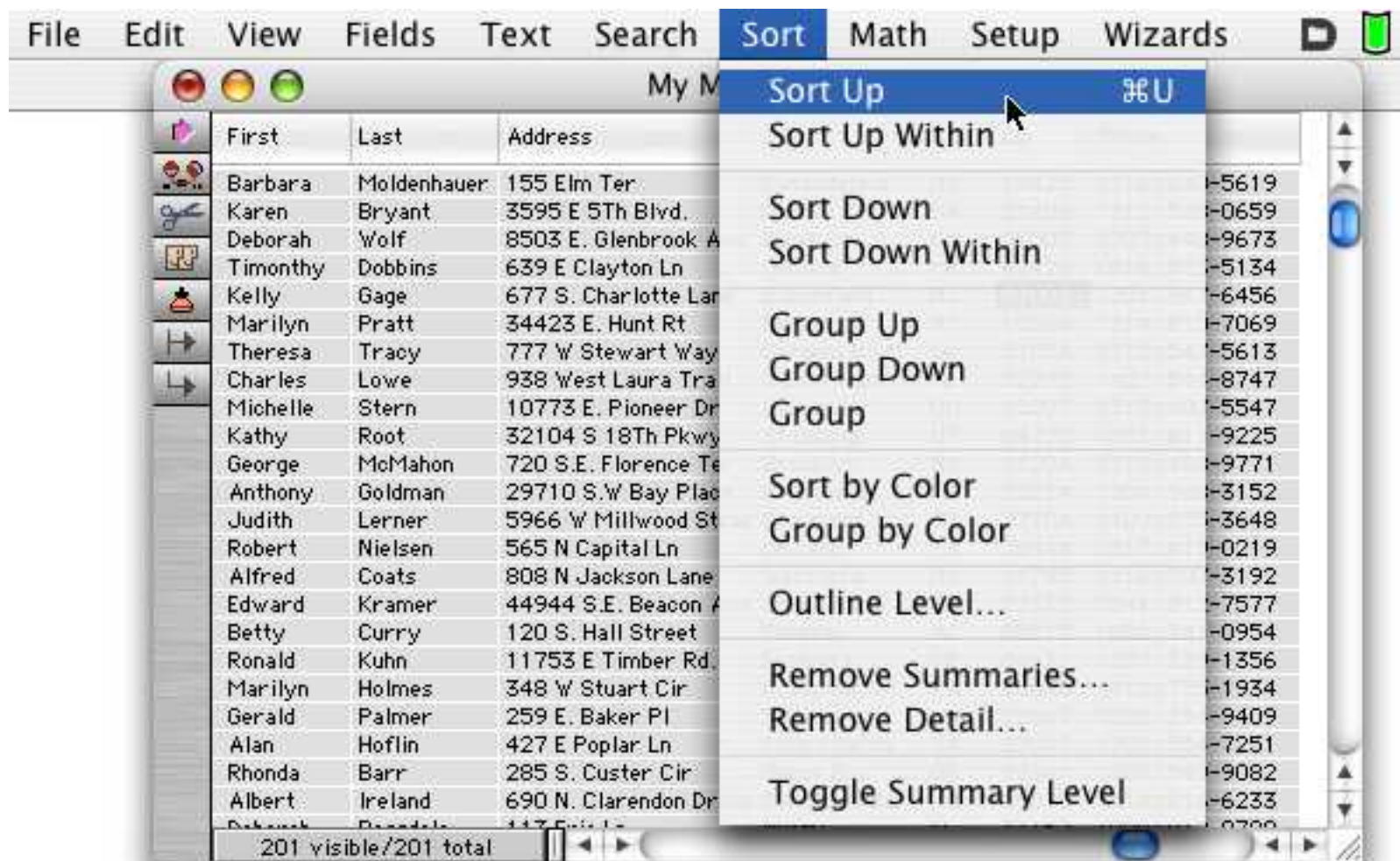
Panorama will sort the database as soon as you release the mouse. Notice that the zip code you originally clicked on is still highlighted. If you want to see the first zip code you'll need to use the vertical scroll bar to move to the top of the database.
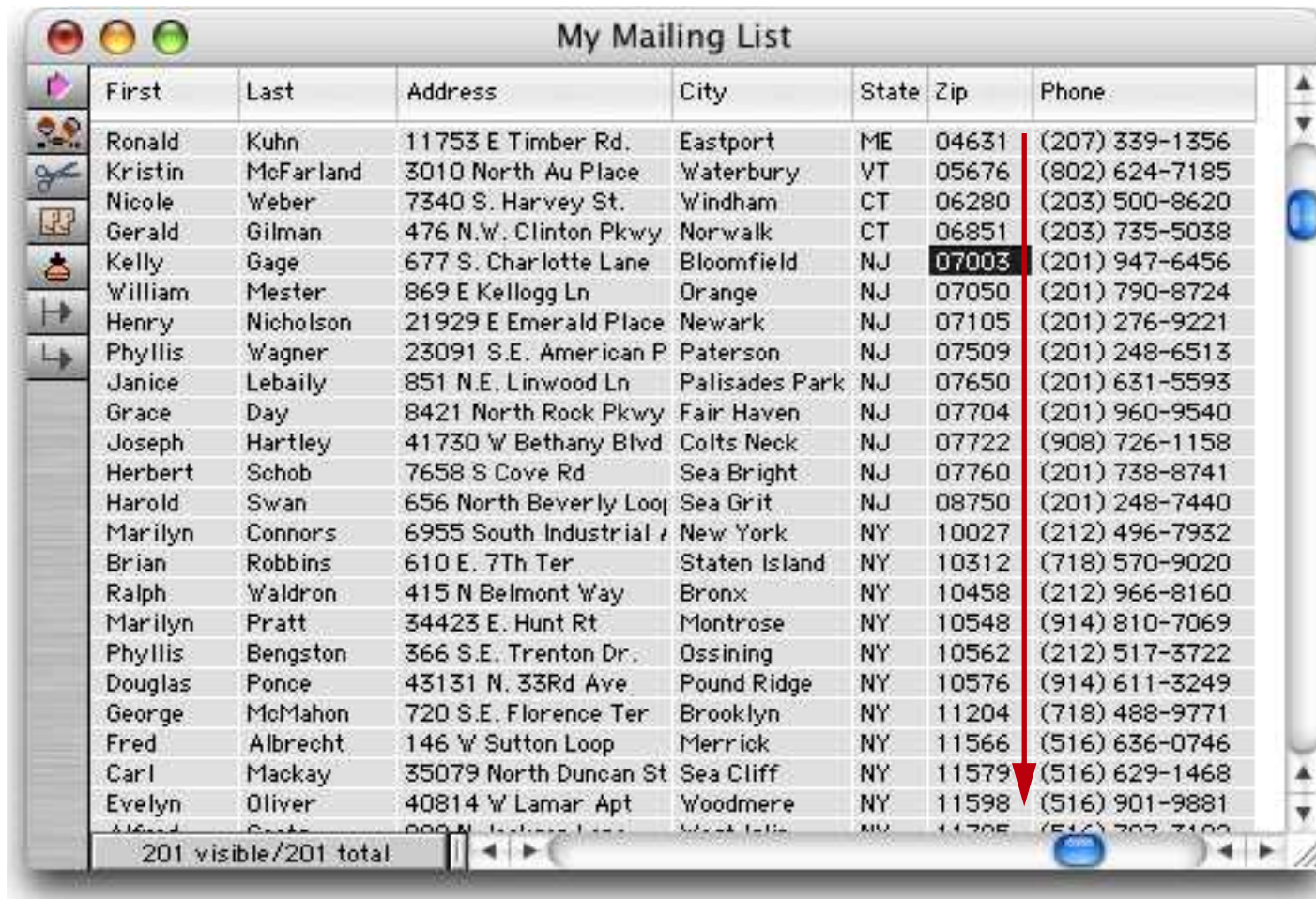
Sorting By Two or More Fields

You can sort by as many fields as you like. In this example you will sort by cities within states. The first step is to sort by states. To do this click anywhere in the **State** field and choose **Sort Up** from the Sort menu.

click anywhere in State field…   *then Sort Up*
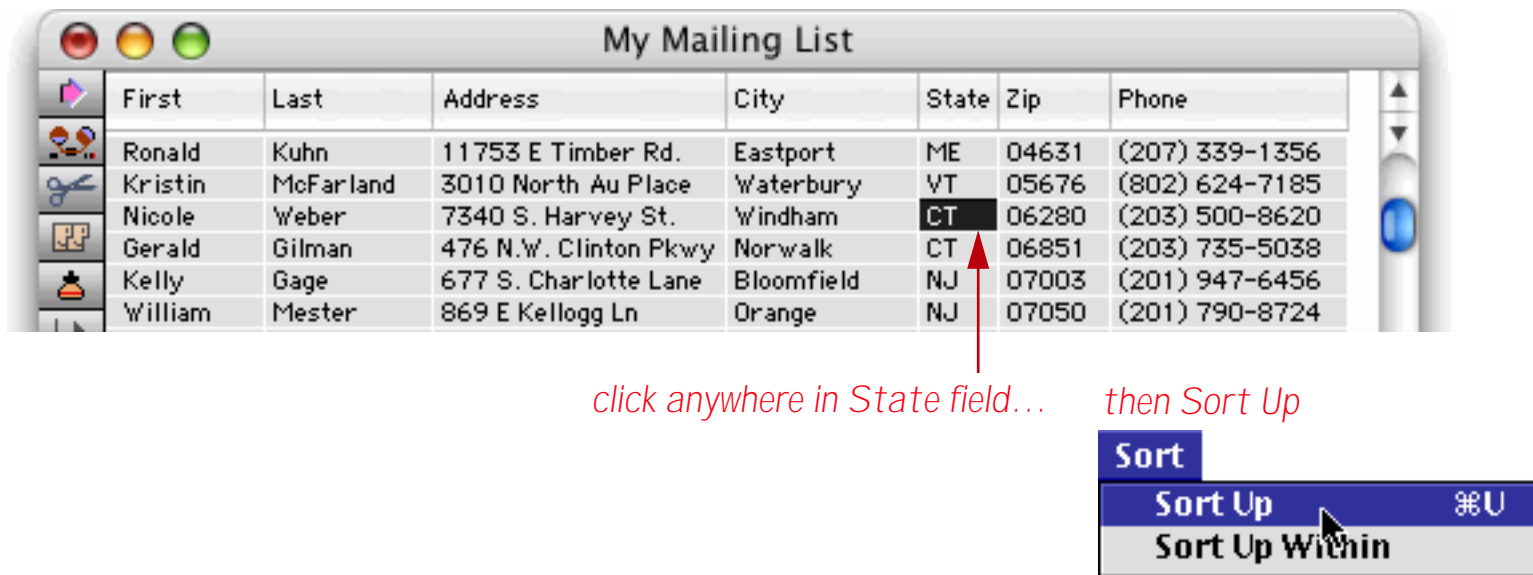
Now the database is sorted by state, but the cities within each state are still out of order. For example, Hialeah should be the first state within Florida (FL) and Atlanta should be the first city within Georgia (GA).

To sort the cities within the states first click anywhere in the City field, then choose **Sort Up Within** from the Sort menu. Be sure to choose **Sort Up Within**, not **Sort Up**.

click anywhere in the City field…   *then Sort Up Within*

The database is still sorted by state, but now the cities are sorted within each state as well.
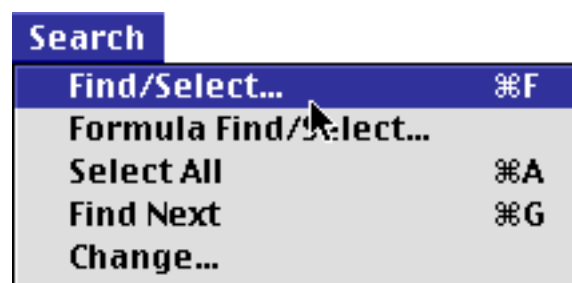

You can use **Sort Up Within** as many times as you wish in your database. For example, you could now sort the last names within each city. To learn more about sorting see "Sorting" on page 487.

Finding a Person

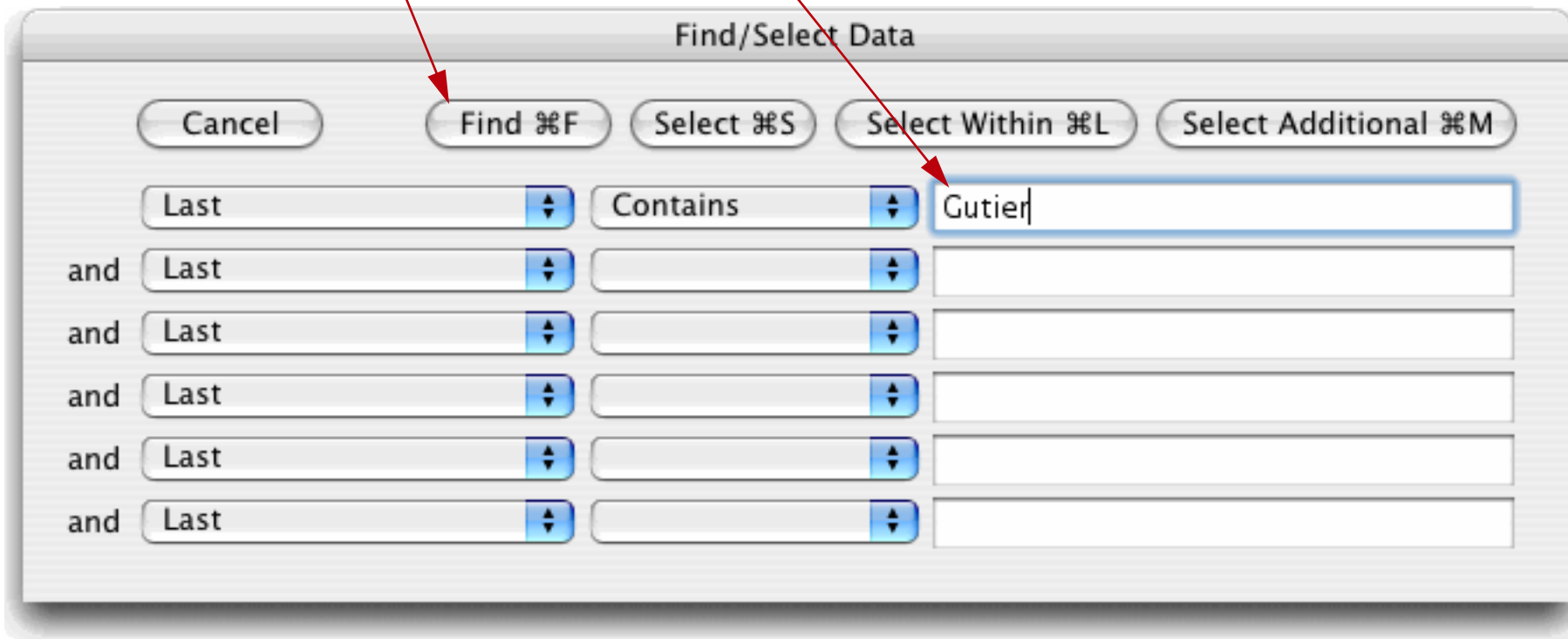To search for someone's last name in the database you first need to click somewhere in the **Last** column.

Now choose the **Find/Select** command from the Search menu.

Type some or all of the name you wish to find into the dialog. In this case we what to search for Gutierrez so we will enter the first few letters of the name. (The more of the name you type in the less chance there will be for a false match with someone else.)

(1) enter some or all of name you want to find

(2) press Find button

When you press the **Find** button Panorama will locate Ms. Gutierrez.

Finding Multiple People

Suppose you want to look up someone who's first name is Alan, but you're not sure what the last name is. Start by clicking anywhere in the First column.

Now choose the **Find/Select** command and type in the name Alan.

When you press the **Find** button Panorama will find the first person named Alan in the database.

If this isn't the Alan you were looking for choose **Find Next** from the Search menu.
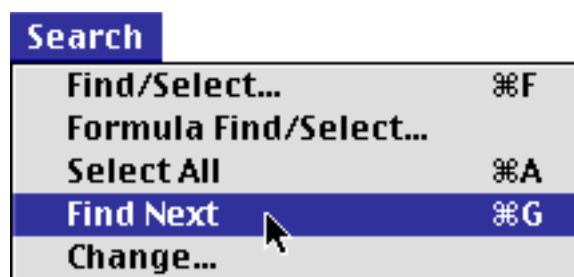
Panorama will skip to the next Alan in the database.

You can continue using the **Find/Next** command until you have located every Alan in the database.

Using the Live Clairvoyance™ Wizard

Searching is one of the most important functions of any database program, so Panorama has more than one technique for searching. The Live Clairvoyance™ wizard searches your database as you type. To use this wizard select it from the Wizard menu and type in the word or phrase you are looking for.

As you type in each letter the wizard shows you the records that match. In this case there are five records with the name **Alan**. To see more information about one of these matches simply double click on the line in the wizard. The wizard will locate the corresponding record in the database itself.
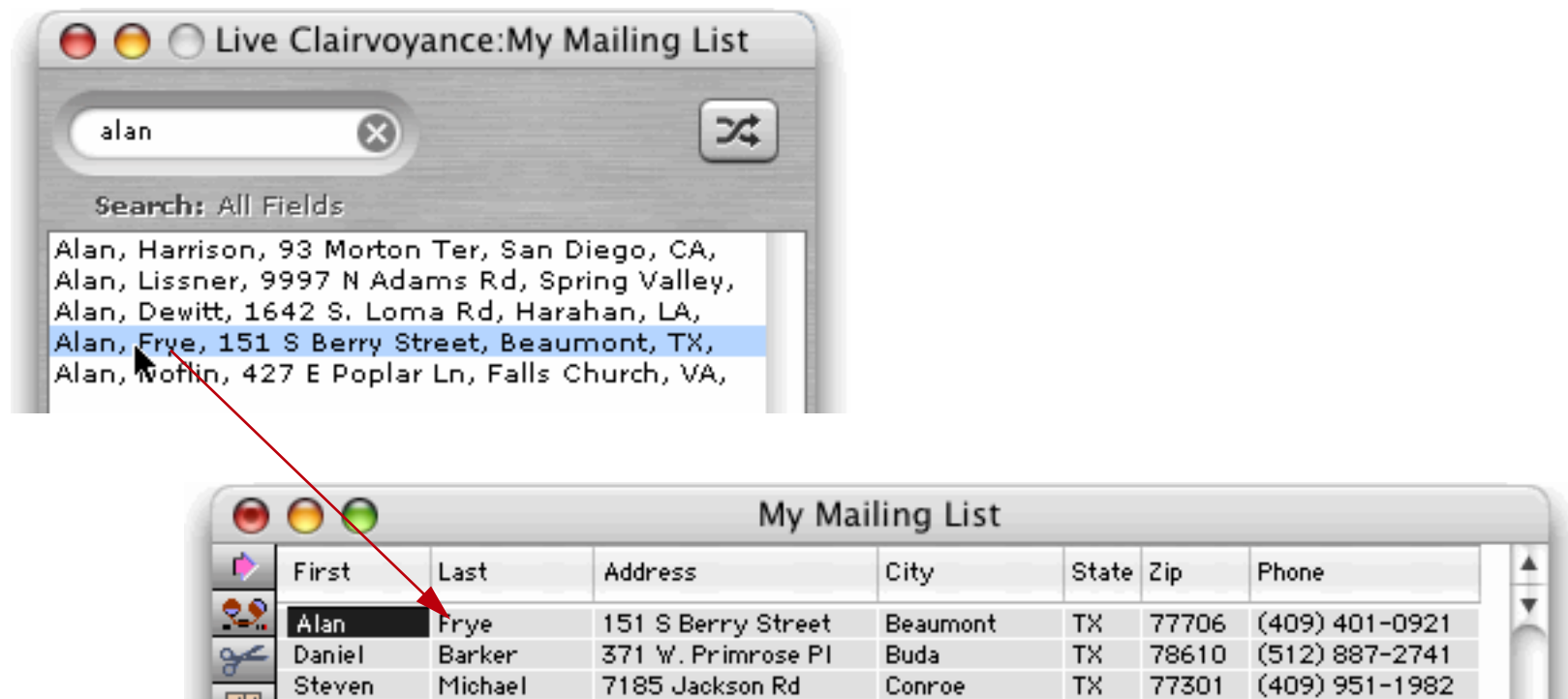
For more information on the Live Clairvoyance wizard see "The Live Clairvoyance™ Wizard" on page 507.

Selecting Instead Of Finding

A third way to locate every person named **Alan** is to **select** the information (see "Finding vs. Selecting" on page 495). To do this click in the First column and choose the **Find/Select** command, but press the **Select** button instead of the **Find** button.

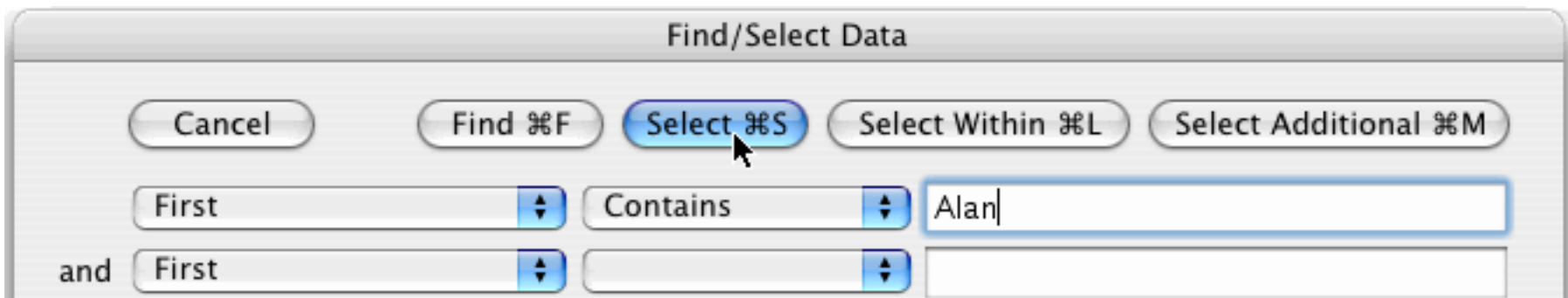Most of the database will disappear. In fact, only the records containing the first name Alan will remain visible (selected). Everything else is temporarily invisible. Panorama displays the number of selected records in the lower left hand corner of the window. In this case five records contain the first name Alan. We say that these five records are the **selected** records. The other 196 records are invisible (unselected).

five selected records contain the name Alan
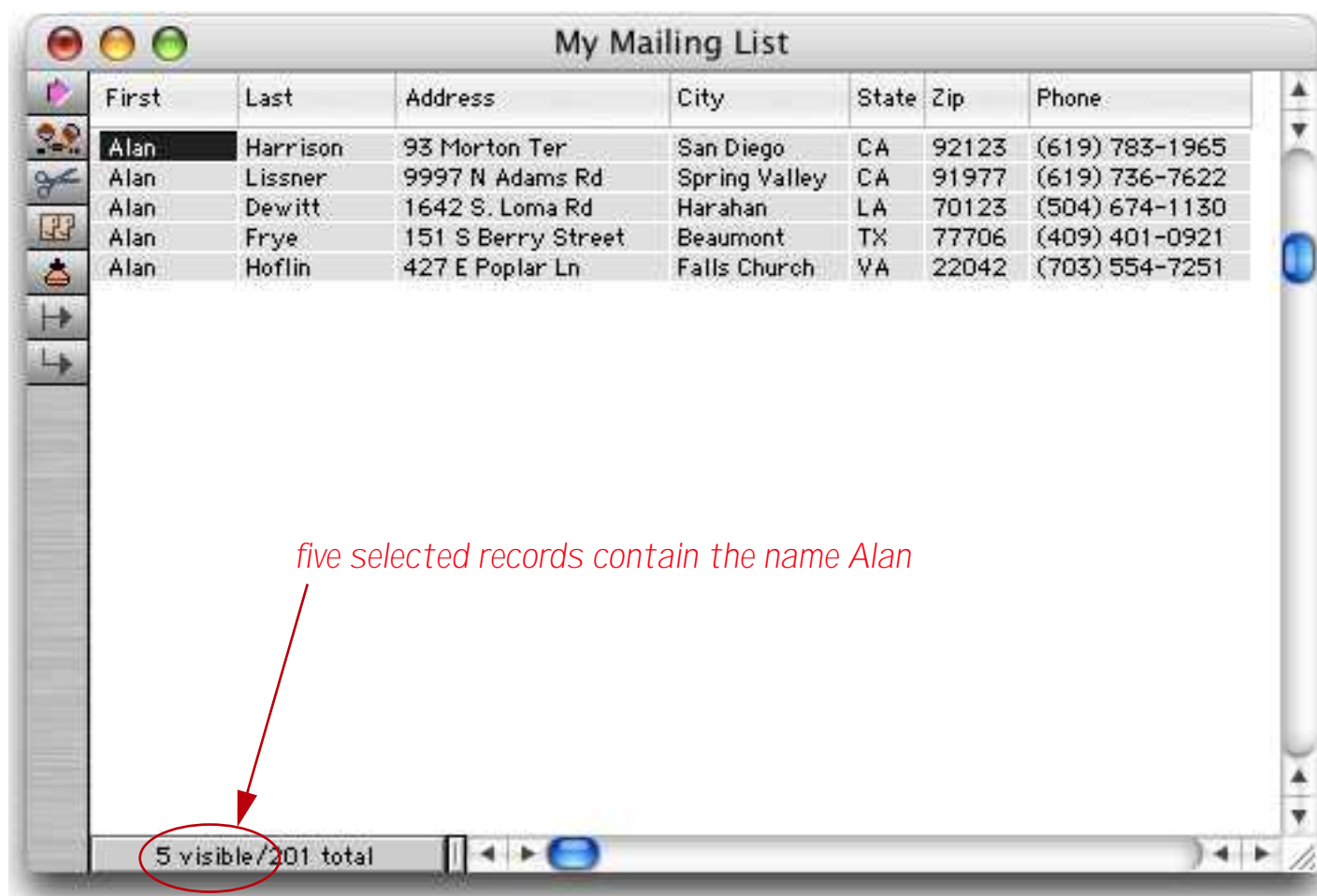
Using the Sounds Like Option

If you don't know exactly how something is spelled you can try using Panorama's **sounds like** option. To use this option open the **Find/Select** dialog and use the middle pop-up menu to select Sounds Like. (Shortcut: You can open the **Find/Select** dialog by clicking on the number of records in the lower left hand corner.)
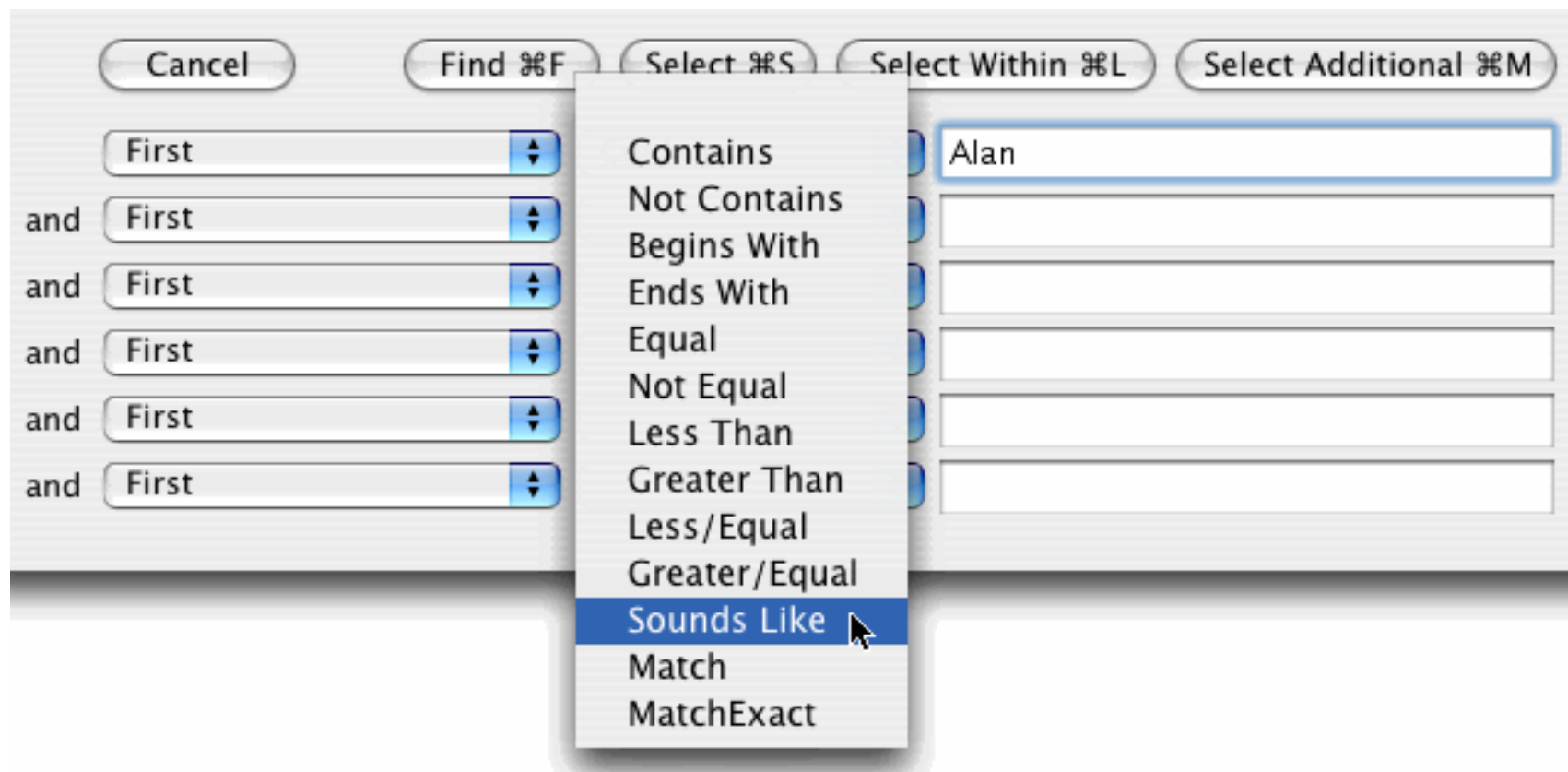
Here's what the dialog looks like after you make this selection.

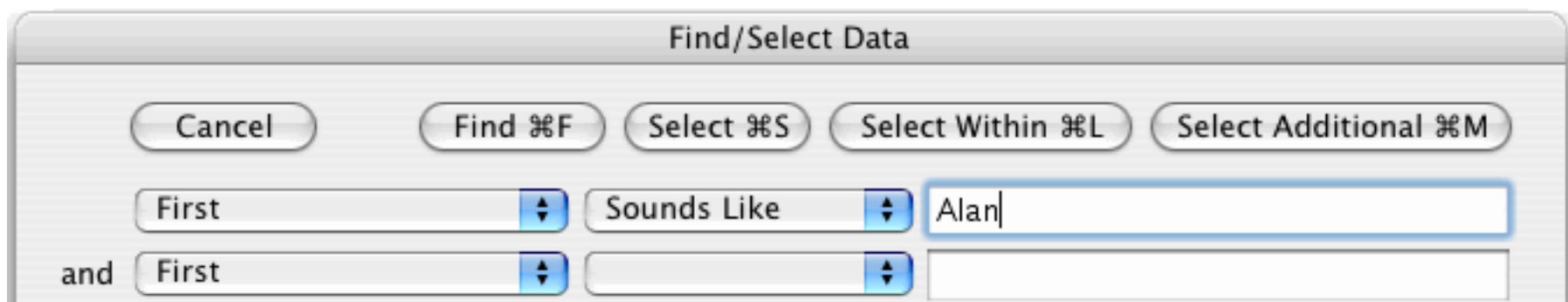Panorama now selects six records instead of five, because the name Allen "sounds like" Alan.

The sounds like option isn't perfect, but it can find most similar sounds and spellings. You must, however, know the first letter of the word or name you are looking for. For example, the sounds like option will never think that the name Ellen sounds like Alan because the two names start with different letters.

Making More Complex Selections

The **Find/Select** dialog make more complex selections based on multiple criteria. For example, suppose you want to select all people with zip codes from 50000 to 69999. Start by clicking on the Zip field, then open the **Find/Select** dialog. Use the pop-up menus to fill in the first two lines of the dialog, like this.
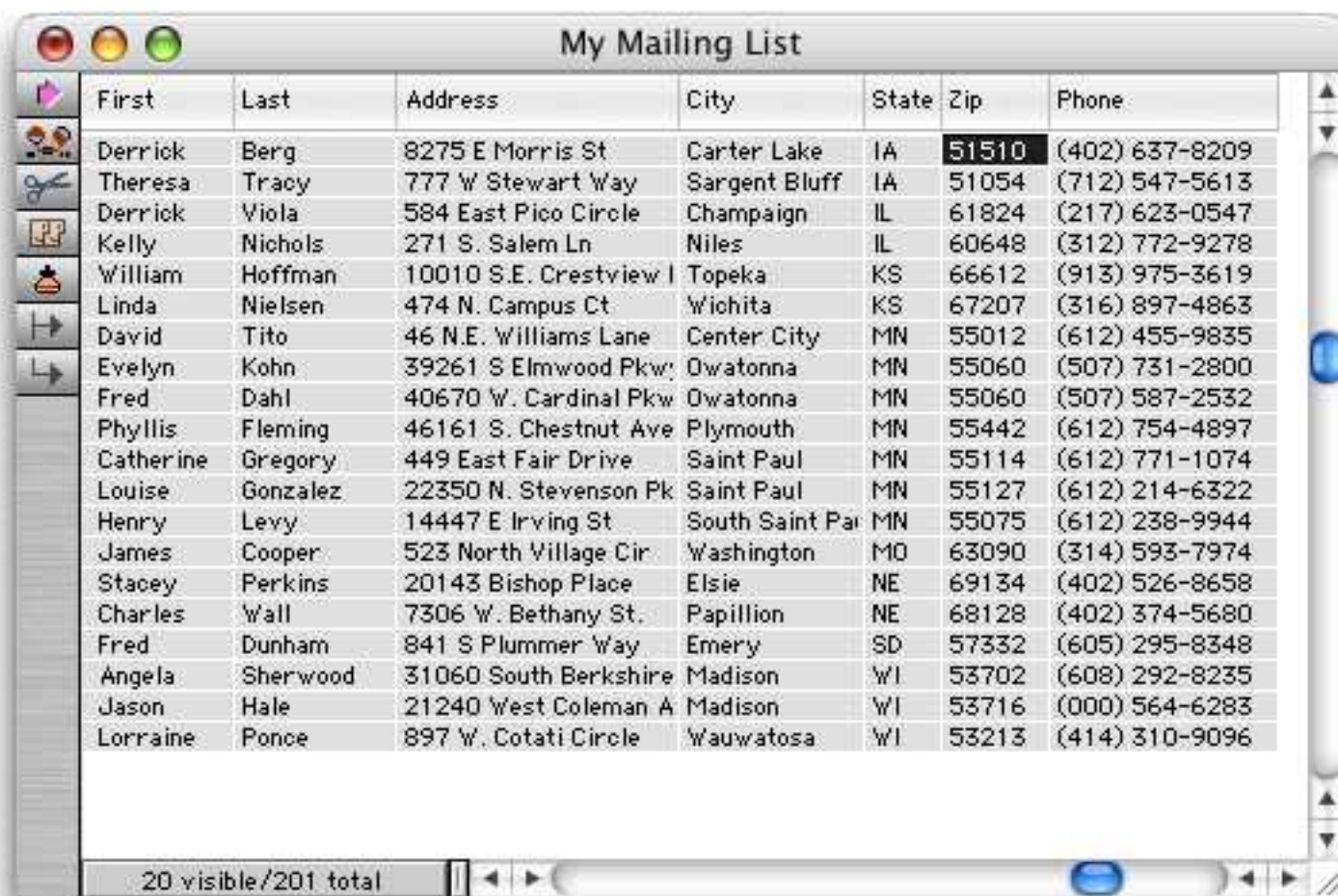
When you press the **Select** button Panorama will select only the records in the requested zip code range, in this case 20 records.

Panorama can also make complex selections based on a formula. To do this use the **Formula Find/Select** command in the Search menu.
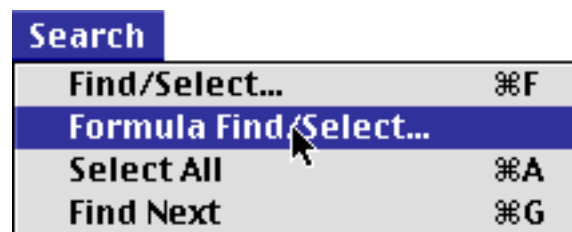
Here is the formula for selecting zip codes in the range from 50000 to 69999.
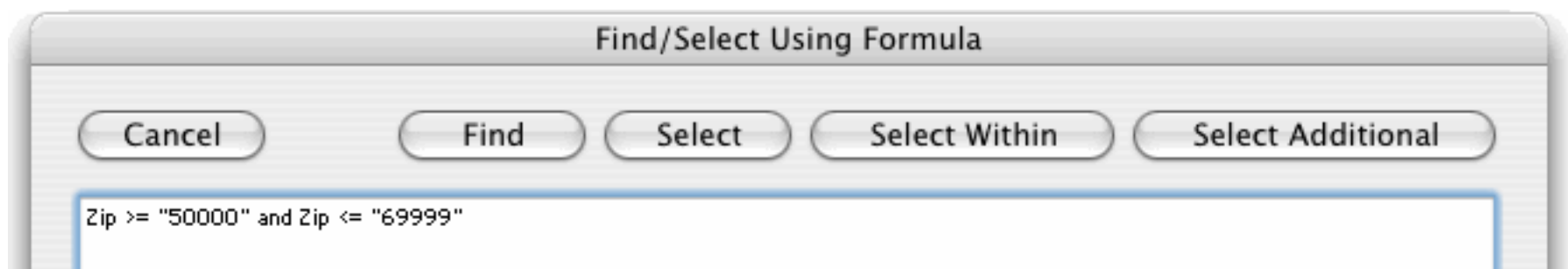
Here is a formula that will select unusually long last names (more than 10 characters).
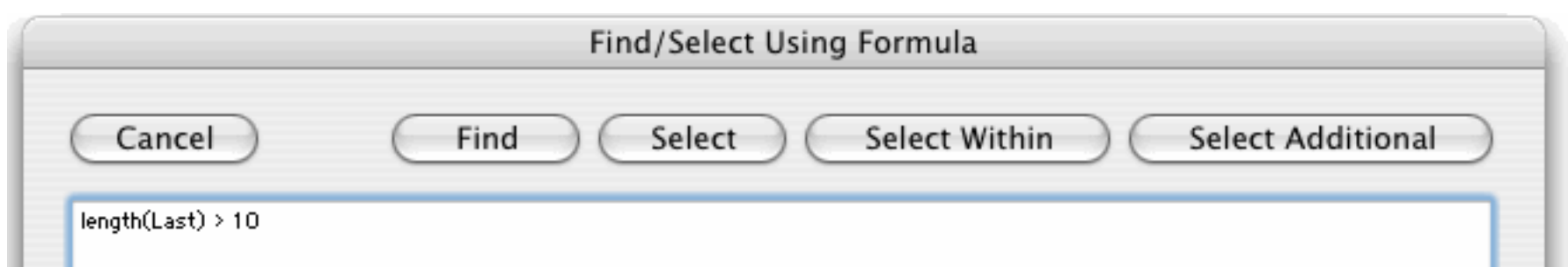
When you press the **Select** button Panorama will select the five people in this database with extra-long last names.

To learn more about selecting with a formula see "Formula Find/Select" on page 515 and "True/False Formulas" on page 1393.

Selecting All Records

To make all of the invisible data re-appear choose **Select All** from the Search menu.
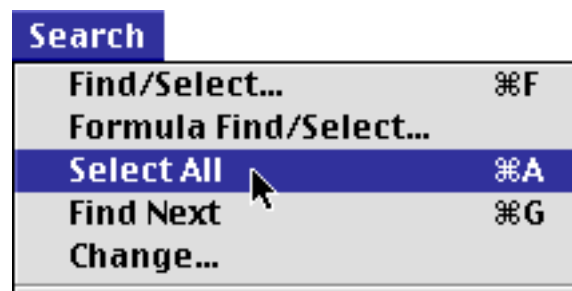
Panorama will display all of the data in the database again.

Adding A Database To Your List Of Favorites

You can use Panorama's **Favorite Databases** wizard to help organize your databases and keep then accessible at your fingertips. To open this wizard choose **Favorite Databases** from the Wizards menu. The wizard displays a list of favorite databases on the left. If you click once on a database the wizard will show you information about that database. (Clicking twice opens the database itself.)
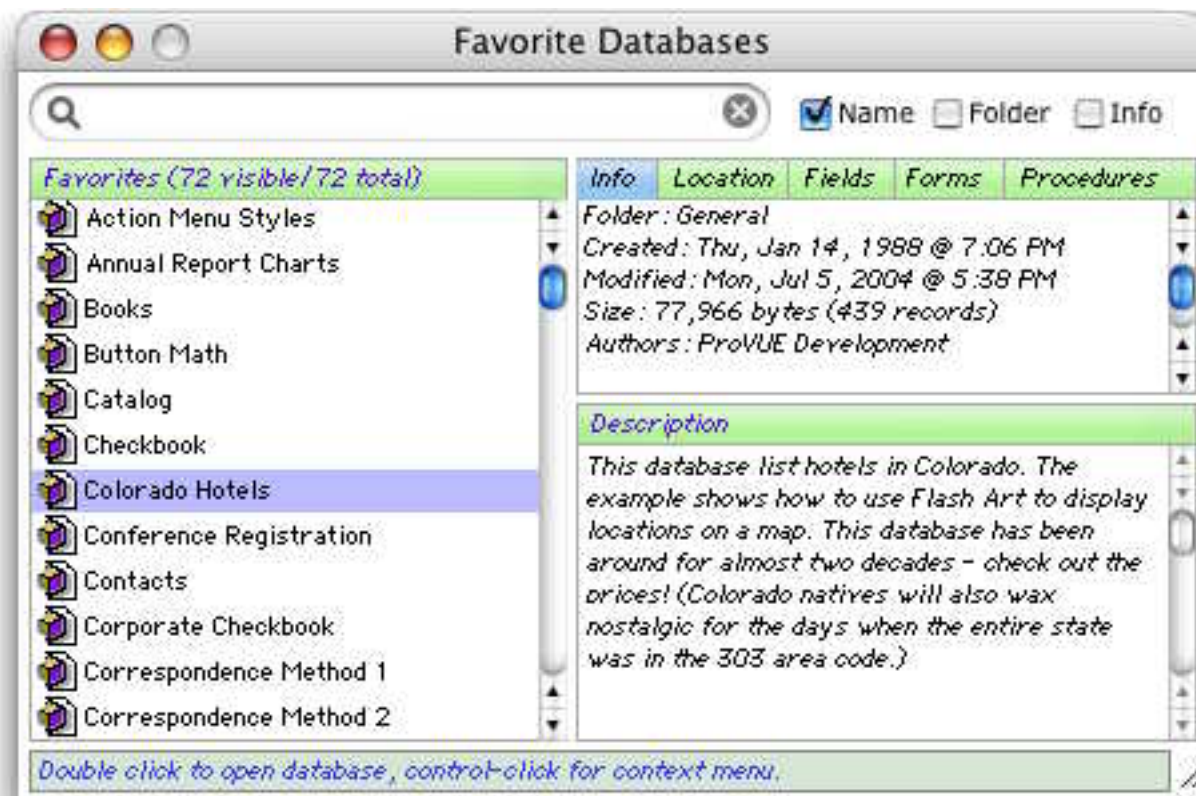
To add your new database to the list of favorites, find the database in the Finder and drag it onto the Favorite Databases window.
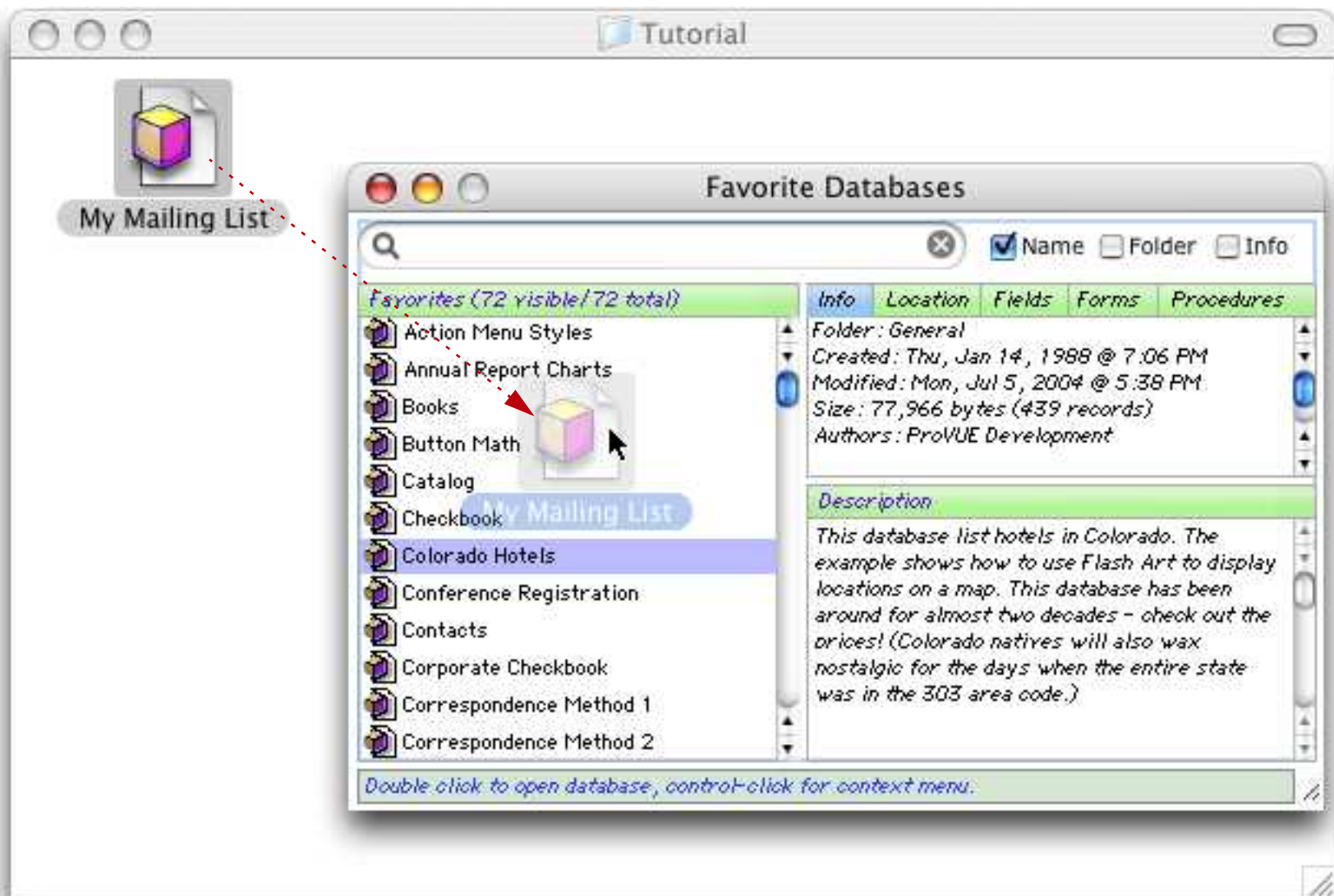
The wizard will add your new database to the list of favorites.
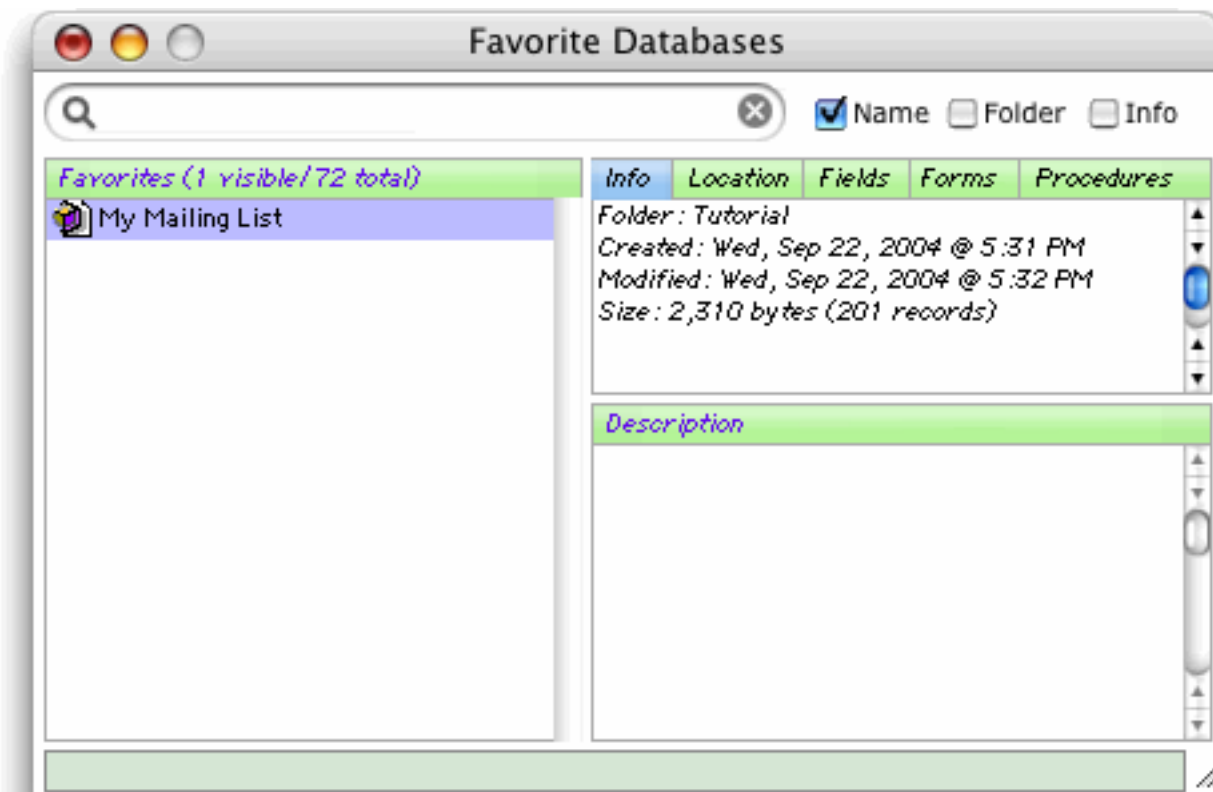
An alternate method for adding the database is to use the Add Favorite command in the Edit menu, then choose the database from the dialog.
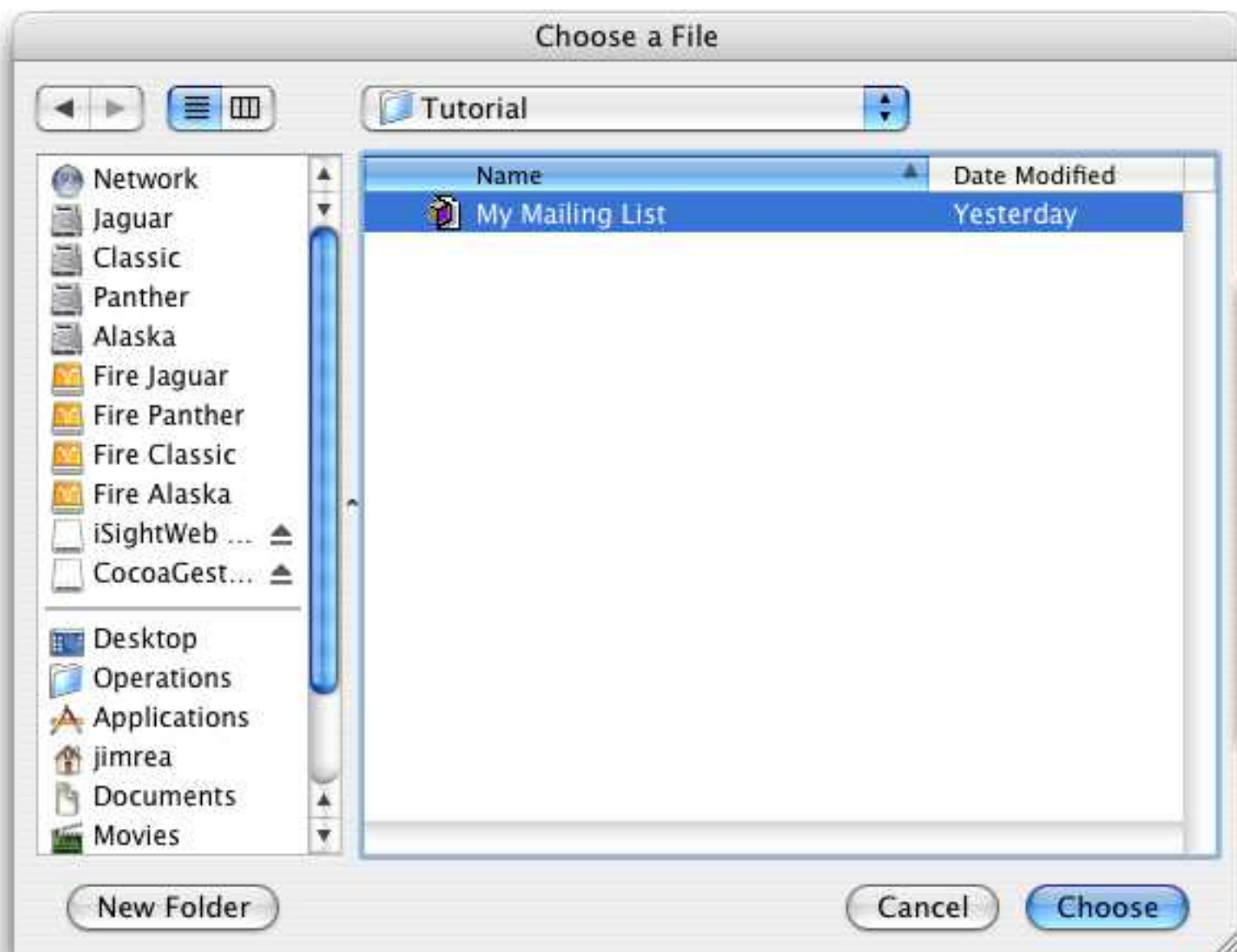
Once you have added your new file to the Favorites Wizard choose the **Save** command in the File menu and your database is permanently added to the list of favorites (see "Removing a Favorite" on page 241 if you later want to remove this favorite).

Closing a Database

To close a database click on it (to bring it's window to the front). If the database has only one window you can close it by clicking on the window's close box. If the database has more than one window you can close each window individually or you can select the **Close File** command from the File menu. Close the My Mailing List database now.
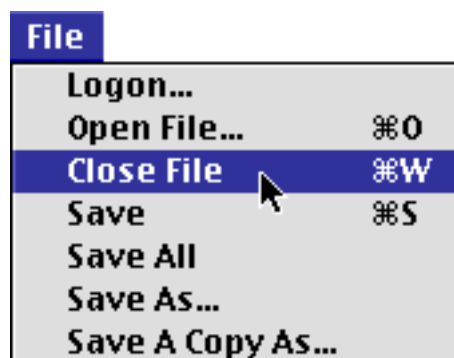
If the database has been modified since the last time it was saved Panorama will ask you if you want to save the changes. Press the **Save** button to save the changes.
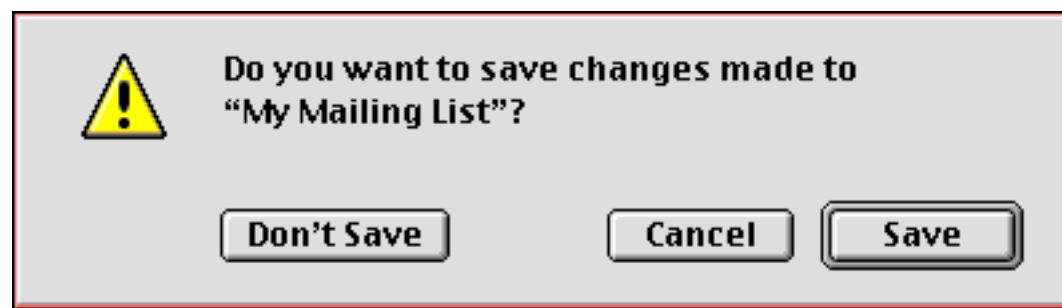
The database is now closed, and the memory it was using is available for use with other databases. See "Monitoring Memory Usage" on page 314 to learn how to oversee Panorama's memory usage.

Re-Opening a Favorite File

To re-open a favorite file, start by choosing the **Favorite Databases** wizard from the Wizards menu. Type **mail** into the search area at the top of the window to find your database.
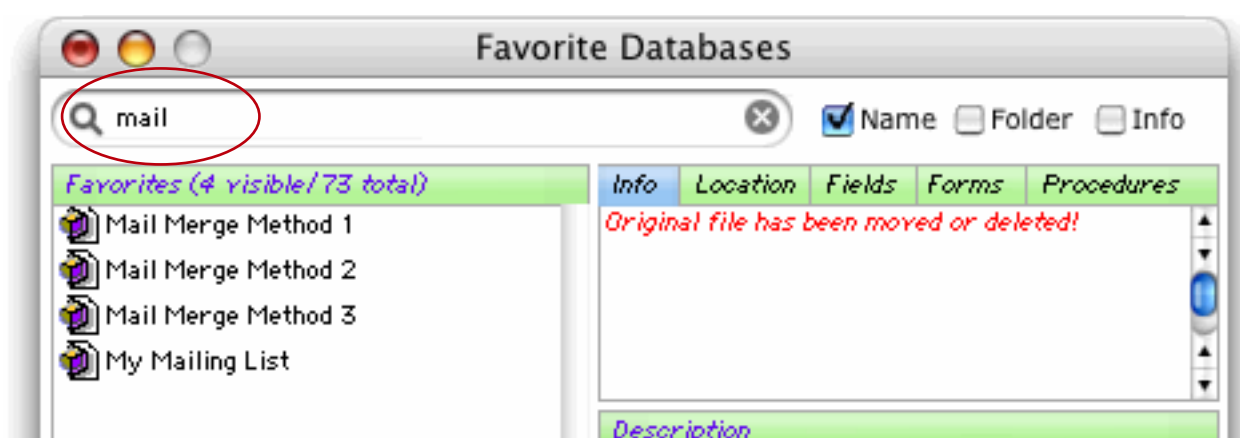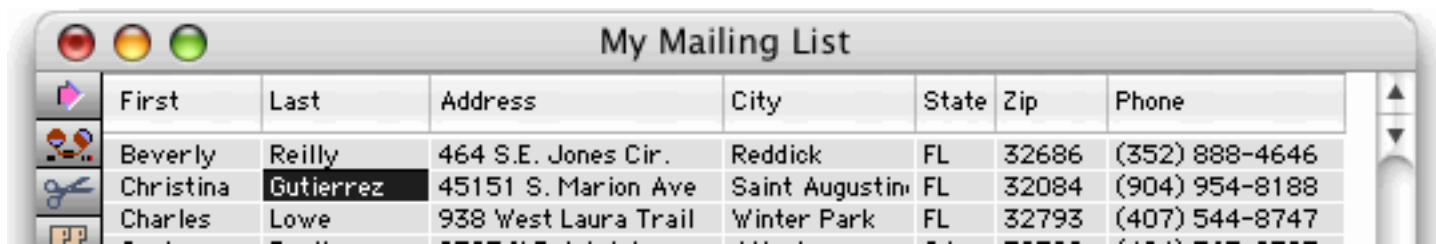
Double click the database name to open it.
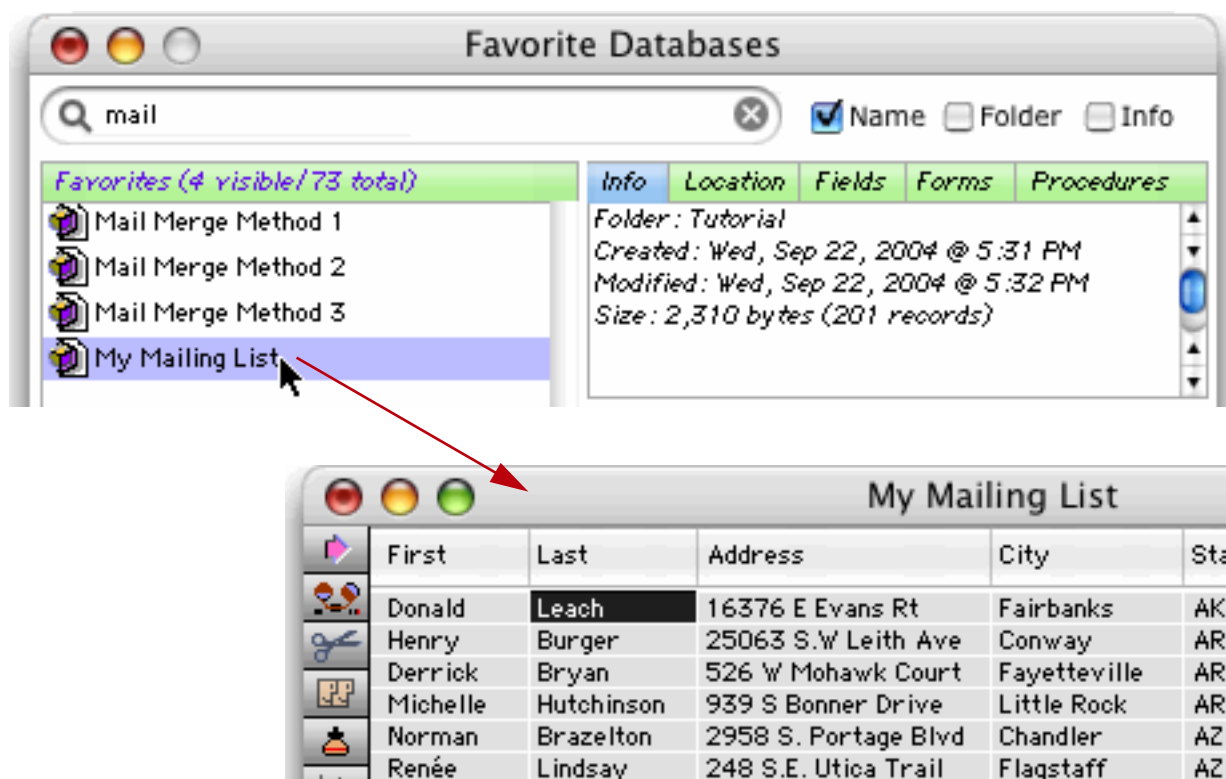
To learn more about this wizard see "The Favorite Databases Wizard" on page 237. Tip: If you hold down the **Control** key (Mac) or double click with the right mouse button (Windows PC) Panorama will automatically close the **Favorite Databases** window after it opens the selected database.

Transferring Data with VCards

In this section we'll export a VCard to Apple's **Address Book** application. A properly configured Panorama database can exchange data with any VCard compatible application. In this case, the **New Database** wizard has done the configuration for us (see ""Generic" Fields" on page 398 to learn how to do this configuration yourself). The first step is to click on the record we want to transfer, in this case Christina Gutierrez.

Open the **VCard Wizard**, which you'll find in the Utility submenu of the Wizard menu. The wizard displays the name, address and phone number of the currently selected person.

To transfer Ms. Gutierrez to the Address Book, drag the tiny book icon onto the Address Book window.
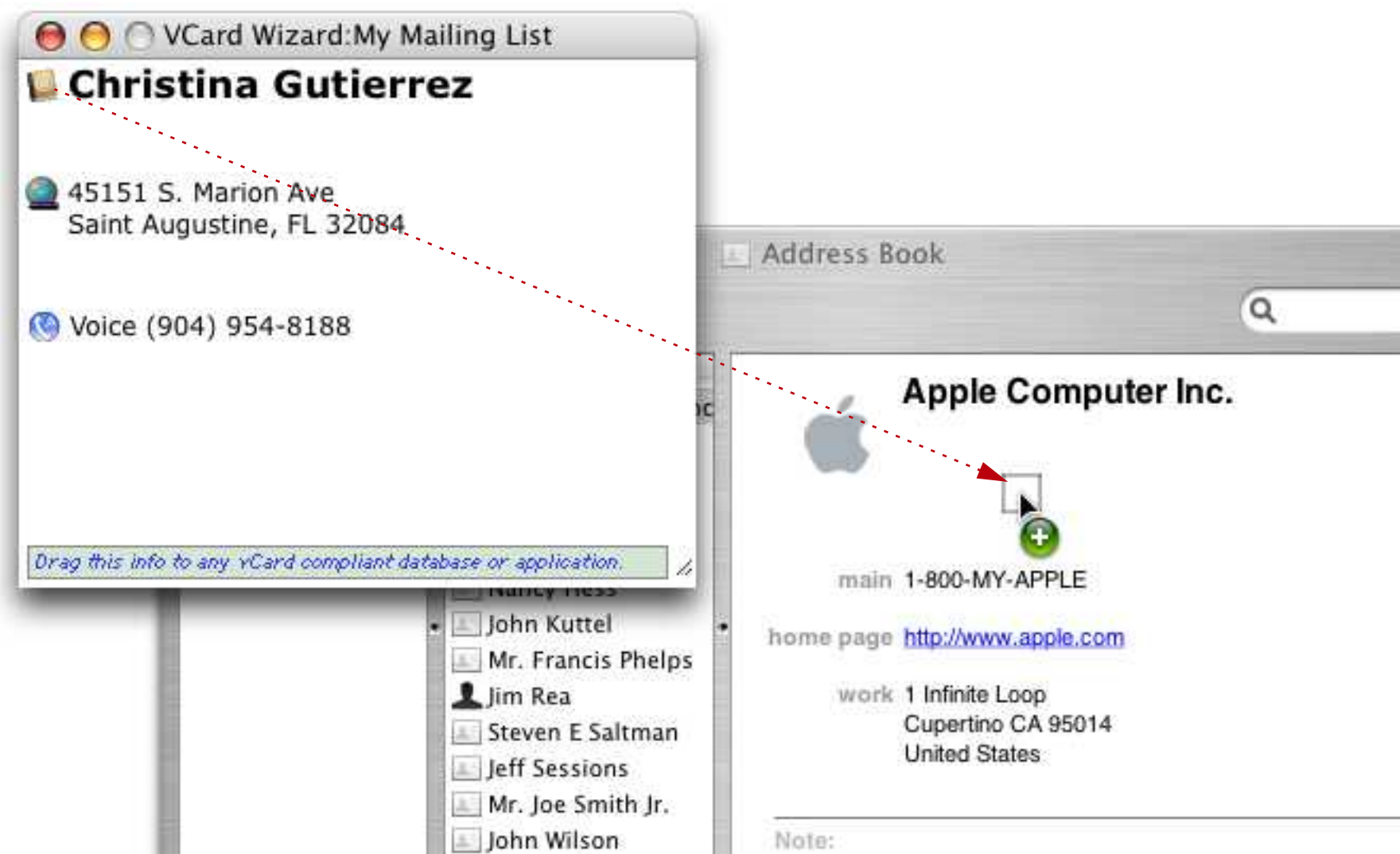
The Address Book program will ask you to confirm that you want to add this person.

Press **OK** to add her to the Address Book.
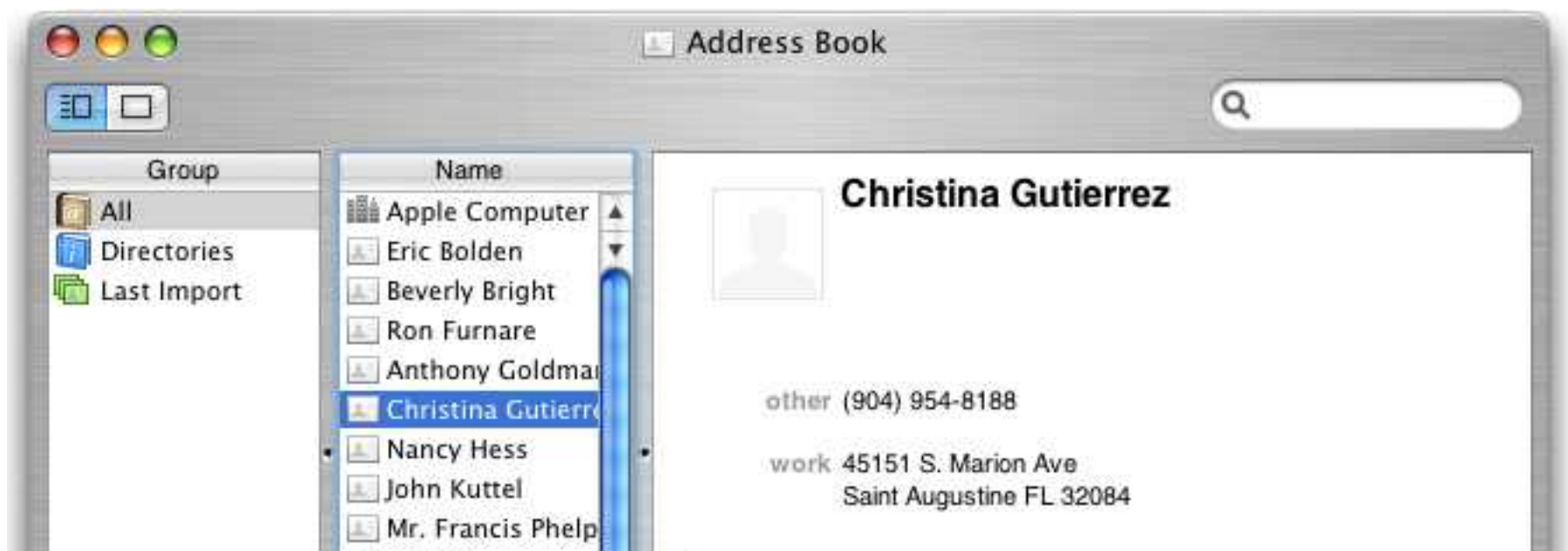
Drag the other way to transfer from the Address Book to your database.

John Kuttel is automatically added to the database.

The VCard wizard can also import and export groups of VCards at once. For more informations see "Using Generic Fields with the VCard Wizard" on page 404.

Displaying a Map

Don't close the VCard wizard yet. It's now displaying the information for John Kuttel, who was just added to the database.
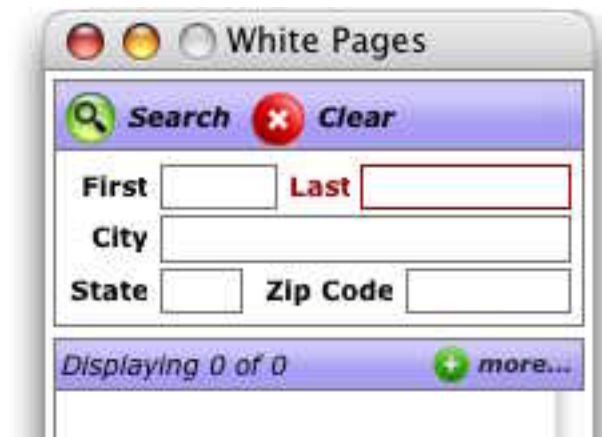
To see a map of Mr. Kuttel's location, click on the globe icon. The map will appear in your default web browser.

Transferring a Person from the White Pages

The **White Pages** wizard allows you to locate a person and add them to your database. You'll find this wizard in the Internet submenu of the Wizard menu.

We're looking for Mr. or Mrs. Furnare somewhere in the Palm Springs area (California).

Press the **Search** button to see the results.

There's a Pat Furnare in Palm Desert. To verify that he's the one we're looking for we can display a map.
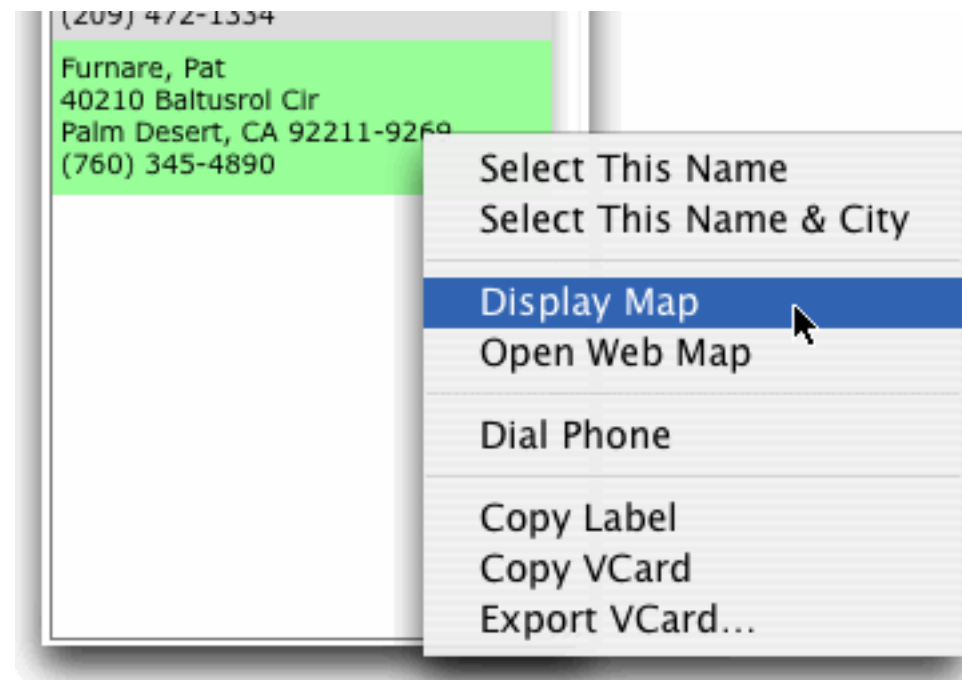
This wizard displays the map in Panorama itself instead of in your web browser.
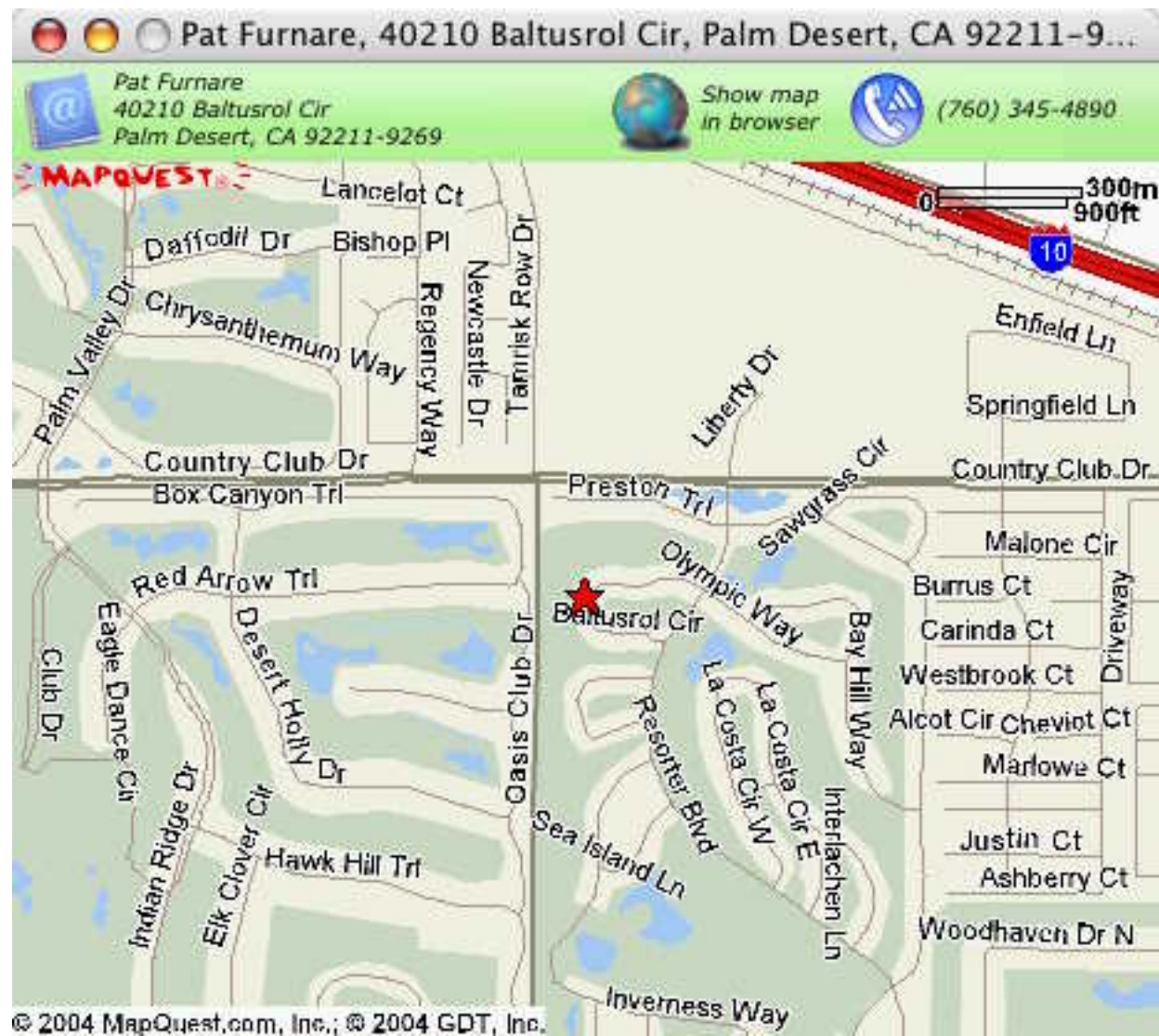
To add Mr. Furnare to your My Mailing List file drag from the White Pages to the **VCard Wizard**.
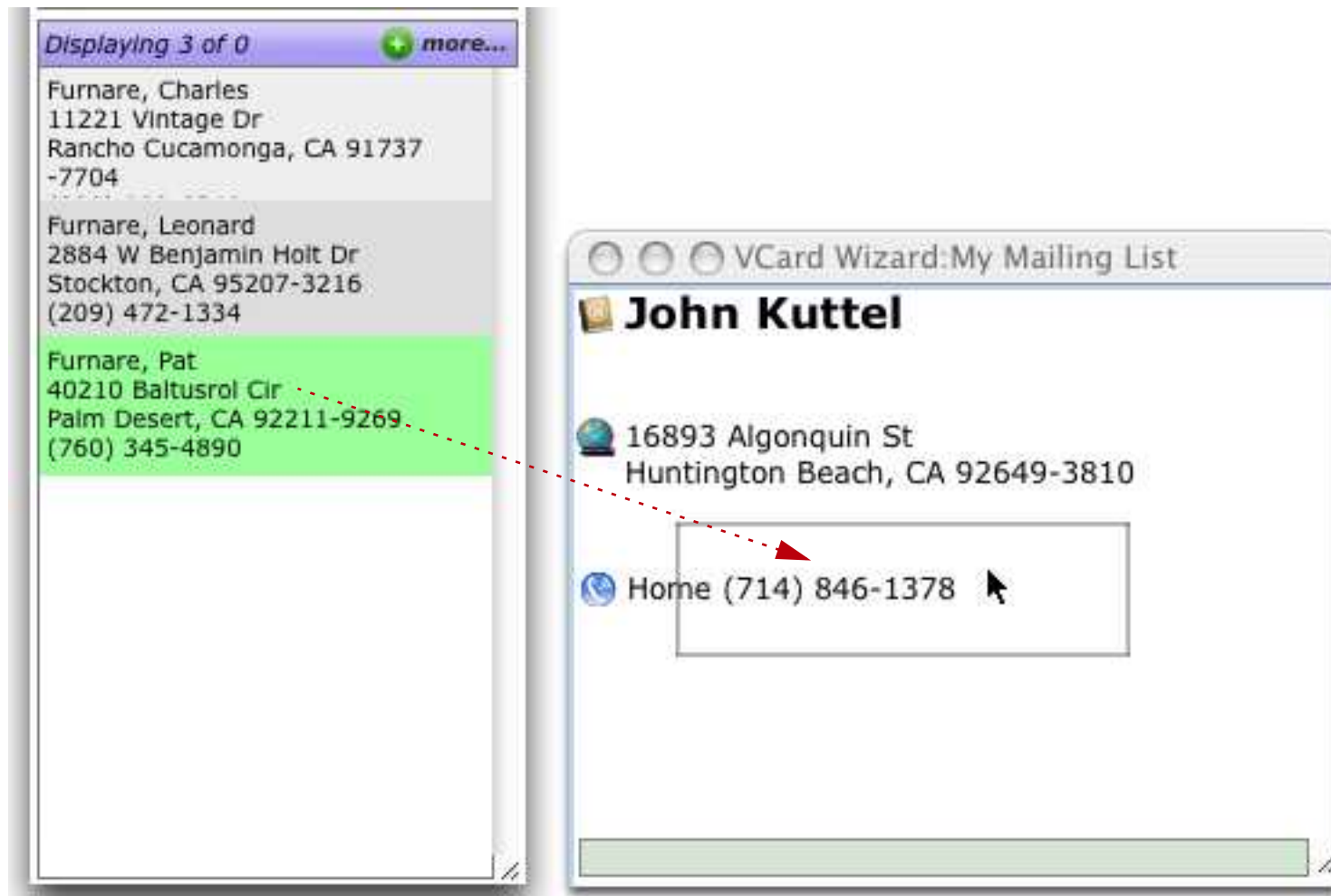
Voila! The new entry has been added to the mailing list.

To learn more about this wizard see "White Pages" on page 149.

Printing the Data Sheet

Before actually printing the data sheet you'll set up a page header to print today's date on the top left and the page number on the top right of each page. To do this choose **Headers/Footers** from the File menu. This command opens a dialog that allows you designate headers on the top left, center and right and a bottom centered footer.
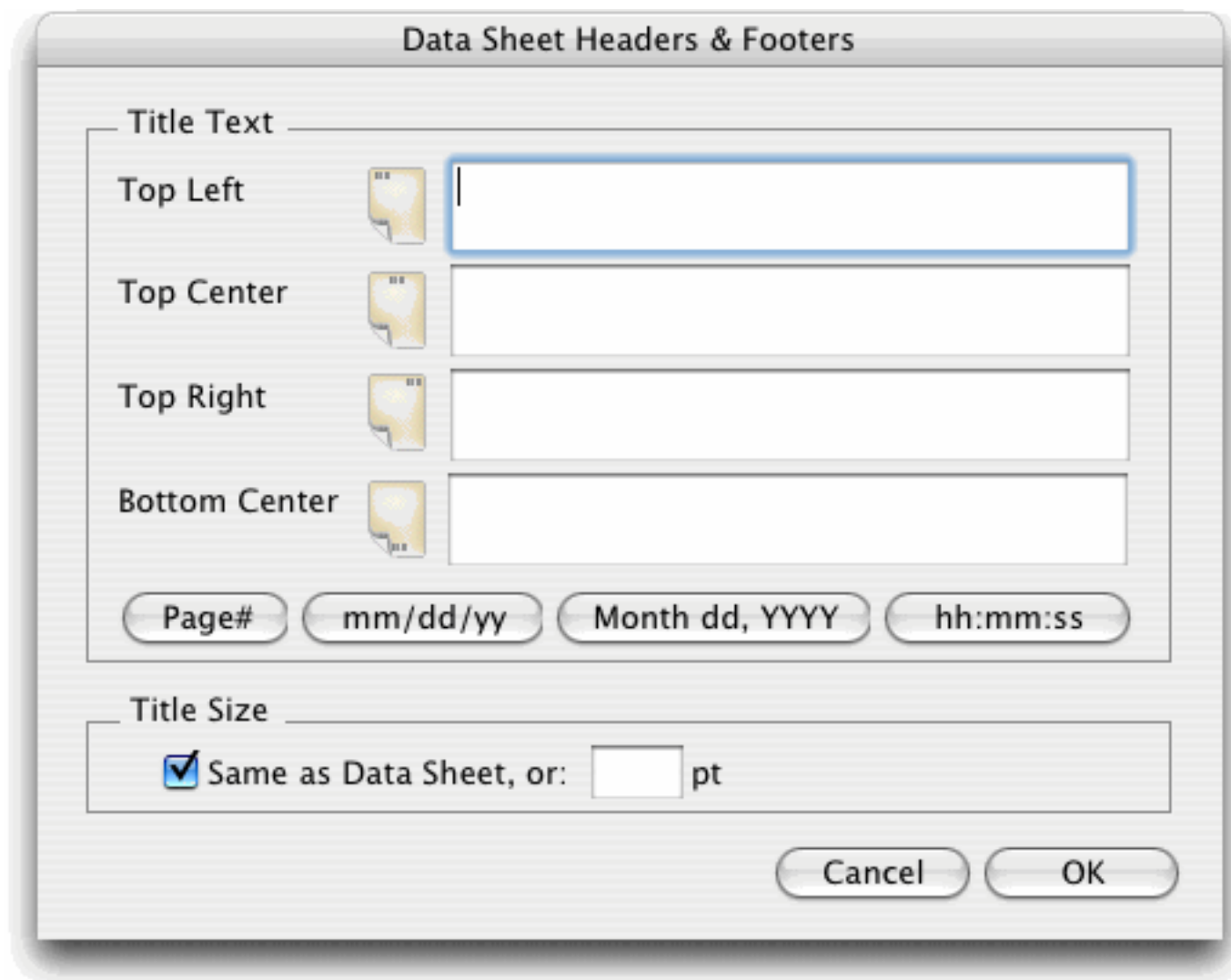
Start with the top left header. Type in the words Printed on and then press the **Month dd, YYYY** button.
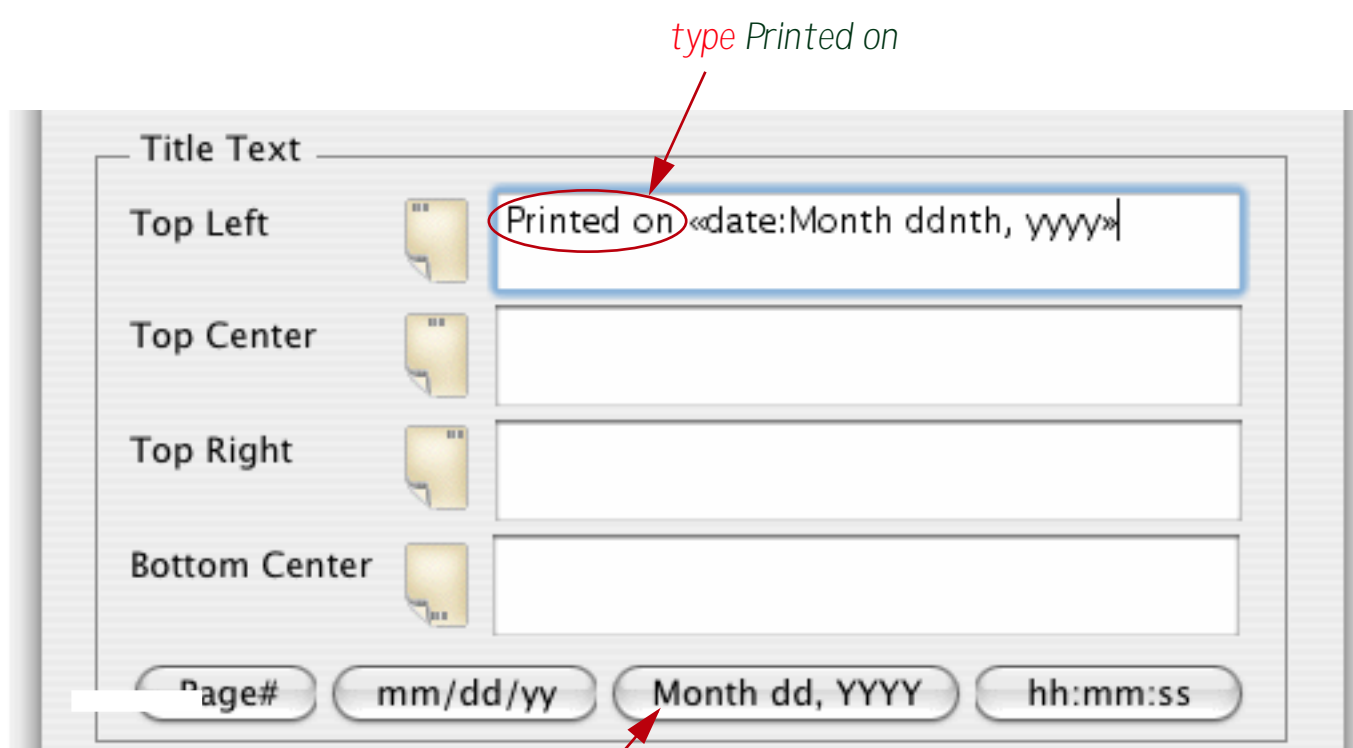
Now for the top right header. Type Page and then press the **Page#** button.

type Page

Title Text

Top Left — Printed on «date:Month ddnth, yyyy»

Top Center —

Top Right — Page «Page#»

Bottom Center —

[Page#] [mm/dd/yy] [Month dd, YYYY] [hh:mm:ss]

then press button
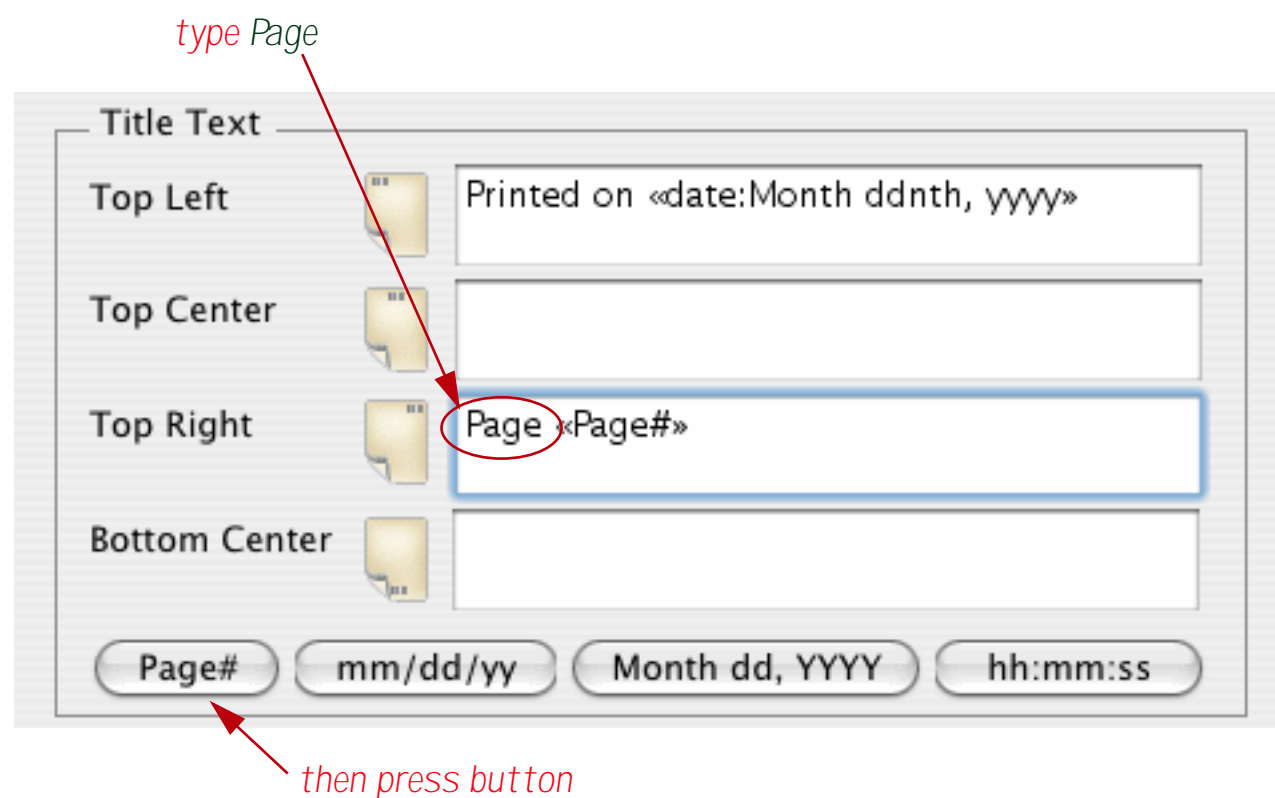
Once both headers are set up press the **OK** button. (To learn more about the header and footer options available when printing the data sheet see "Printing Data Sheet Headers & Footers" on page 1166. When printing a form you have complete control over the exact layout of headers and footers — see "Custom Reports" on page 1177.)

Next, choose the **Page Setup** command from the File menu. (Before you do this, make sure that the printer you want to use is connected to your computer and selected.) The exact options available in the **Page Setup** dialog depend on the operating system and what kind of printer you are using, but in general you can control the page size, orientation (tall or wide), and print reduction factor. Here is a typical **Page Setup** dialog.

Page Setup

Settings: Page Attributes

Format for: Any Printer

Paper Size: US Letter
8.50 in x 11.00 in

Orientation:

Scale: 100 %

[Cancel] [OK]
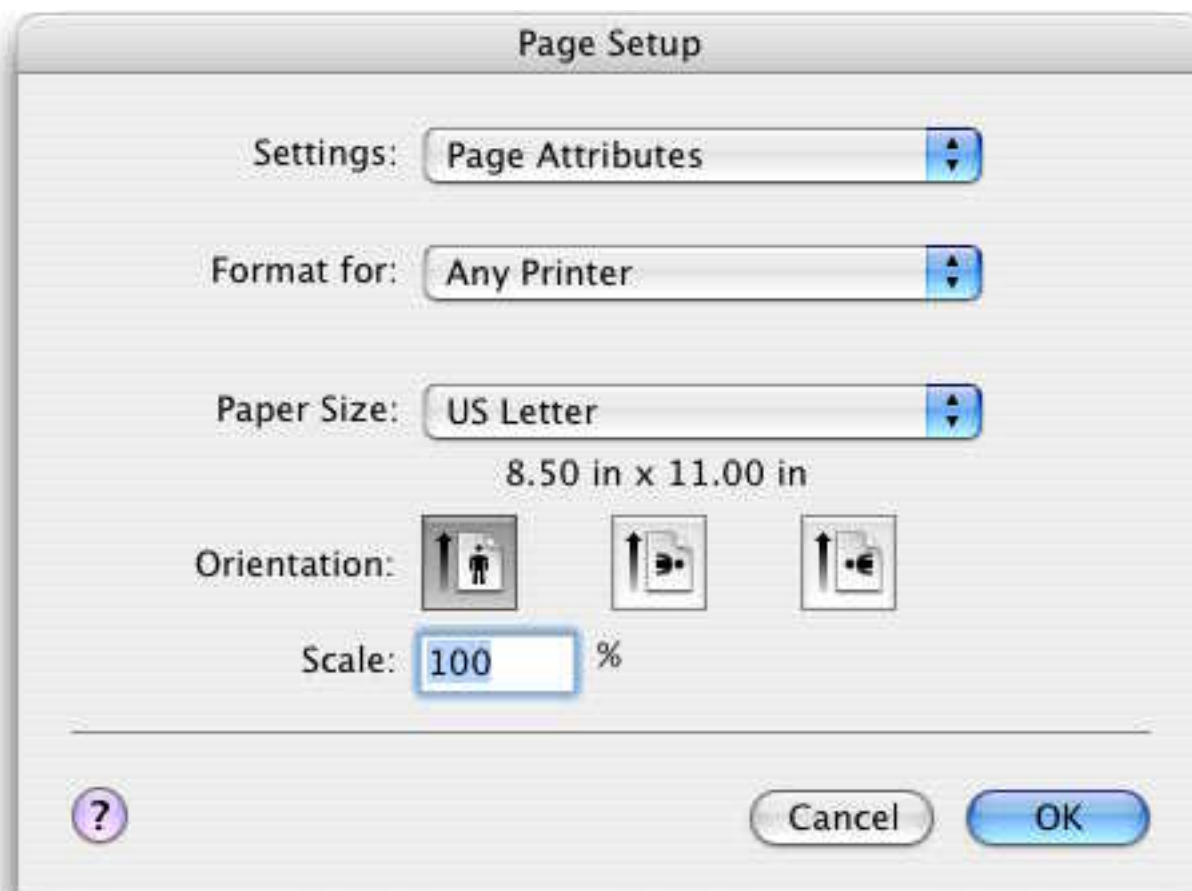
Select the printing options you want to use and press the **OK** button. To actually print the data sheet choose **Print** from the File menu. The printing dialog will appear. The exact options available in this dialog depend on the operating system and what kind of printer you are using, but in general you can control which pages to print, how many copies to print, and whether you want to manually feed the paper. Here is a typical **Print** dialog.
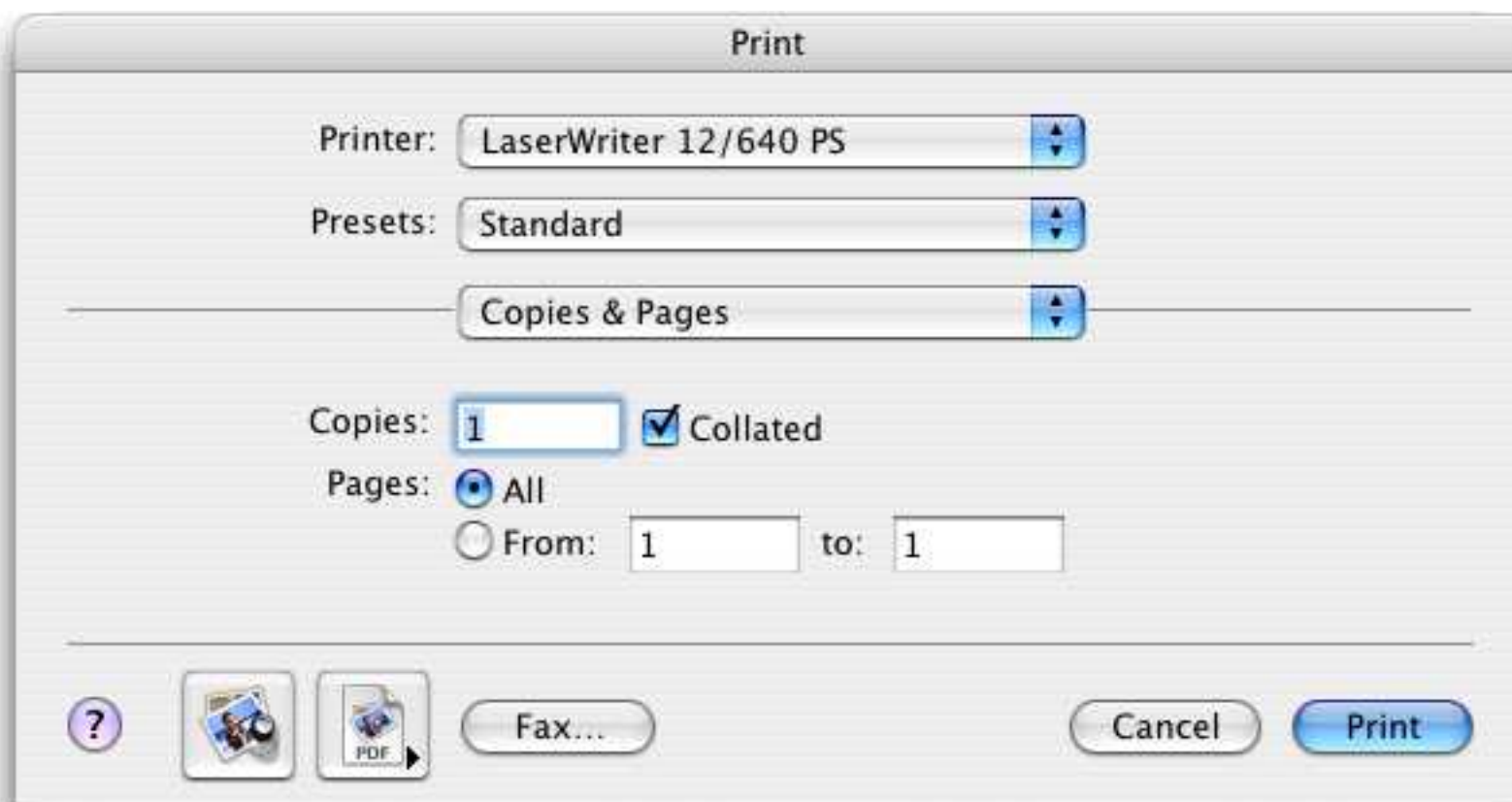
For the exact details on the operation of this dialog see the documentation that came with your printer. Press the **Print** button to print the data sheet. Panorama will automatically print as many sheets as necessary.

If you want to print only a portion of the database, use the **Select** button in the **Find/Select** dialog to select the data you want before printing the database (see "Selecting Instead Of Finding" on page 24). Only the visible records will be printed.

Creating a Form for Printing Mailing Labels

Now let's create a mailing label. Many types of peel-off labels are available commercially. Panorama already knows the dimensions of many popular labels and can do most of the work for you. The first step in setting up a mailing label is to create a **form** to hold the label. A form is like a sheet of paper that you can draw on (see "Introduction to Forms" on page 609). You can place graphics, text and data on the form to create labels, invoices, statements, or virtually anything else. To create a new form select **New Form** from the View menu.

A dialog box appears asking for more information about the new form you want to create. Type in a name for the new form (we used the name Mailing Labels, but you can choose any name up to 25 characters long).
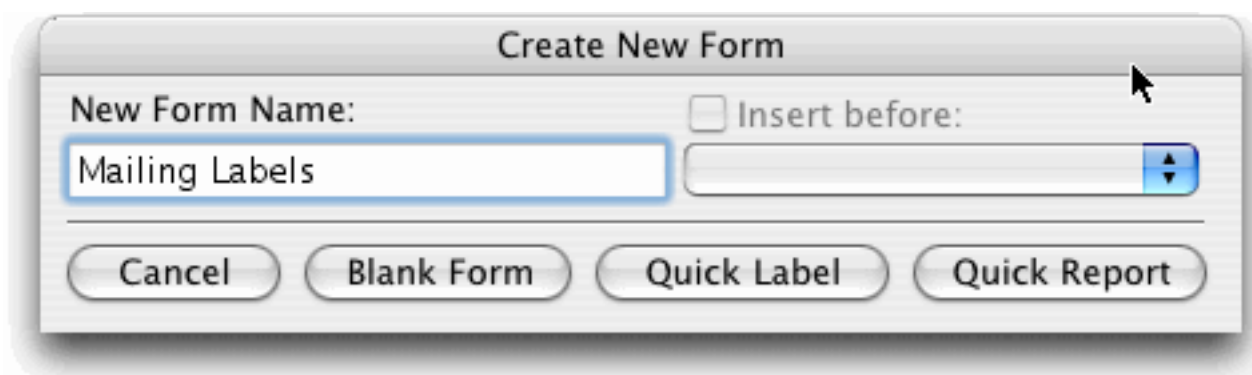
The dialog gives you three options when creating a new form — a blank form, a mailing label and a report. Press the **Quick Label** button. The Quick Label dialog appears, allowing you to define the dimensions of the mailing label you want to print on.
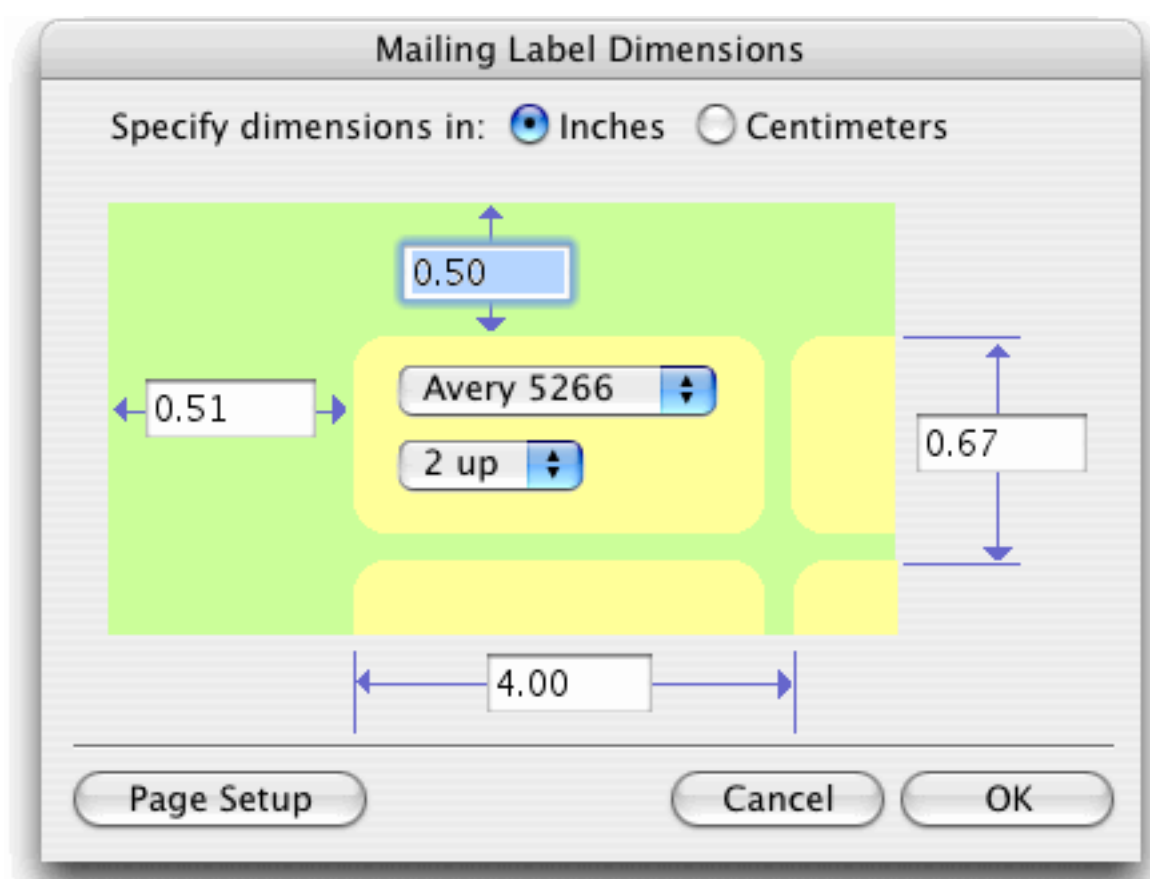
In the center of the dialog is a pop-up menu that lists many popular labels. The most popular label is the Avery 5160 which contains 30 labels per page in three columns of 10 labels.

Avery 5160
Avery 5260
Avery 5161
Avery 5261
Avery 5162
Avery 5262
Avery 5162 Old
Avery 5262 Old
Avery 5163
Avery 5164
Avery 5266
Avery 5267
Avery 5293
Avery 5294
Avery 4013
Avery 4145
Avery 4162
Avery 4163
Avery 4146
Avery 4604
Avery 4143
Avery 4144
Avery 4610
Avery 4161
Avery 4166
Avery 4167
Avery 4168
Avery 4169
Chesire

Specify dimensio... ...ntimeters

0.51

0.67

Page Setup   ...cel   OK
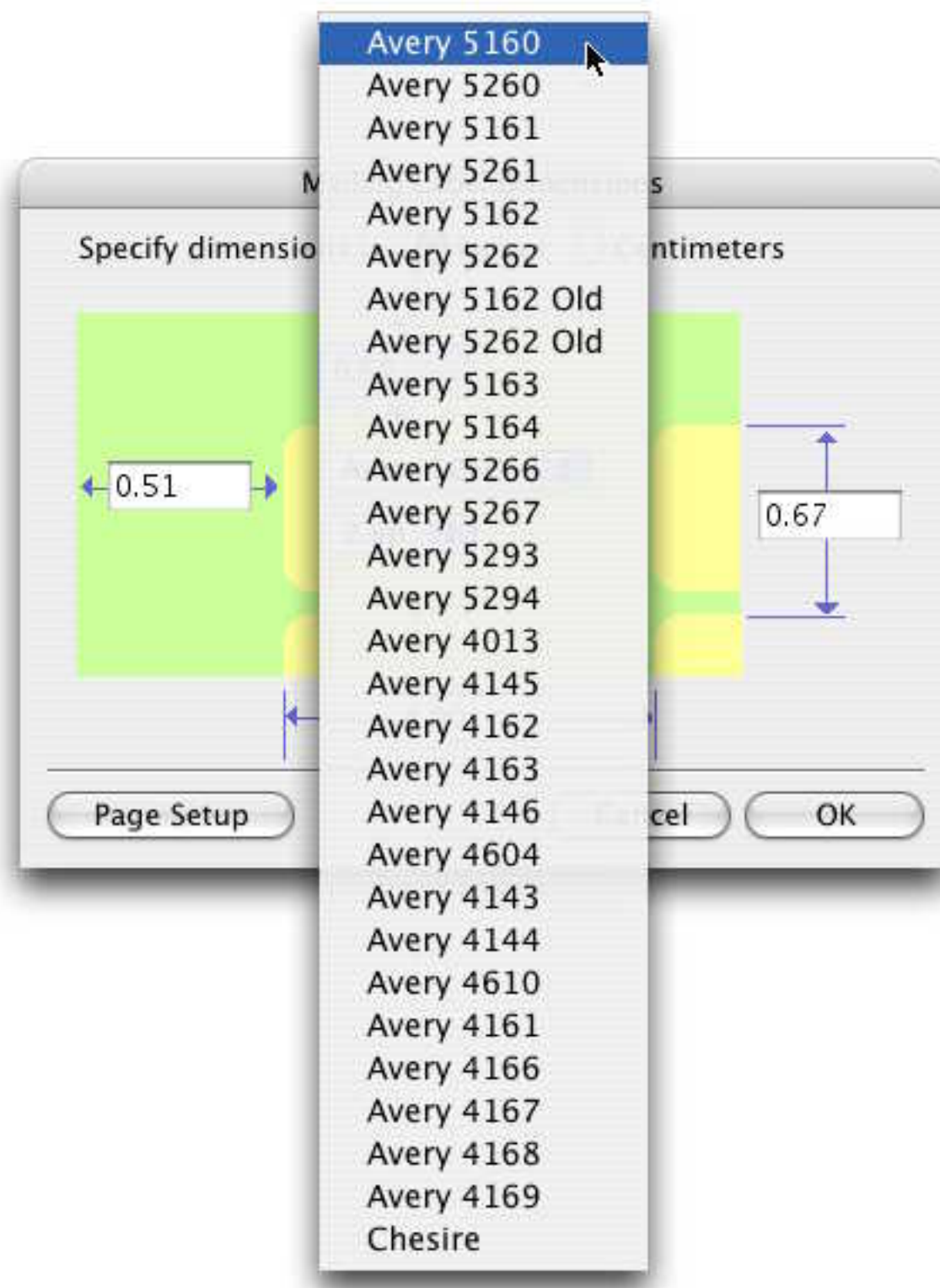
When you release the mouse the updated label dimensions appear. (You may also see an alert telling you that the largest possible printable page area must be set in the **Page Setup** dialog. If you see this message you should make sure Page Setup is configured to use as much of the page as possible, with the minimum possible margins.)
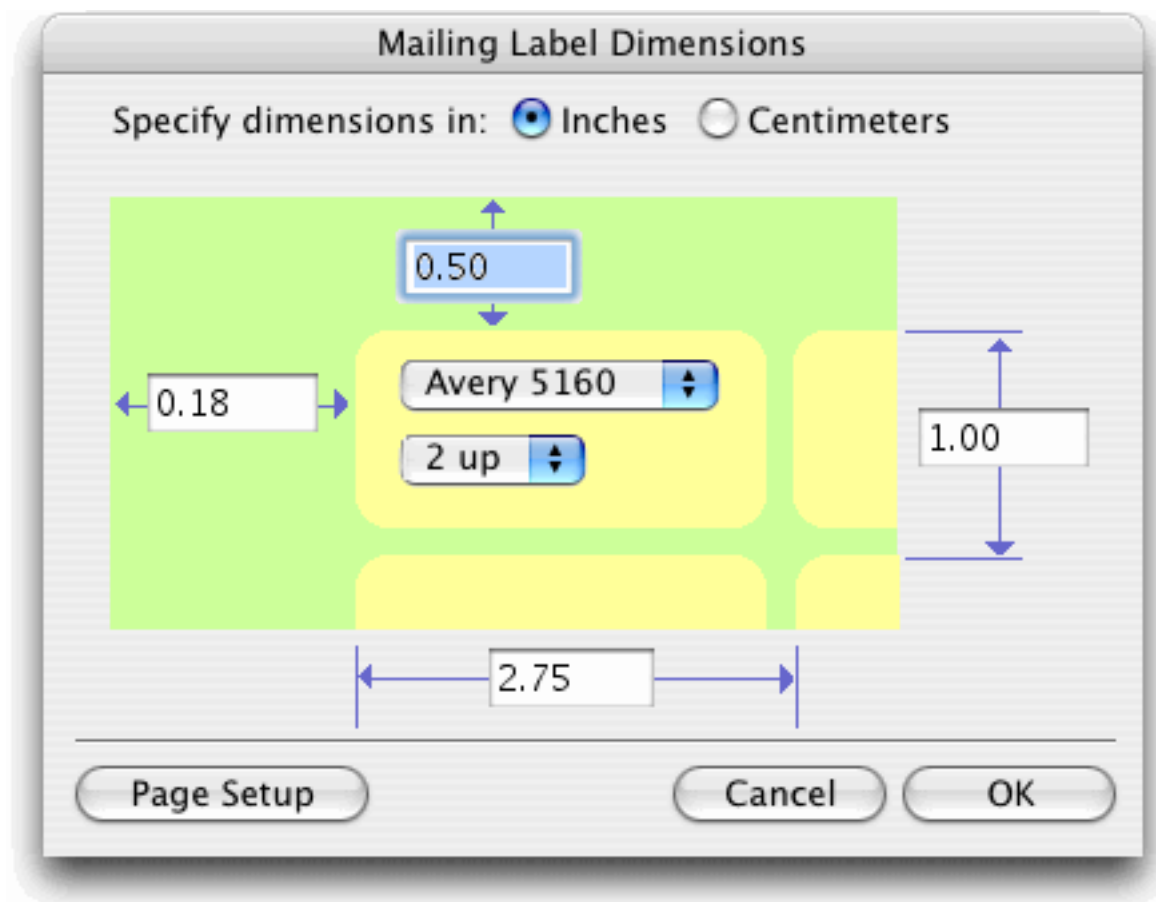
Press the **OK** button after the dimensions are set up.

Once the label dimensions are set up, the next step is to set up the text that will be printed on the label. A second dialog box will appear with a list of fields on the left. You'll build the template for your label on the right.
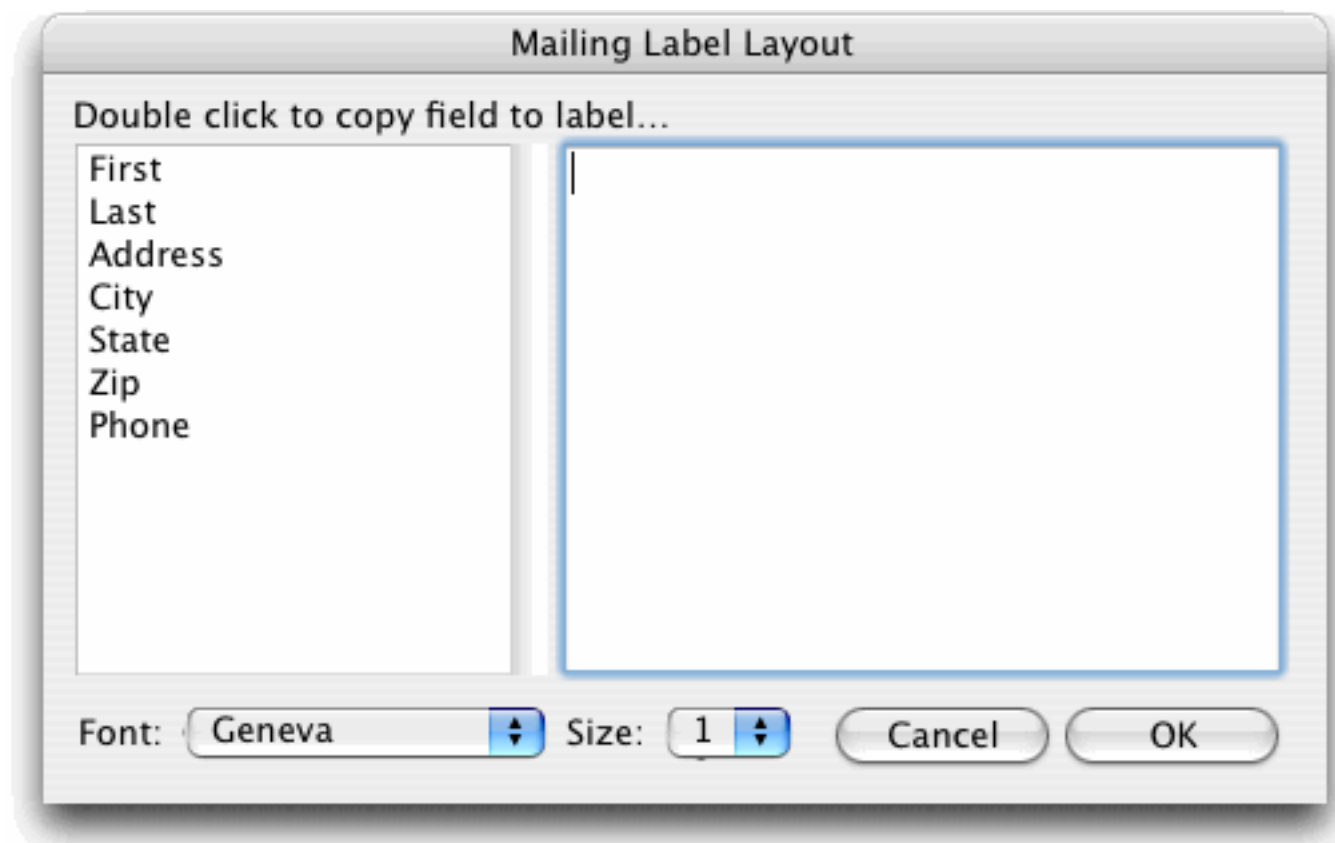
Start by double clicking on the First field, then press the **Space Bar**.
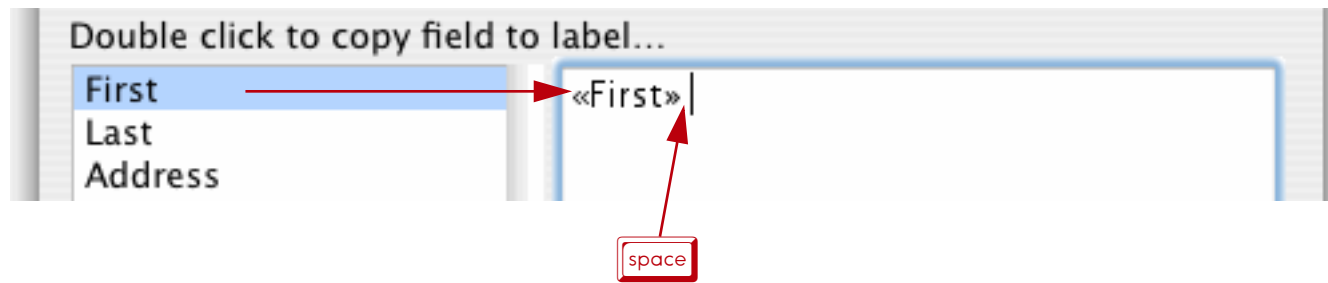
Now double click on the Last field, then press the **Return** key.
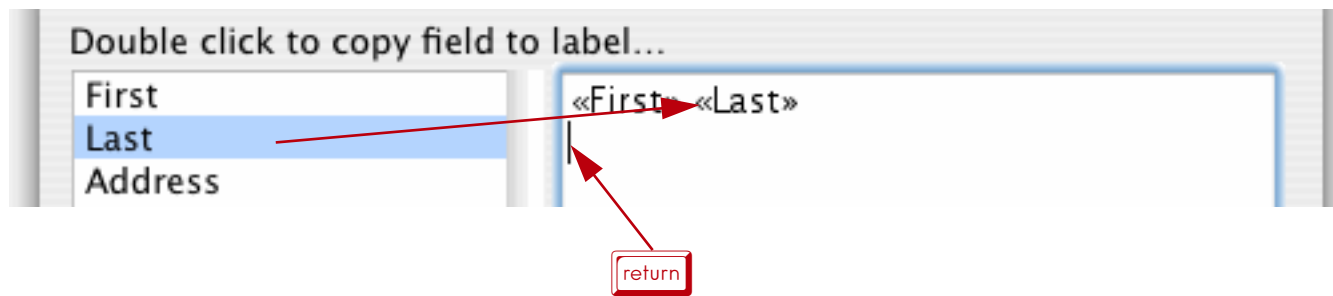
Double click on the Address field, then press the **Return** key.

Double click on the City field, then press the **comma** key and the **Space Bar**.
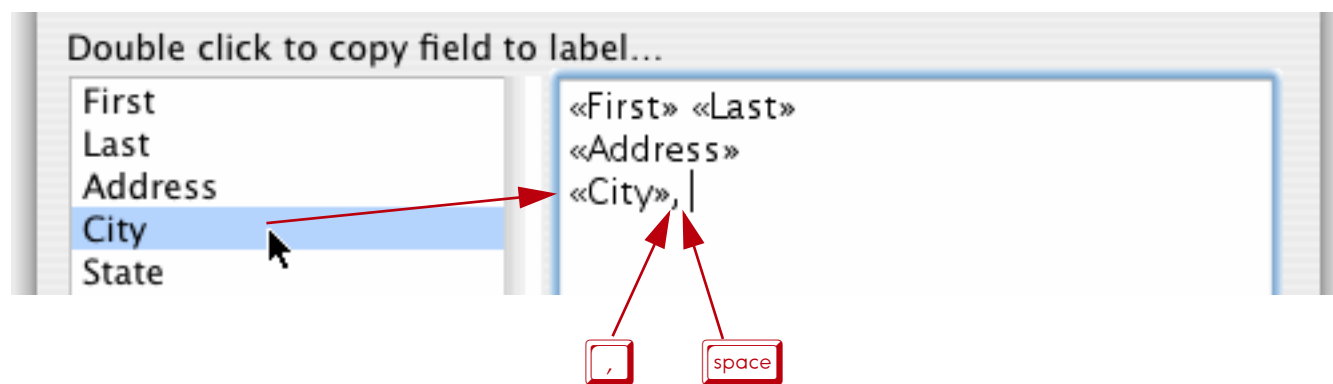
Finish the label by double clicking on the State field, pressing the **Space Bar** and then double clicking on the Zip field.

You can choose the font and size you want to use now or later.
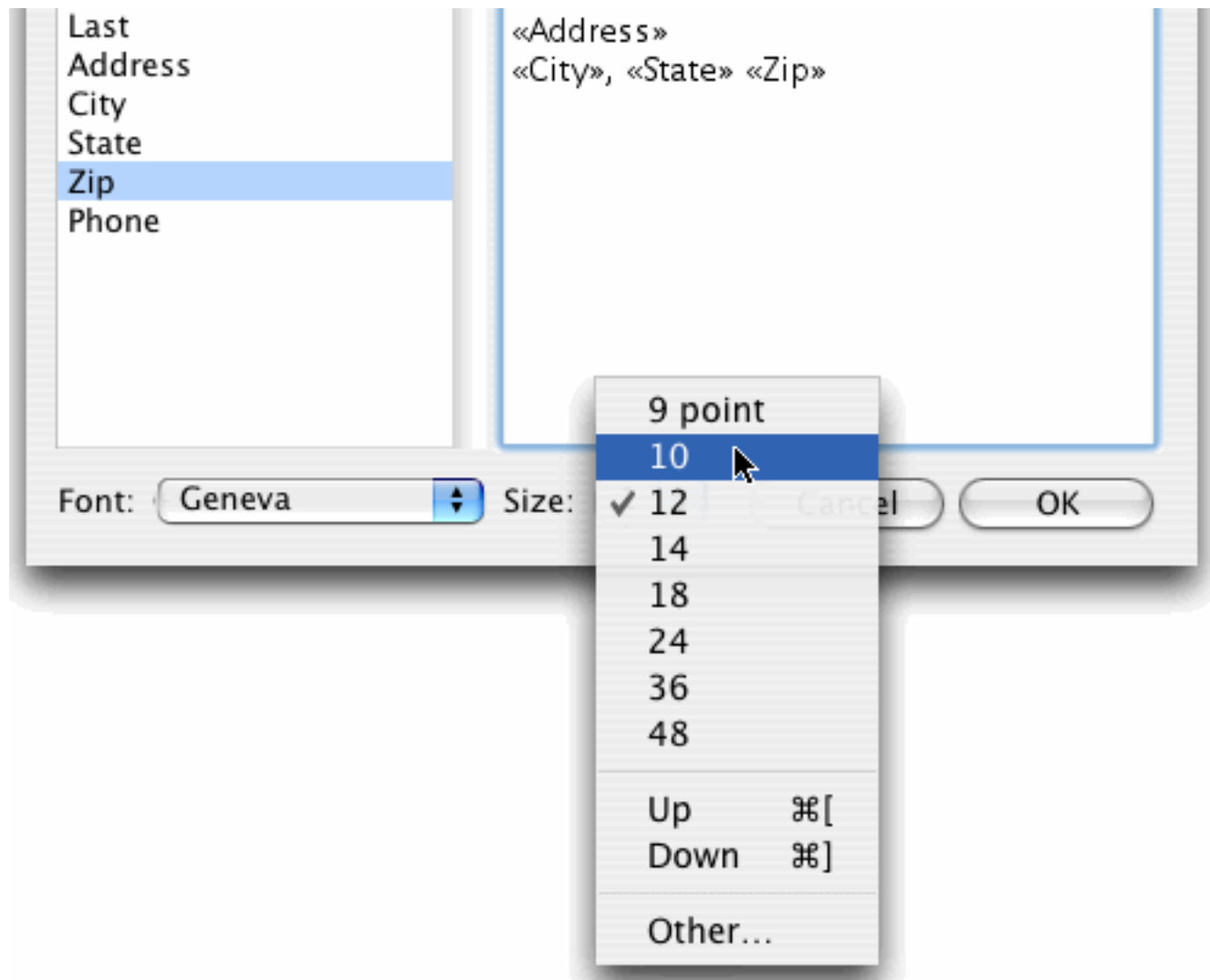
Press **OK** when the label design is complete.

Panorama now shows you the finished template for the label. The label appears on special "tiles" that control the size and spacing of the labels (see "Tiles In Action" on page 1192).
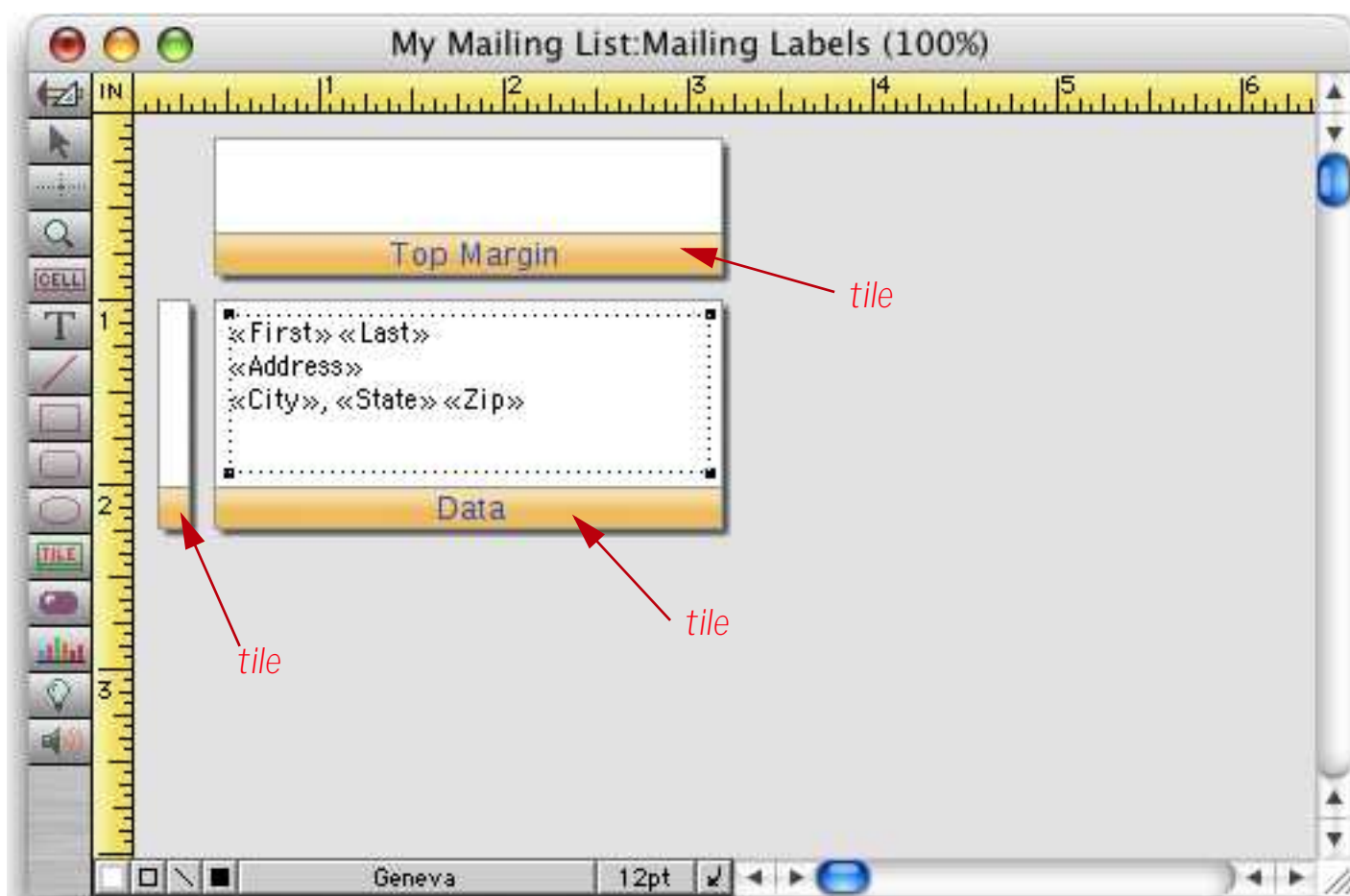
Previewing the Labels

To see how the page of labels would look before printing, choose **Preview** from the File Menu. If this is the first time the labels have been previewed or printed, the **Page Setup** dialog will appear. If this happens, just press **OK** to skip to the preview window. The Print Preview window will show a reduced view of an entire page of labels.
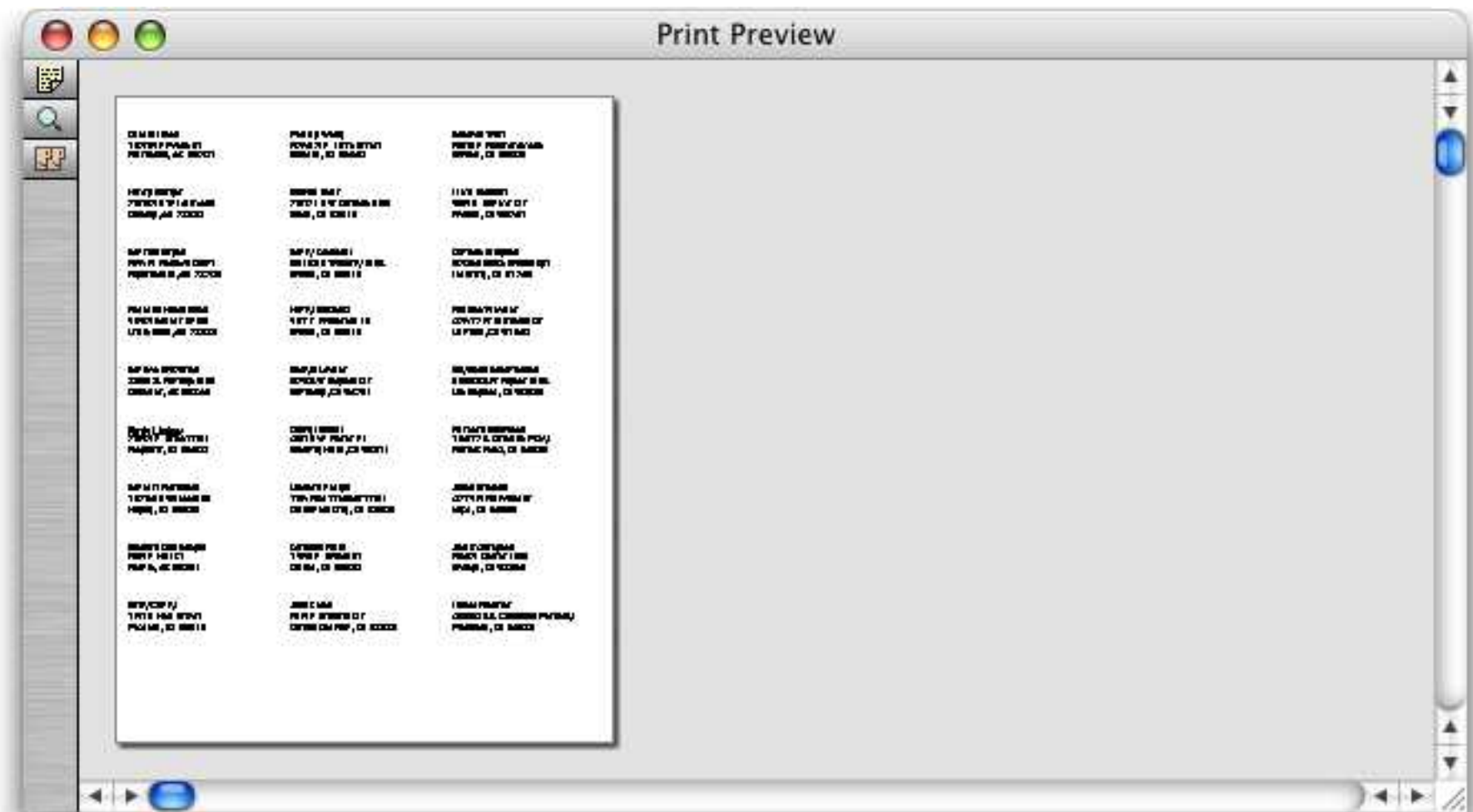
You can click on the magnifying glass tool to see the report life-size, and click on the Next Page tool to preview the next page.
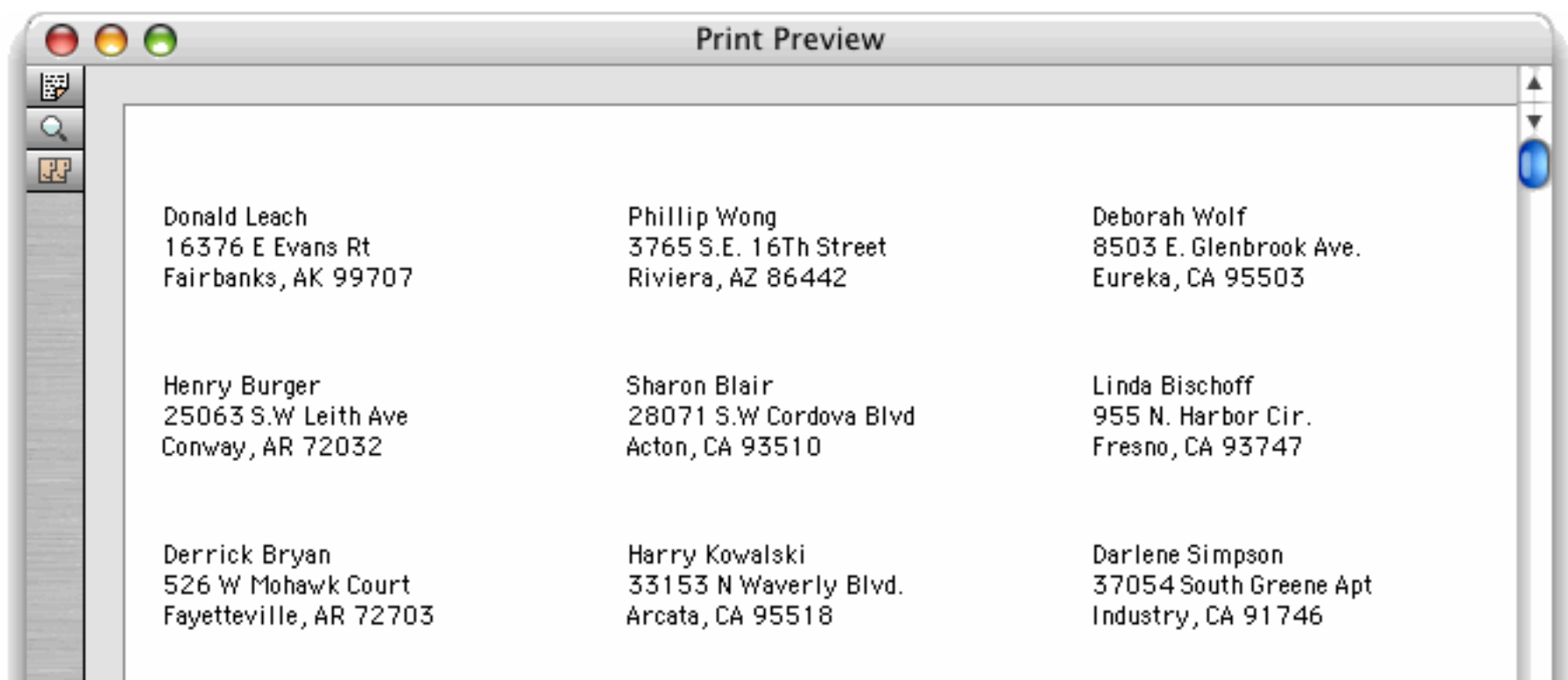
When you are done looking at the preview, click on the window's close box. To learn more about the Print Preview window see "Print Preview" on page 1174.

Printing the Labels

To print your mailing labels, first make sure that the correct printer is selected. Make sure the labels are set up in the printer, then choose **Print** from the File Menu.

If you don't want to print all of the labels, use the **Find/Select** command to select the addresses you do want to print. Use the **Select** button so that only the addresses you want to print are visible (see "Selecting Instead Of Finding" on page 24). Once the correct addresses are selected, use the **Print** command to print the labels. After the labels are printed, use the **Select All** command (see "Selecting All Records" on page 28) to make all of the addresses visible again.

Switching Between Forms and the Data Sheet

To switch back to the data sheet select **Data Sheet** from the View menu.
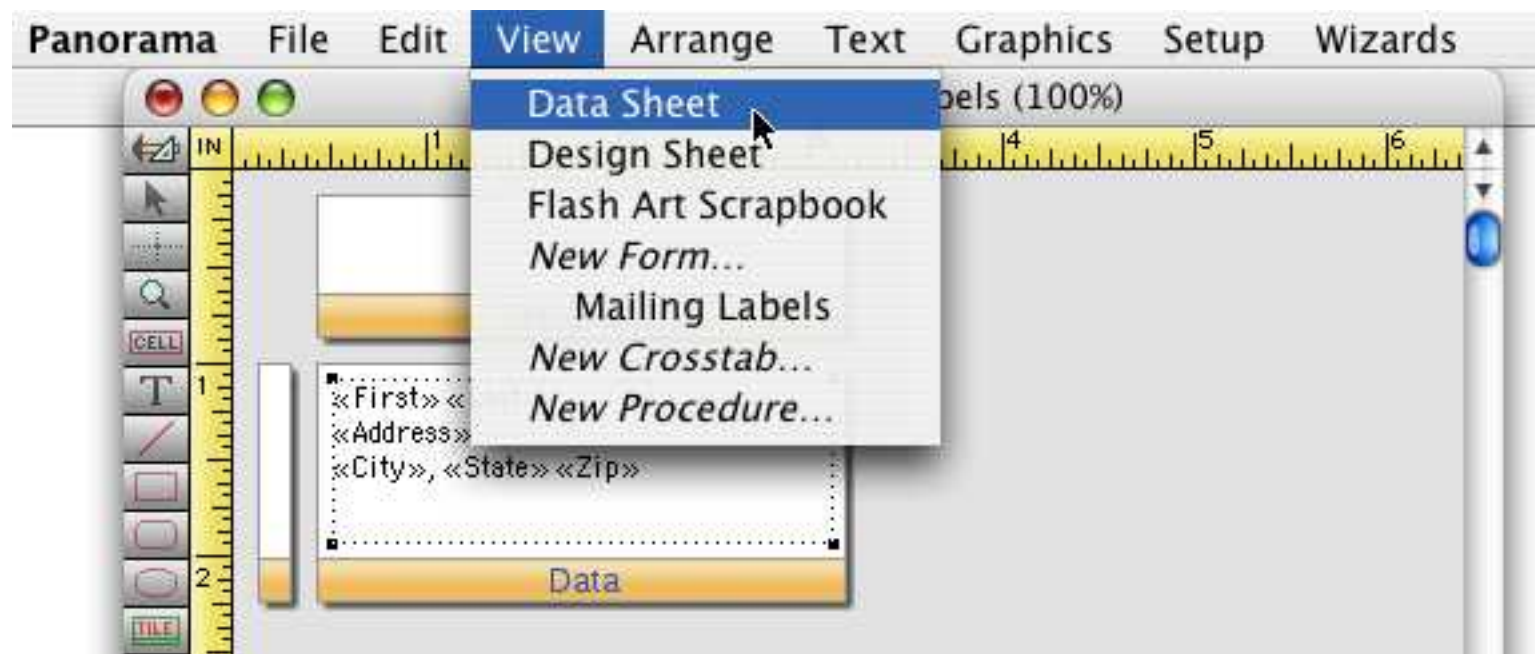
Panorama will switch the window from the mailing label back to the data sheet.

The View Menu lists every possible view of your database, and also allows you to create new views. To switch back to the mailing label, choose the name of the form containing the label from the menu.
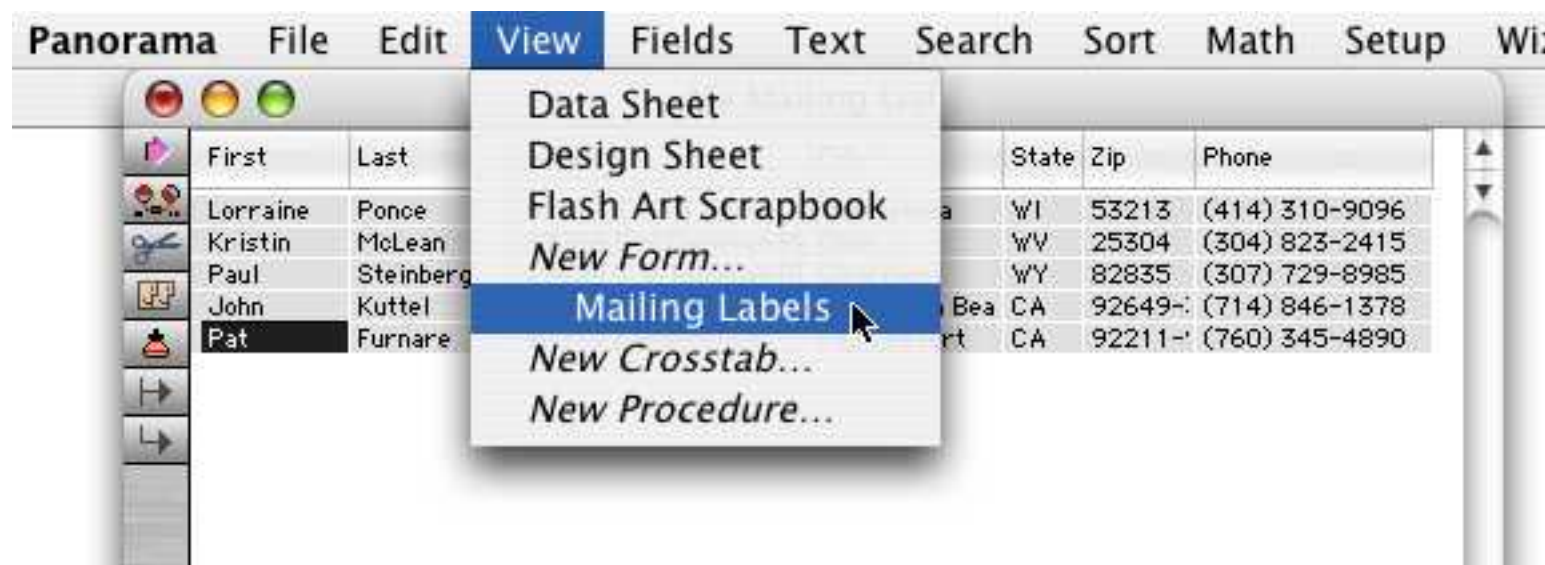
Your database can contain many different forms, each displaying the data a different way (see "Introduction to Forms" on page 609).

Creating a Data Entry Form

A form is not limited to displaying and printing data, it can also be set up for data entry. Using a form allows you to lay out the fields any way you like. You are not limited to the row and column format used by the data sheet.

To create a new form view you'll use the **View** menu. You're going to create the form in a new window. To do this you must hold down the **Alt** key if you are using a Windows PC, if you are using a Macintosh hold down the **Control** key. Either way, select **New Form** from the View menu.
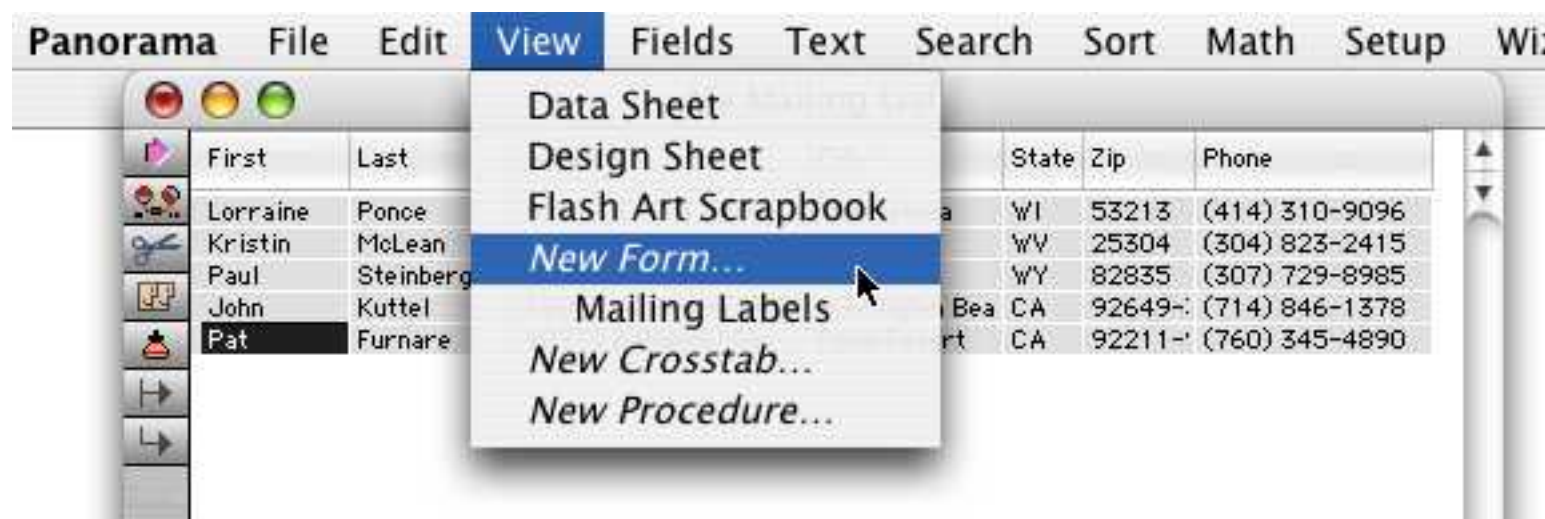
Panorama will ask you for the name of the new form. You can use any name you like up to 25 characters, we chose the name Entry.
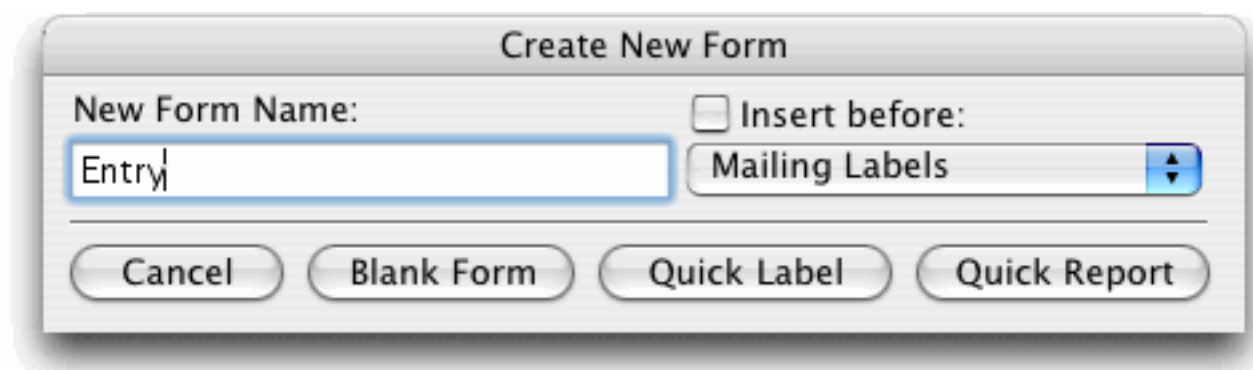
When you press the **Blank Form** button Panorama will create a new, empty, form. Since you pressed the **Alt** key (PC) or the **Control** key (Mac) when using the **View** menu, Panorama creates the form in a new window, leaving the data sheet also open in the back (see "Opening More Than One Window Per Database" on page 351).
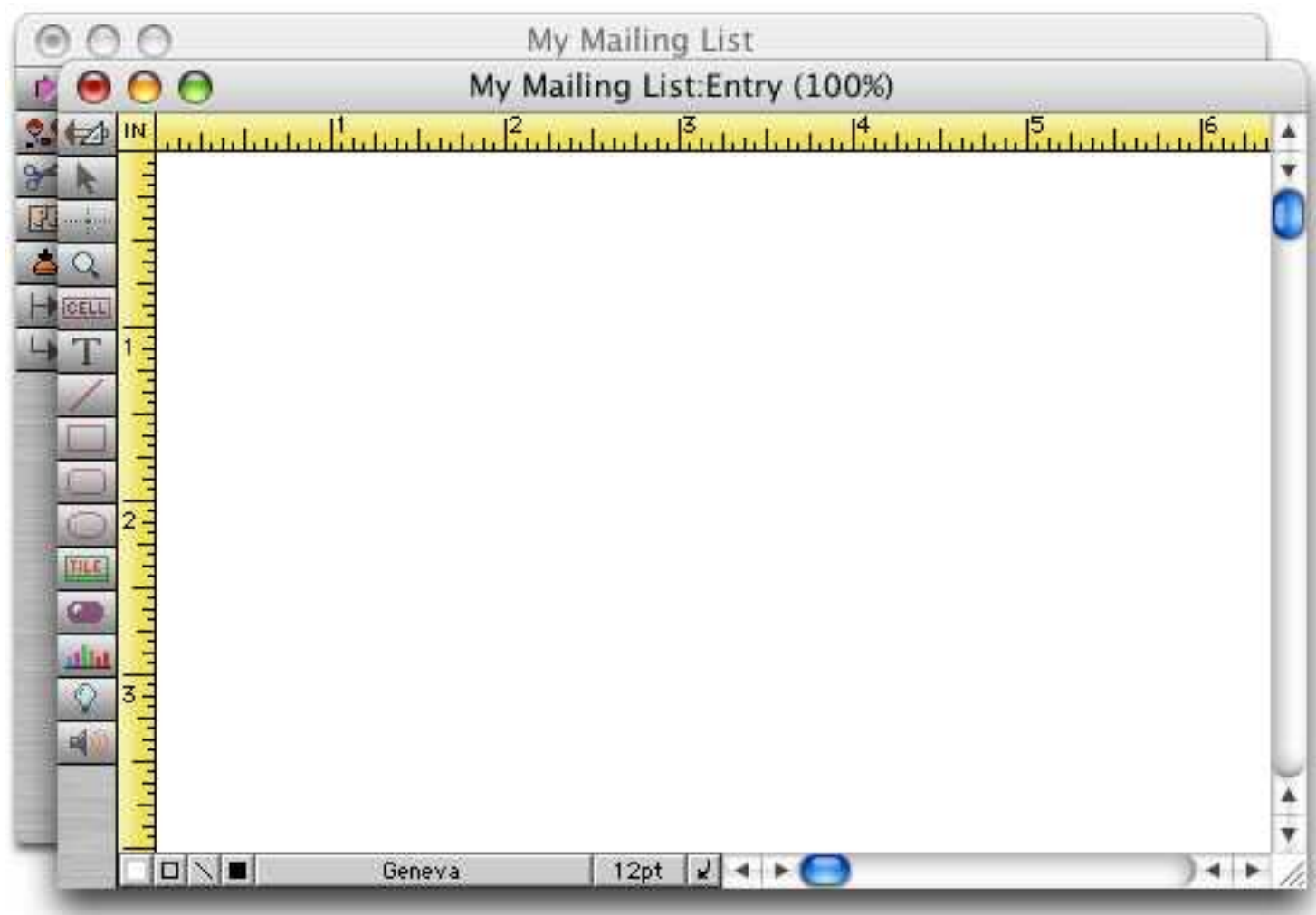
The tool palette on the left side of the window contains tools for creating and manipulating graphic objects on the form. The most commonly used tools are shown below.

- switch between graphics editing and data editing
- pointer for selecting graphic objects
- turn cross hair on/off (to help alignment)
- magnify/reduce
- create data cell object (database field)
- create text object
- create line object
- create rectangle object
- create rectangle object with round corners
- create oval/circle object

Creating Graphic Objects

Before you actually start creating the data entry form let's practice a bit with using these tools. Start by selecting the **Oval** tool.
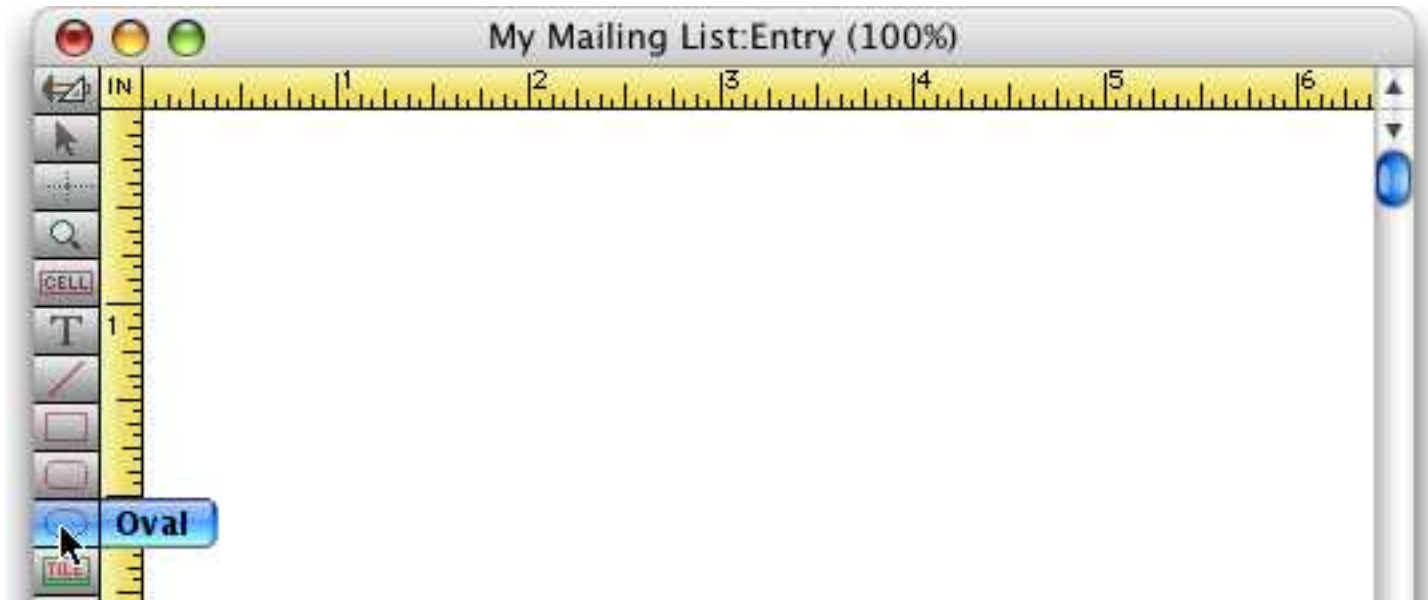
Now move the cursor onto the form and drag the mouse across the surface of the form to define the location and size of the new object (the dragging motion is shown by the dashed arrow in the illustration below). A gray outline of the new object will follow the mouse.
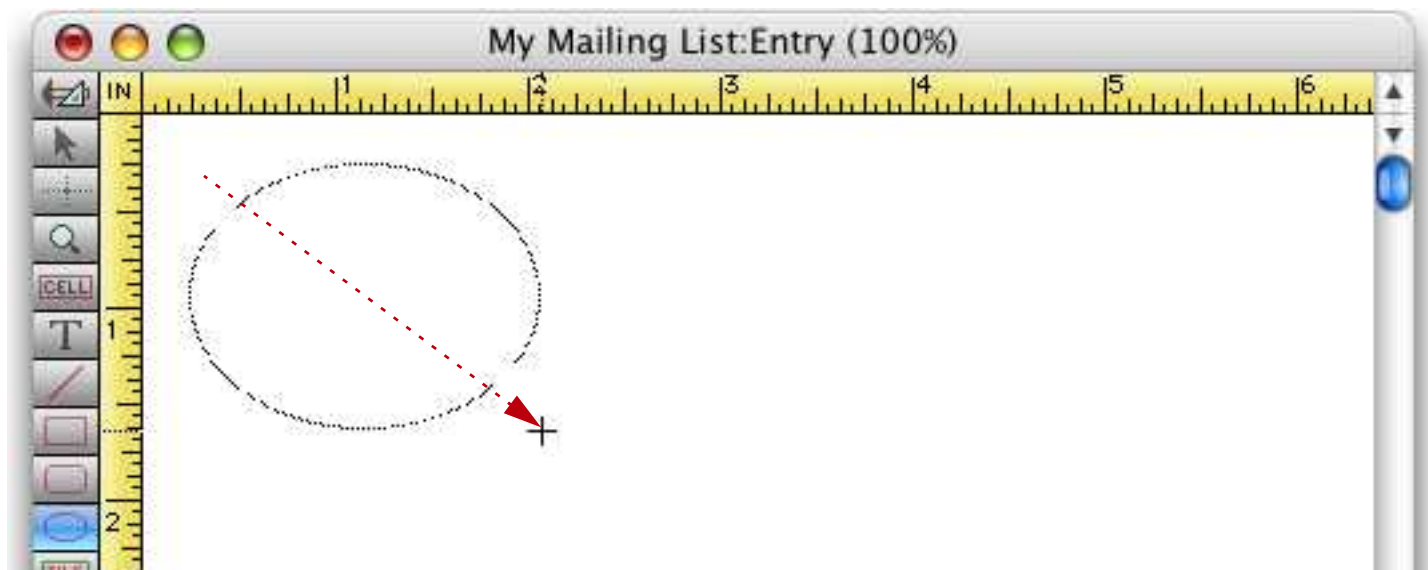
When you release the mouse, the new object will appear.
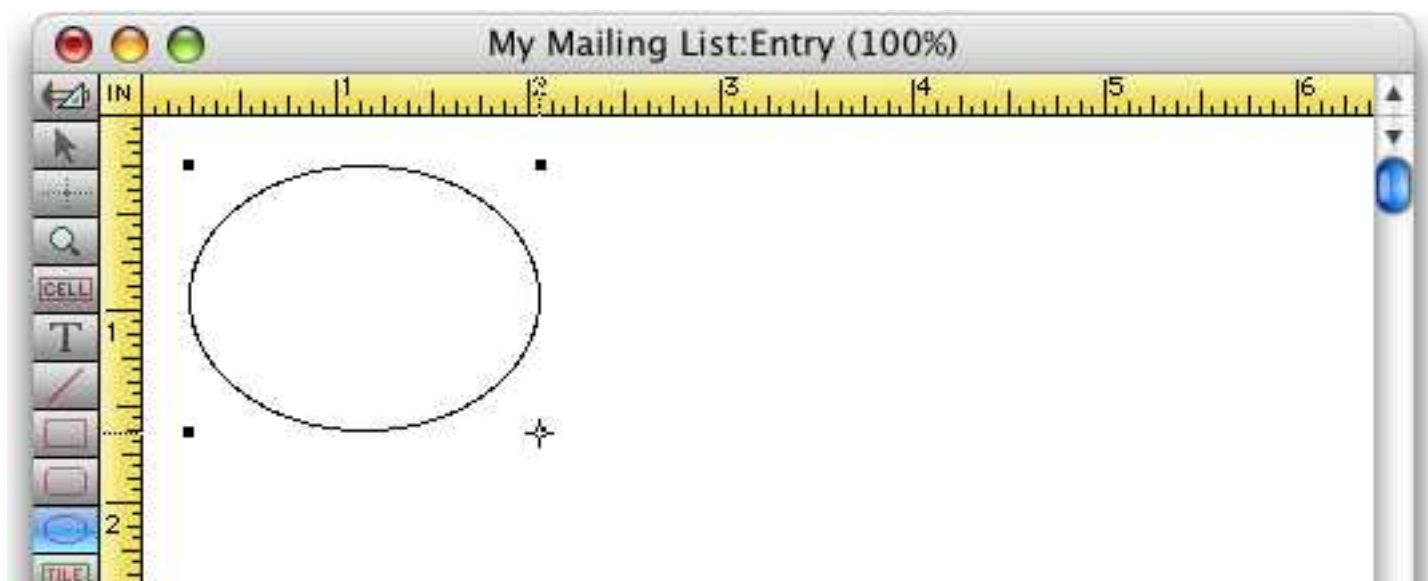
Each time you drag across the form you will create a new shape. Create several shapes as shown below (these objects are just for experimentation, so don't worry about the exact position and size).
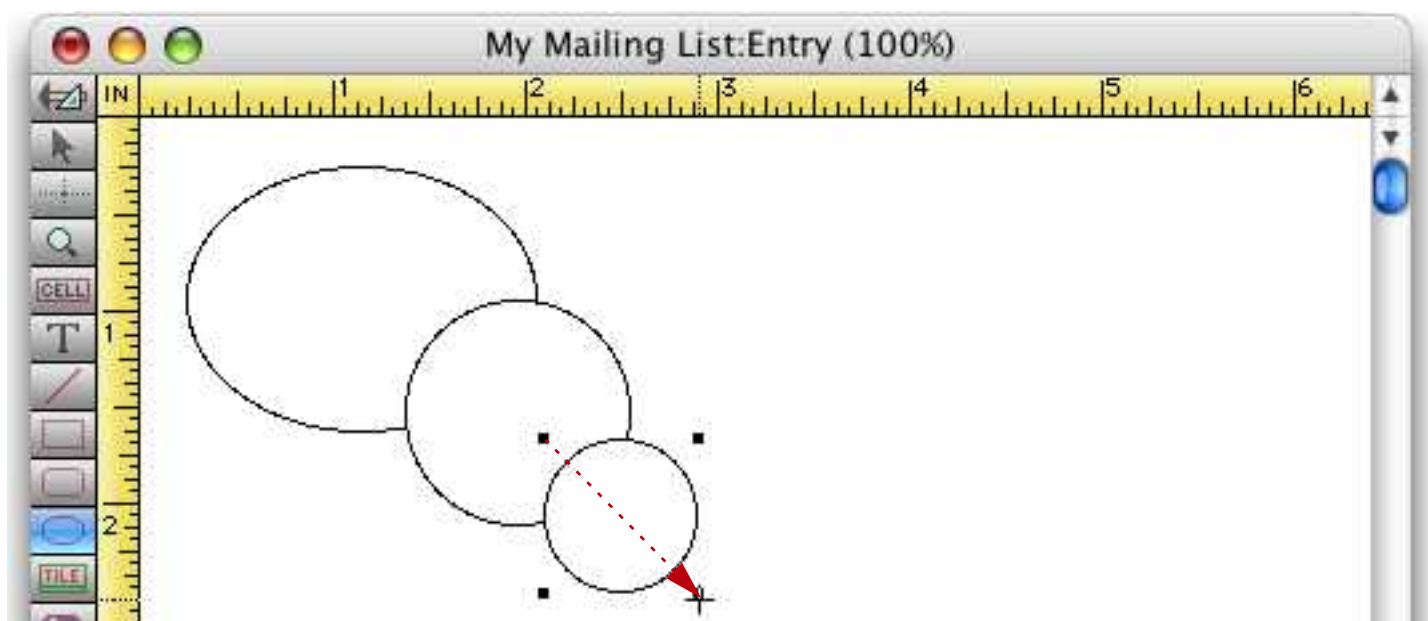
When you are finished creating shapes, click on the **Pointer** tool.
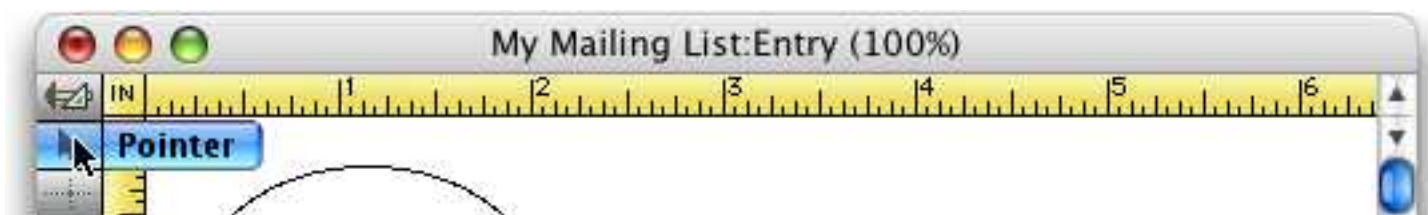
Don't forget to click on the Pointer tool when you are done! If you don't, the next time you click you will create another graphic object. To learn more about creating graphic objects see "Creating a Graphic Object" on page 622.

Selecting and Moving a Graphic Object

To select a graphic object simply click on it with the **Pointer** tool selected. Four "**handles**" appear at the corners to show that the object is selected (see "Selecting a Single Object" on page 629).

handles
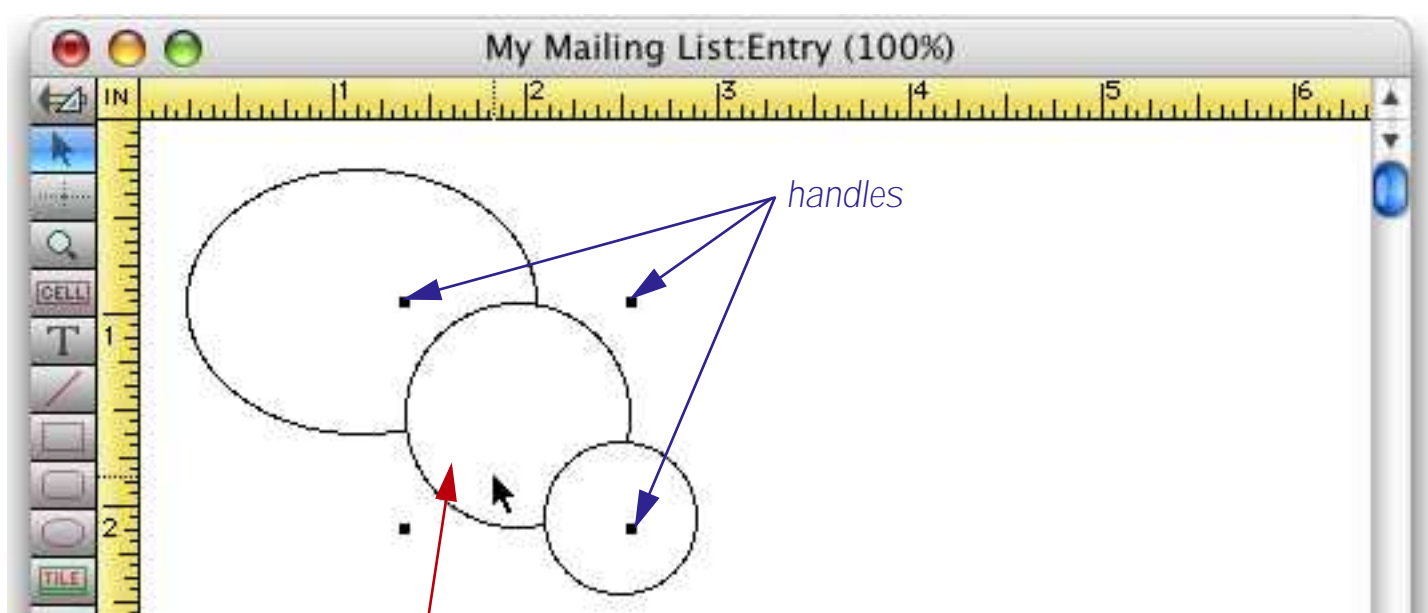
click on the object you want to select

To move an object click on it and drag to the new position (see "Moving a Single Object" on page 636).
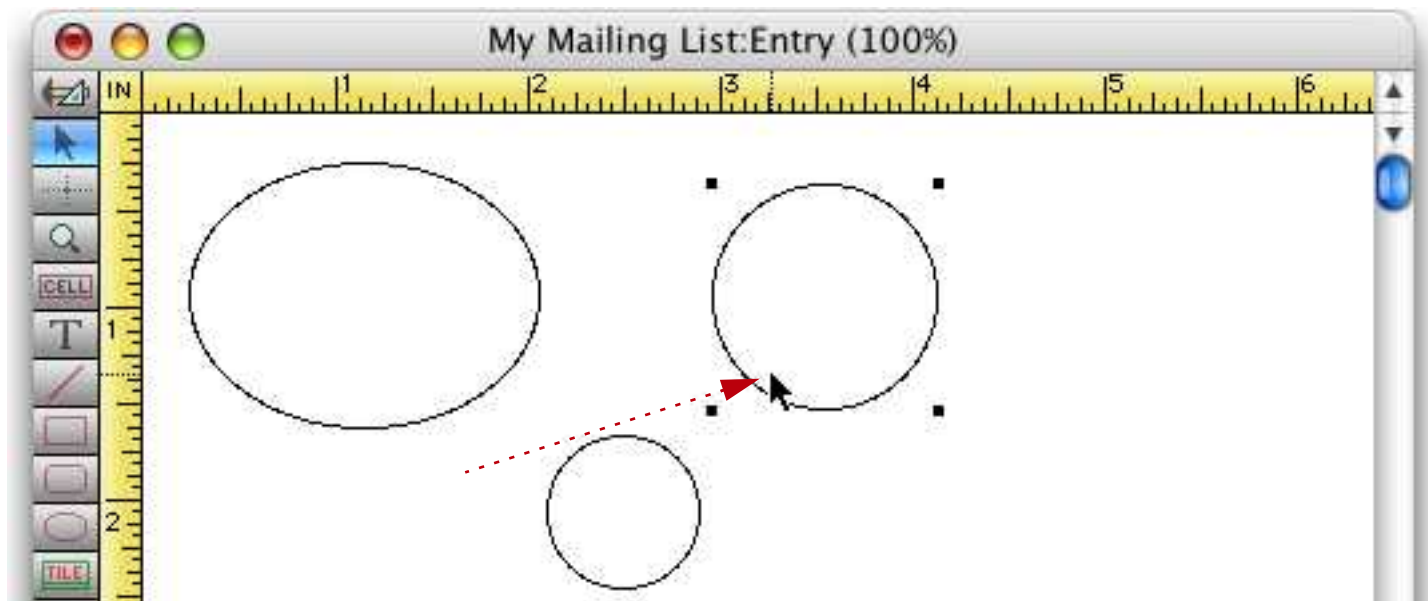
For fine adjustments you can use the arrow keys (←, →, ↓, ↑) to nudge selected objects into position. Each time you press an arrow key, the object (or objects) moves one pixel in the direction of the arrow (see "Nudging an Object (or Objects)" on page 637).

Adjusting the Size of a Graphic Object

To change the size of an object, first select the object with the **Pointer** tool. Then use the mouse to drag one of the corner handles. As you drag the handle, an outline of the object will follow the mouse.
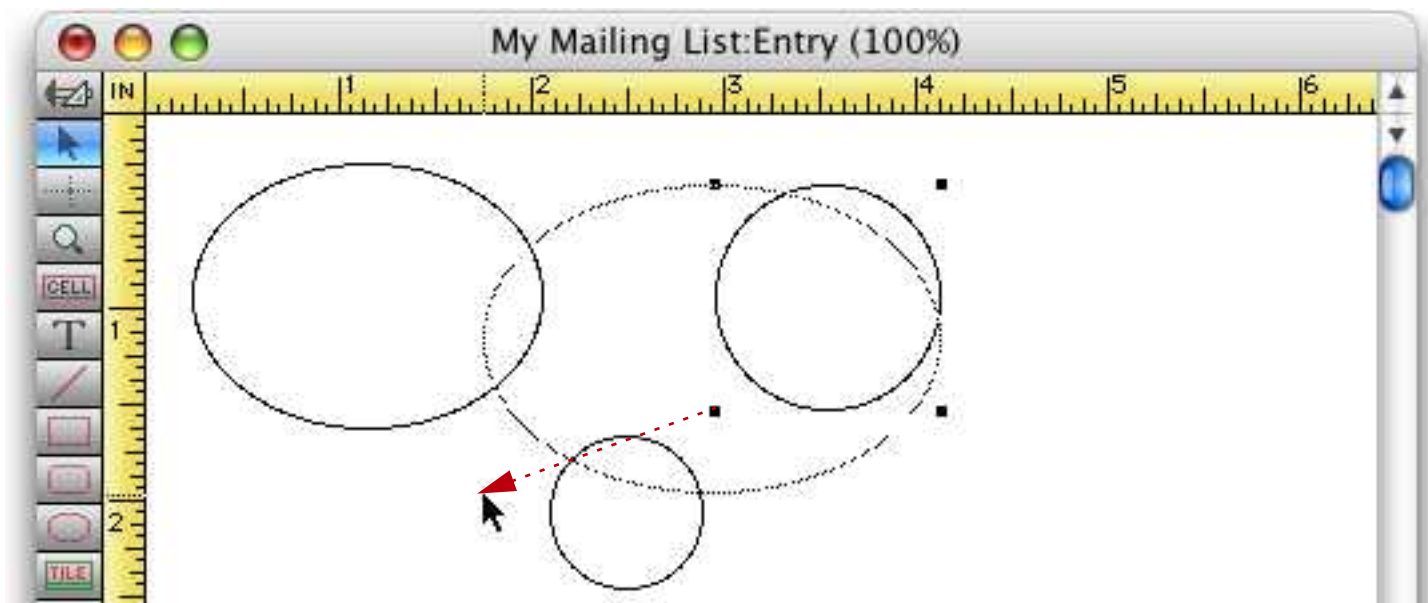
Release the mouse when the corner is in the correct spot (see "Changing the Size of a Single Object" on page 641).
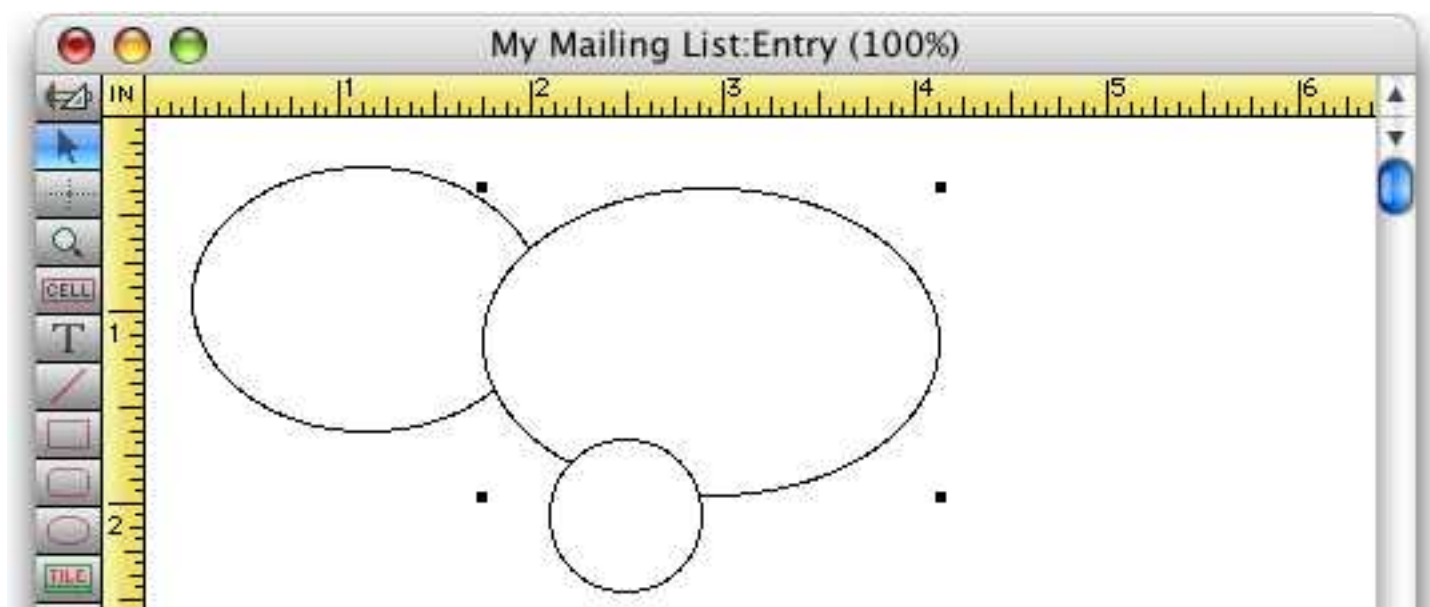
The arrow keys (←, →, ↓, ↑) usually nudge the entire object. However, after you click or drag a handle, the arrow keys will nudge just that handle. Each time you press an arrow key the handle will move one pixel in the direction of the arrow. In other words, each time you press an arrow key the object will grow (or shrink) one pixel in the direction of the arrow (see "Nudging the Size of an Object" on page 641). You can also adjust the position and size of the object numerically with a dialog, see "Viewing and Setting Exact Object Dimensions" on page 640 to learn how.

Changing an Objects Appearance

The new objects you have created are white with a black border. You can change it to Solid (or Hollow) with the Graphics menu (see "Solid, Outline and Hollow Objects" on page 648).
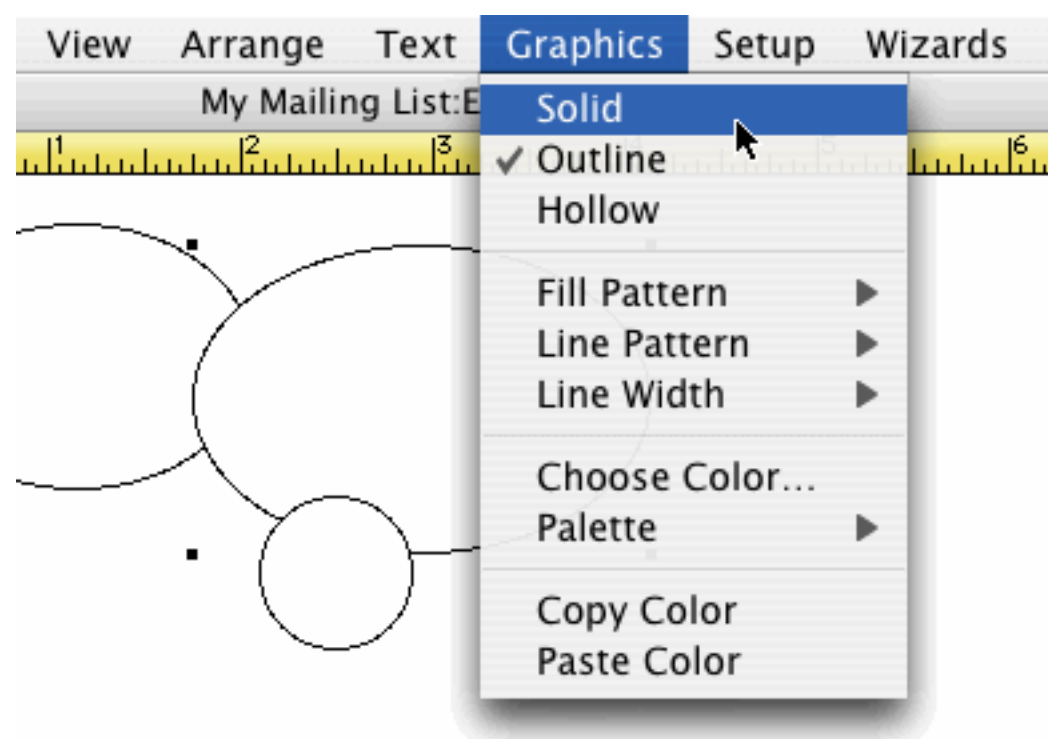
After you make your selection the object will change to the selected pattern, in this case solid fill.
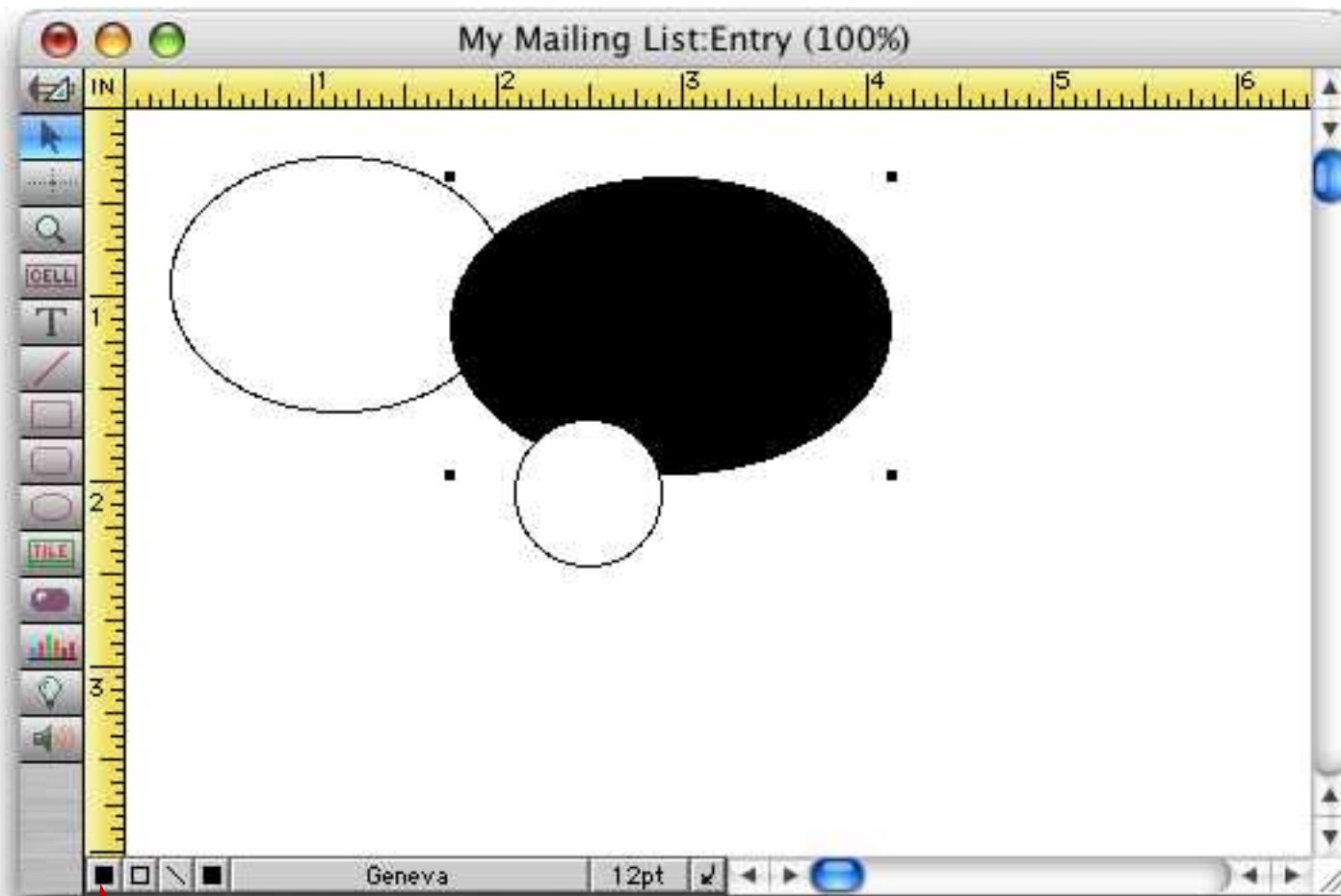
current fill pattern (solid)

You can also use the **Graphic Control Strip** (on the bottom of the window next to the horizontal scroll bar, see "The Graphic Control Strip" on page 633) to change the appearance of the selected objects. Another way to change the selected object to solid black is to use the fill pattern menu (see "Fill Pattern" on page 649). This menu has 40 different patterns to choose from.

50% gray

transparent

solid white

solid black

My Mailing List:Entry (100%)

click to pop-up the fill pattern menu
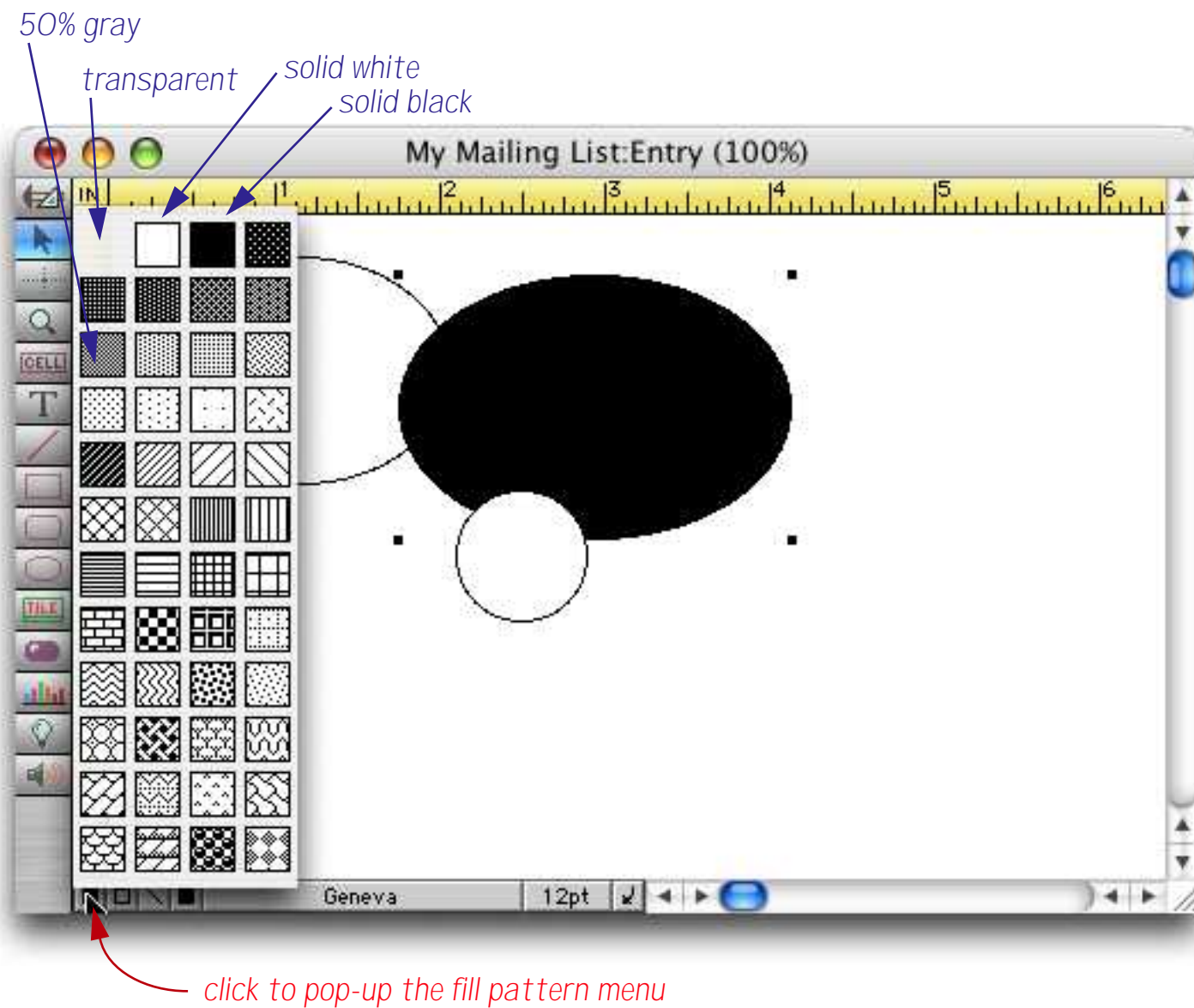
To change the color of the selected object use the color menu (see "Color" on page 654).

current color (black)   new color (blue)
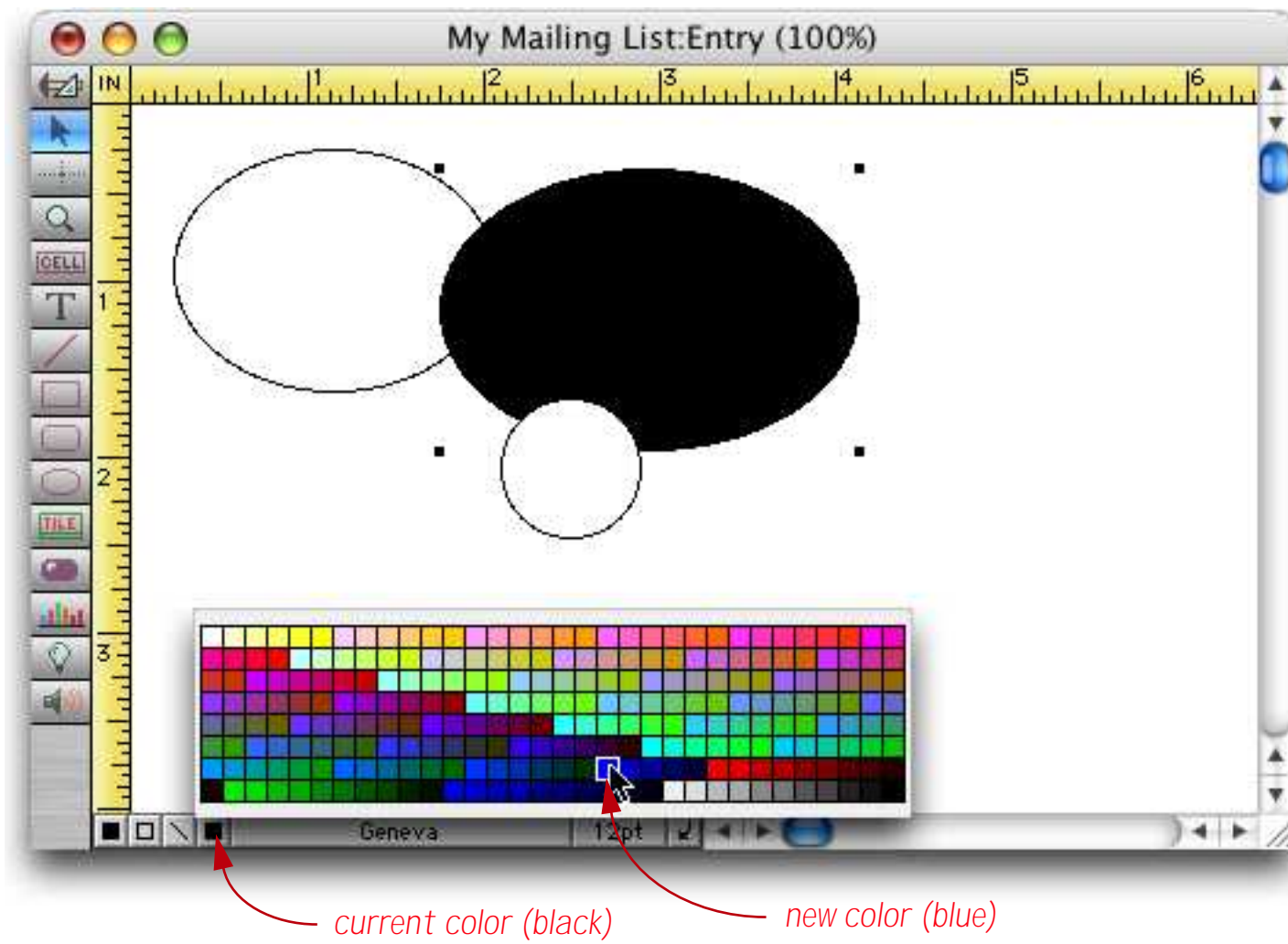
After you make your selection the object will change to the selected color.
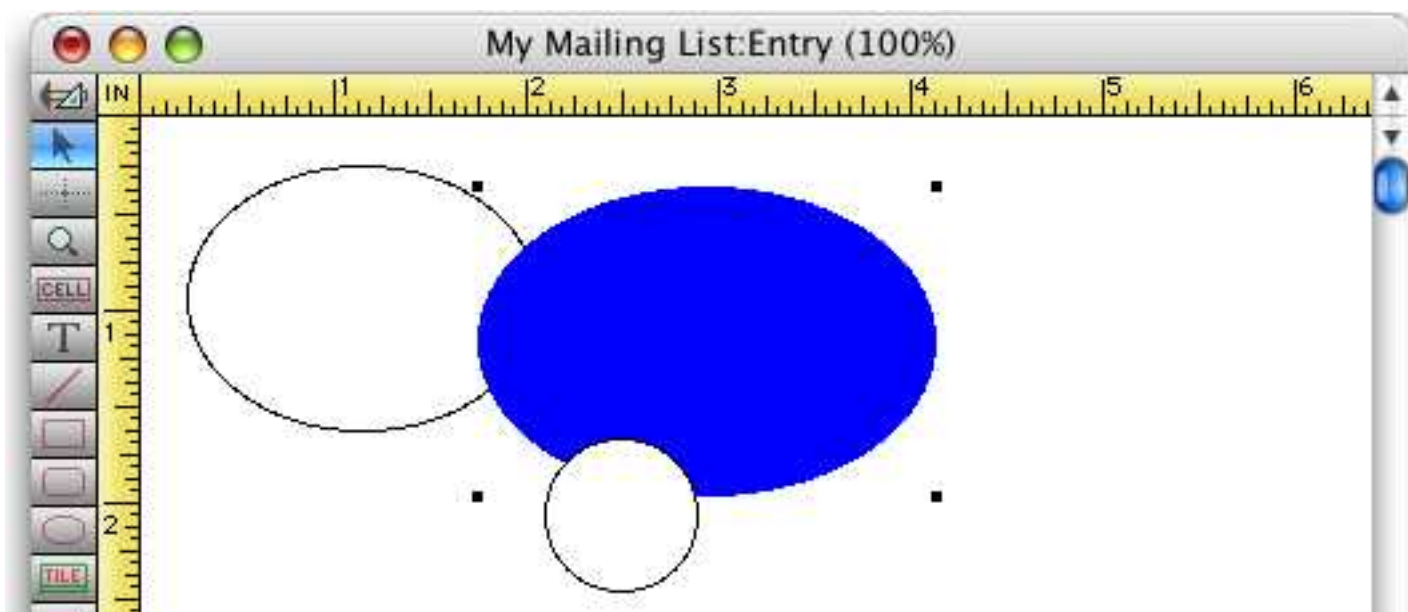
If you want to choose a color that is not on the palette hold down the **Control** key while clicking on the color swatch in the control strip (On PC systems you should Right-Click on the swatch instead of holding down the Control key). The standard system color dialog will appear.
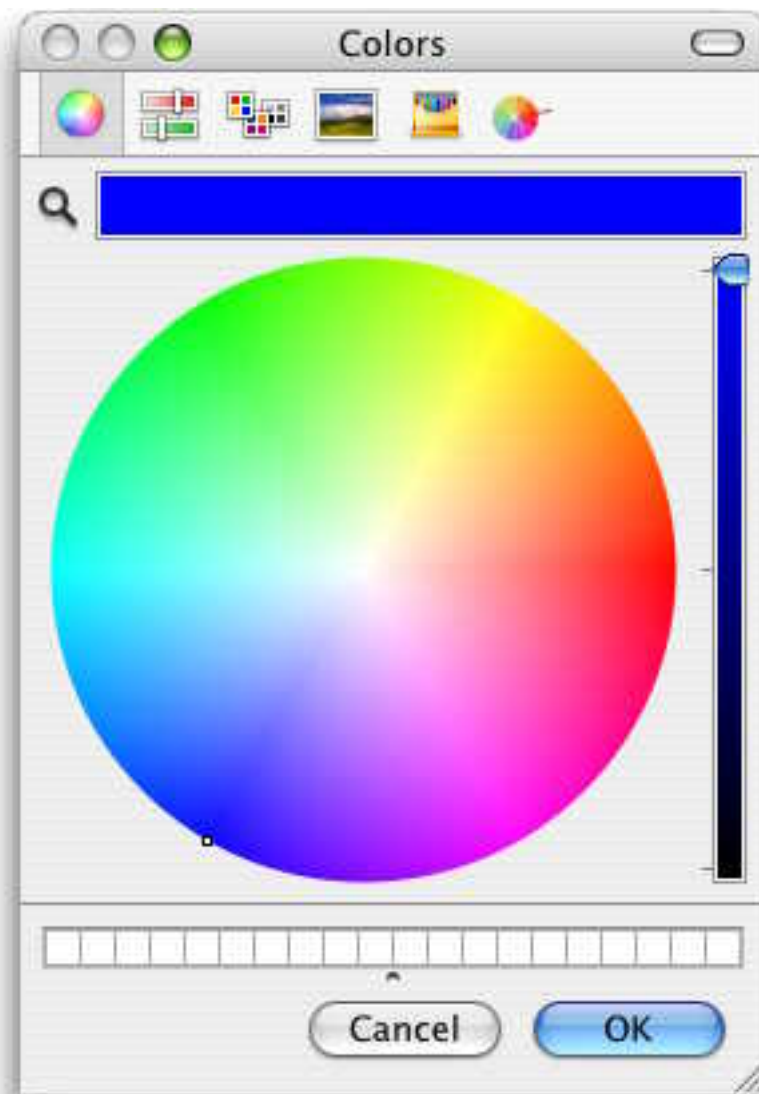
Choose the color you want and press **OK**.

You can also adjust the line pattern (see "Line Pattern" on page 651) and the line width (see "Line Width" on page 653) of the selected object(s), and you can copy the color from one object to another (see "Copying and Pasting Colors" on page 656).

Creating Text Objects

To add a piece of text to your form start by clicking on the **Text** tool.
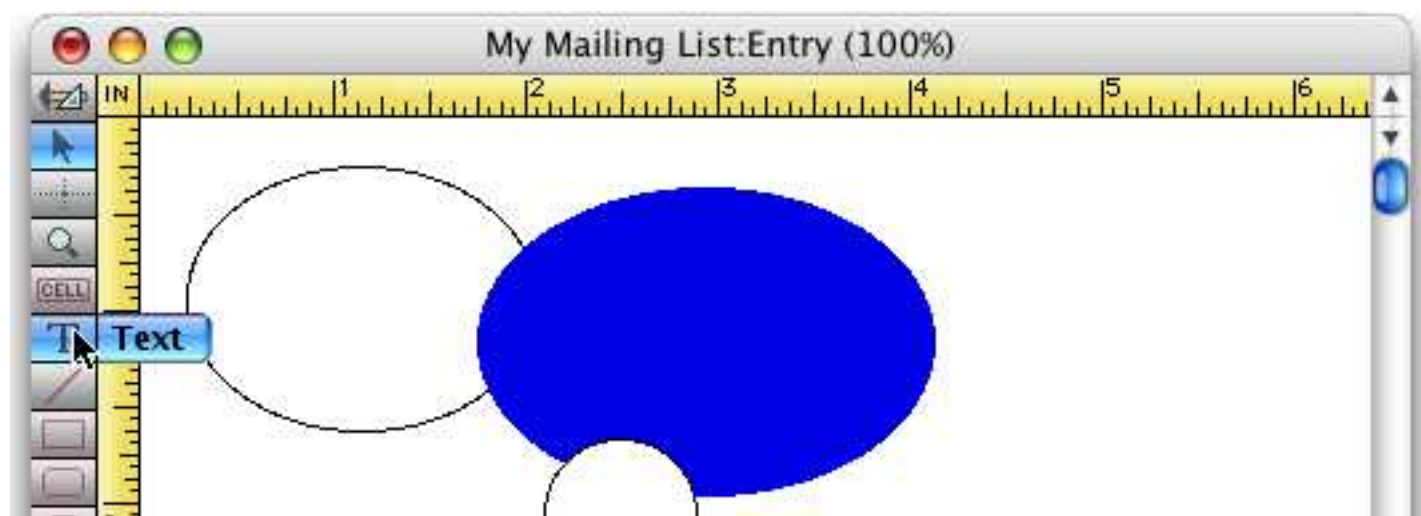
Now move the mouse to the position where you want the text to appear (you can adjust the position later) and click the mouse.
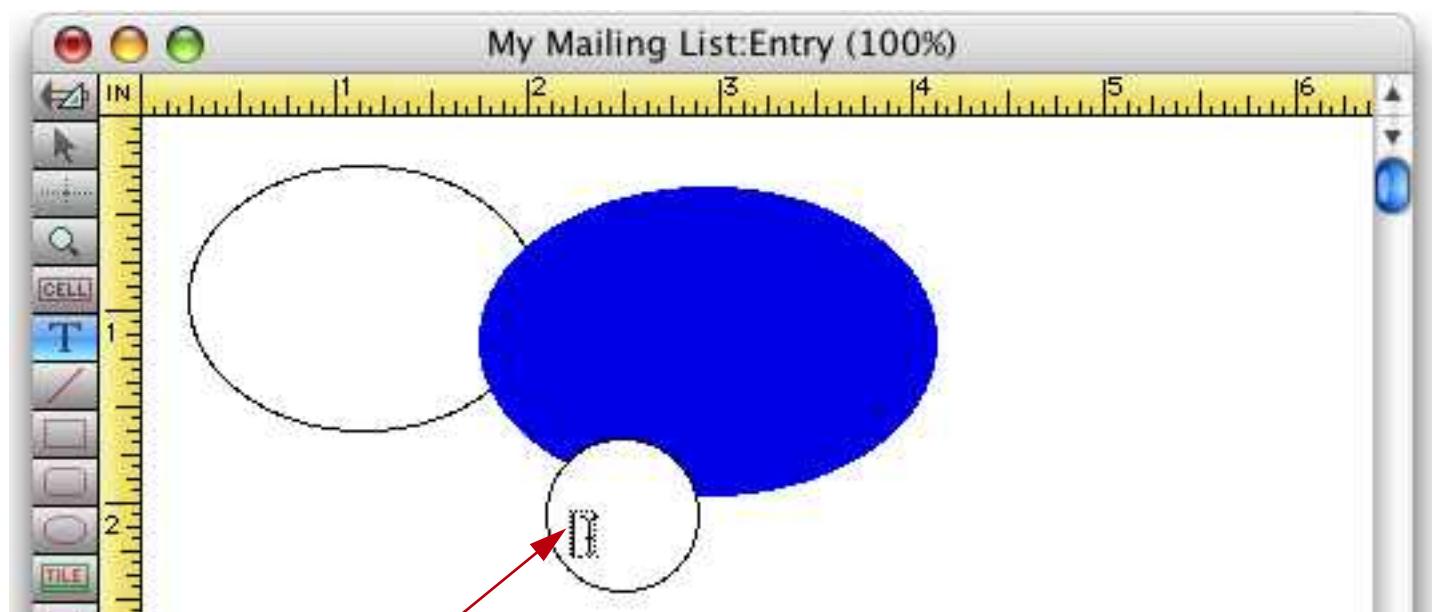
click where you want the text to appear

Now use the keyboard to type in the text.
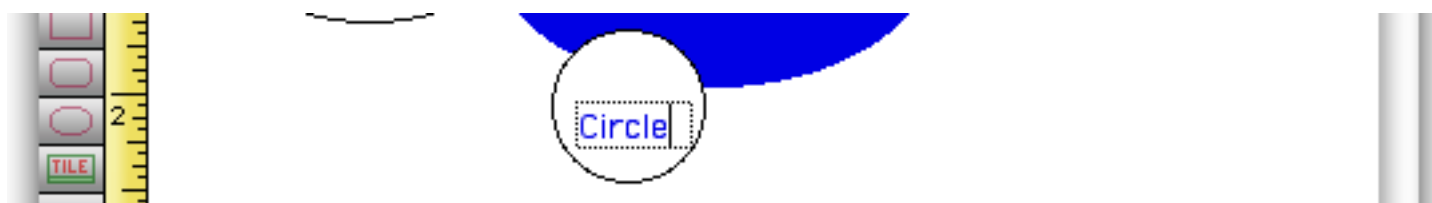
As you type each character, the click text object automatically expands. To add another line of text press the **Return** key. When you're done creating text you can click on another spot to create another text object or you can click on the **Pointer** tool.

The text object you just created is called **click text**, because you click to create it. Panorama has another type of text object called an **auto-wrap text** object. Instead of expanding automatically as you type an auto-wrap text object is a fixed size, with the text wrapping inside the object. To create an auto-wrap text object click on one corner of where you want the object to appear and then drag to the opposite corner.
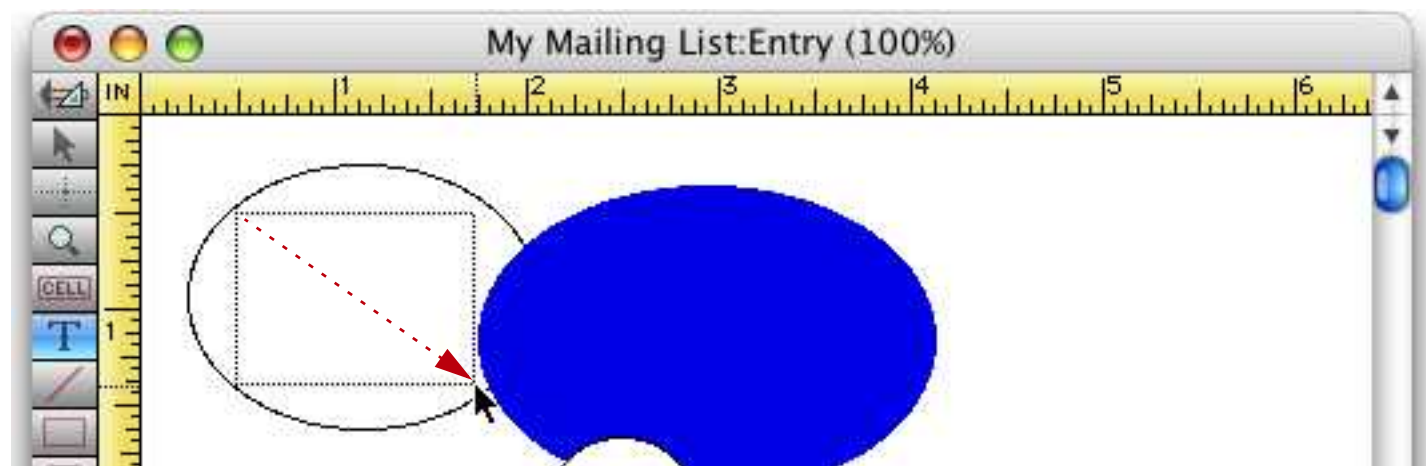
When you release the mouse a dotted box appears for you to type into.
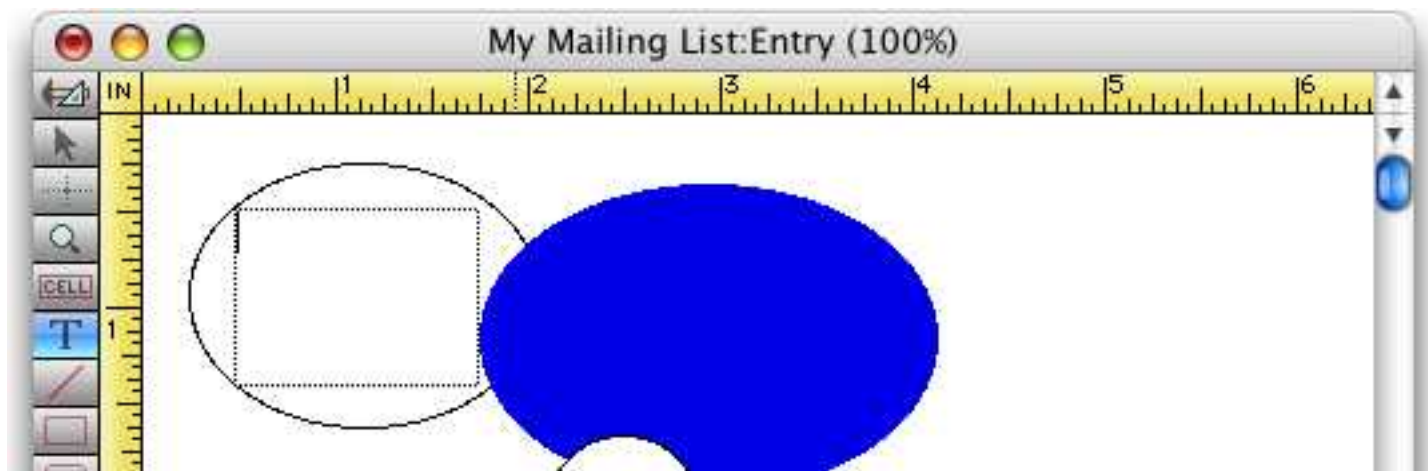
Whatever you type will wrap inside of the box.
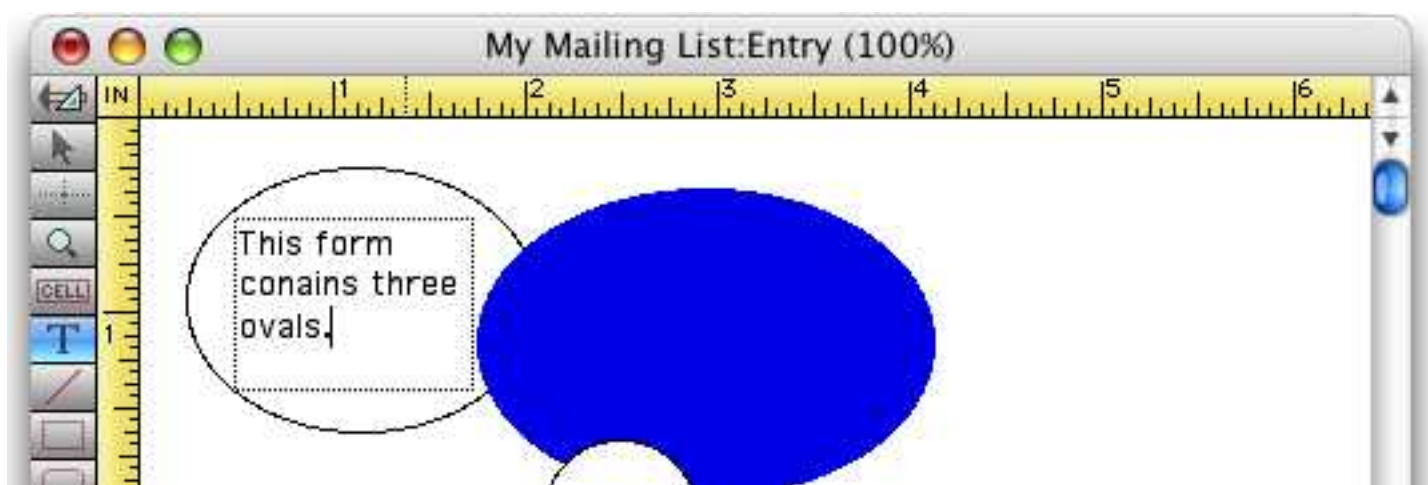
When you're done creating text you can click or click-drag on another spot to create another text object or you can click on the **Pointer** tool.

Changing the Font and Size

To change the font and size of the selected object you can use the **Graphic Control Strip** or you can use the **Text** menu (see "Text Font, Size and Style" on page 721). The illustration below shows the auto-wrap text object being changed from 12 point to 9 point.

current text size

current font
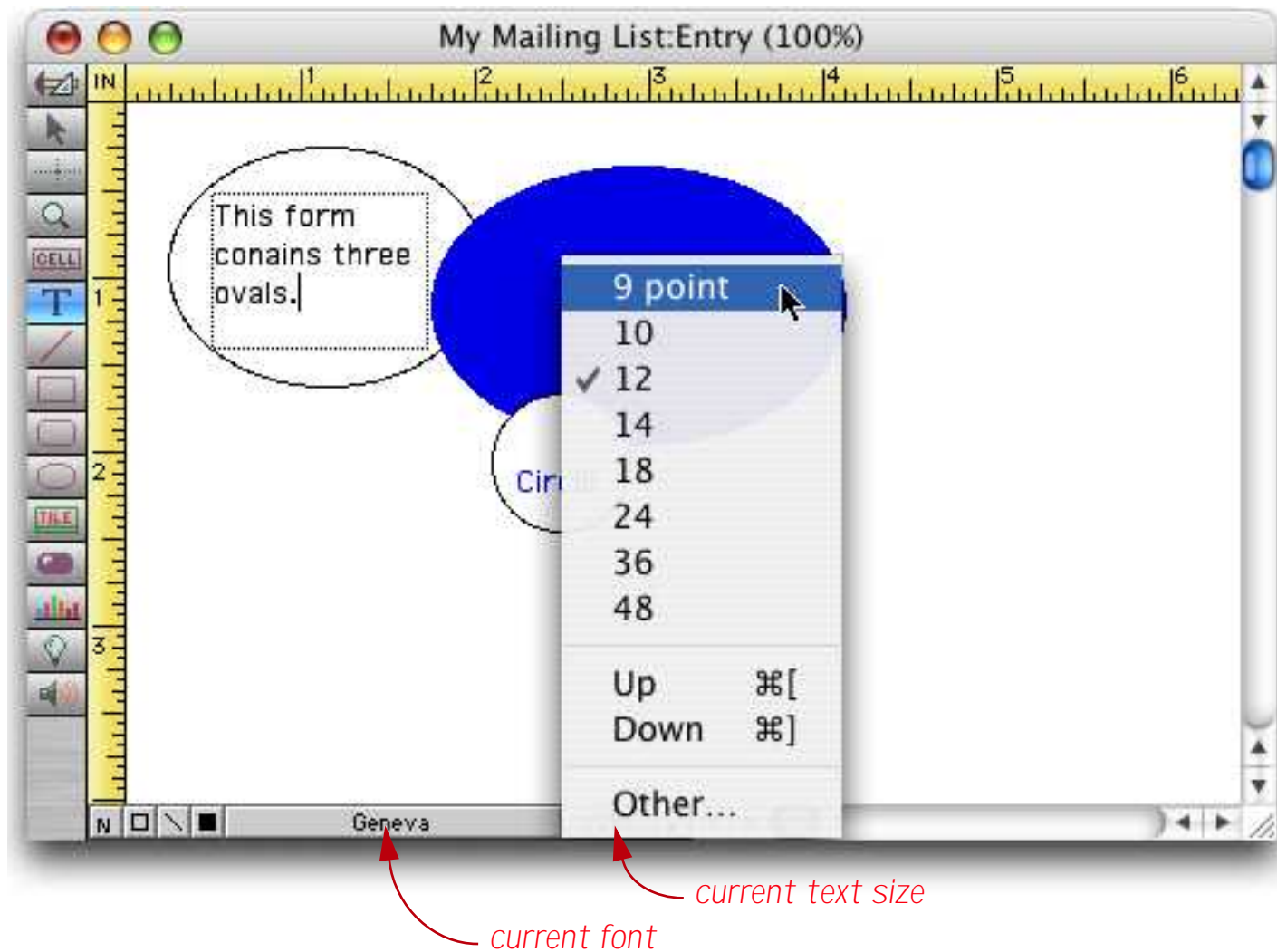
Here's the revised text object.
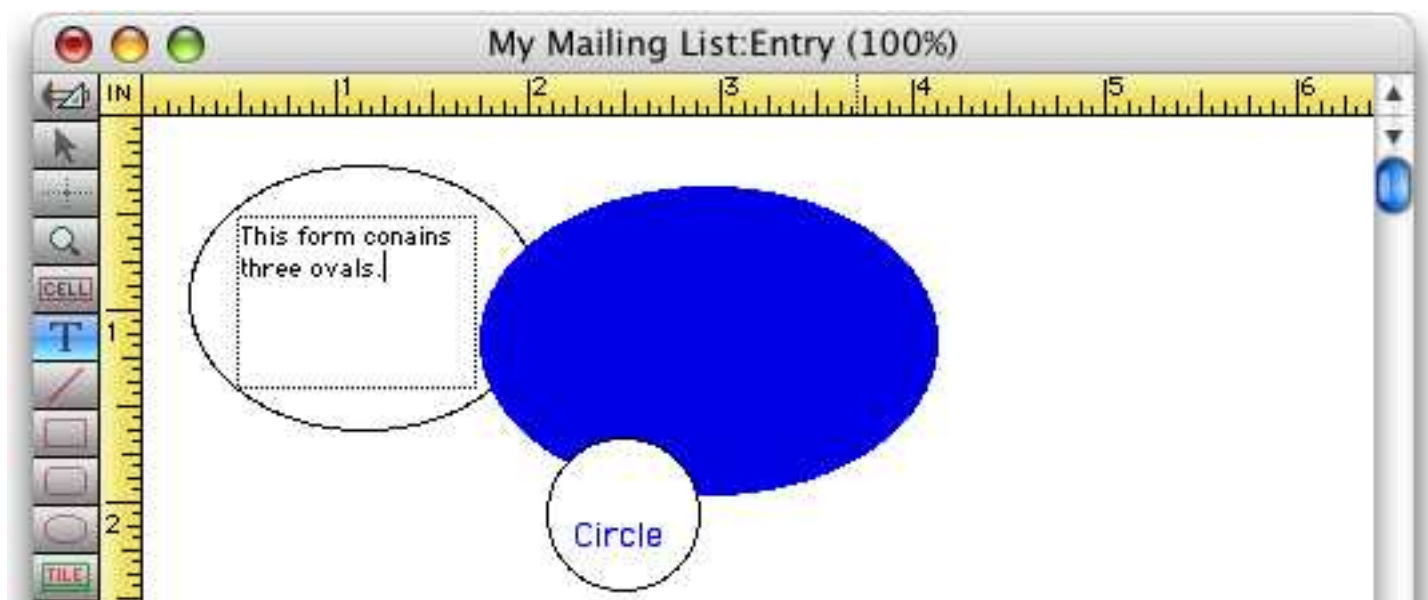
Within a single text object all of the text must be the same font, size, style and color. If you want to mix different text appearance within a single object you must use Panorama's Word Processor SuperObject (see "Word Processor SuperObject" on page 801).

Editing a Text Object

To edit a text object simply select the **Text** tool and click or drag on the object (see "Editing Fixed Text" on page 718). With this tool you can edit the text object just like any other text - click to select an insertion point, double click to select a word, etc.
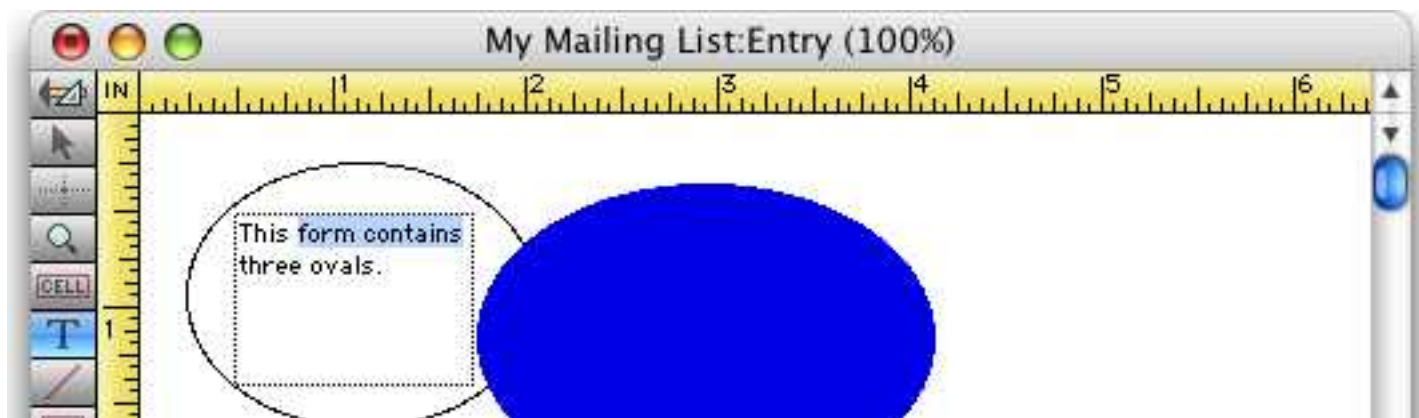
Creating Data Cell Objects

Panorama has two different types of objects for editing data (see "Types of Data Editing Objects" on page 760). Right now you're going to learn about data cells, which allow data fields to be edited with a pop-up input box very similar to the data sheet (see "Entering Data Into Your New Database" on page 4 and "The Input Box" on page 438). To create a data cell start by selecting the **Data Cell** tool (see "Working with Data Cell Objects" on page 763).
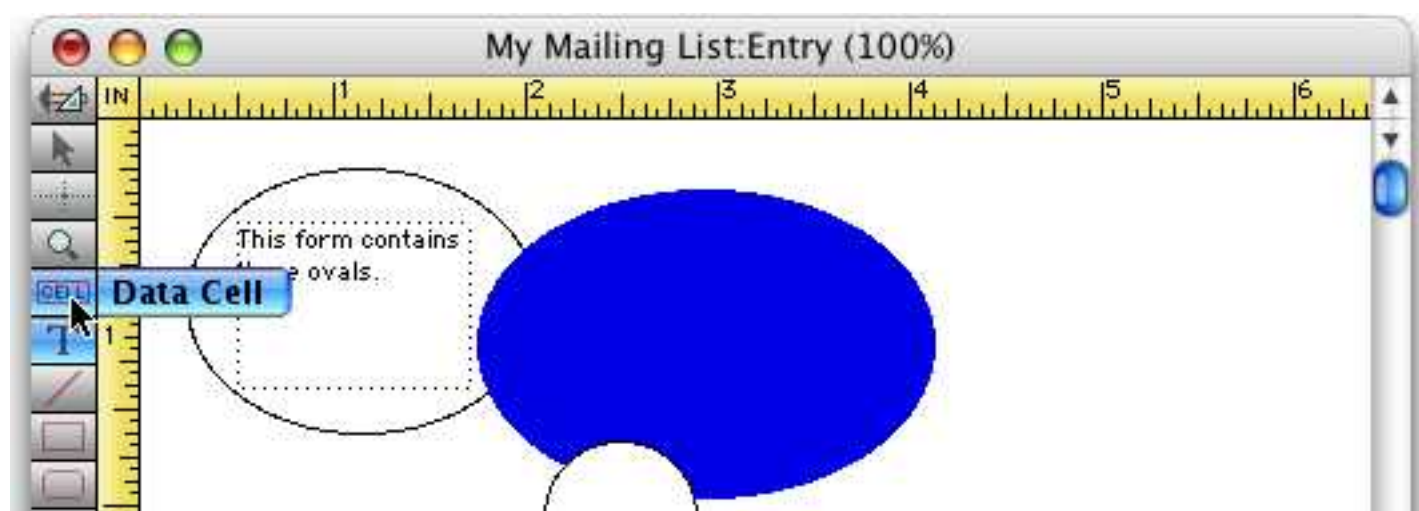
Drag the mouse across the form in the spot where you want to create the data cell.
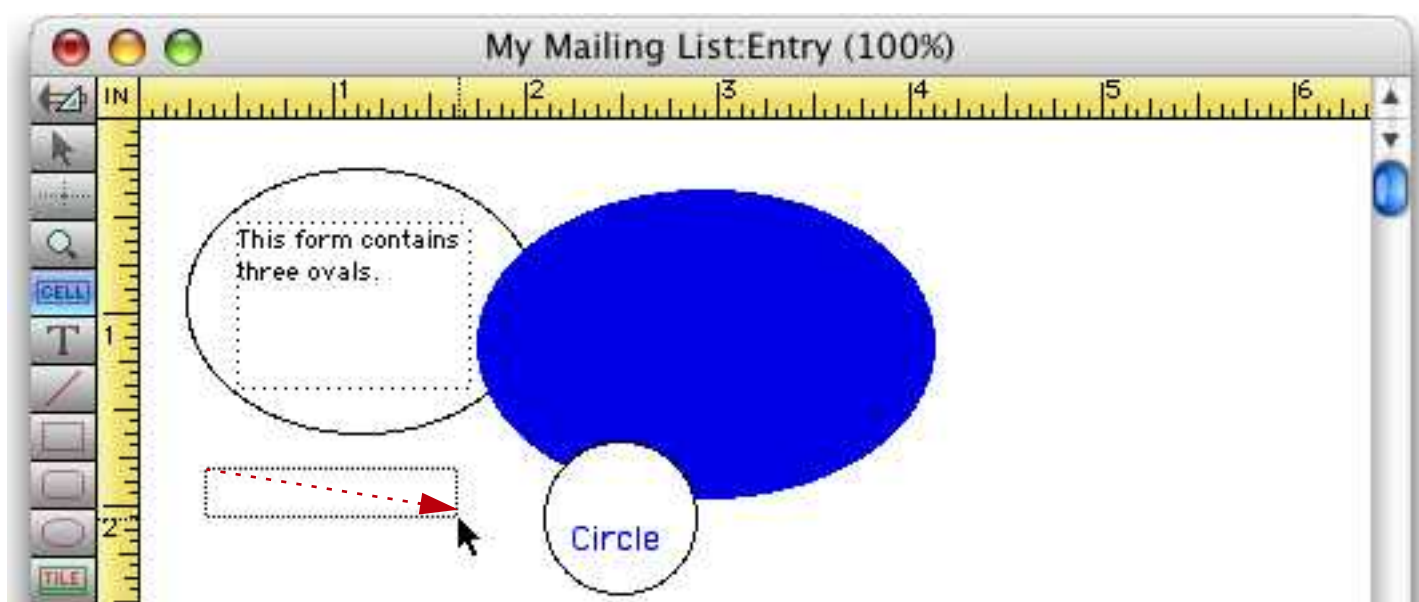
When you release the mouse the data cell is created. It is automatically assigned to the first field in the database, which in this database is First.
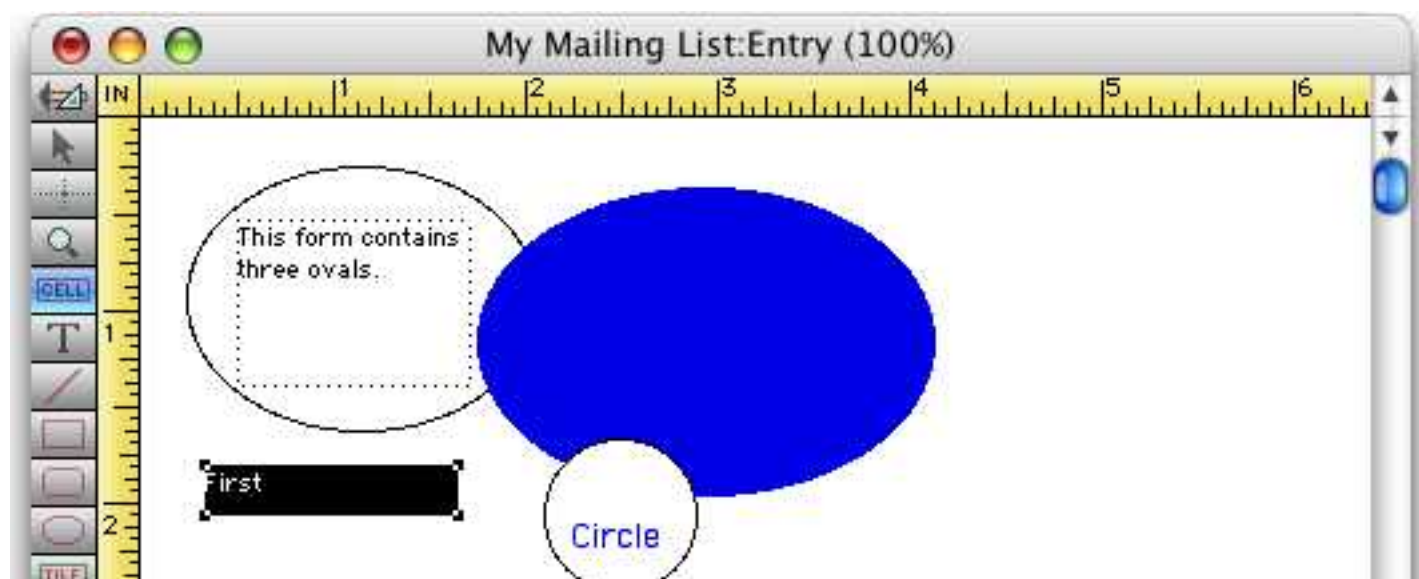
Each additional data cell you create will be assigned to the next available field in the database.
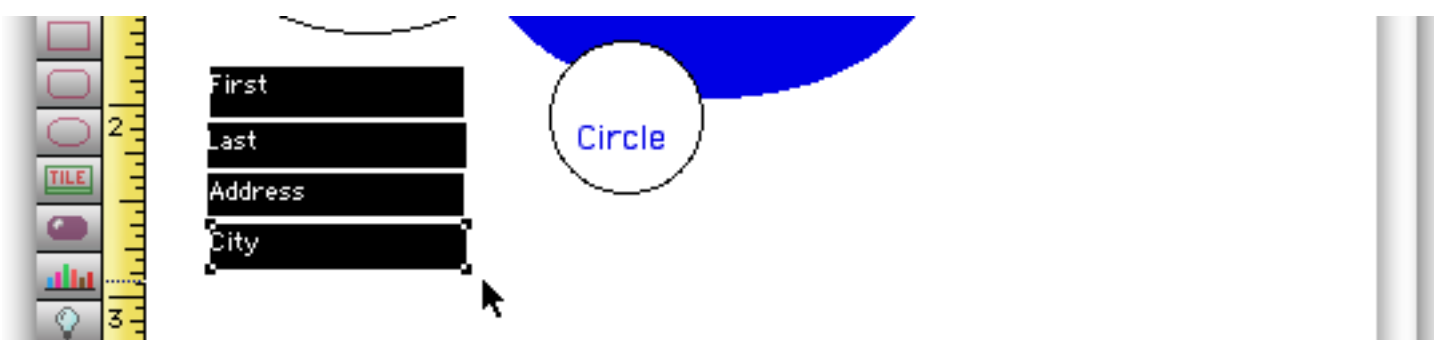
To change the field a data cell is assigned to make sure the **Data Cell** tool is selected and move the mouse over the data cell object. When the mouse is over the object the arrow turns into a little menu icon.
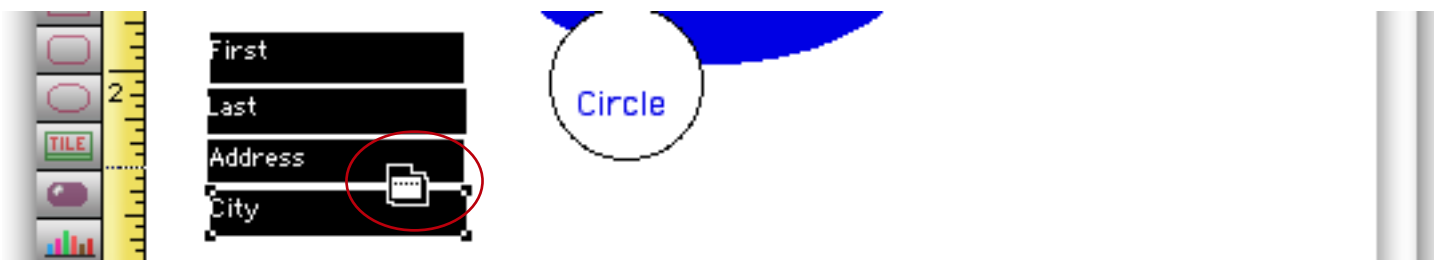
When you see this icon you can press the mouse button to see a pop-up menu of the fields in the database.
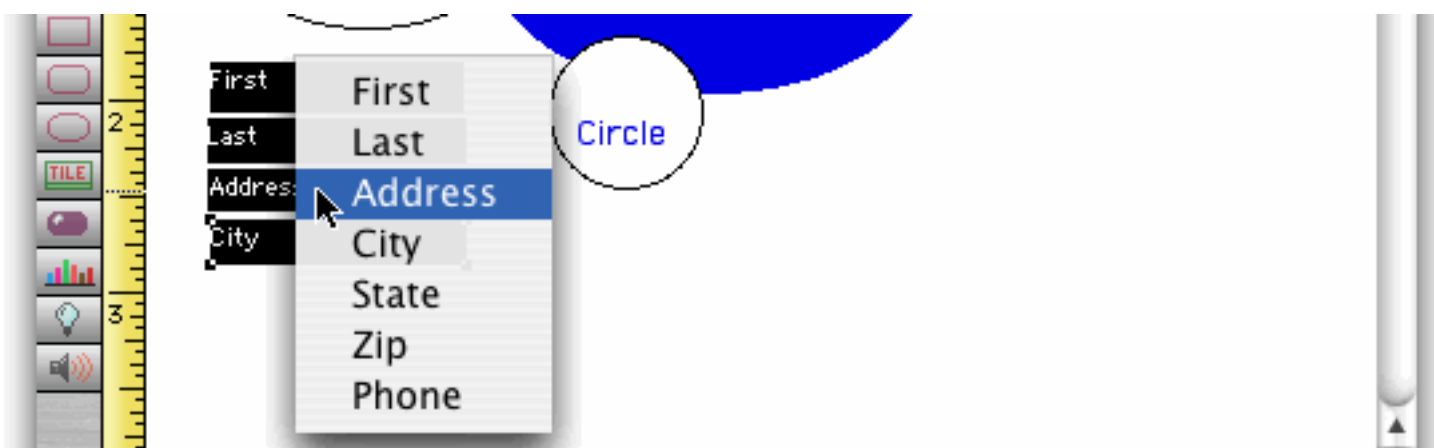
Select the field you want assigned to the data cell from the pop-up menu.

changed from Address to Phone
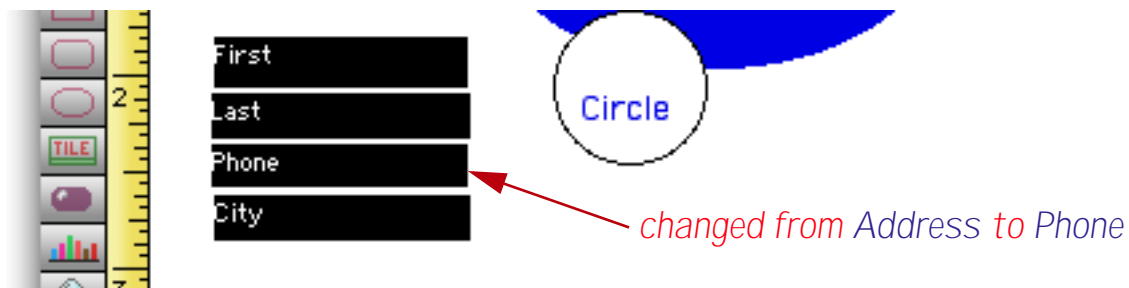
Panorama has another type of graphic object for editing data - the Text Editor SuperObject. To learn more about this type of object see "Text Editor SuperObject" on page 767.

Aligning Multiple Objects

I don't know about you, but those raggedy looking data cells are really bothering me! Fortunately Panorama has tools that can make this objects nice and neat in a hurry. Start by selecting the **Pointer** tool.

Now start on an empty spot on the form and drag the mouse diagonally across all four objects. The dotted rectangle should surround the objects.
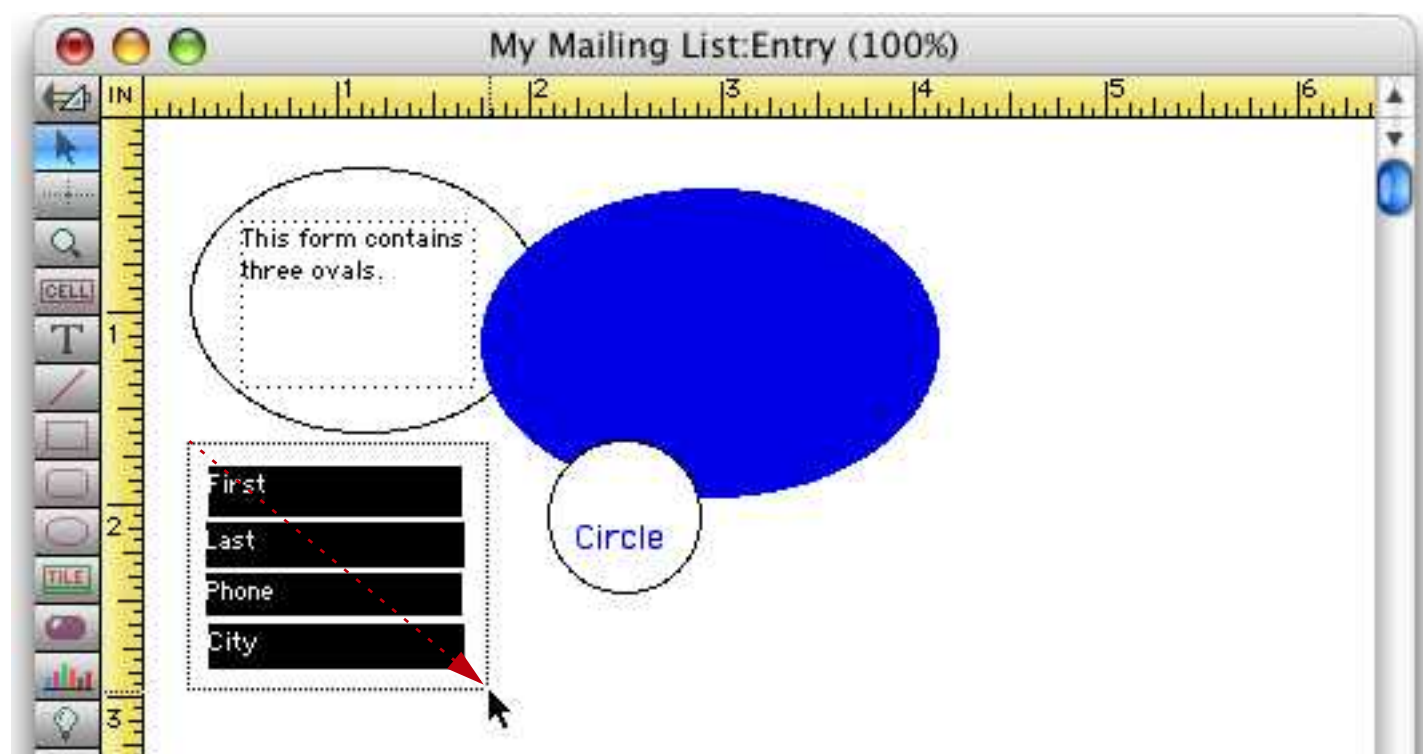
When you release the mouse all four objects will be selected (see "Selecting Multiple Objects at Once" on page 630).
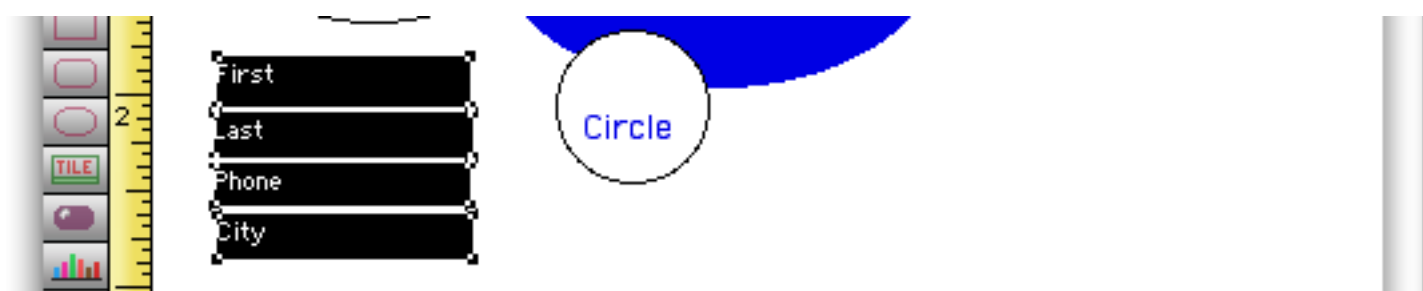
To align the left and right edges of the objects choose **Align Objects** from the Arrange menu (see "Aligning Objects" on page 681). The dialog gives you eight different alignment choices — pick Left & Right.
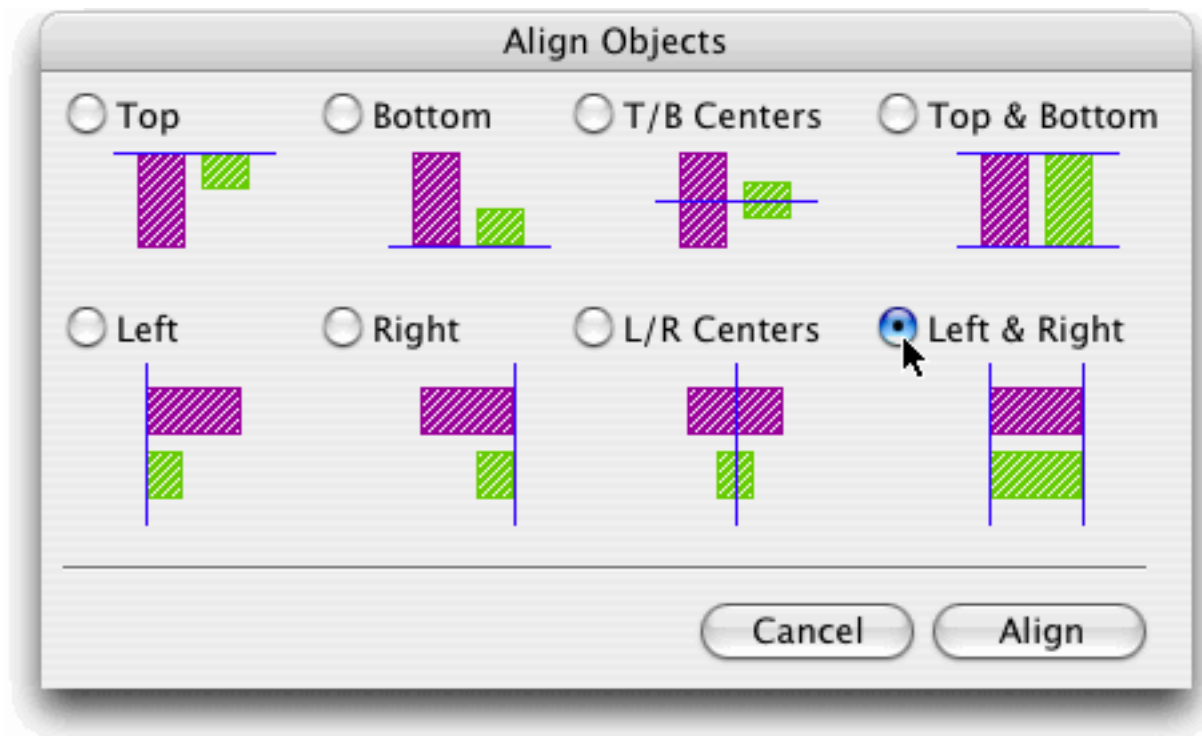
When you press the **Align** button the left and right edges of the objects are brought into perfect alignment.
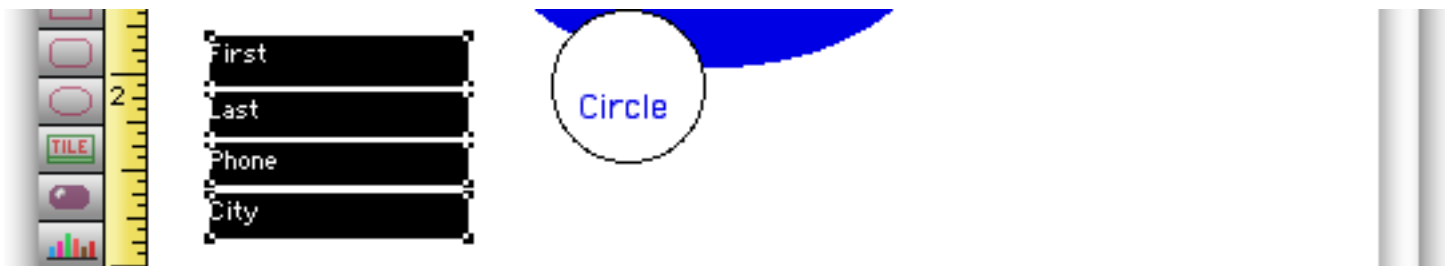
To set the height of all of the objects to 15 pixels choose **Dimensions** from the Edit menu (see "Setting Exact Dimensions of Multiple Objects" on page 678). Select the Pixels radio button and type in 15 for the height (just 15, not +15).
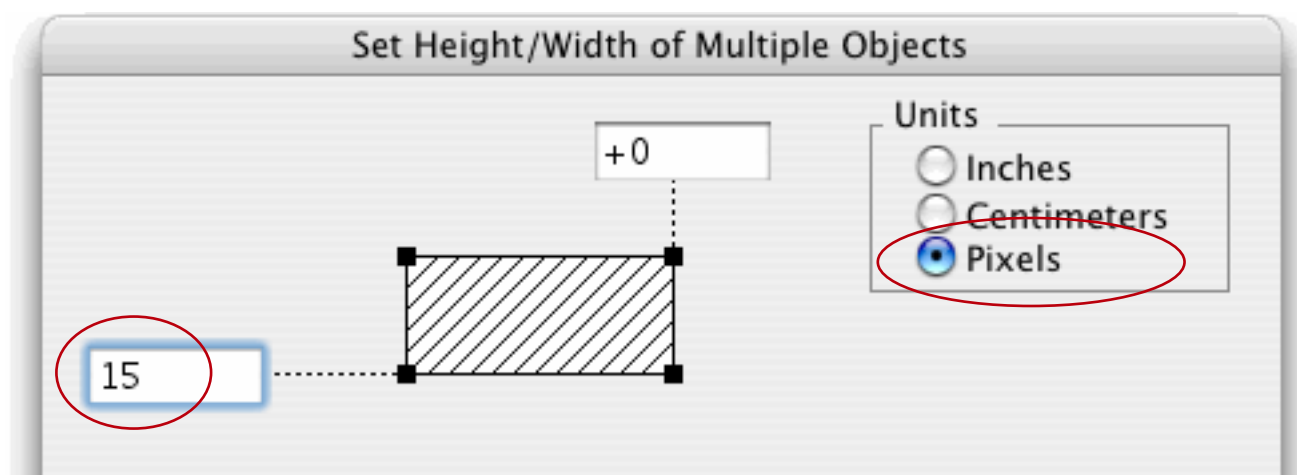
When you press OK all of the objects will be adjusted to 15 pixels.
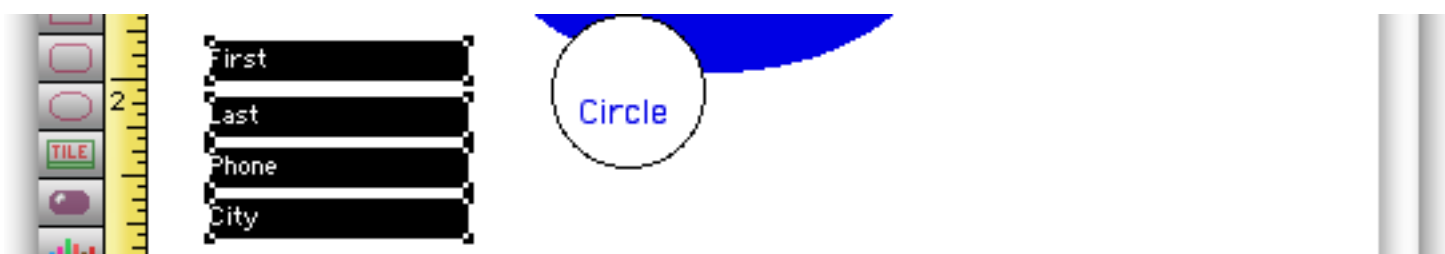
To vertically space the objects evenly choose the **Spacing** command from the Arrange menu (see "Adjusting Spacing Between Multiple Objects" on page 684). Click on the Vertical option and set the spacing you want between each object (a pixel is one screen dot, or 1/72nd of an inch).
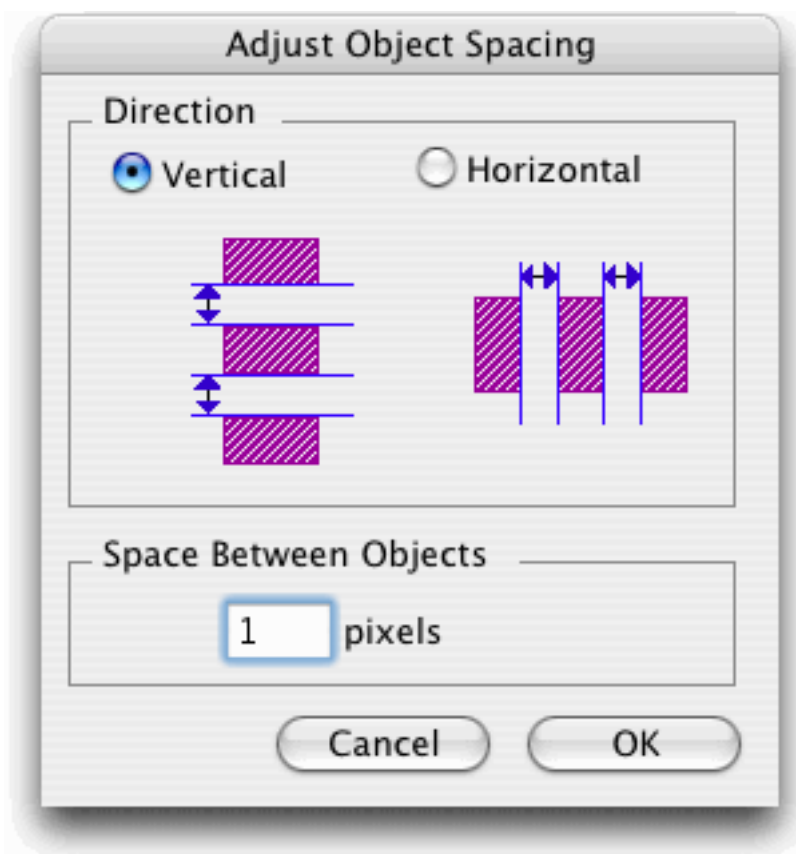
The data cells are now lined up nice and neat.

Before we call it a day let's make one final adjustment. Hold down the **Shift** key and drag the bottom right handle of the bottom object to the right.
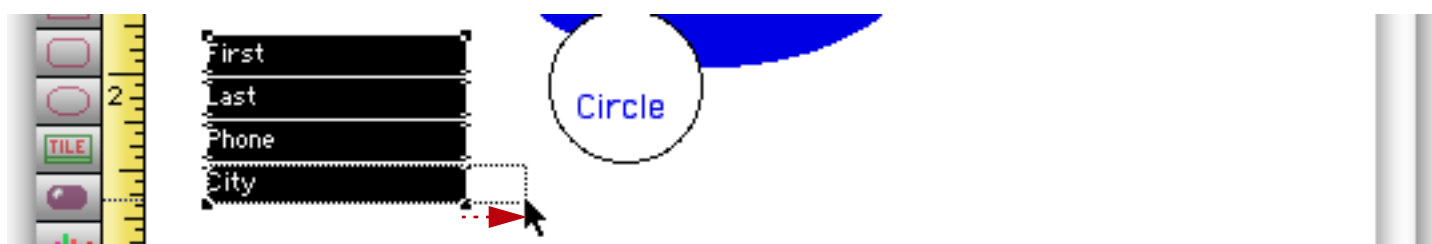
When you release the mouse all four objects will expand. This feature is called **cluster resize** (see "Cluster Resize" on page 669 for additional examples) and is very handy for adjusting columns of objects.

In a few minutes you'll learn a method to create data cell objects in a nice neat column or row in the first place, making the technique shown above unnecessary. However, you'll still find the techniques described above useful in many circumstances.

Using Data Cells to Edit Data

So far you've managed to make four boxes with field names on them — perhaps that doesn't seem very useful. To activate these cells you must switch the form from **Graphic Design Mode** to **Data Access Mode**.
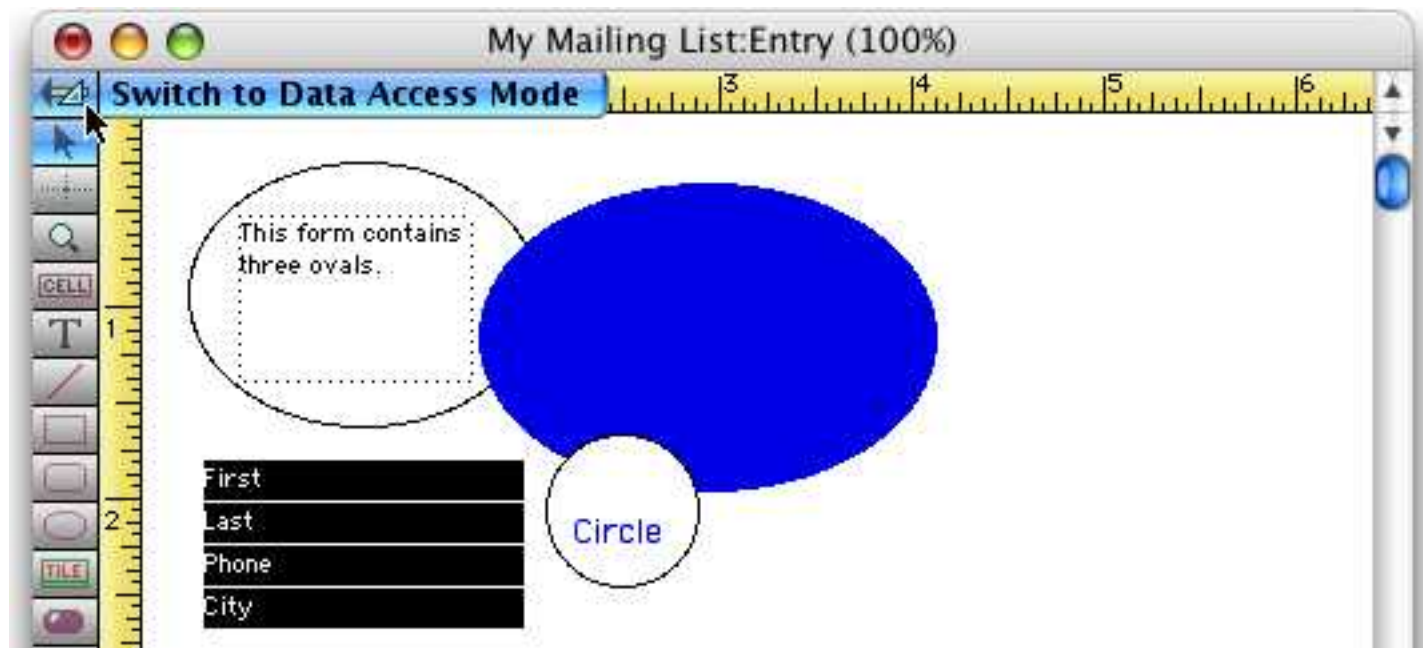
In this mode the rulers disappear and the tool palette switches from graphics tools to data navigation tools (see "Moving From Record to Record" on page 431 and "Browsing the Database With a Form" on page 616). Most importantly, the data cells now display information from the database itself.

database fields
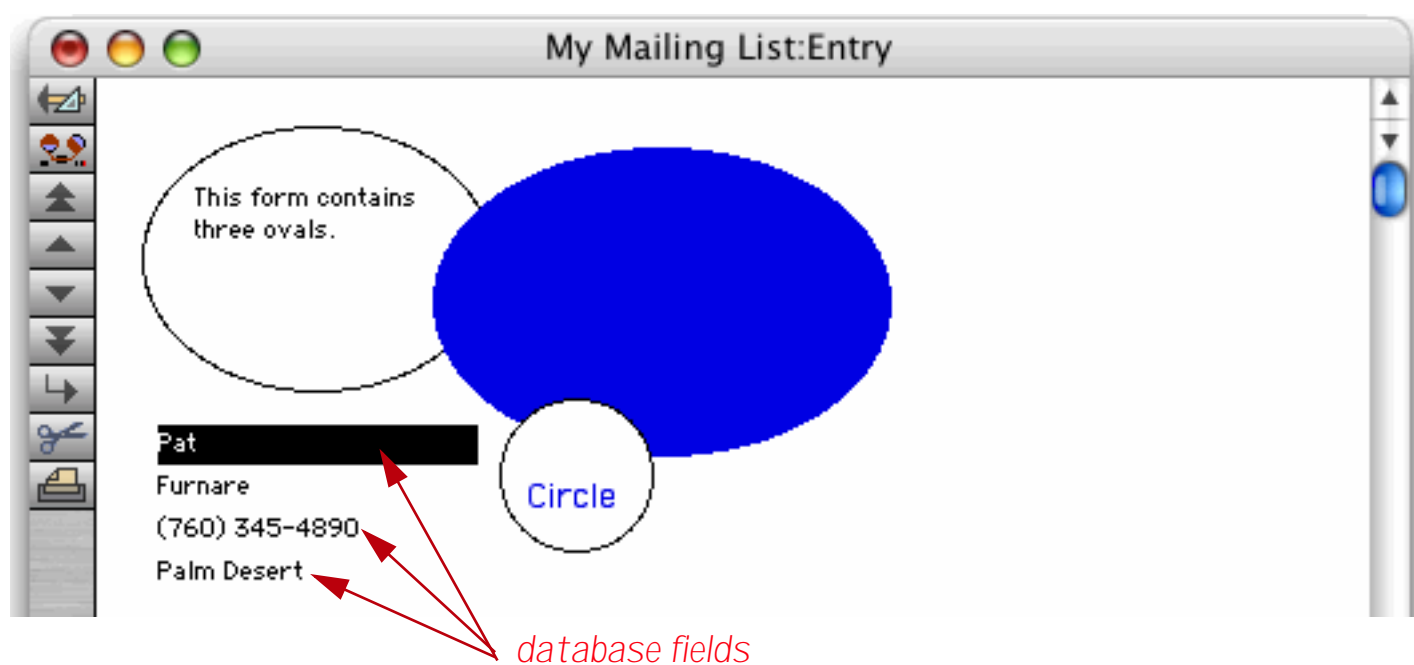
If you adjust the windows so that you can see both the data sheet and the form you can see that the form is displaying the same information that the data sheet is displaying.
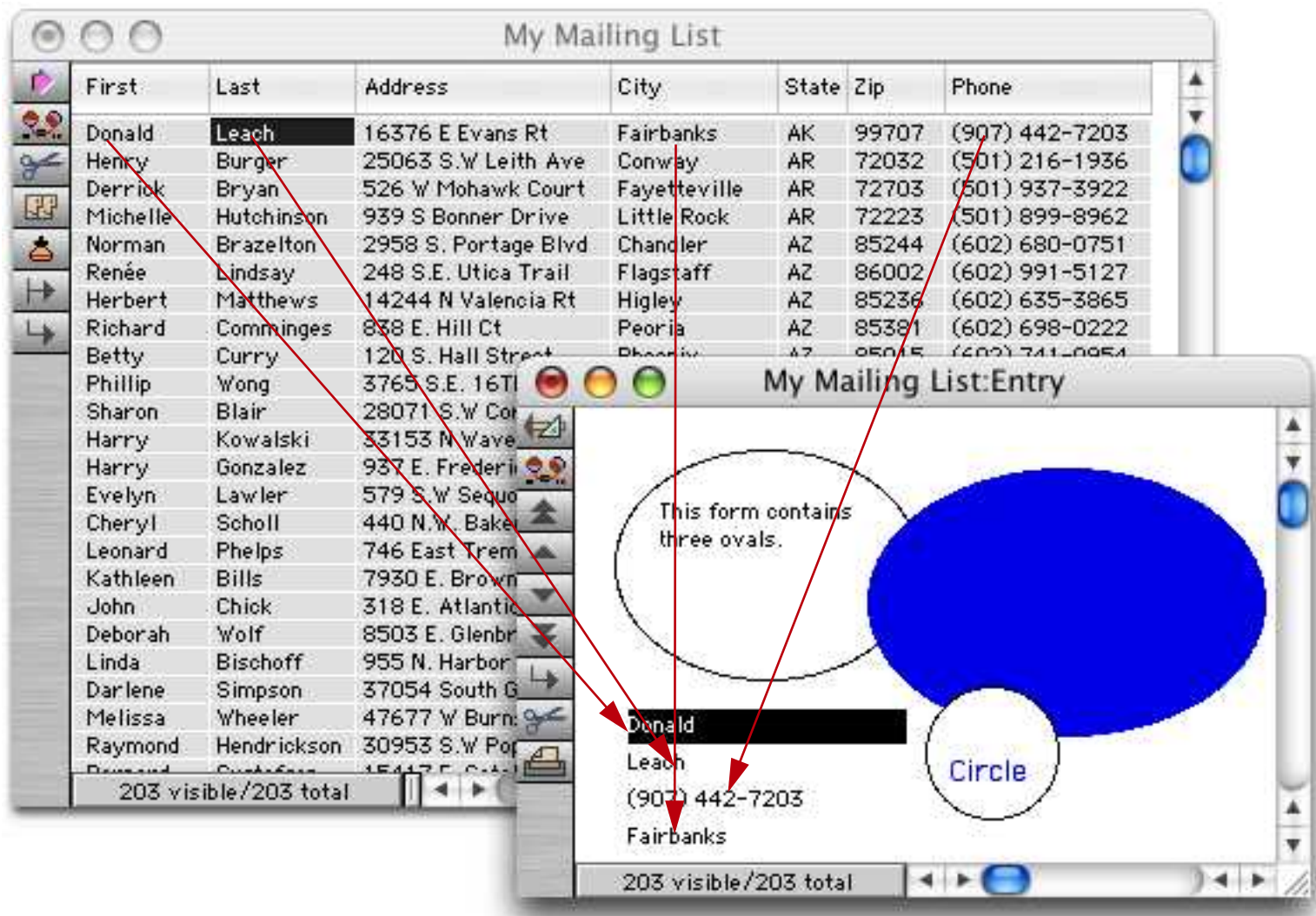
If you double click on one of the data cells you can edit the data, just as you could in the data sheet (see "Entering Data Into Your New Database" on page 4 and "The Input Box" on page 438).
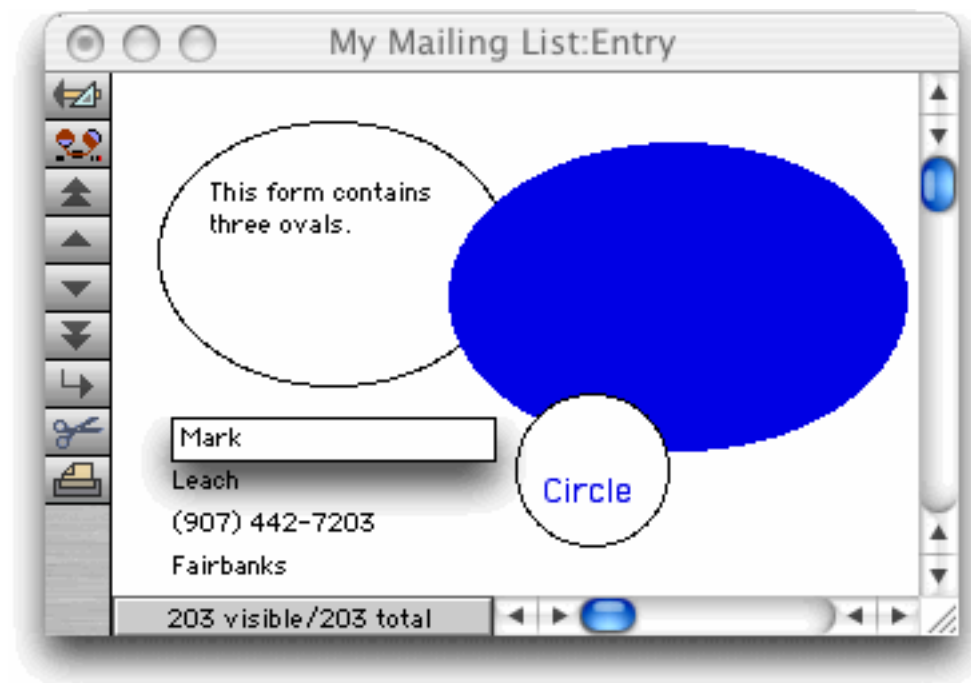
When you press the **Enter** key the new data will appear in both the form and the data sheet.
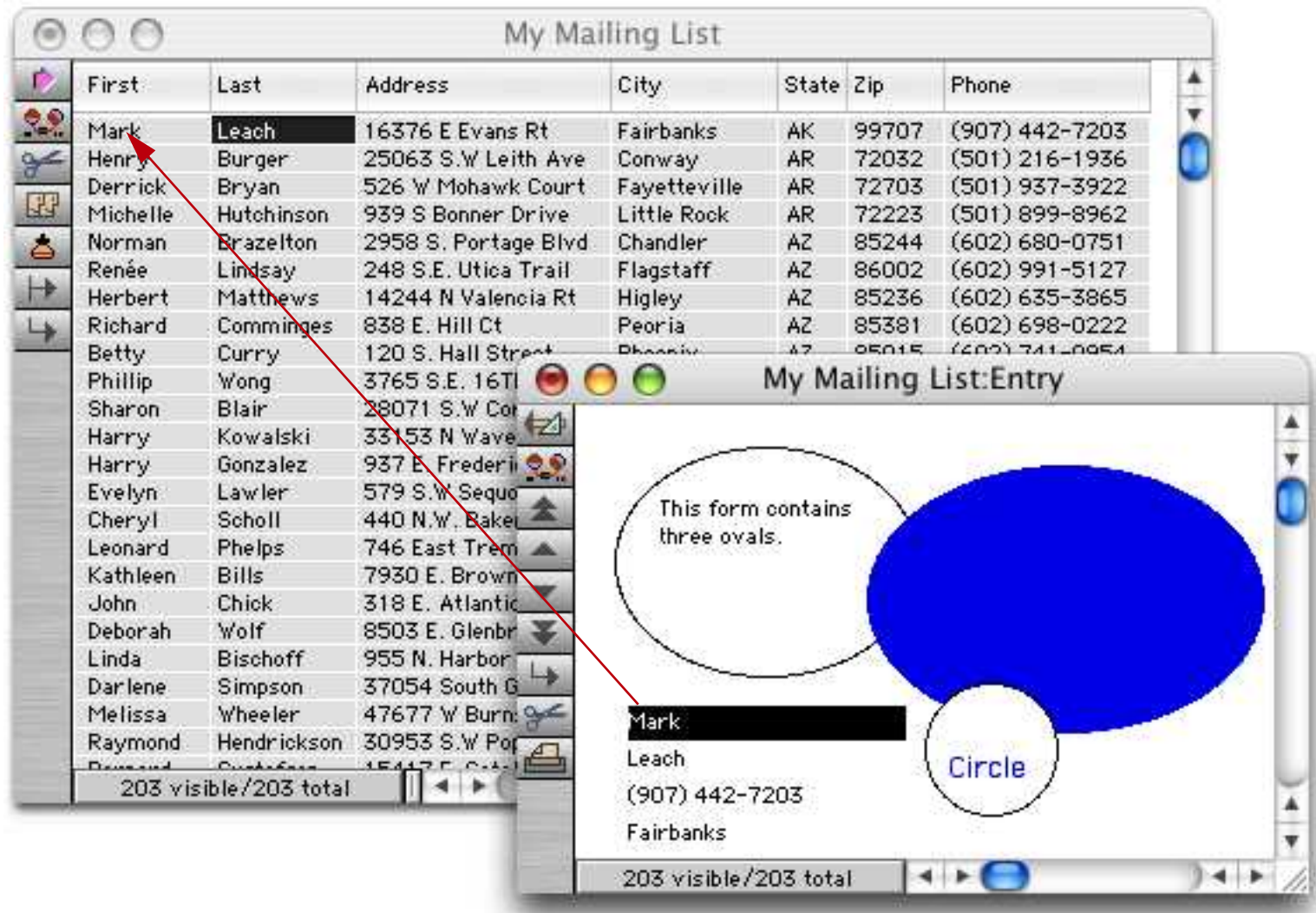
The same process works in reverse also — any data you enter into the data sheet will also appear in any forms that are open.

Building the Data Entry Form

Enough practice — it's time to start building the actual data entry form. Start by switching the form back to **Graphic Design Mode**.
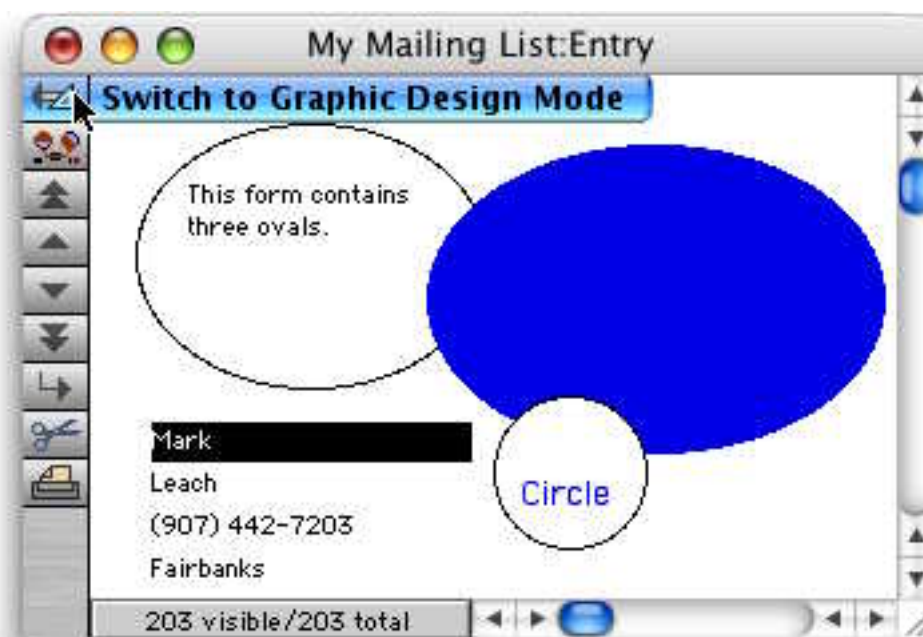
We're going to start over in this form, so the first step is to erase all of the practice objects you have created. To do that choose **Select All Objects** from the Edit menu, then **Clear** from the Edit menu (or press the **Delete** key). Now you've got an empty form.
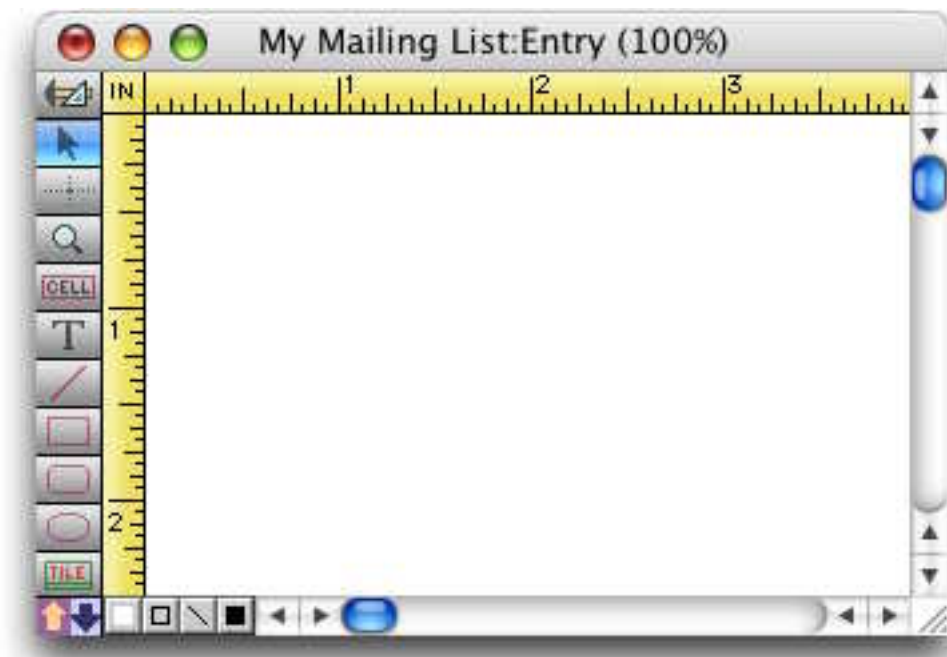
Now click the mouse in the upper left hand corner of the form, about 1/16th of an inch from the top and left hand sides.
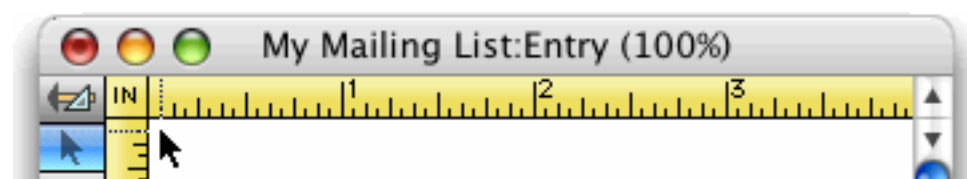
Now choose the **Auto Cell Layout** command from the Arrange menu. This command is going to create a neat column of data cells for us (see "Automatically Creating Rows or Columns of Data Cells or Text Editor Super-Objects" on page 790). This dialog controls how the data cells are generated. Start by pressing the **Select All Fields** button. Then set the Spacing (Pixels) option to 1.
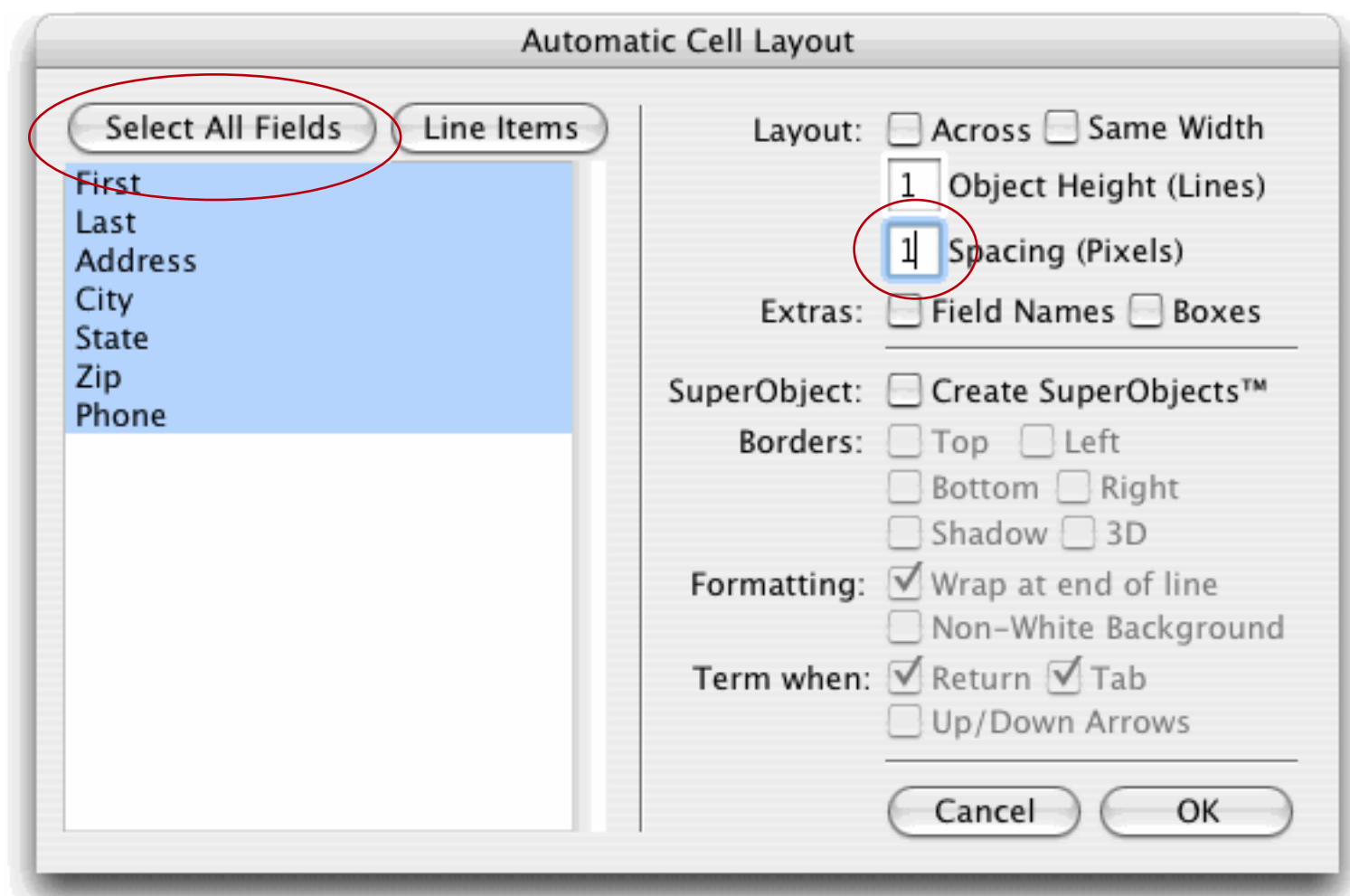
When you press the **OK** button Panorama will automatically create a column of data cells (starting at the point where you clicked the mouse).
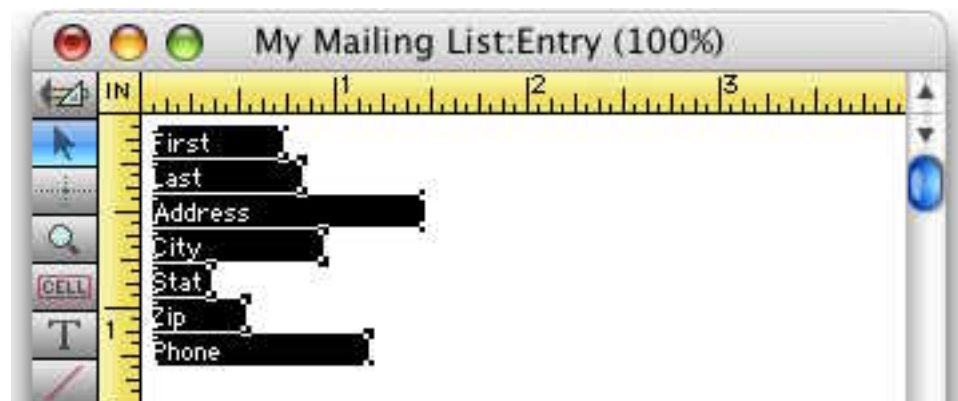
All of the objects are selected. To begin working on the objects separately click on any blank spot to de-select the objects.
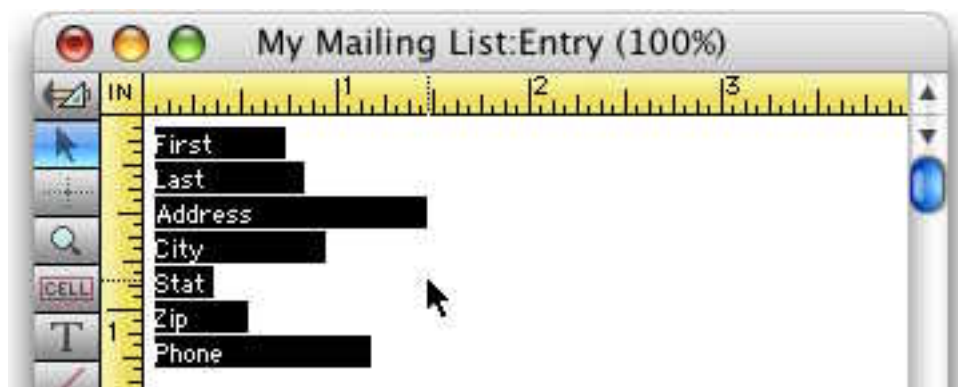
Using a combination of dragging and the arrow keys (←, →, ↓, ↑) move the objects so that the First and Last name objects are on the same line and the City, State and Zip objects are the same line. Usually the best technique is to drag the object approximately into place and then use the arrow keys to nudge it exactly into position. If you need to review the techniques for dragging and nudging objects see "Moving a Single Object" on page 636 and "Nudging an Object (or Objects)" on page 637. You may also find "Viewing and Setting Exact Object Dimensions" on page 640 useful.
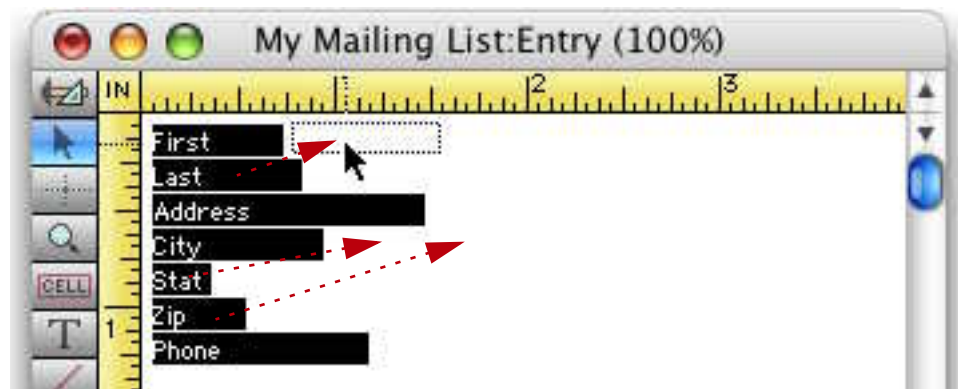
When you nudge an object with the arrow keys (←, →, ↓, ↑) blue lines will appear when the object is aligned with other objects. When you are finished the result should look like this.
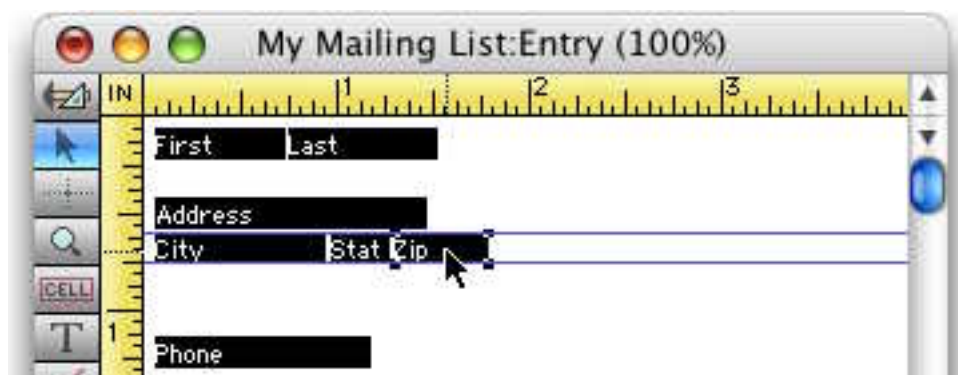
Next drag and nudge the Phone object up under the City, State and Zip objects. When you drag the Phone object hold down the **Shift** key so that Panorama will drag the object straight up with no slip to the left or right (see "Moving a Single Object" on page 636). Then use the ⬇ and ⬆ arrow keys to nudge it into final position.
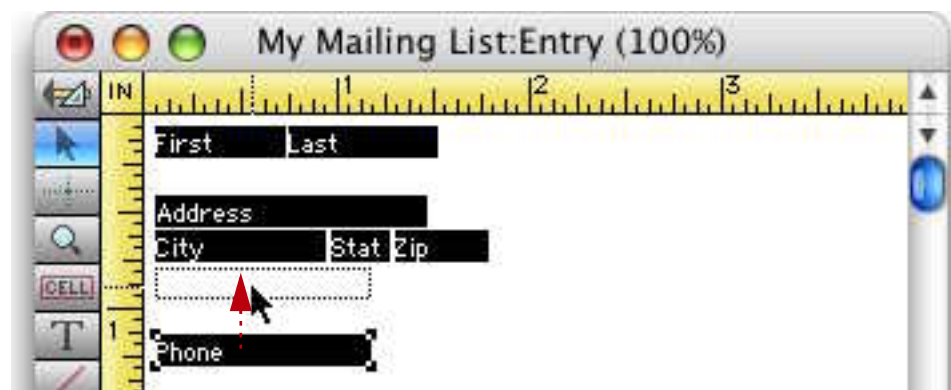
Again holding down the **Shift** key, drag the lower right hand handle to the right, expanding the width of the Phone object.
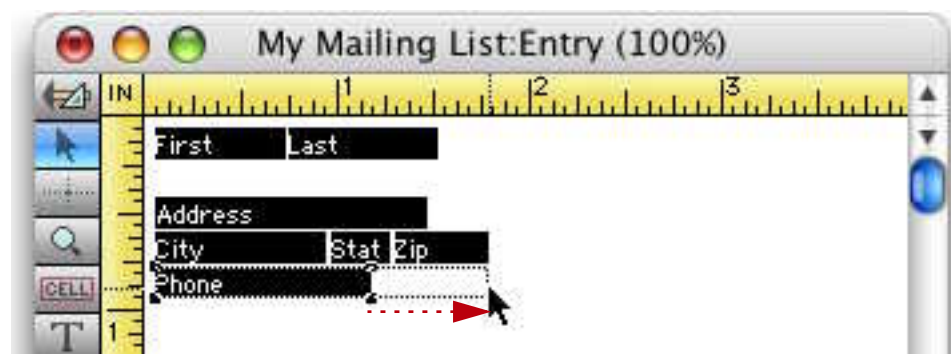
Then use the ⬅ and ➡ arrow keys to nudge the width of the object until it matches the combined width of the City, State and Zip objects. The blue alignment lines appear when the objects are aligned. You may also find it useful to use the crosshair cursor to check the alignment (see "Nudging to the Crosshair Cursor" on page 643).
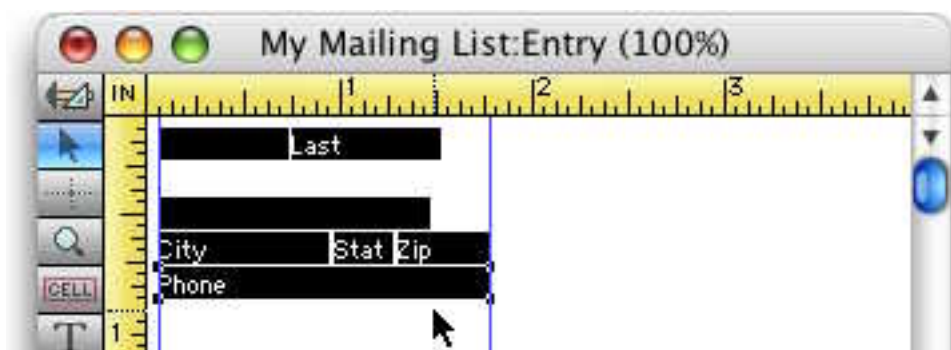
Then use the same techniques to adjust the width of the Address cell. Alternatively you can select the Address and Phone objects (see "Selecting Multiple Objects at Once" on page 630) and then use the **Align** command with the Left & Right option to adjust the width. Either way the form should now look like this.

Drag the mouse around the bottom group of objects to select them (see "Selecting Multiple Objects at Once" on page 630).
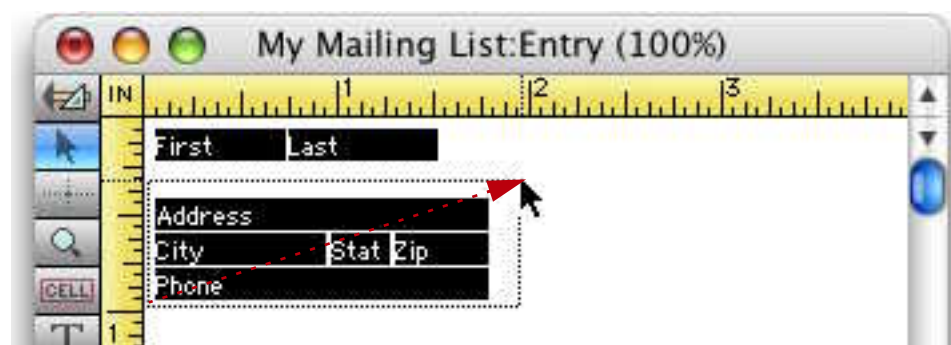
While holding down the **Shift** key drag these objects up underneath the First and Last objects. After you've dragged them close use the ⬇ and ⬆ arrow keys to nudge the objects into final position.
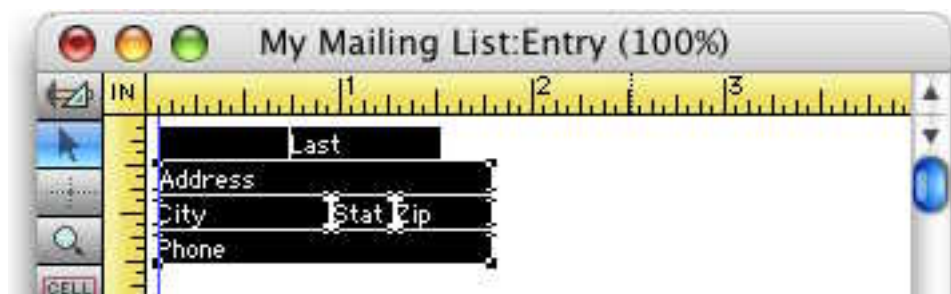
Finally drag and nudge the width of the Last name object to match the other objects.
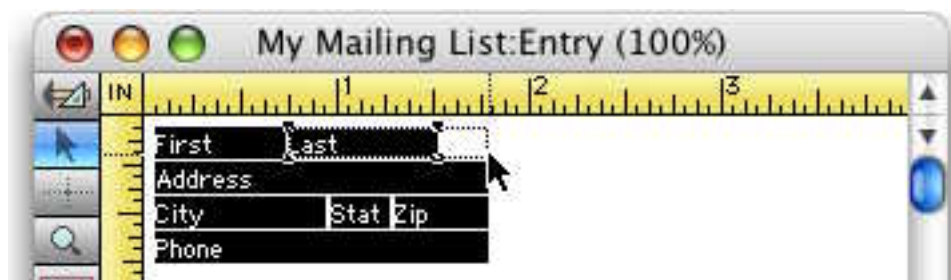
As one last enhancement you'll set the background color of the form. To do this use the **Form Preferences** command in the Setup menu. The background color is set with a pop-up menu at the bottom of this dialog (see "Form Background Colors" on page 710).
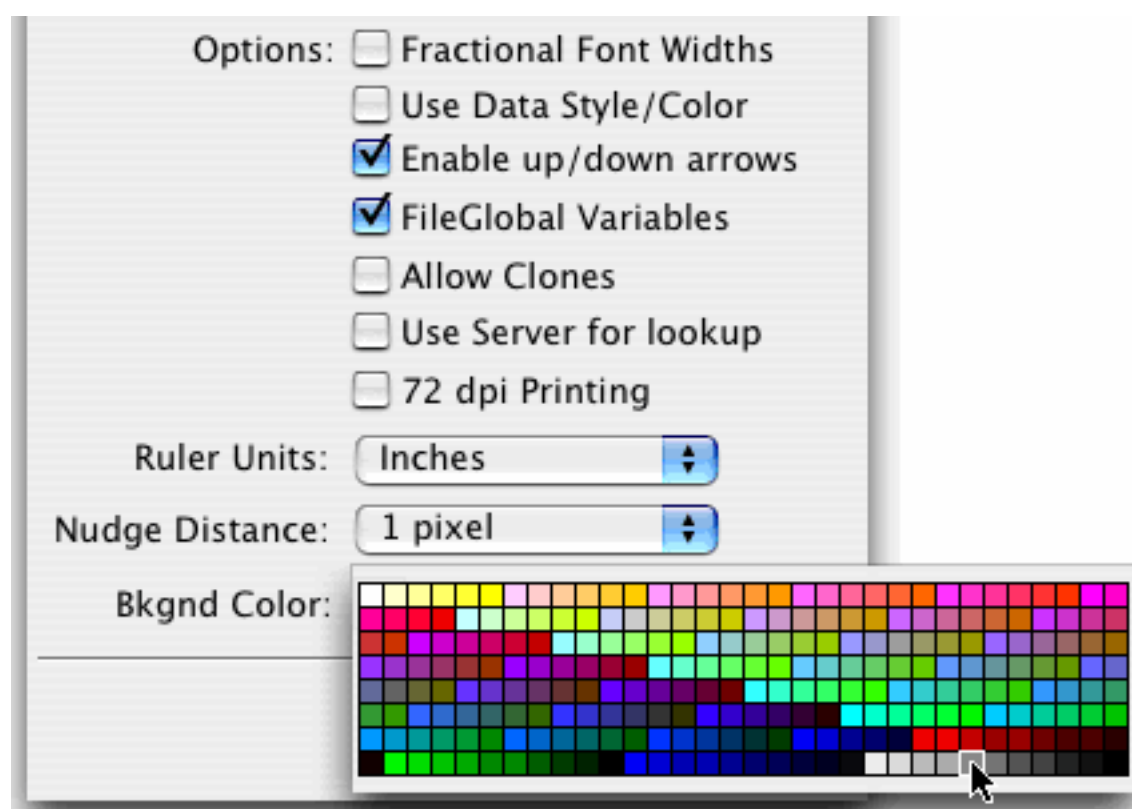
Your new form is now complete. Use the **Switch To Data Access Mode** tool to prepare for displaying and entering data, and adjust the window size and position so that both the data sheet and form are visible at the same time.
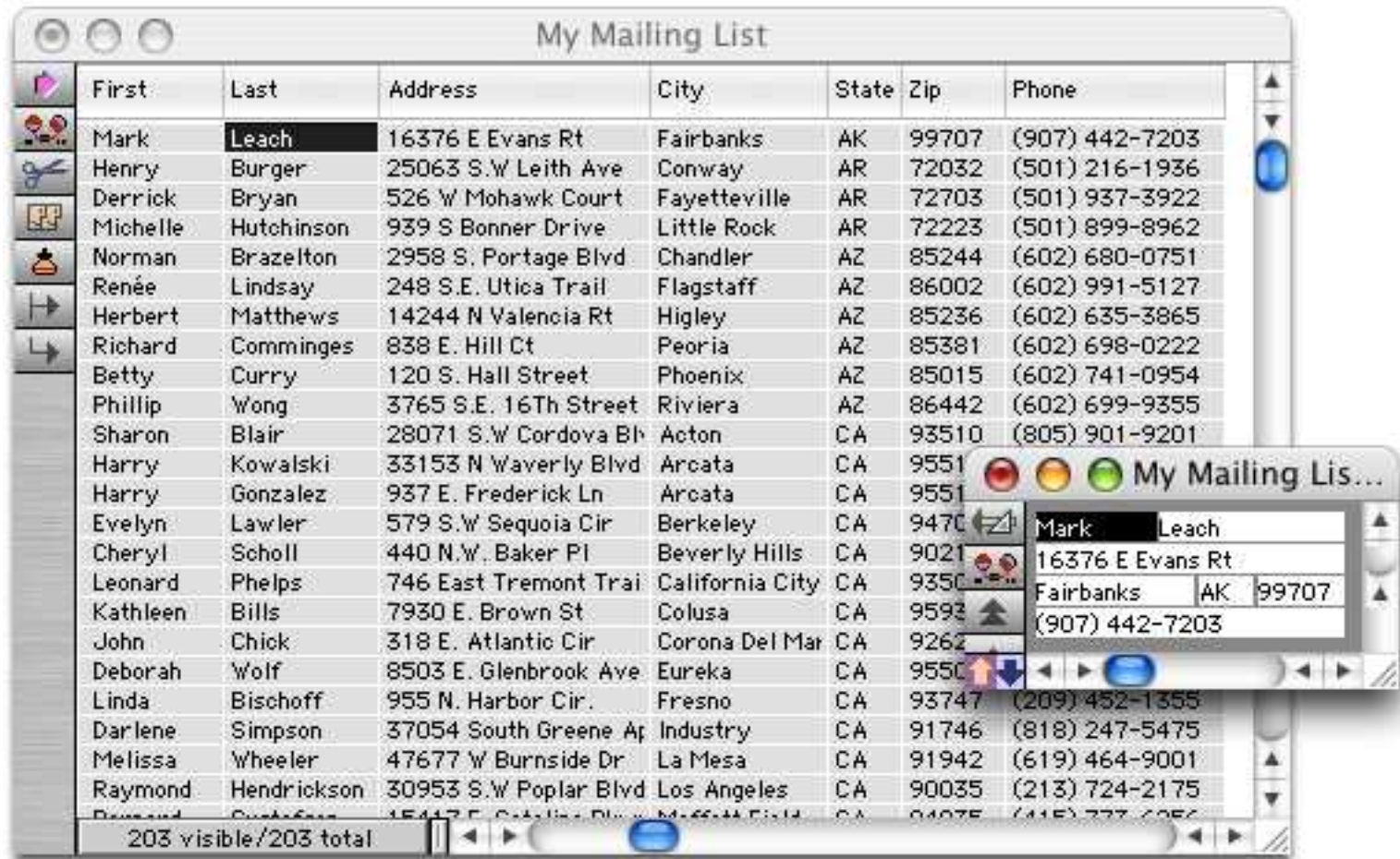
The form window has a tool palette and scroll bars that aren't really necessary. To get rid of them select the **Window Tweak** command from the Form Tools submenu of the Wizard menu (see "Turning Window Components On and Off (Window Tweak Wizard)" on page 331). The tool palette and scroll bars are now removed.
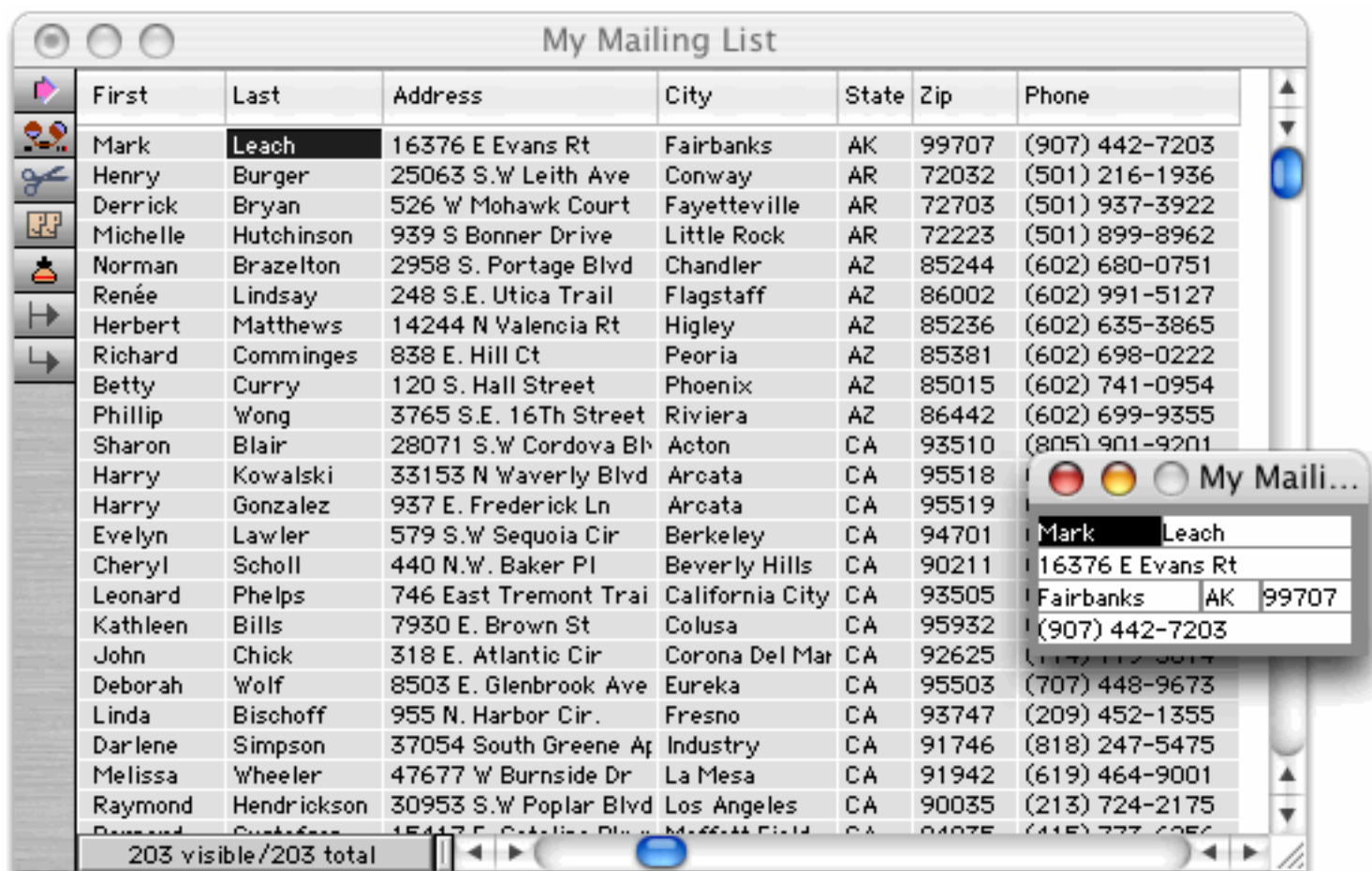
If you ever need to get the scroll bars and tool palette back again (for example to modify the form) simply select the **Window Tweak** command again. Another option is to close the form window and then re-open it with the **View** menu, which will also restore the tools and scroll bars.

Now that the form is complete be sure to **Save** your work. (In fact it really would have been a good idea to save two or three times while you were working on the form. Since Panorama saves so quickly there's no reason not to save early and often.) Panorama saves the window positions along with the data and graphics (assuming you checked the Save Window Positions option when you originally saved the file, see "Saving Window Positions" on page 260), so if you close the file and then re-open it the form window and data sheet windows will reappear in the same places, ready to go.

The new form you have created only scratches the surface of the capabilities available for building forms. To see a more sophisticated example use the **Favorite Databases** wizard to open the 106th Congress database. This form uses what is called **view-as-list** mode, which allows a form to display more than one record at a time (kind of a cross between the data sheet and a regular form. See "View-As-List Forms" on page 1017 to learn how to create this type of form.

To see an example of a more traditional form press the **Contact Info** or **Bio** button. (See "Push Buttons" on page 941 to learn how to create a button.) Pressing either button opens a form in a new window.
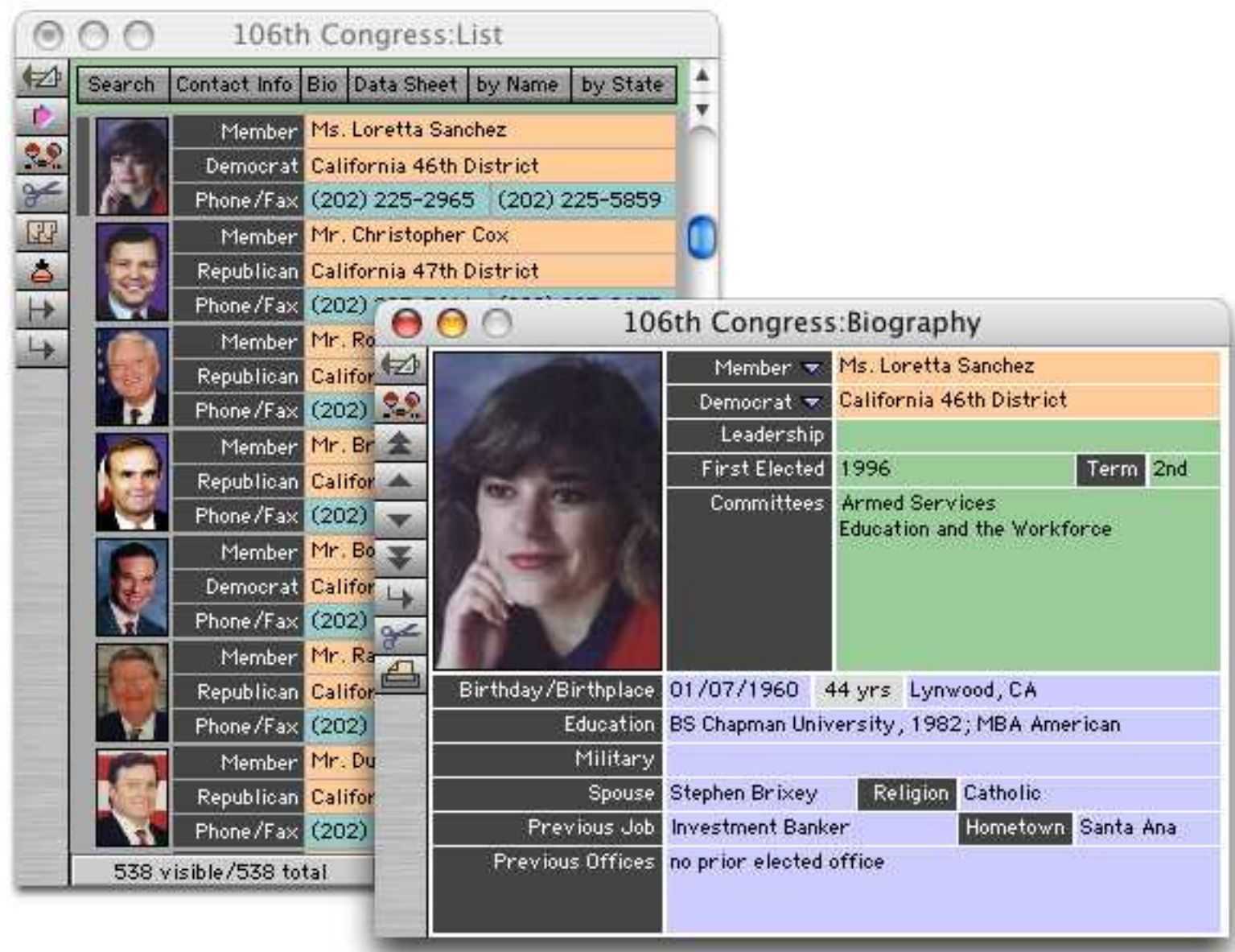
All of these forms use **Flash Art** to display a photograph (see "Flash Art™" on page 876). You can also show and play a QuickTime movie in a form (see "Displaying Movies in a Form" on page 938).

Writing a Letter to Someone in the Mailing List

Panorama includes a pre-built database for handling general word processing chores — the **Mini Correspondence** wizard (see "Using the Mini Correspondence Wizard" on page 855). This database may be used for general correspondence (letters, memos, etc.) and to create mail merge letters that are customized and sent to a group of recipients. To write a letter to a person in your mailing list database, first locate and click on that person.
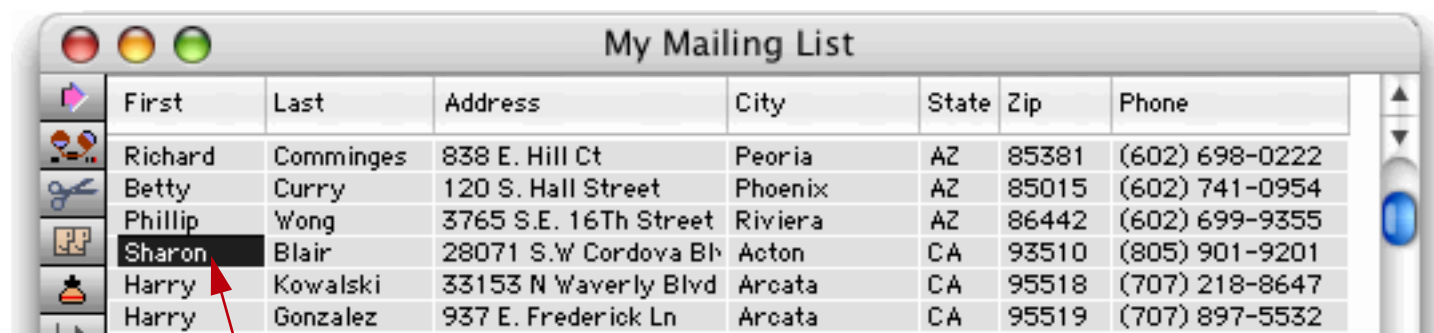
click on the person you want to write a letter to

Now open the **Mini Correspondence** wizard.
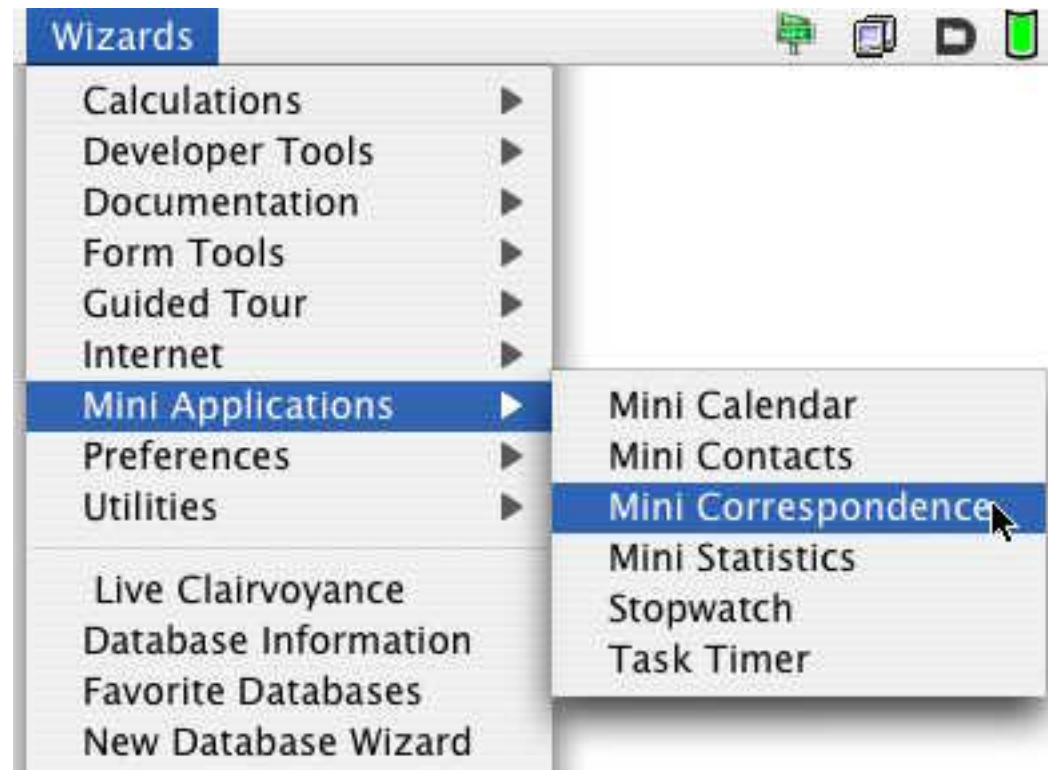
The wizard will ask you if you want to create a new letter to Sharon Blair.
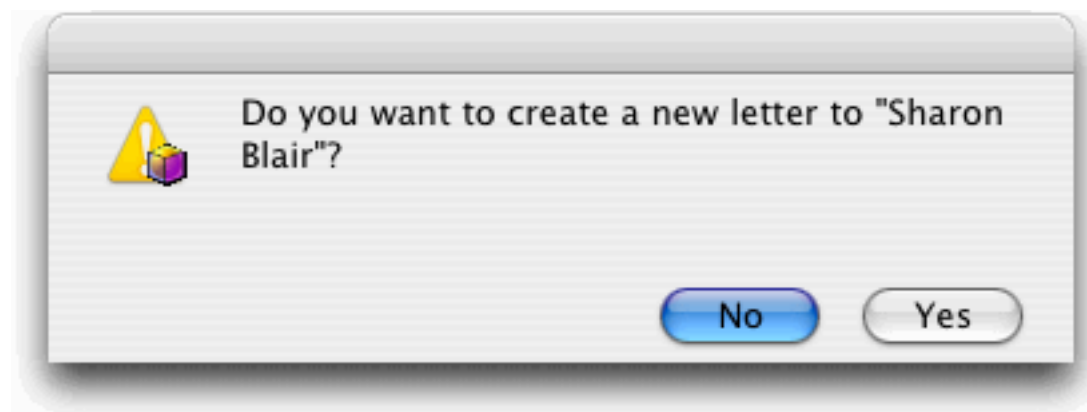
Press the **Yes** button to create the new letter. The wizard will automatically fill in the name and address in the new letter.
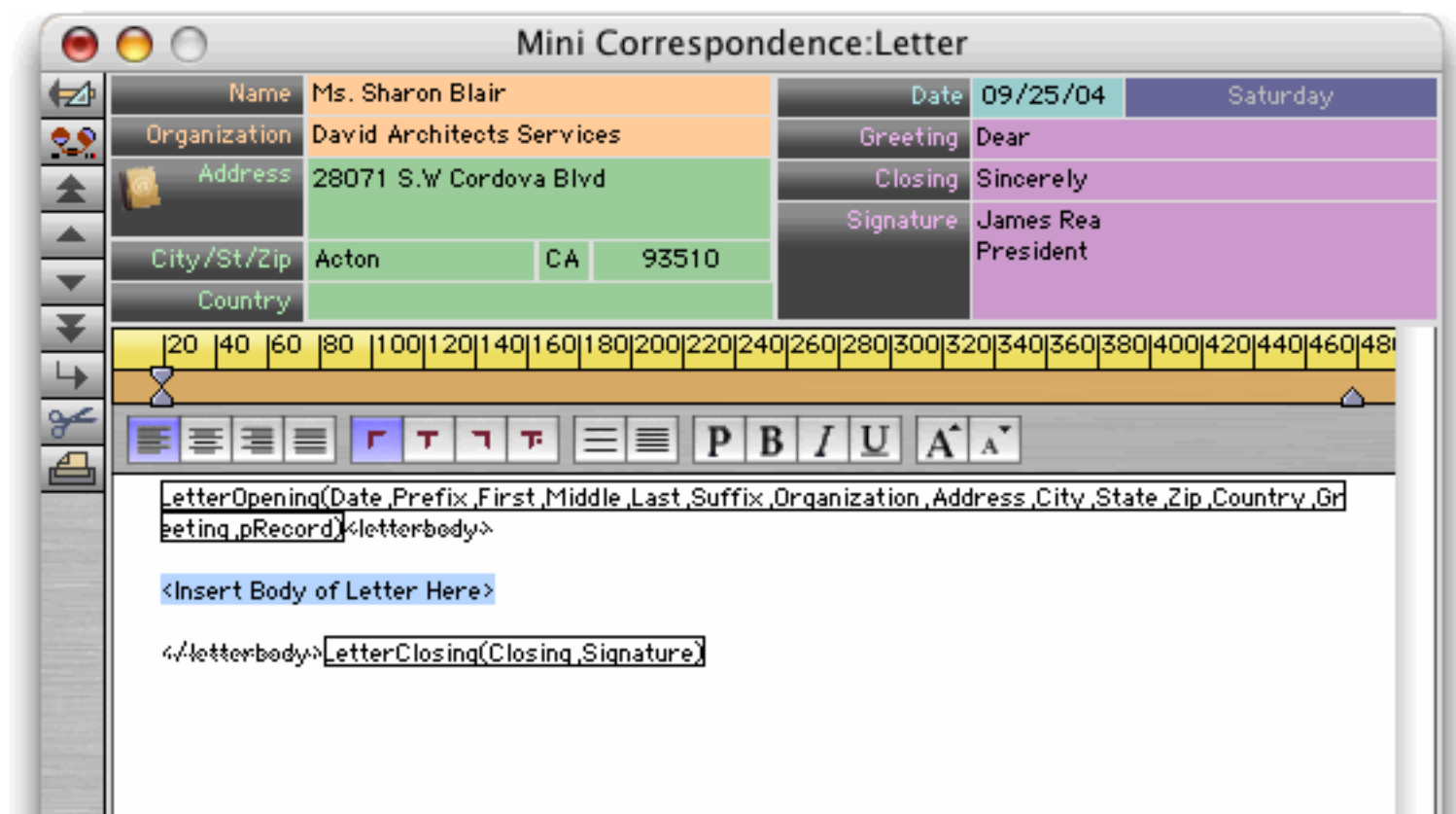
At this point all you need to do is type in the body of the letter. Just start typing.
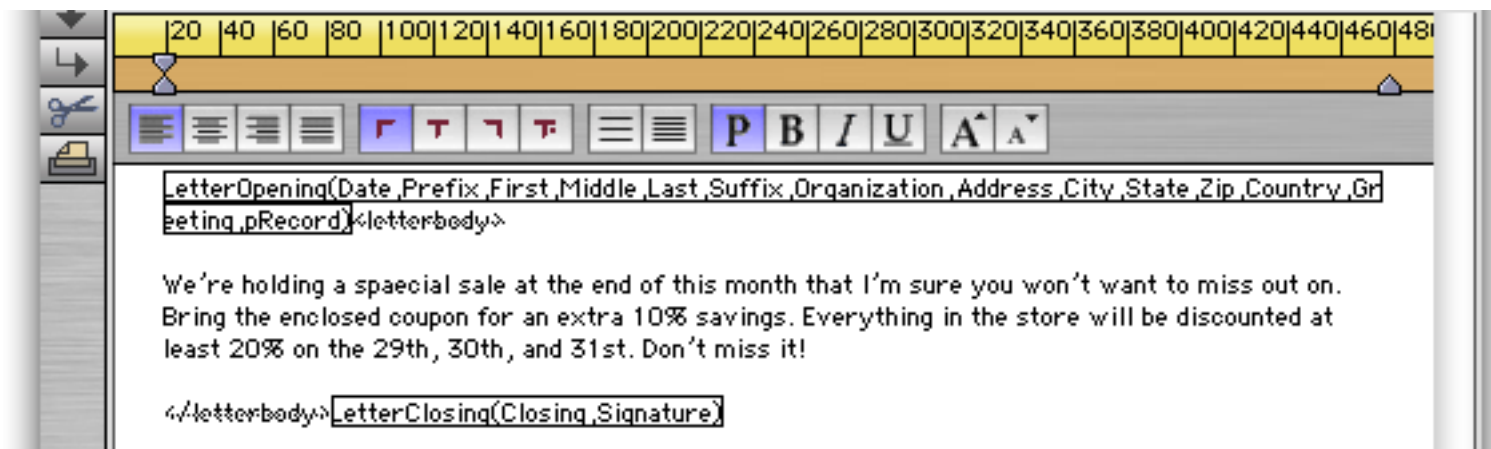
When you are finished typing in the letter press the **Enter** key. Panorama will display a preview of the actual letter, including the address, greeting and salutation.

If you want to print this letter use the **Print This Letter…** command in the Letter menu.
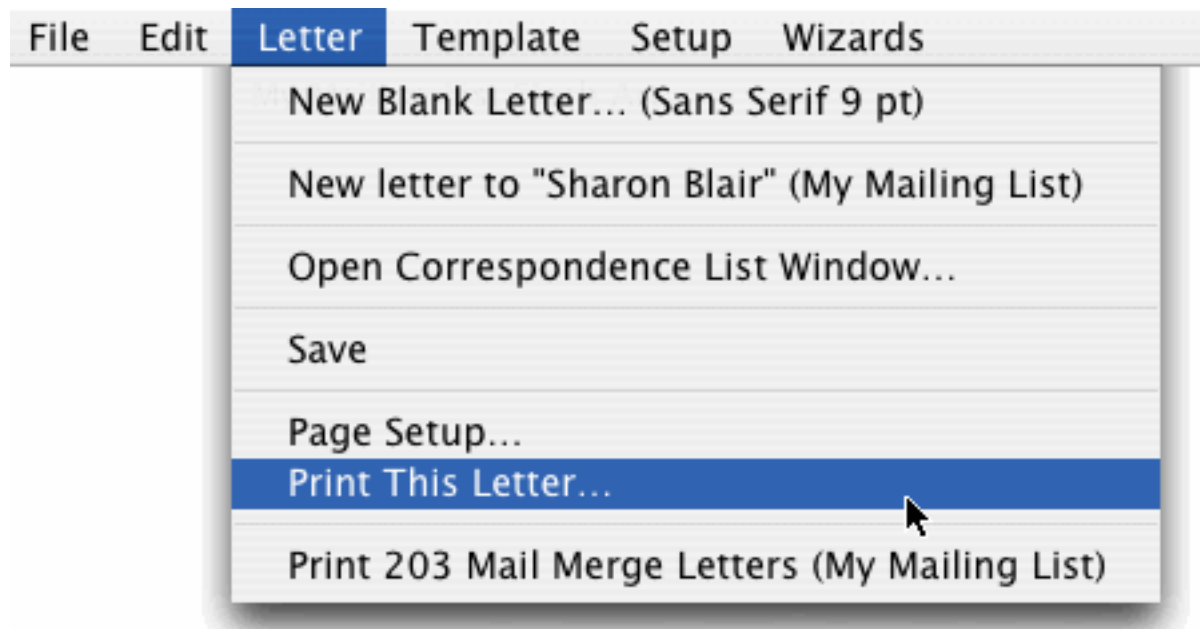
To learn more about editing a word processing document (including setting margins, tabs, fonts, styles and colors) see "Using the Word Processor" on page 805.

Printing a Mail Merge Letter

You can take the same letter you just created and send it to multiple recipients — for example we could send it to everyone in the 619 area code. Start by going back to the **My Mailing List** database and selecting the members of congress from California (see "The Find/Select Dialog" on page 497).
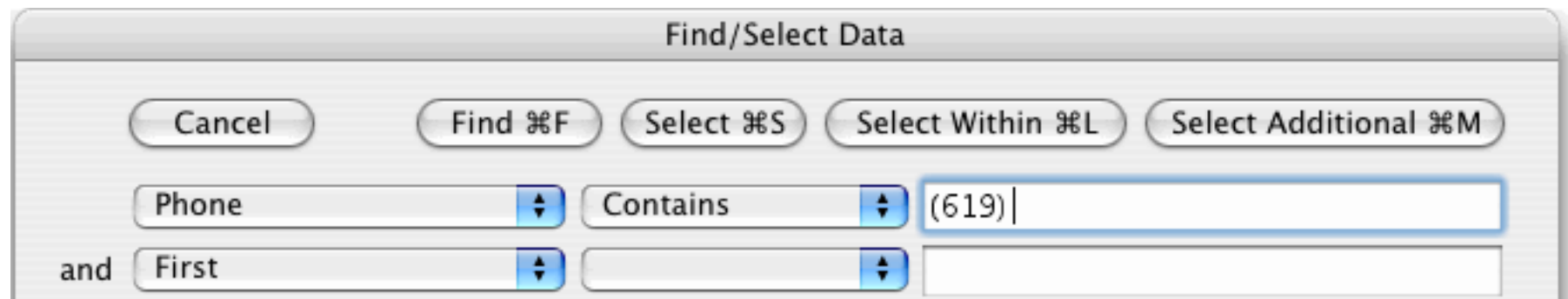
As you can see there are 4 people in this area code in the mailing list.

Now go back to the **Mini Correspondence** database and pull down the **Letter** menu. The last item in this menu will print a customized letter to each selected person in the My Mailing List database.
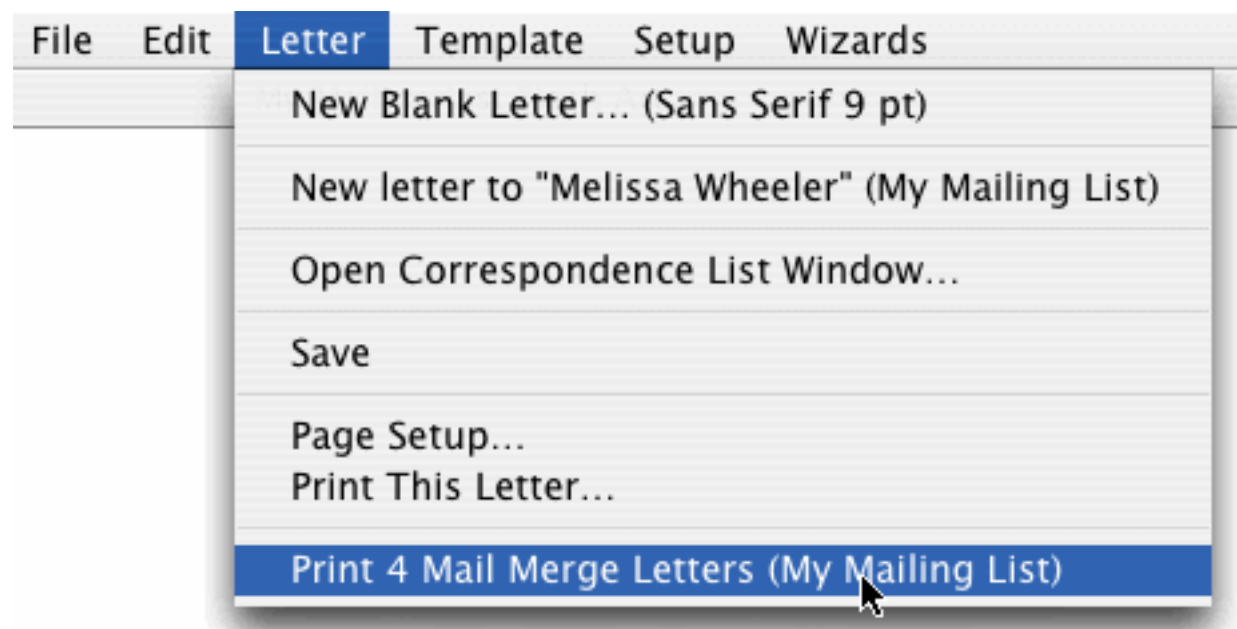
The wizard will print 4 customized letters.
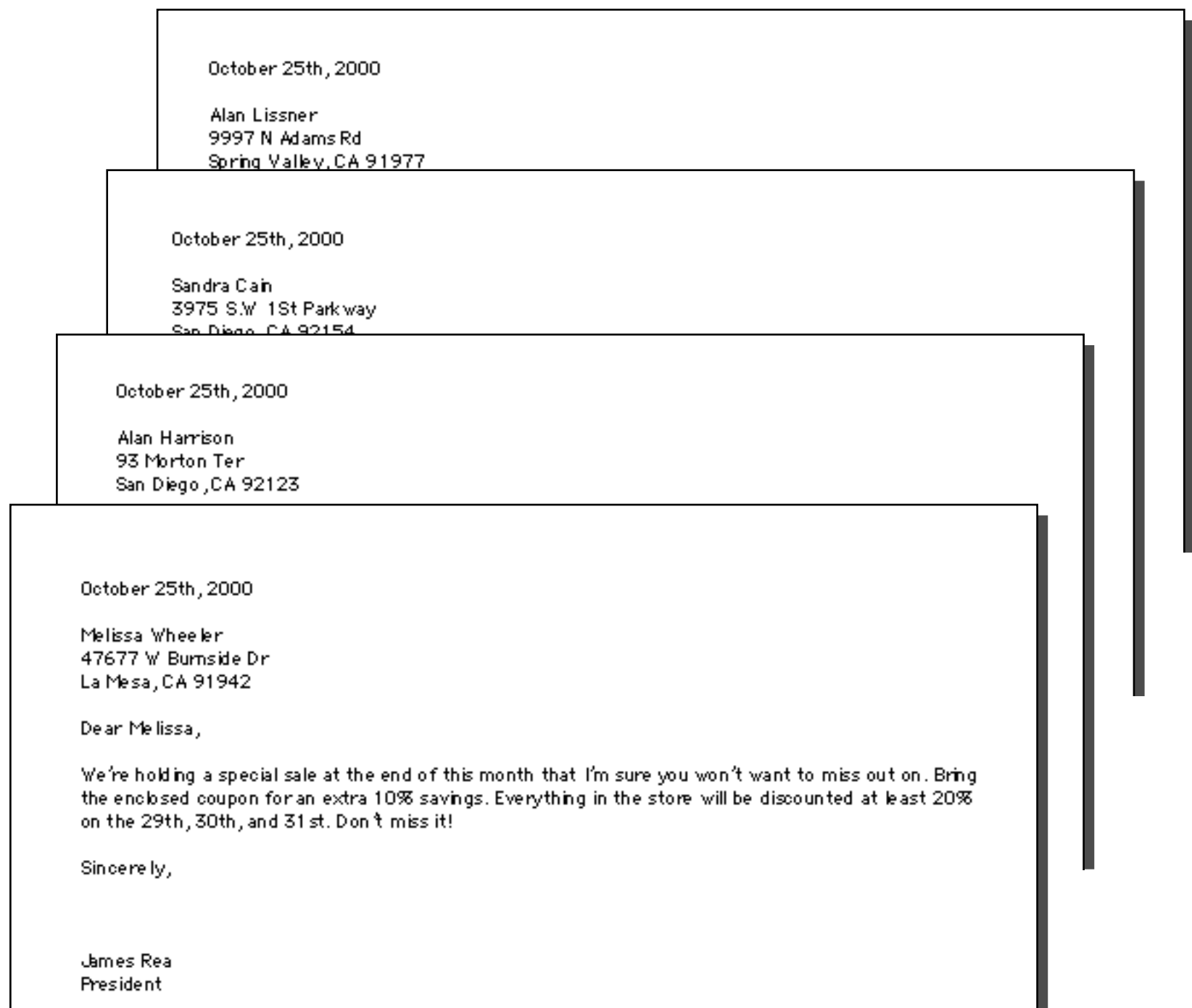
See "Printing a Mail Merge Letter" on page 860 to learn more about printing mass mailings with Panorama.

Tidying Up

Your mailing list database is complete, so now is the time to save your work permanently. Choose **Quit** from the File Menu (OS 9 or Windows) or the Panorama Menu (OS X). If you have made any changes to your database since the last time it was saved, Panorama will ask you if you wish to save the database. You do, so click the **Save** button.

Congratulations! You've successfully created and used your first Panorama database (you were following along on your computer, right?). Now that you've mastered the basics you're ready to move on to some more advanced techniques.

Lesson 2: Building and Organizing a Checkbook

Now that you've created your first simple mailing list database, you're ready to try something more complicated. In this lesson you'll build and use a database for keeping track of a checkbook. Start by launching Panorama and the **New Database Wizard**.
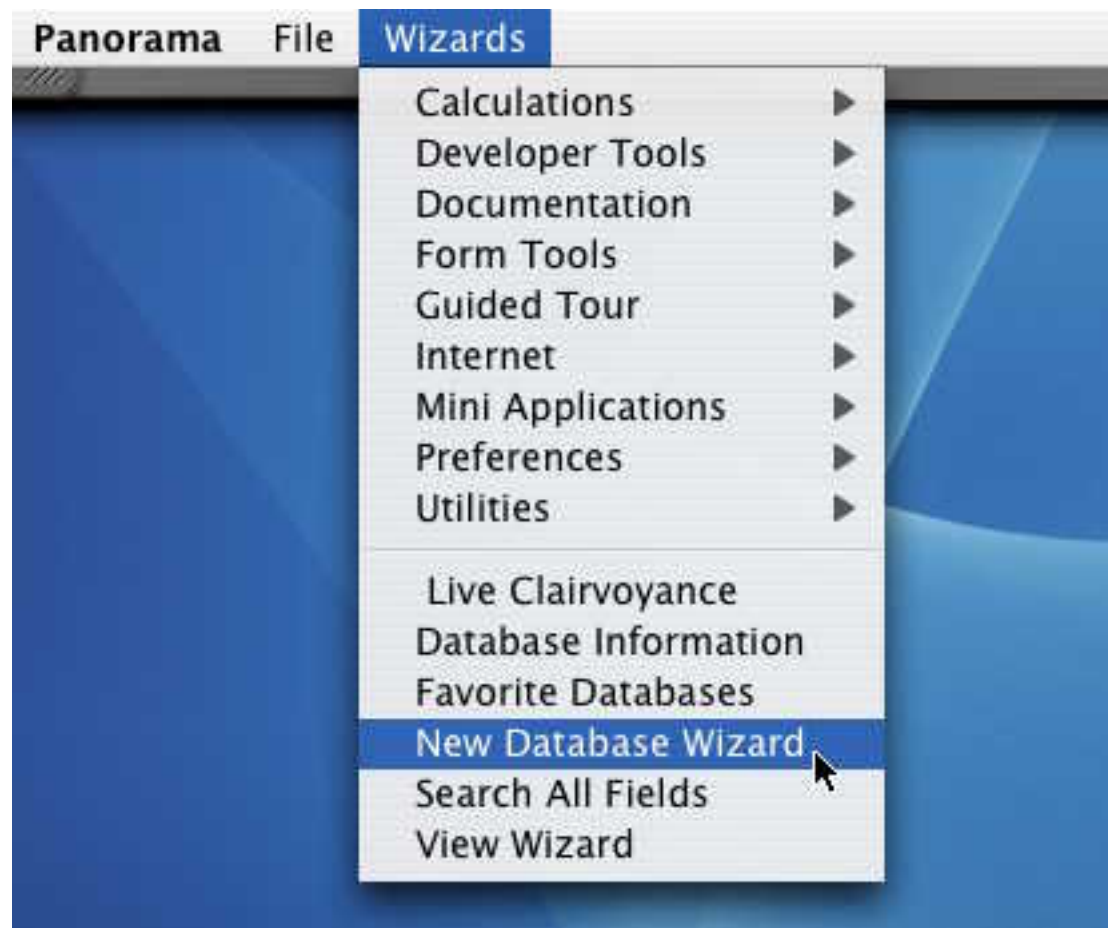
On Windows systems you can do this with the **Start** menu.
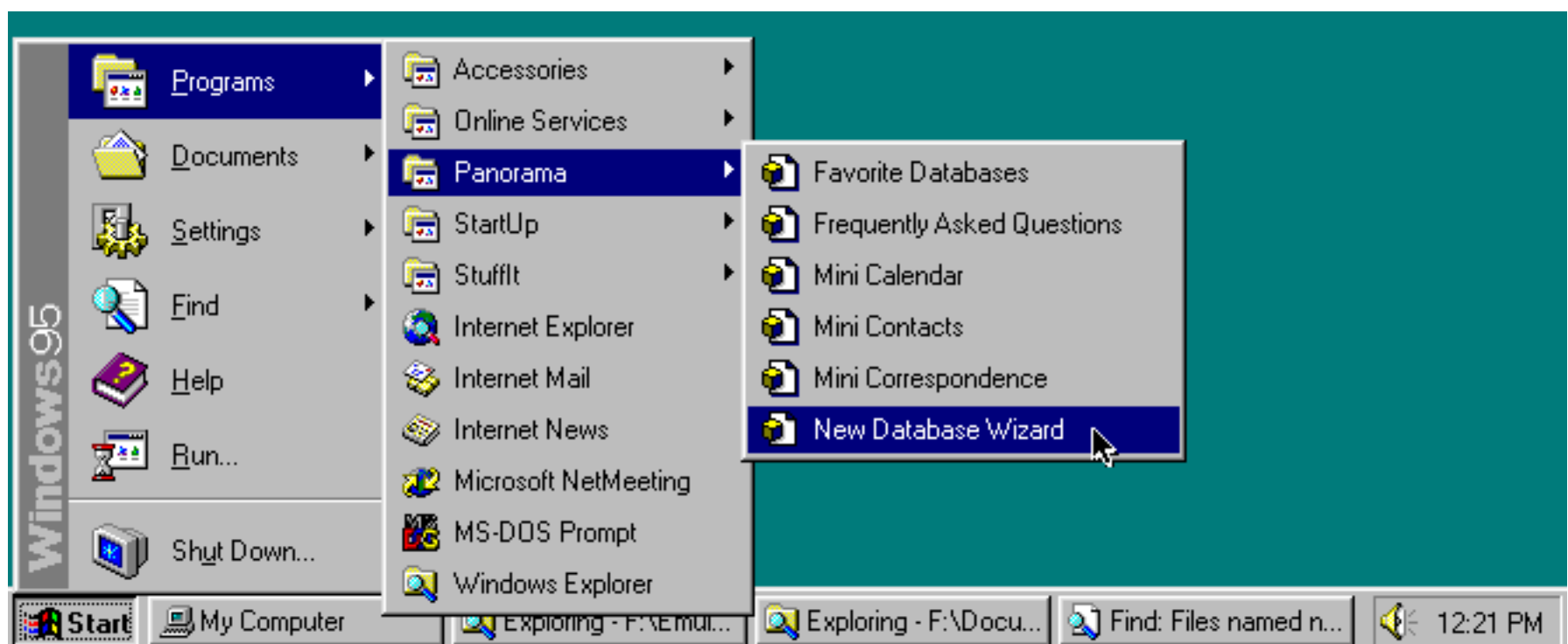
The checkbook database will have eight fields — Date, Check, Pay To, Category, Memo, Debit, Credit and Balance. (See "Fields" on page 375 for a complete explanation of fields.) Type in the name of each field into the wizard, with each name on a separate line. The four numeric fields have special suffixes. The Check field has a suffix of # to tell the wizard to create an integer numeric field (1, 2, 3, etc.). The Debit, Credit and Bal-

ance fields have a suffix to create a 2-digit numeric field (12.34, 813.94, 8.43 etc.). (Note: These suffixes are only used when creating databases with the **New Database Wizard** (see "Creating Numeric and Date Fields" on page 252). When creating fields with the **Add Field** command (see "Add Field" on page 377) or the Design Sheet (see "The Design Sheet" on page 380) you can use any field name with any field type you like.)
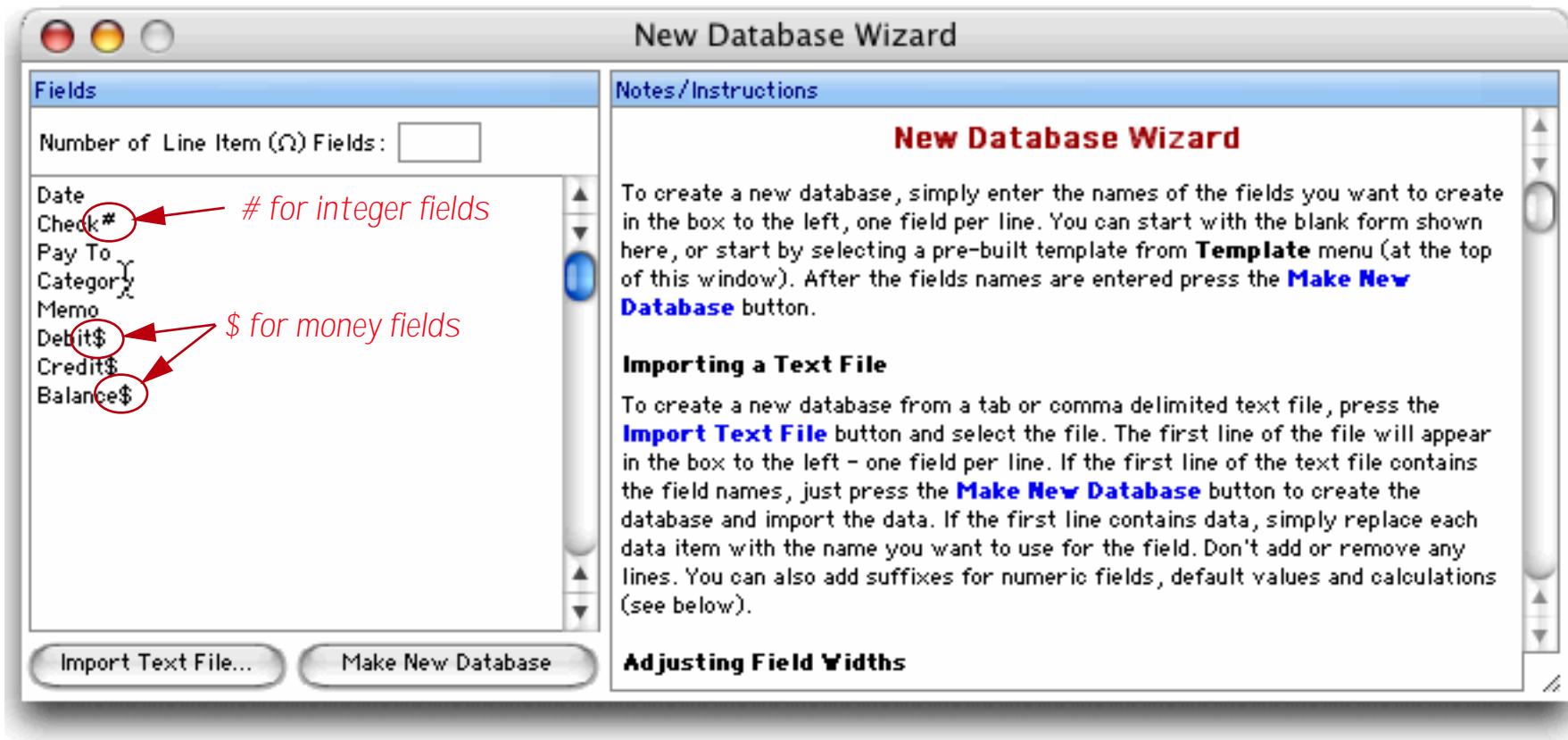
When you press the **Make New Database** button the wizard will create a new database for you. The database is displayed using a row and column format called the **data sheet**. The new database contains one blank record (line) and eight fields (columns).

The eighth column, Balance, is not visible. To make it visible reduce the text size to 9 pt.
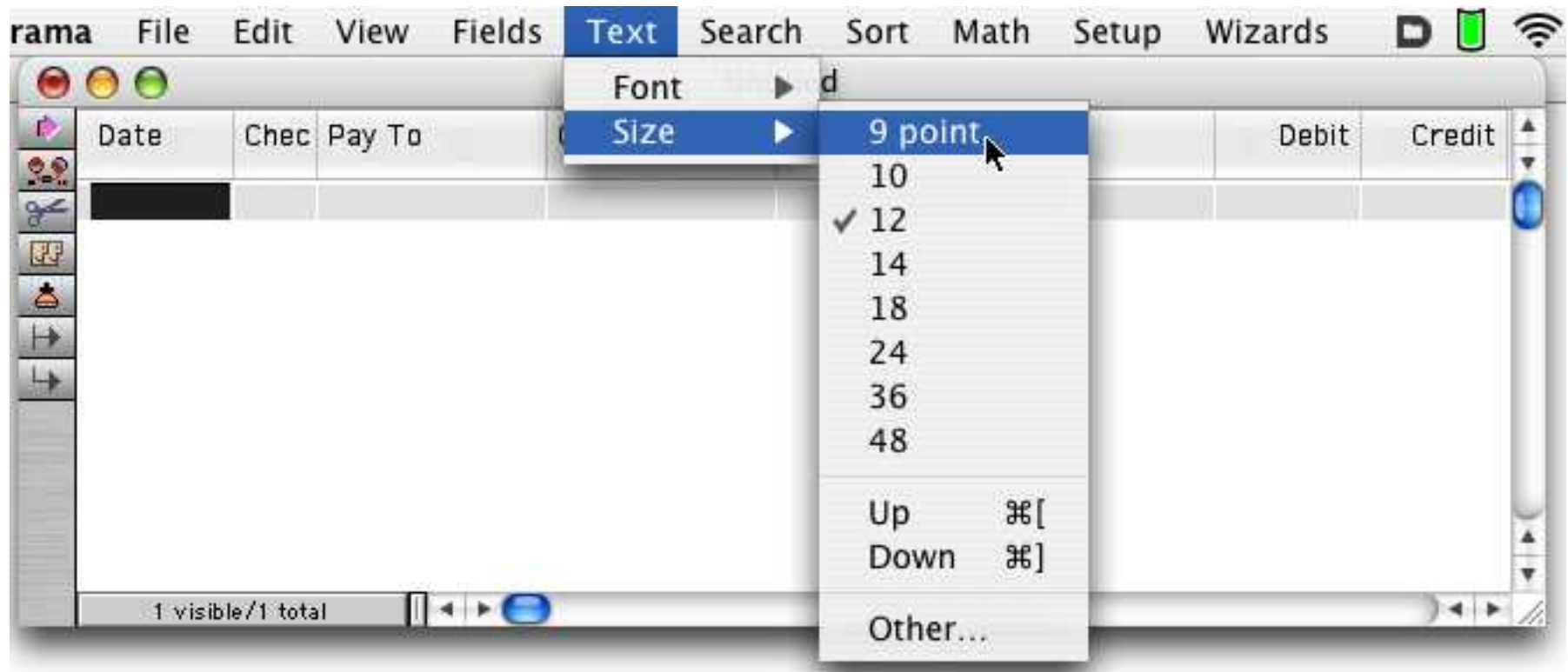
Now all of the columns are visible within the window.

Loading the Data

To demonstrate Panorama's organizational features you'll need to type in a bunch of data. That doesn't sound like much fun, does it? Didn't think so. To help you out we've created a database that is programmed to automatically fill your new checkbook database with sample data. Start by choosing **Favorite Databases** from the Wizard menu (see "The Favorite Dat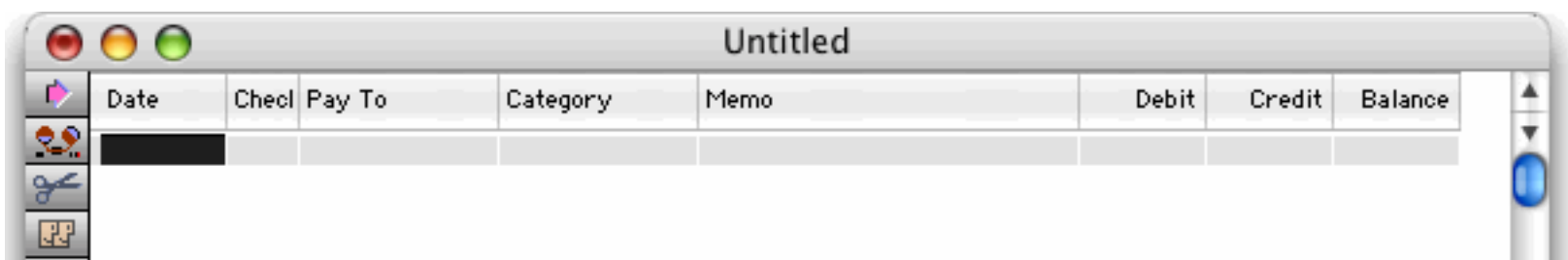abases Wizard" on page 237). The database you need is called Sample Checkbook. To locate it, type **sample** into the search area a the top of the window, then click on Sample Checkbook.
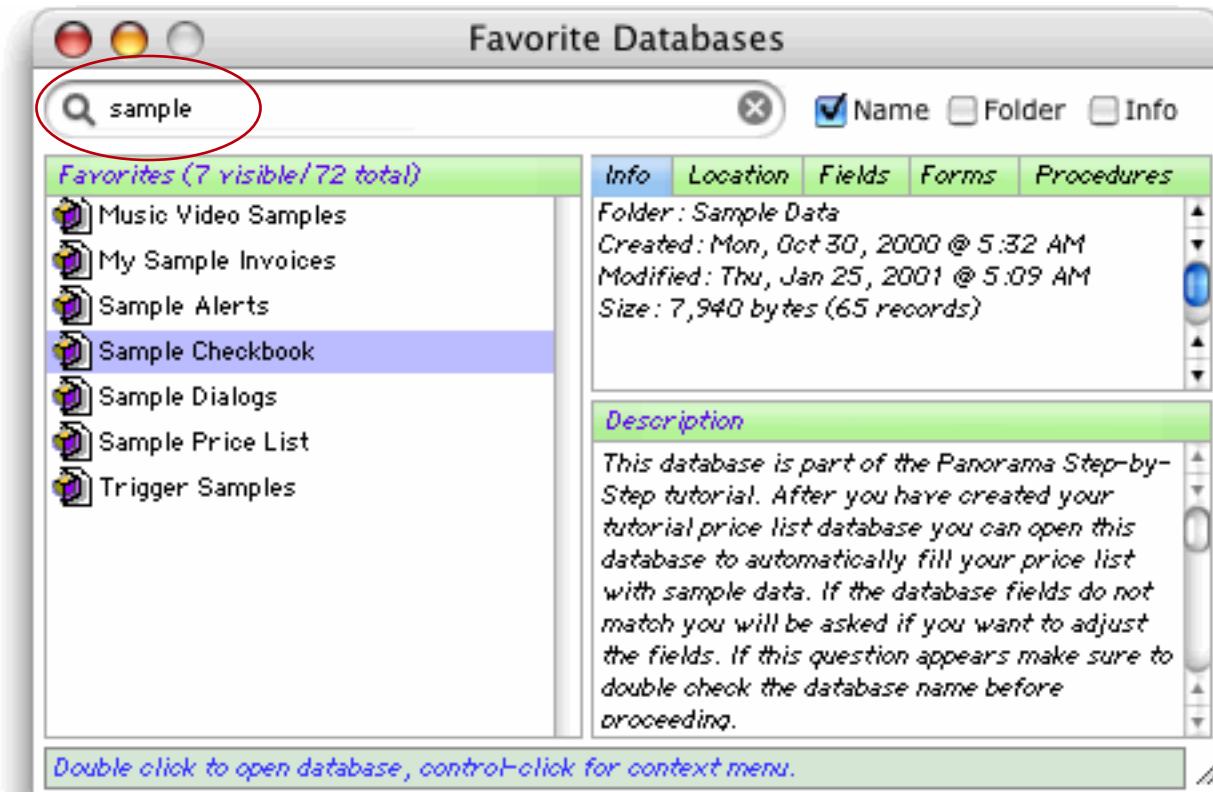
Double click on the Sample Checkbook file to open it. A small window will appear briefly. The database has been pre-programmed to automatically transfer one year's worth of sample checkbook data into the new database you have created.

You may want to adjust the widths of some of the columns (see "Adjusting Column Widths, Font and Size" on page 14).

Before continuing you should use the **Save** command in the File menu to save your new creation. The first time you save any file Panorama will ask you to give it a name. You'll also want to check the Save Window Positions option (see "Saving Window Positions" on page 260). When everything is set up press the **Save** button. (To see what this dialog looks like on the PC see "Saving Your Work" on page 8.)

You may also want to add your new file to the **Favorite Database** wizard. See "Adding A Database To Your List Of Favorites" on page 29 for a refresher on how to do this.

Analyzing the Checkbook

In the next few sections you'll learn several techniques for extracting useful information from any database.

Selecting Data

To select all office supply expenditures, click anywhere in the Category column.

Next, choose **Find/Select** from the Search menu. (You can also open the **Find/Select** dialog by clicking on the number of records in the lower left hand corner of the window). Type office supplies.

When you press the **Select** button (or the **Enter** key) Panorama will select the 73 checks for office supplies in the database. All of the other checks will become temporarily invisible.

To select only the office supply expenditures in October 1998, re-open the **Find/Select** dialog. Use the pop up menus to change the second line to Date and Equal, then type in oct 98. When you want to select an entire month you must spell out the month, for example nov 02 or january 1997. You can also select a single day, for example 3/7/96 or August 15, 2001 (see "Locating Dates by Month, Quarter, or Year" on page 501).
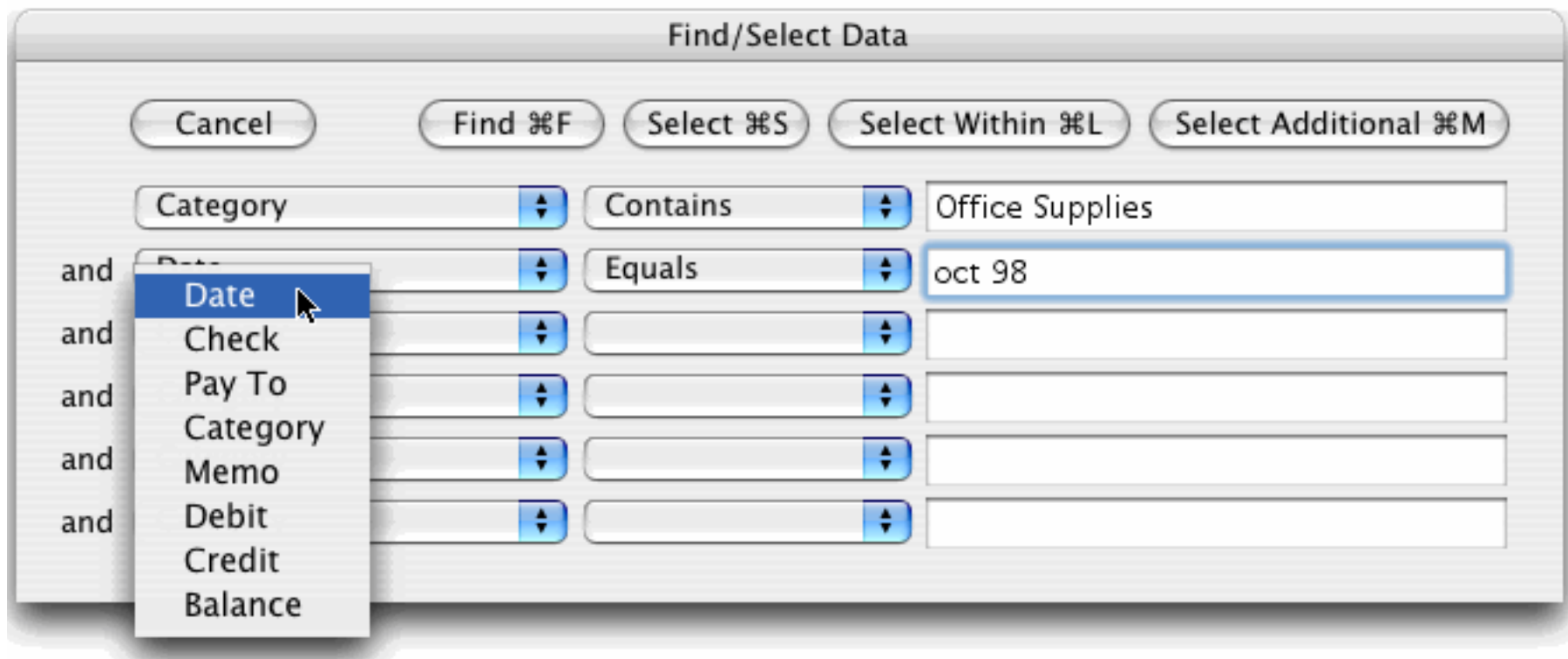
Press the `Select` button (or the **Enter** key) to see the 8 checks for office supply expenses in October 1998.
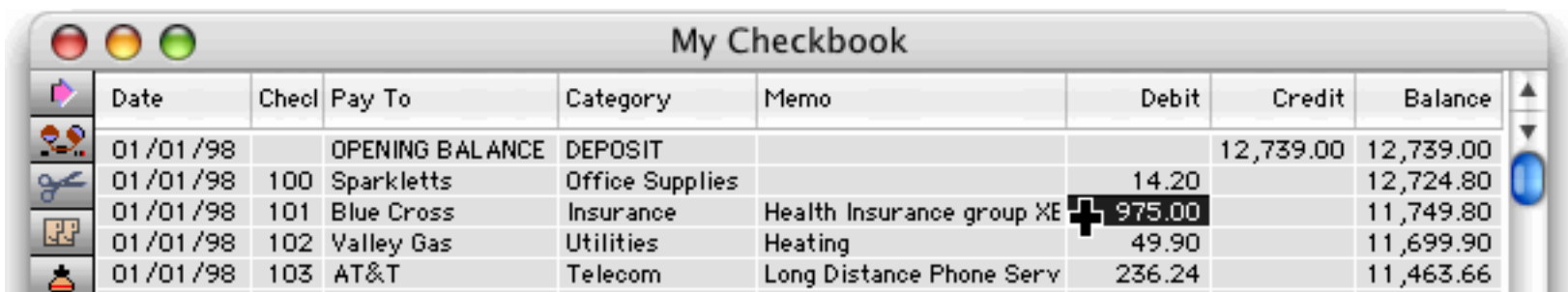
When you want to see all of the checks again, choose **Select All** from the Search menu. You can also undo the sixteen most recent selections with the **Undo** command in the Edit menu (see "Undo Select" on page 506).

Calculating the Grand Total

To calculate the grand total of all the checks in the database start by clicking anywhere in the Debit column.

Next, choose the **Total** command from the Math menu. Panorama will add a new record to the end of the database. This new record is called a summary record (see "Summary Records" on page 371), and it contains the grand total for all the checks.

summary records displayed in bold with blue background   *grand total*

As you can see the column isn't quite wide enough to display the entire grand total. You can drag on the column name to adjust the width (see "Adjusting Column Widths, Font and Size" on page 14).

When you are finished looking at the grand total use the **Cut Record** tool to delete it (or press the **Delete** key, see "Deleting a Record" on page 435).

Calculating Subtotals

To calculate the grand total you created a single summary record at the end of the database. To calculate subtotals you must create a summary record for every category you want to subtotal. This is done with the **Group Up** command in the Sort menu. As an example you'll create subtotals for each month, and sub-subtotals for each category within each month. Start by clicking anywhere in the Date column and choosing **Group Up** from the Sort menu.
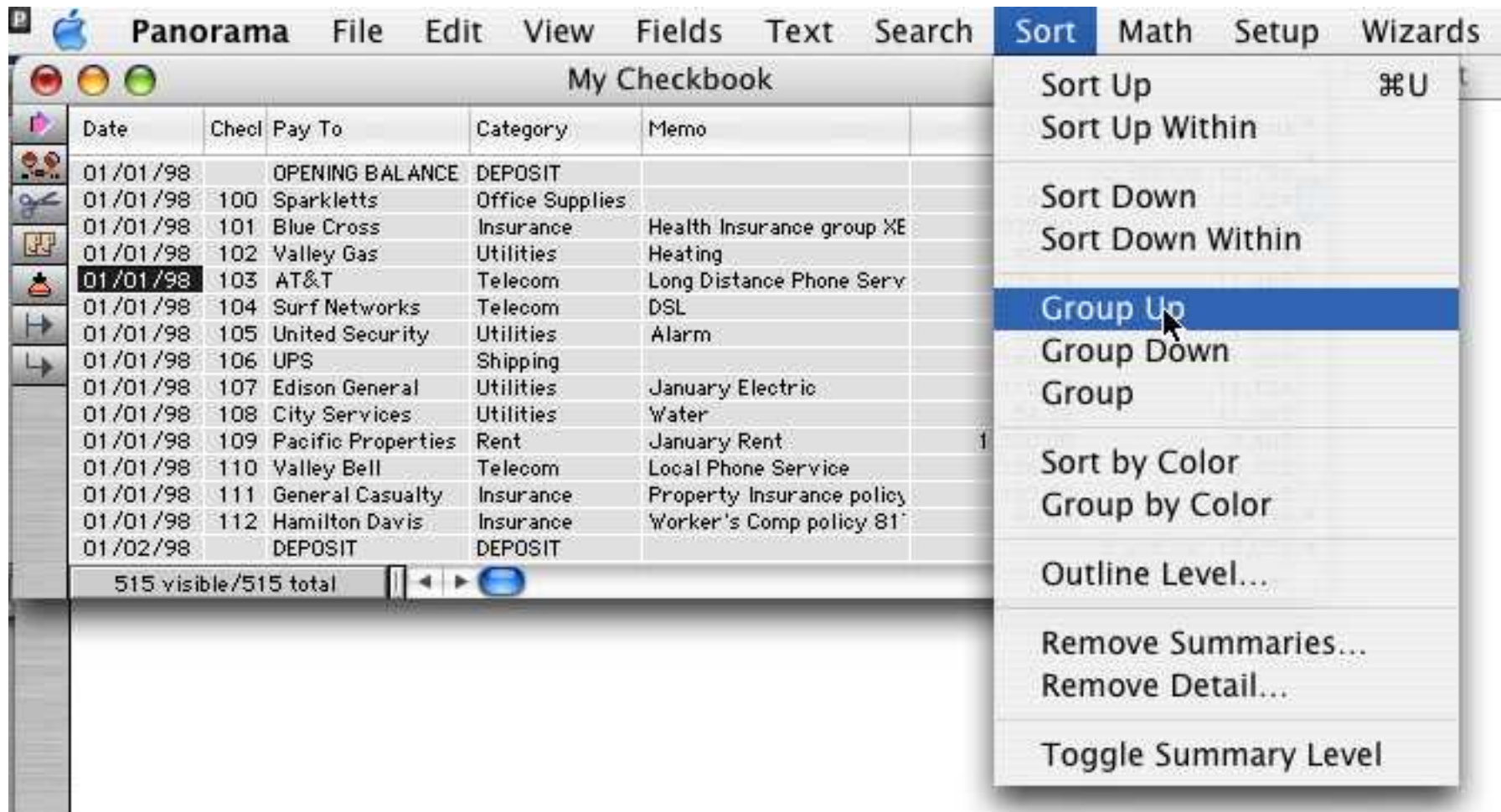
Since the field being grouped contains dates, Panorama will ask what time period you want to use. The Month option is already selected, so just press **Group**.
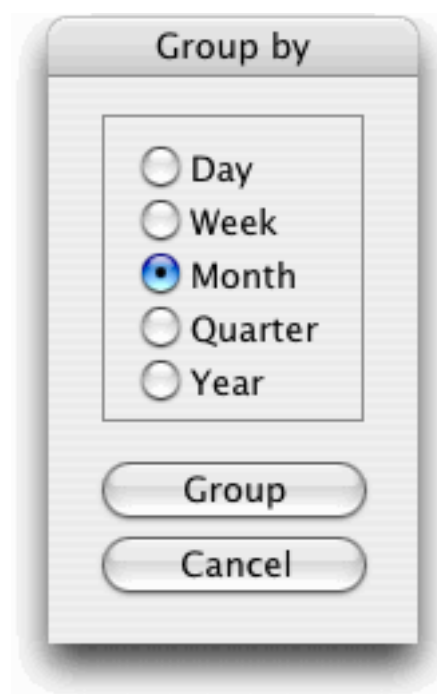
At first it may appear that nothing has happened. However, if you scroll the database down you will see that Panorama has created a summary record after each month. It also creates an extra summary record at the bottom of the database for the grand total. You can identify summary records easily because— 1) they are bold, and 2) they have a little plus sign to the left of the first column.

summary record for January 1998

summary record for February 1998

summary record for March 1998

summary record for April 1998

summary record for grand total

Now click anywhere in the Category column, then choose **Group Up** from the Sort menu. Panorama will create a summary record after each category within each month.

summary records for categories within January

summary record for January 1998

summary records for categories within February

summary record for February 1998

summary records for categories within March

summary record for March 1998

summary record for December 1998

summary records for categories within December

summary record for grand total

Once the summary records are set up, you're ready to actually calculate the subtotals. Click anywhere in the **Debit** column and choose **Total** from the Math menu. The **Total** command will calculate a grand total, subtotals for each month, and subtotals for each category within each month.

Date	Checl	Pay To	Category	Memo	Debit	Credit	Bal
01/19/98	130	FedEx	Shipping	Invoice 75951	160.97		11,24
01/19/98	132	Champion Trucking	Shipping	Invoice 26309	171.79		10,94
			Shipping	*Jan shipping*	**540.39**		
01/01/98	103	AT&T	Telecom	Long Distance Phone Serv	236.24		11,46
01/01/98	104	Surf Networks	Telecom	DSL	50.00		11,41
01/01/98	110	Valley Bell	Telecom	Local Phone Service	136.95		9,35
			Telecom	*Jan telecom*	**423.19**		
01/01/98	102	Valley Gas	Utilities	Heating	49.90		11,69
01/01/98	105	United Security	Utilities	Alarm	30.00		11,38
01/01/98	107	Edison General	Utilities	January Electric	115.55		11,12
01/01/98	108	City Services	Utilities	Water	54.39		11,06
			Utilities	*Jan utilities*	**249.84**		
01/30/98					**17,202.48**		
02/09/98	154	Valley Publications	Advertising		923.74		14,69
02/09/98	159	Power Printing	Advertising		654.04		11,52

subtotal for January 1998

Date	Checl	Pay To	Category	Memo	Debit	Credit	Bal
02/02/98	141	AT&T	Telecom	Long Distance Phone Serv	351.56		17,46
02/02/98	145	Valley Bell	Telecom	Local Phone Service	113.05		17,04
			Telecom	*Feb telecom*	**514.61**		
02/02/98	137	City Services	Utilities	Water	48.99		17,97
02/02/98	138	Valley Gas	Utilities	Heating	47.99		17,92
02/02/98	142	United Security	Utilities	Alarm	30.00		17,43
02/02/98	149	Edison General	Utilities	February Elect	109.06		15,45
			Utilities	*Feb utilities*	**236.05**		
02/27/98					**19,773.29**		
03/02/98	190	Valley Publications	Advertising		1,051.99		10,57

subtotal for February 1998

Date	Checl	Pay To	Category	Memo	Debit	Credit	Bal
03/02/98	193	Valley Bell	Telecom	Local Phone Service	147.80		10,21
			Telecom	*Mar telecom*	**454.94**		
03/02/98	183	Valley Gas	Utilities	Heating	24.23		13,88
03/02/98	185	Edison General	Utilities	March Electric	105.50		13,71
03/02/98	191	United Security	Utilities	Alarm	30.00		10,54
03/02/98	197	City Services	Utilities	Water	49.23		9,32
			Utilities	*Mar utilities*	**208.95**		
03/30/98					**21,908.19**		
04/13/98	241	Foundation Web Ser	Advertising		702.99		15,41

subtotal for March 1998

Date	Checl	Pay To	Category	Memo	Debit	Credit	Bal
12/01/98	534	Valley Bell	Telecom	Local Phone Service	123.25		16,40
12/01/98	535	Surf Networks	Telecom	DSL	50.00		16,35
			Telecom	*Dec telecom*	**449.00**		
12/01/98	526	Edison General	Utilities	December Elec	94.07		18,26
12/01/98	532	Valley Gas	Utilities	Heating	39.59		16,58
12/01/98	533	City Services	Utilities	Water	57.52		16,53
12/01/98	537	United Security	Utilities	Alarm	30.00		14,74
			Utilities	*Dec utilities*	**221.17**		
12/28/98					**18,053.95**		
					225,677.47		

subtotal for December 1998

659 visible/659 total

Grand Total

Hiding and Showing Detail

It's difficult to get a feel for the subtotals when they are mixed in with the raw data. To collapse the database so that only the monthly totals are visible, choose the **Outline Level** command in the Sort menu.
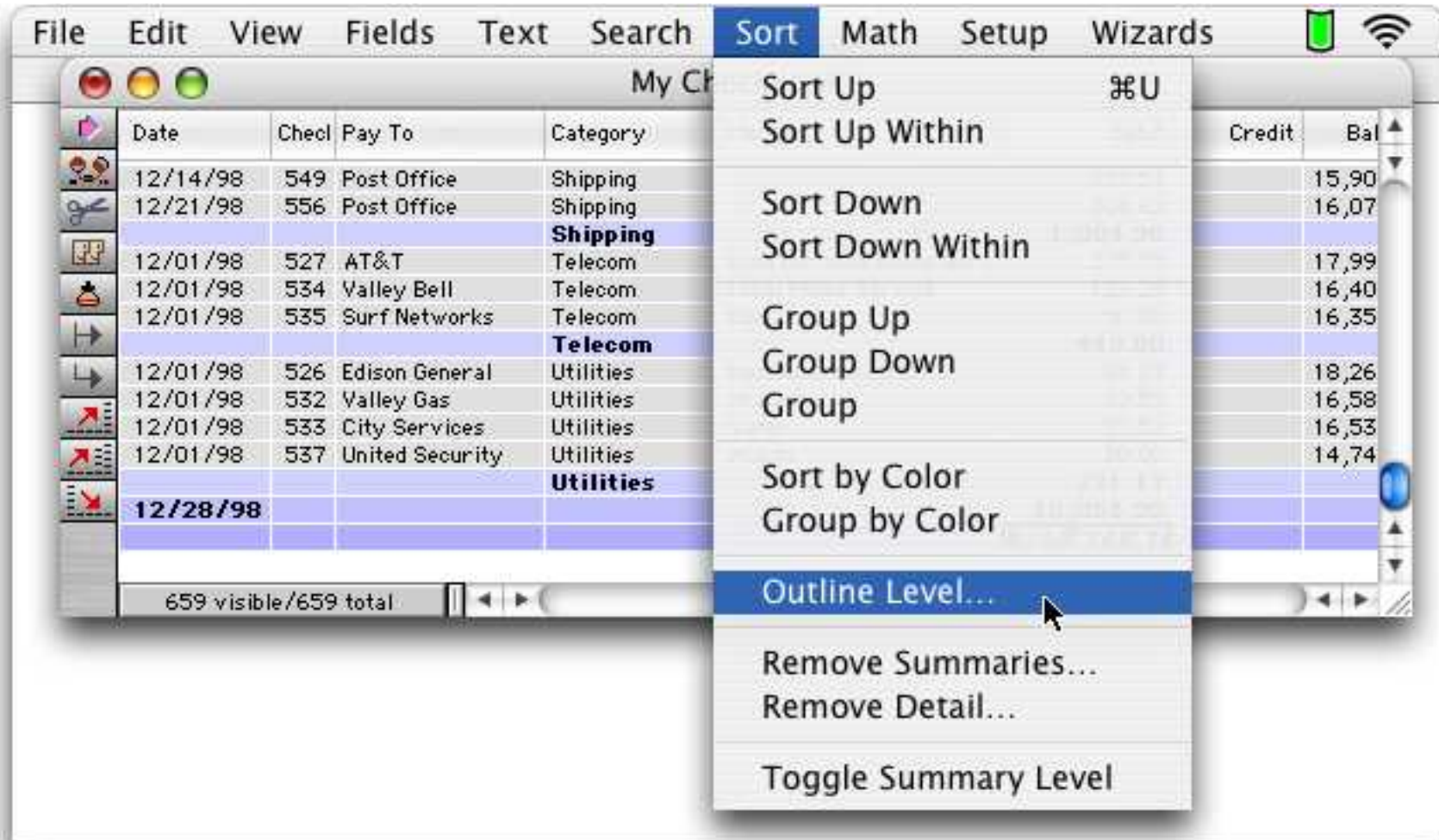
The **Outline Level** dialog shows how you have grouped the data. At the top is the raw data, all 515 records. The next level is the Category, then the monthly summaries. At the bottom level is the grand total. To collapse the database so that only the monthly totals are visible, press the **2** button.

When you press the button the database collapses so that only the twelve monthly totals and the grand total are visible. Everything else is hidden. You can quickly see that March was the month with the highest spending and July the month with the lowest spending.

Why was the spending almost 22,000 dollars in March? To find out, click anywhere on the March summary record.

Now click on the **Expand** tool.

The **Expand** tool reveals the next level of detail, in this case the Category summaries for the month of March.

To see the actual checks that make up a particular category, just click on the category and then choose the **Expand** tool again.

Now the actual checks are visible for each purchase in March.

Date	Checl	Pay To	Category	Memo	Debit	Credit	Ba
			Payroll		**9,123.23**		
03/02/98	178	Oregon National Enç	Purchases	Invoice 64191	205.77		17,10
03/02/98	181	Tech Media	Purchases	Invoice 8910	556.72		15,49
03/02/98	194	Precision Plastics	Purchases	Invoice 10488	498.49		9,72
03/09/98	198	Clark Supply	Purchases	Invoice 47372	318.44		13,33
03/09/98	200	Telon Productions	Purchases	Invoice 26984	265.12		12,95
03/16/98	206	Clark Supply	Purchases	Invoice 73927	328.26		14,34
03/16/98	207	Oregon National Enç	Purchases	Invoice 73178	336.09		14,00
03/30/98	214	Telon Productions	Purchases	Invoice 18763	326.98		17,20
03/30/98	215	Precision Plastics	Purchases	Invoice 42862	411.58		16,79
03/30/98	218	Miller Industries	Purchases	Invoice 47187	200.48		14,56
			Purchases		**3,447.93**		
			Rent		**1,580.00**		
			Shipping		**1,228.69**		
			Telecom		**454.94**		
			Utilities		**208.95**		
03/30/98					**21,908.19**		
04/27/98					**17,708.77**		
05/29/98					**20,072.21**		

34 visible/659 total

If you want to hide the detail again use the **Collapse** tool.

Date	Checl	Pay To	Category	Memo	Debit	Credit	Ba
			Payroll		**9,123.23**		
03/02/98	178	Oregon National Enç	Purchases	Invoice 64191	205.77		17,10
03/02/98	181	Tech Media	Purchases	Invoice 8910	556.72		15,49
03/02/98	194	Precision Plastics	Purchases	Invoice 10488	498.49		9,72
03/09/98	198	Clark Supply	Purchases	Invoice 47372	318.44		13,33
03/09/98	200	Telon Productions	Purchases	Invoice 26984	265.12		12,95
03/16/98	206	Clark Supply	Purchases	Invoice 73927	328.26		14,34
03/16/98	207	Oregon National Enç	Purchases	Invoice 73178	336.09		14,00
03/30/98	214	Telon Productions	Purchases	Invoice 18763	326.98		17,20
03/30/98	215	Precision Plastics	Purchases	Invoice 42862	411.58		16,79
03/30/98	218	Miller Industries	Purchases	Invoice 47187	200.48		14,56
			Purchases		**3,447.93**		
Collapse			**Rent**		**1,580.00**		
			Shipping		**1,228.69**		
			Telecom		**454.94**		
			Utilities		**208.95**		
03/30/98					**21,908.19**		
04/27/98					**17,708.77**		
05/29/98					**20,072.21**		

34 visible/659 total

To learn more about expanding and collapsing summaries see

Sorting Summaries by Value

Summary records are normally sorted alphabetically by category, but you can resort them by value to produced a ranked list from highest to lowest. As an example we'll sort the **Category** subtotals within each month to find out the highest spending categories in each month. Start by choosing the **Outline Level** command from the Sort menu, then press the **1** button.

Now both the monthly and category summaries are visible, but the raw data is not visible. The category summaries are sorted alphabetically within each month (the window has been expanded to show three months worth of data).

Now click anywhere in the **Debit** column, then choose **Sort Down** from the Sort menu. We're using **Sort Down** instead of **Sort Up** because we want the largest values at the top.

click on Debit field before sorting

Within each month, the Category subtotals are now sorted by value from highest to lowest. Now you can easily see that payroll is the largest spending category in each month. Rent and advertising are consistently near the top, while telecom and utilities are consistently near the bottom.

If you'd like to see more detail about a particular summary just click on it and press the **Expand** tool.

When Panorama sorted the summary records by value it also moved the corresponding data records so that you can expand to see the detail. Within each summary the data records have not been sorted by value, they are still sorted in their original order (by date).

To learn more about sorting summary values see "Sorting Within Groups" on page 549.

Removing Summary Records

Summary records are designed to be temporary. When you are done examining the summary records you need to remove them to restore the database to it's original state. To do this choose the **Remove Summaries** command from the Sort menu. As you can see from the illustration, it doesn't matter whether the summary records are expanded or collapsed when you choose this command. The **Remove Summaries** dialog allows you to delete some or all of the summary records in the database.

Since you want to remove all of the summary records press the **Remove All Summaries** button (or press the **Enter** key). This removes all of the summary records and leaves only the original data records. (If you want to learn how and why you would delete only some of the summary records see "Getting Rid of Summary Records" on page 549).

Although the summary records are gone, the database still isn't quite back to its original state. Instead of the entries being sorted by date they are still sorted by category within each month. To get back to the original order click anywhere in the Date field and choose **Sort Up** from the Sort menu.
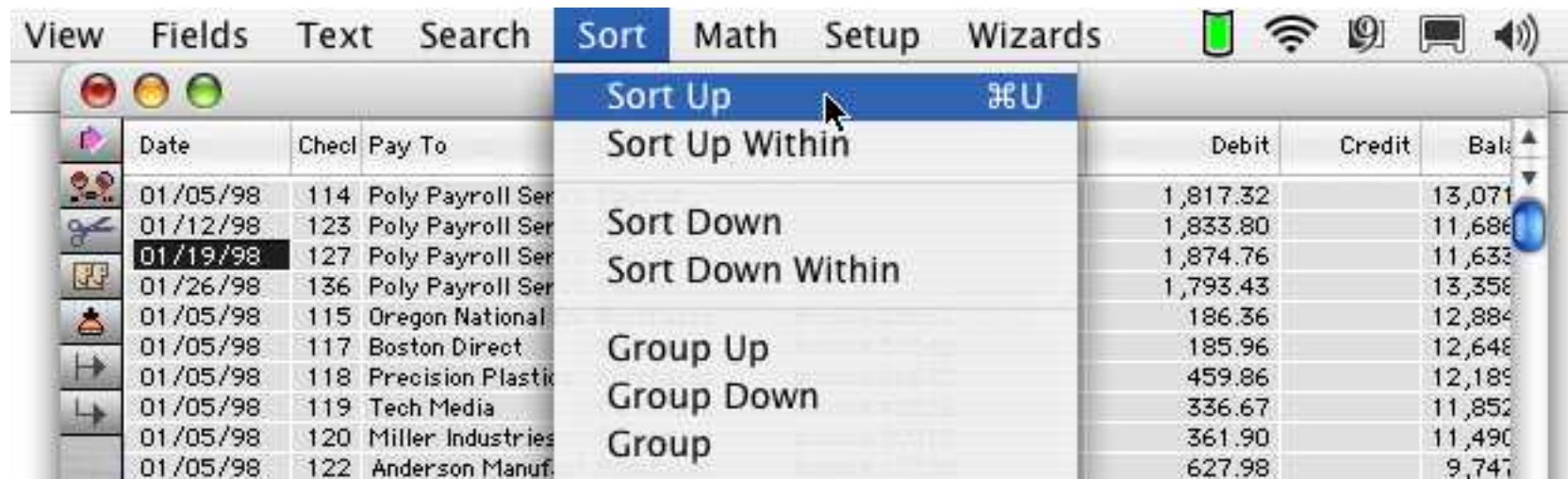
The database still isn't quite back in the original order. Originally the check numbers were sorted within each day.

To fix this problem click anywhere in the Check column and choose **Sort Up Within** (see "Sorting By Two or More Fields" on page 18).

Now all of the data is back to its original order.

With a little bit of advance preparation you can make it much simpler to restore the original database order after grouping summary records (assuming that you care what order the records are in — in many cases you won't. One technique would be to **Save** the database just before using the Group command, and then use the **Revert to Saved** command when you are done (see "Revert to Saved" on page 261). Another technique would be to create an extra field and fill the field with a numeric sequence (1, 2, 3, etc.) using the **Sequence** command (see "Automatic Numbering" on page 592). After you remove the summaries you can simply sort by this numeric field to restore the original order.

Automating Tasks with Procedures

Right out of the box, Panorama is a very flexible program. Its built in menus and tools bring incredible power to your fingertips. Even better, you can easily create your own commands that can be activated with a menu or button. You can create these commands (called procedures) using Panorama's built in programming language or simply by recording each step with the built in recorder. To start recording a procedure just click on the **Record Procedure** tool. The wheels of the recorder will start to spin to let you know that Panorama is recording your actions (see "Creating a Procedure with the Recorder" on page 1476).
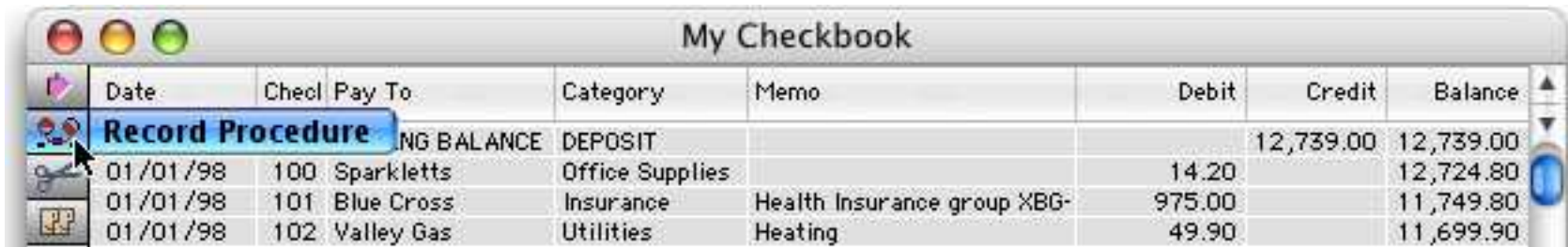
Your job is to create procedures that automate the summary process you just learned. With the recorder running (make sure the reels are spinning) perform the following steps (the same steps you just performed, see "Calculating Subtotals" on page 90).

Step	Action
1	Click on the Date field.
2	Choose **Group Up** from the Sort menu.
3	Choose the Month option.
4	Click on the **Group** button.
5	Click on the Category field.
6	Choose **Group Up** from the Sort menu.
7	Click on the Debit field.
8	Choose **Total** from the Math menu.
9	Choose **Outline Level** from the Sort menu.
10	Click on the **2** button.

When you've finished with these steps press the **Record Procedure** tool again. This stops the recording.
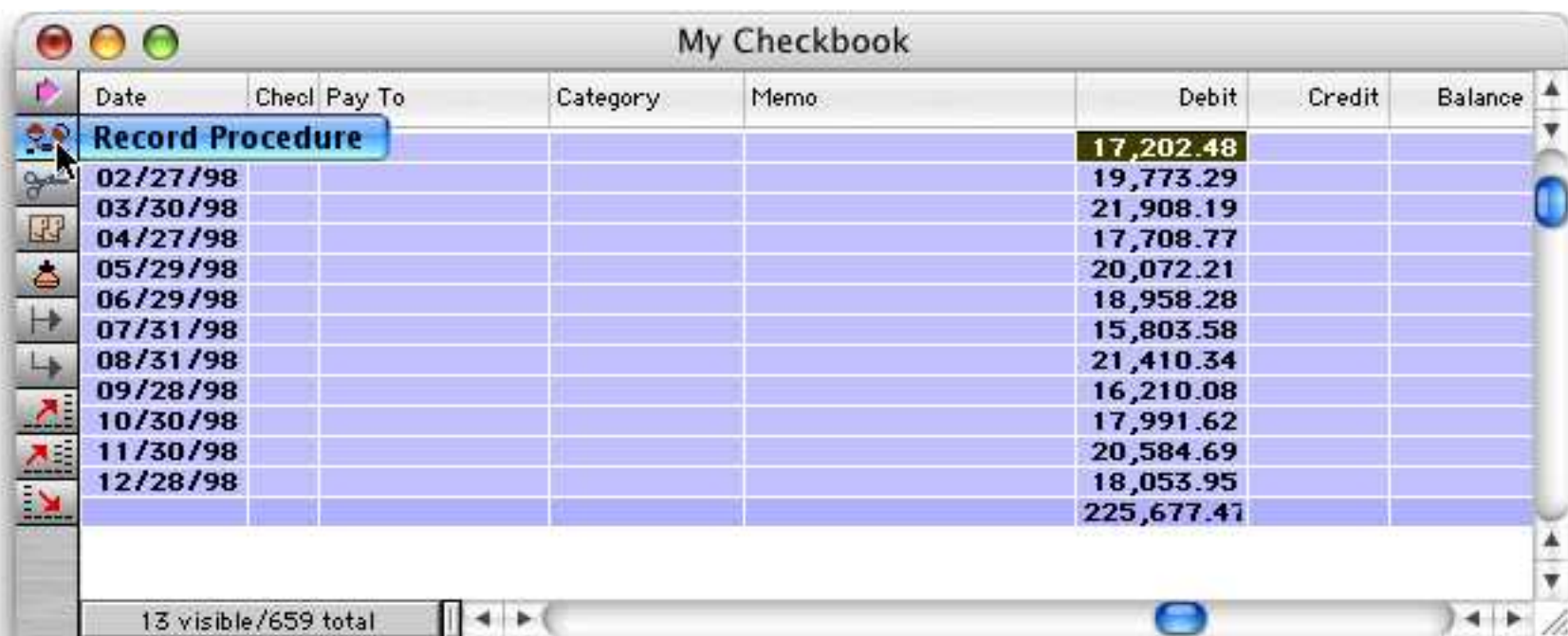
After you stop the recorder a dialog box will appear. Type in the name of the new procedure (in this case Month & Category Totals) and press the **Save Procedure** button.
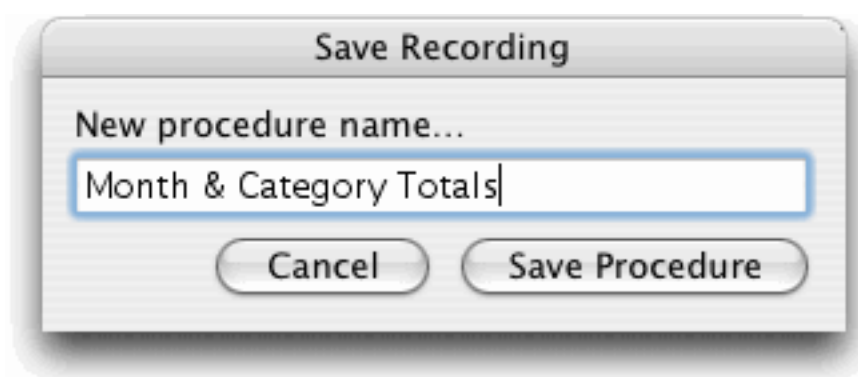
Next you'll create another procedure to remove the summaries and restore the original order of the data (see "Removing Summary Records" on page 101). Start by turning the recorder back on again.
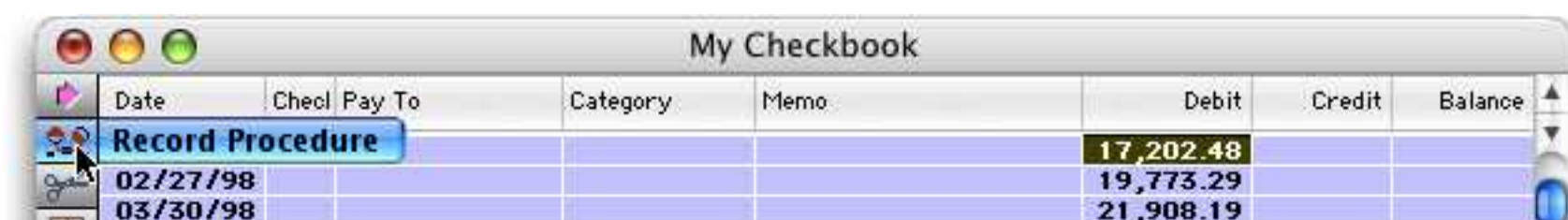
With the recorder running perform the following steps.

Step	Action
1	Choose **Remove Summaries** from the Sort menu.
2	Click on the **Remove ALL Summaries** button.
3	Click on the Date field.
4	Choose **Sort Up** from the Sort menu.
5	Click on the Check field.
6	Choose **Sort Up Within** from the Sort menu.

When you've finished with these steps press the **Record Procedure** tool again to stop the recording.
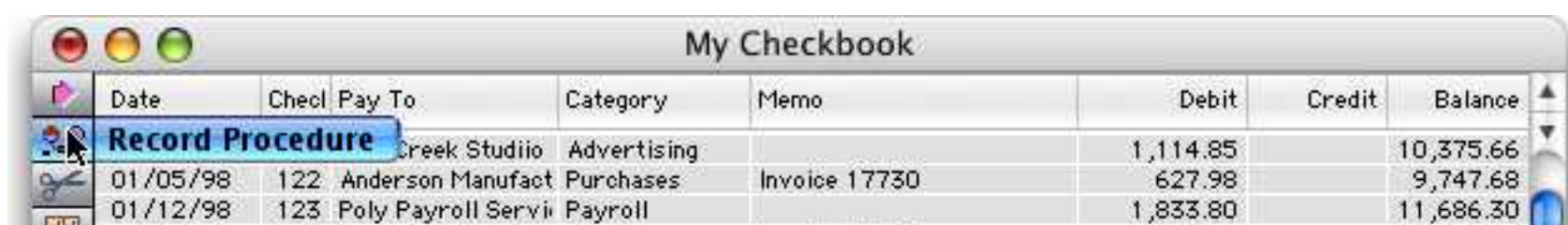
Panorama will ask you to give this procedure a name of its own.

Before you go any further you should **Save** your database with the new procedures you just created.

Using the Action Menu

If you look closely you'll see that a new menu has appeared — the **Action** menu. This menu contains the two procedures you just recorded.
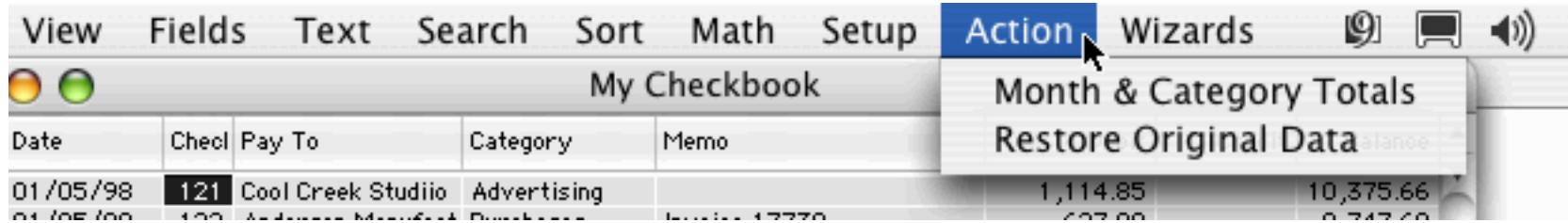
When you choose a command from this menu it replays the steps that were recorded in the procedure. Choose the **Month & Category Totals** command now. Panorama replays the 10 steps in this procedure as fast as it can — zip zip zip.
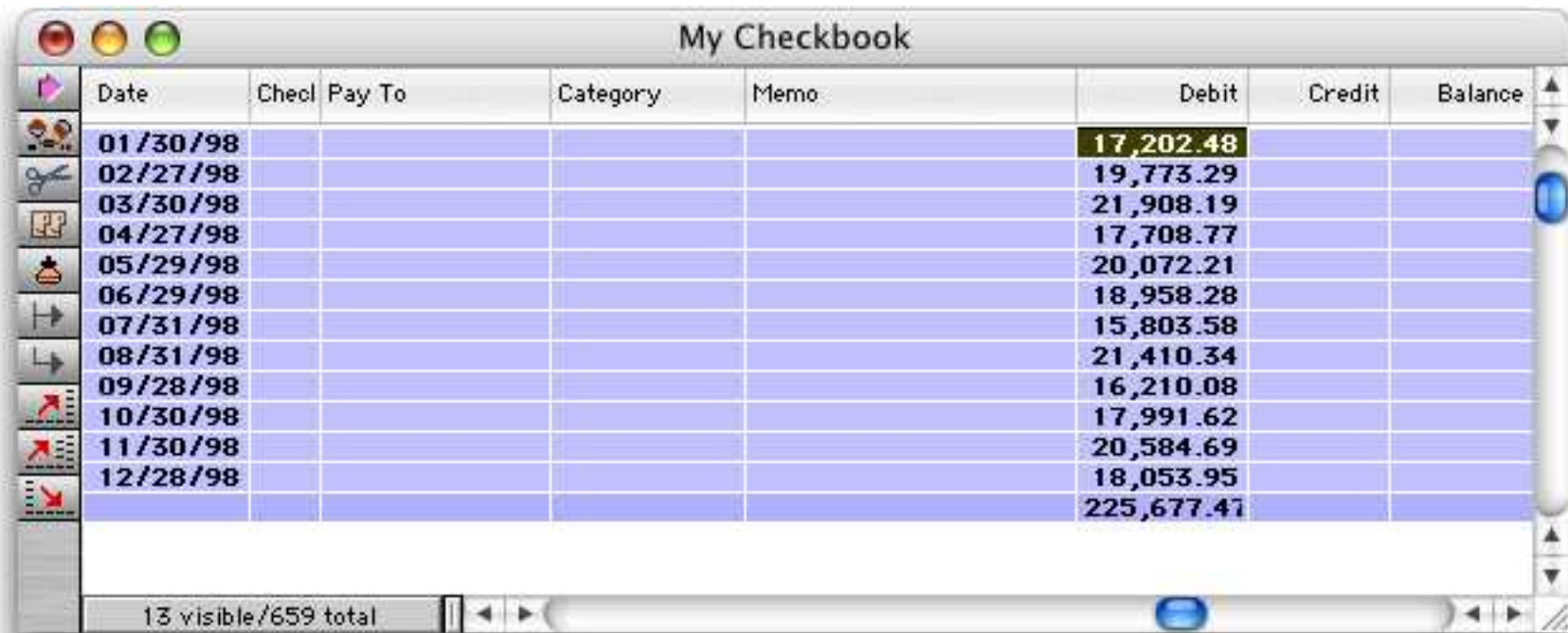
Now choose the **Restore Original Data** command to quickly remove the summary records and restore the original data order.
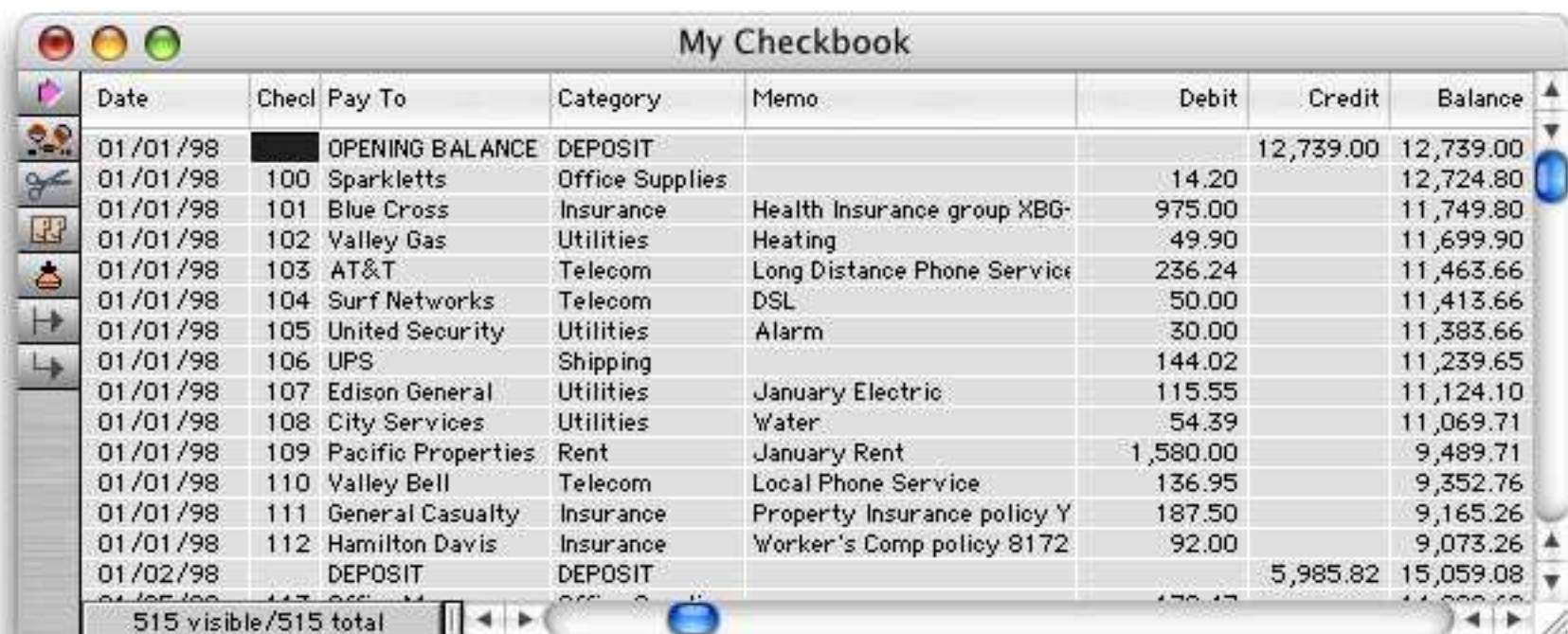
To learn more about the **Action** menu see "The Action Menu" on page 1586.

Editing a Procedure

To see what is inside a procedure open the procedure with the **View** Menu.
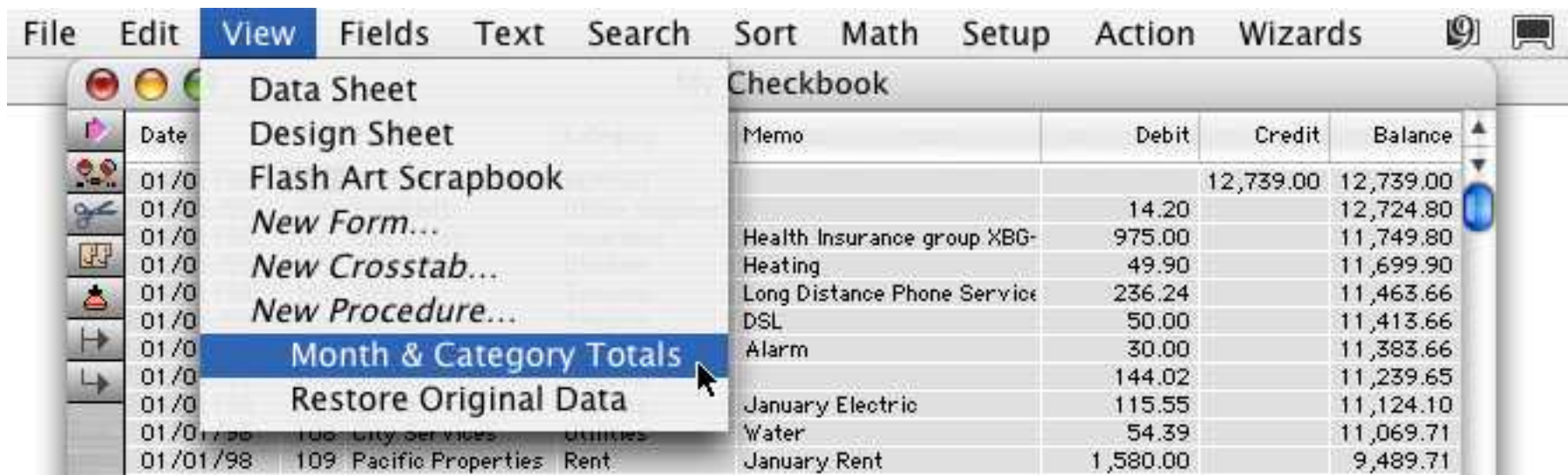
The window switches from the Data Sheet to show the procedure. Each command you recorded appears in a simple English-like format.
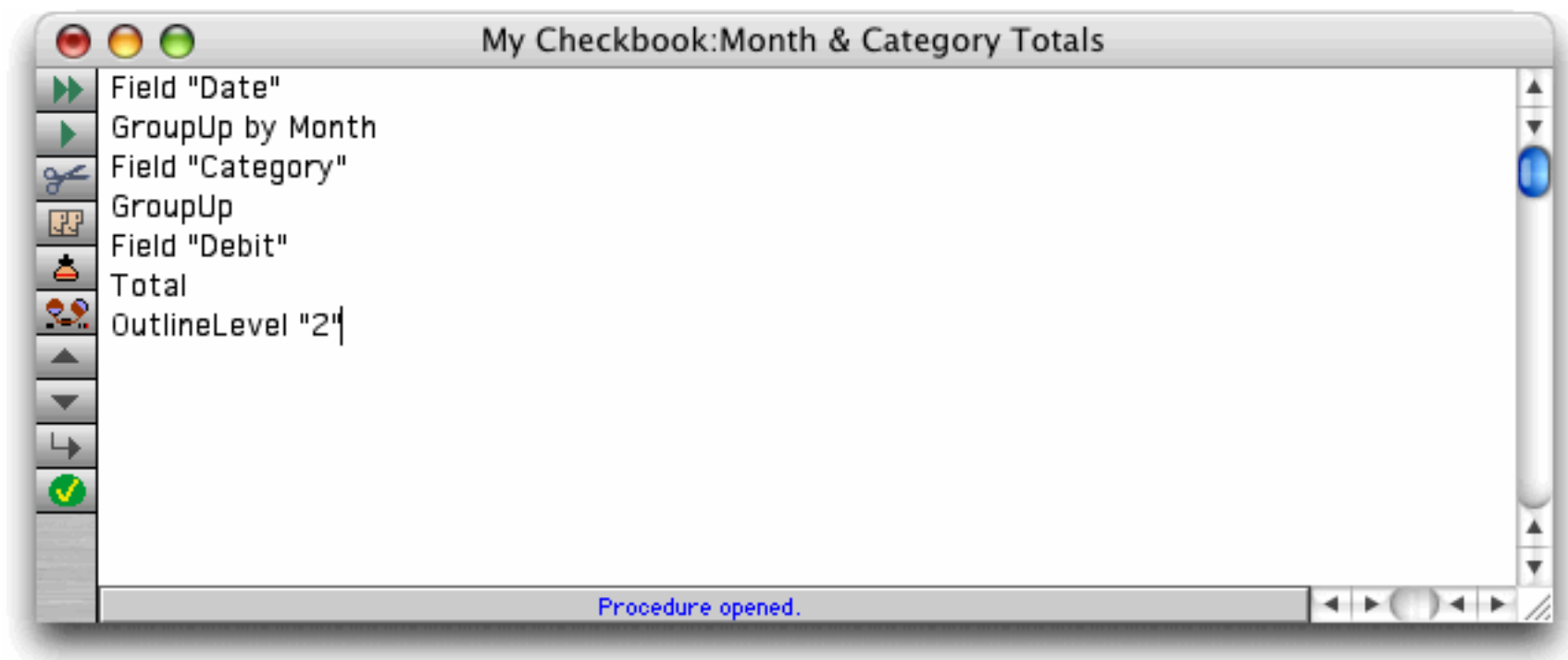
Panorama has hundreds of commands that can be used in a procedure — in fact, it has a complete programming language. The fundamentals of this programming language are described starting with "Introduction to (Panorama) Programming" on page 1467.

When you used the Month & Category Totals procedure you may have noticed that the screen flashed over and over again as the commands were performed. By editing the procedure to add two new commands you can eliminate the extra unnecessary flashing. Edit the procedure to add the two new commands shown in the illustration below.
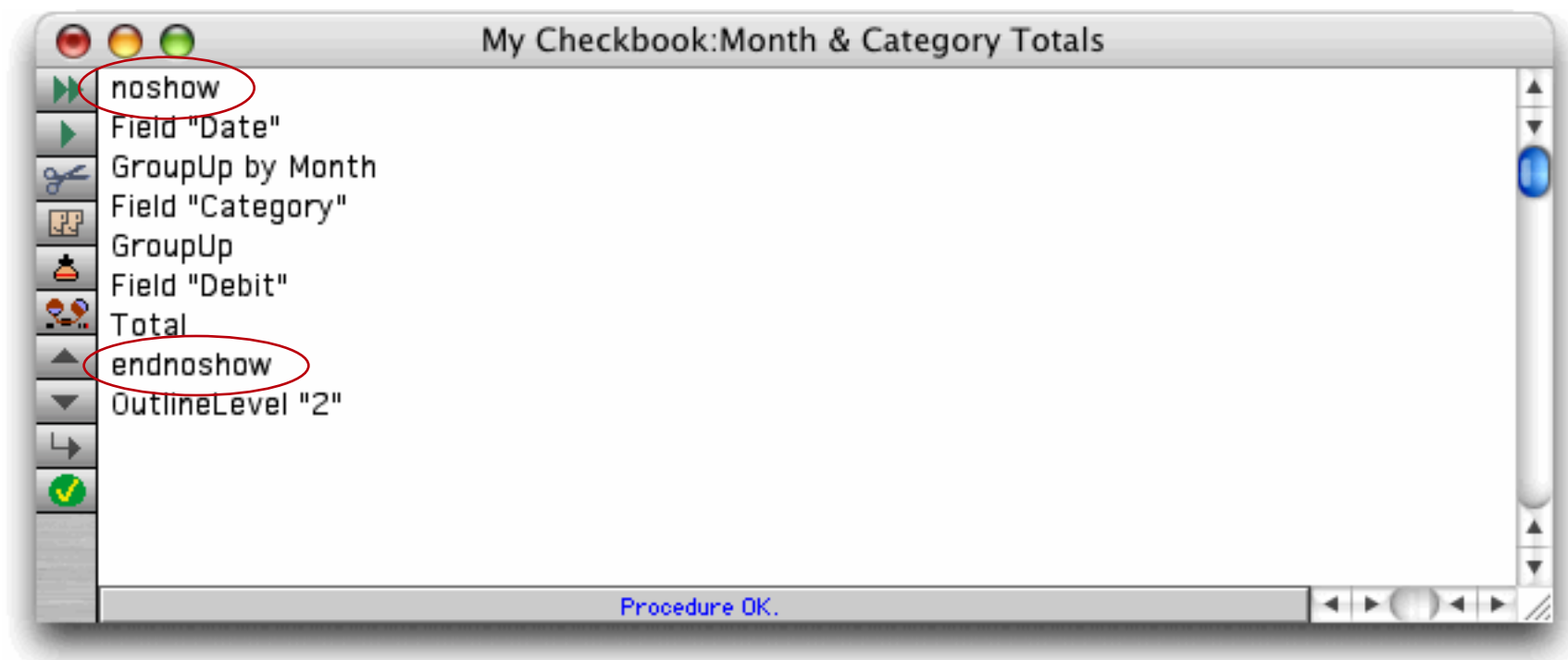
To try out the revised procedure you'll need to use the **View** menu to switch back to the Data Sheet.
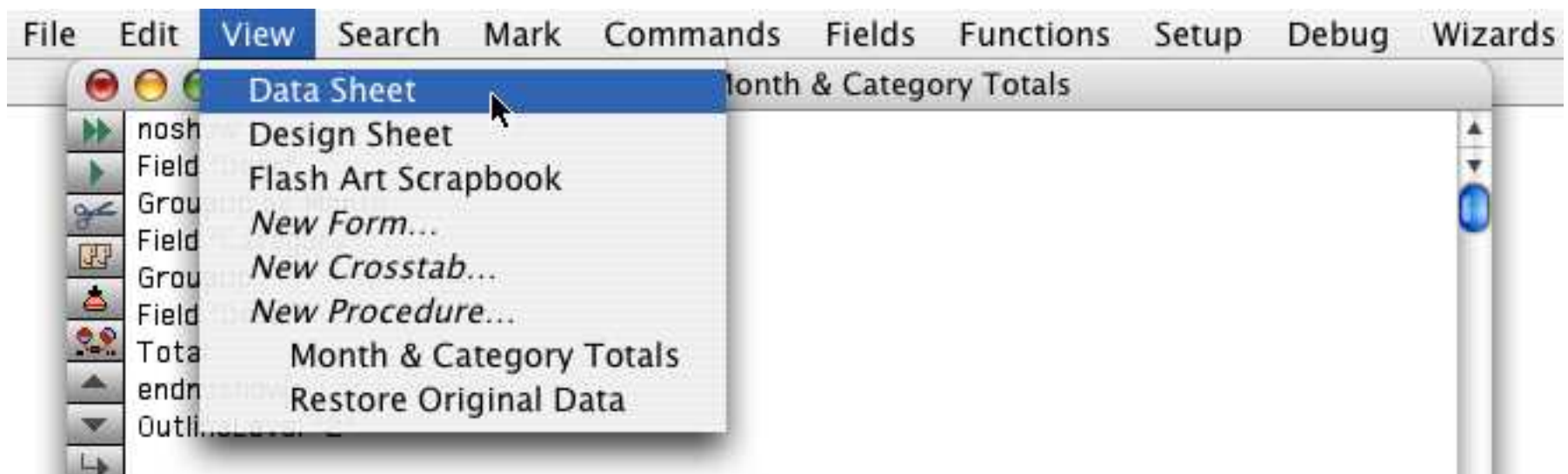
To try out your revised procedure choose it from the **Action** menu.
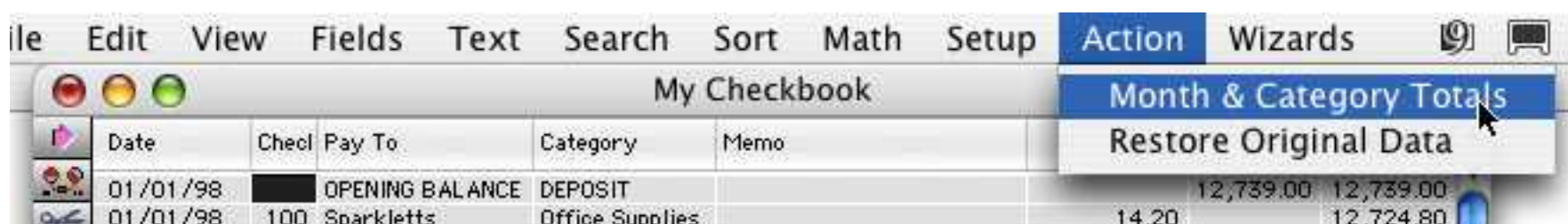
You'll notice that the procedure now runs with a minimum of extra flashing. (Actually, on a fast machine it may be a bit difficult to tell the difference for a procedure as short as this, but it can make a big difference with a slower machine or a longer procedure.)

Before moving on to the next step in the tutorial you choose the **Restore Original Data** command and then the **Save** command in the File menu to save the revised procedure.

Analyzing Data with a Crosstab

In addition to the **Group** command Panorama has another powerful tool for summarizing data — **crosstabs**. For your next trick you'll create a crosstab table that displays spending by category vs. month. To create a new crosstab view you'll use the **View** menu. If you are using a Windows PC hold down the **Alt** key, if you are using a Macintosh hold down the **Control** key. Either way, select **New Crosstab** from the View menu.
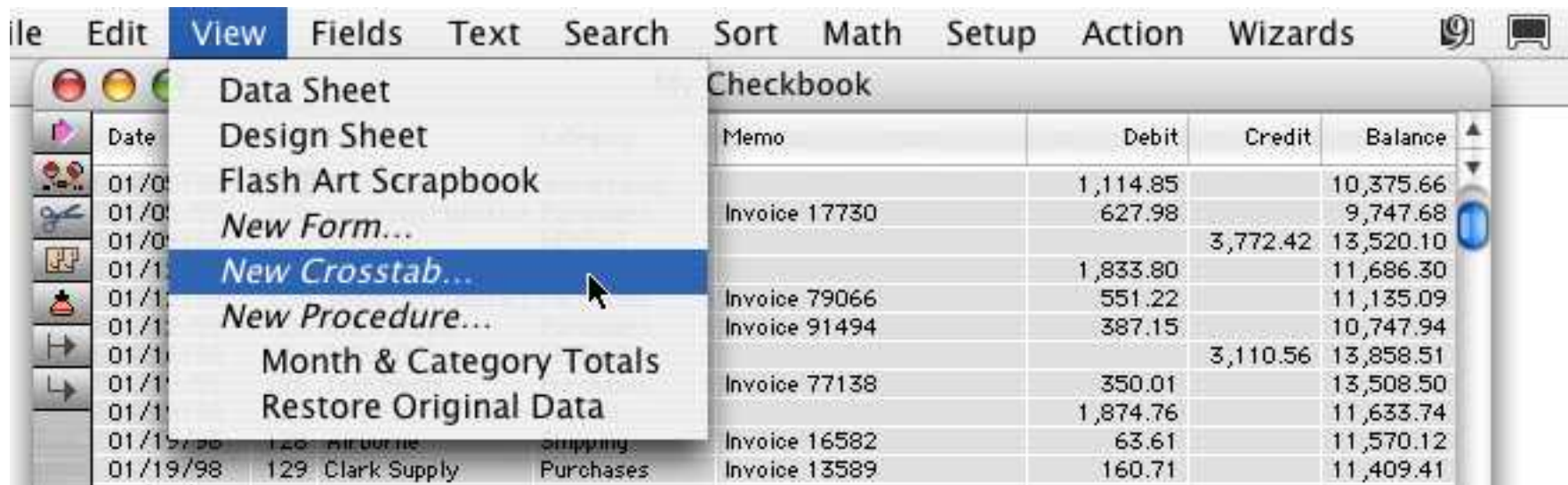
Type in the name of the new crosstab, in this case Monthly Spending, and then press the **OK** button.
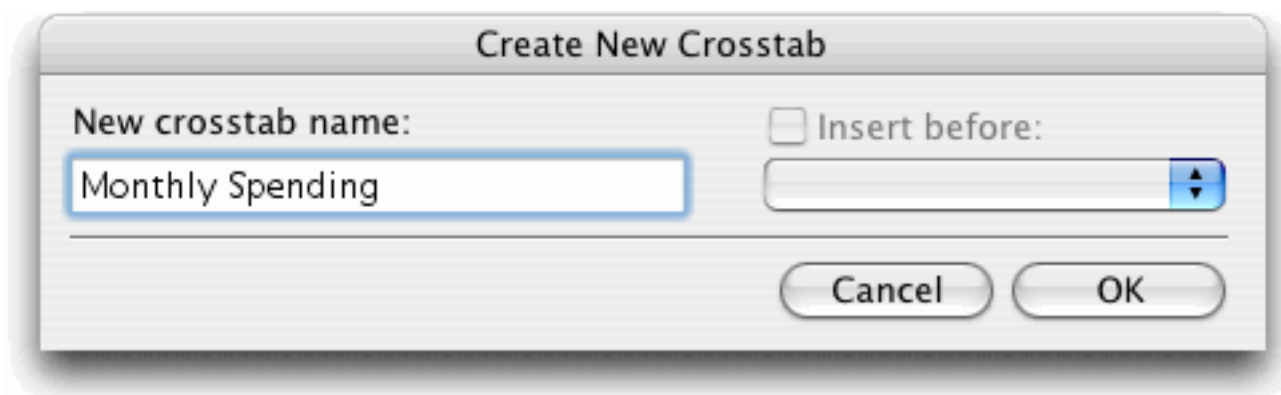
Panorama will create the new crosstab window, and then immediately open the **Crosstab** dialog. This dialog contains a list of the database fields on the left hand side. On the right hand side is a list of fields in the crosstab and a diagram of the crosstab layout (both empty to start).
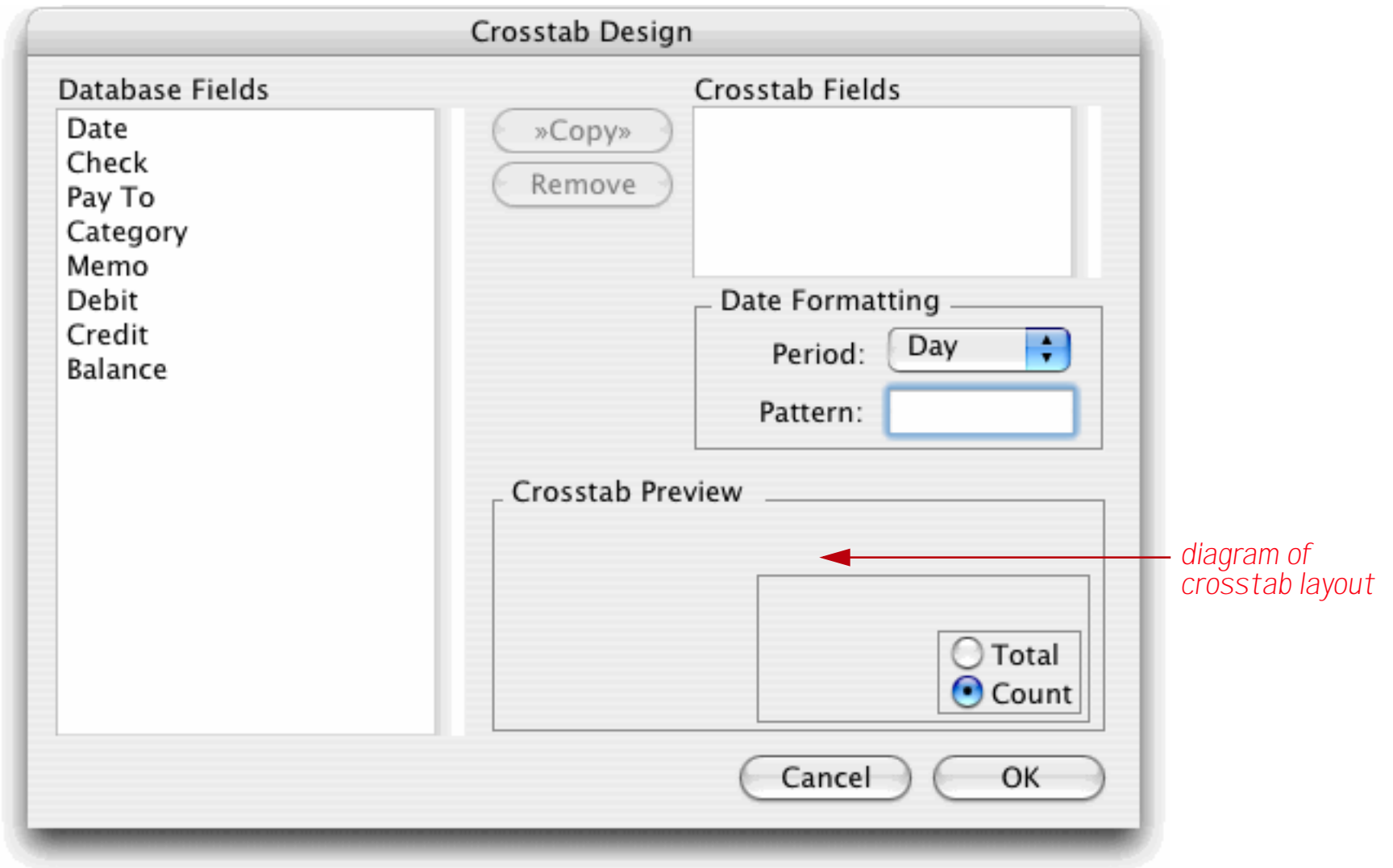
To tell Panorama to list months across the top of the crosstab click on Date and then press the »Copy» button (or double click on Date).
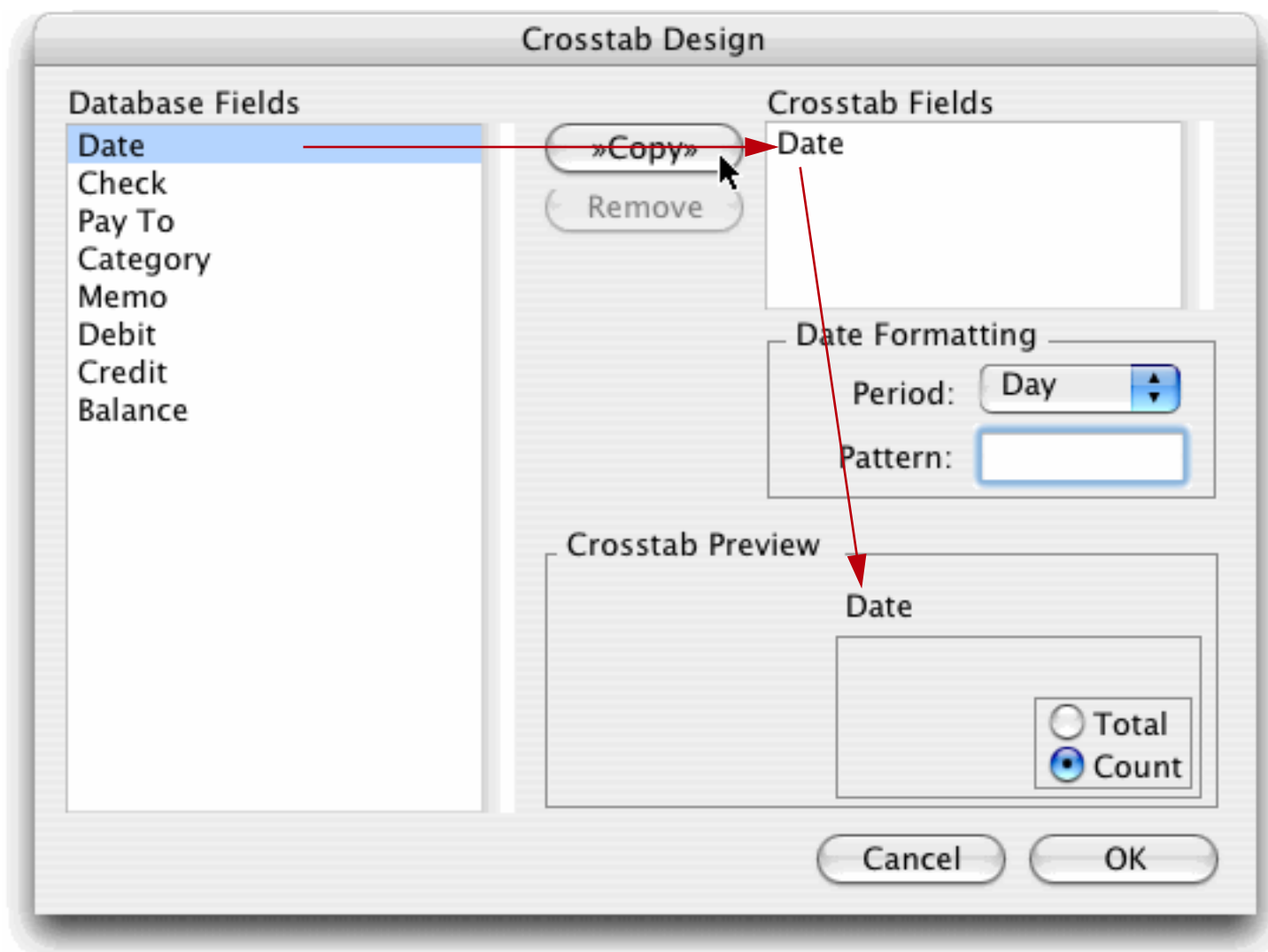
To separate the crosstab into one month per column use the pop-up menu to switch from Day to Month.
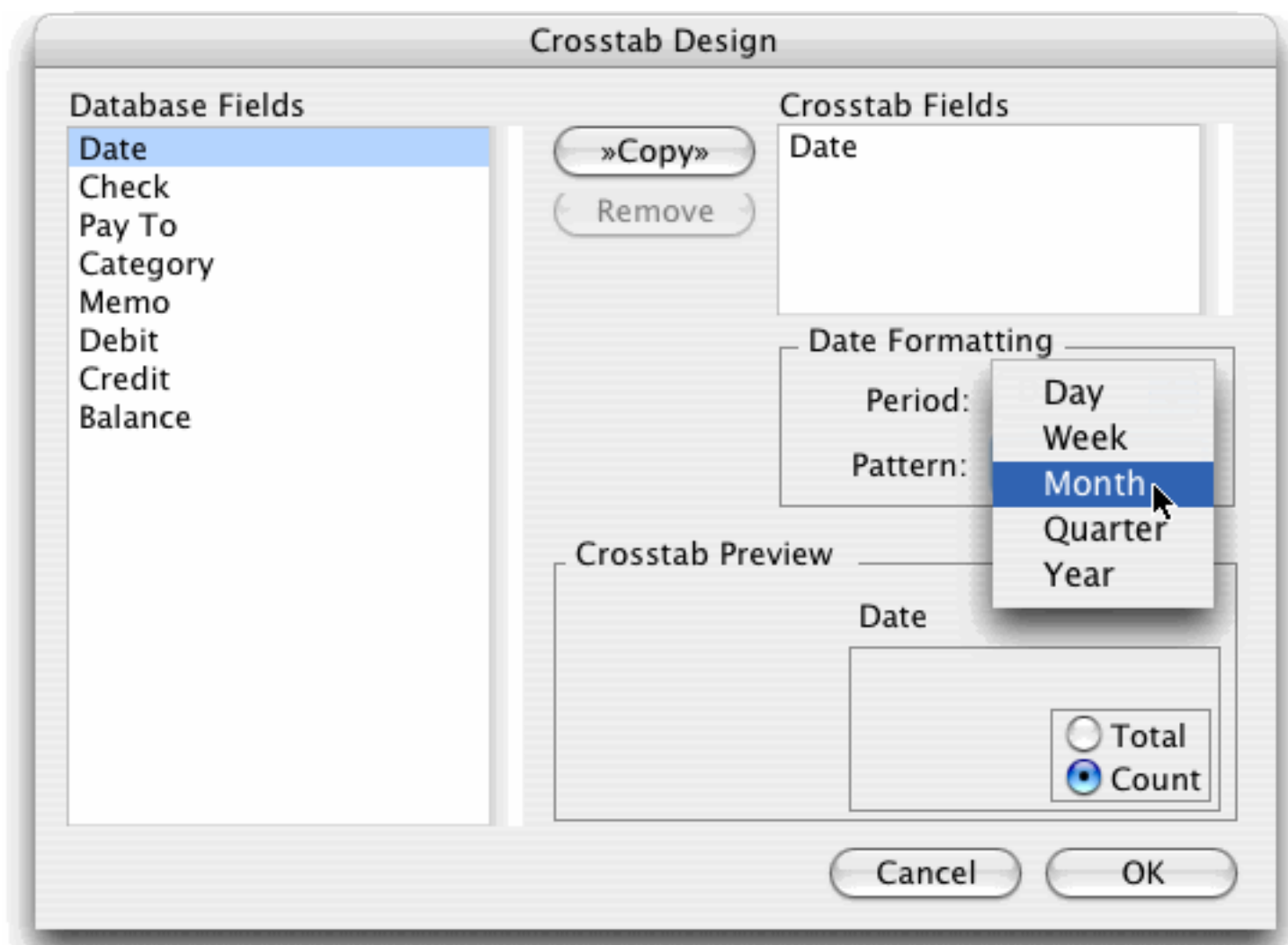
Next you need to specify the field that will appear down the left hand side of the crosstab table. Click on Category and then press the **»Copy»** button (or double click on Category).
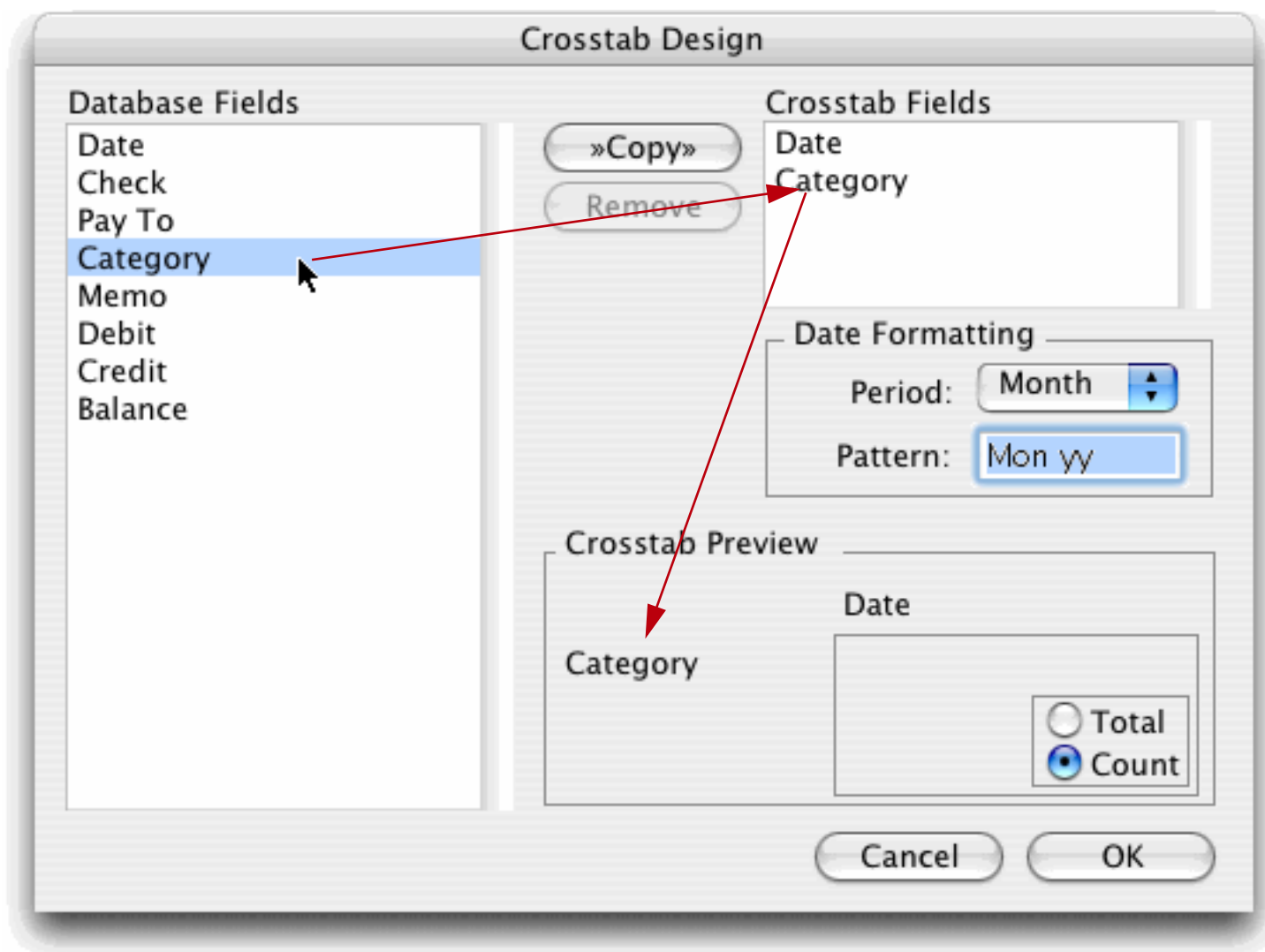
Next you must specify what goes in the middle of the crosstab table. Click on Debit and then press the **»Copy»** button (or double click on Debit).
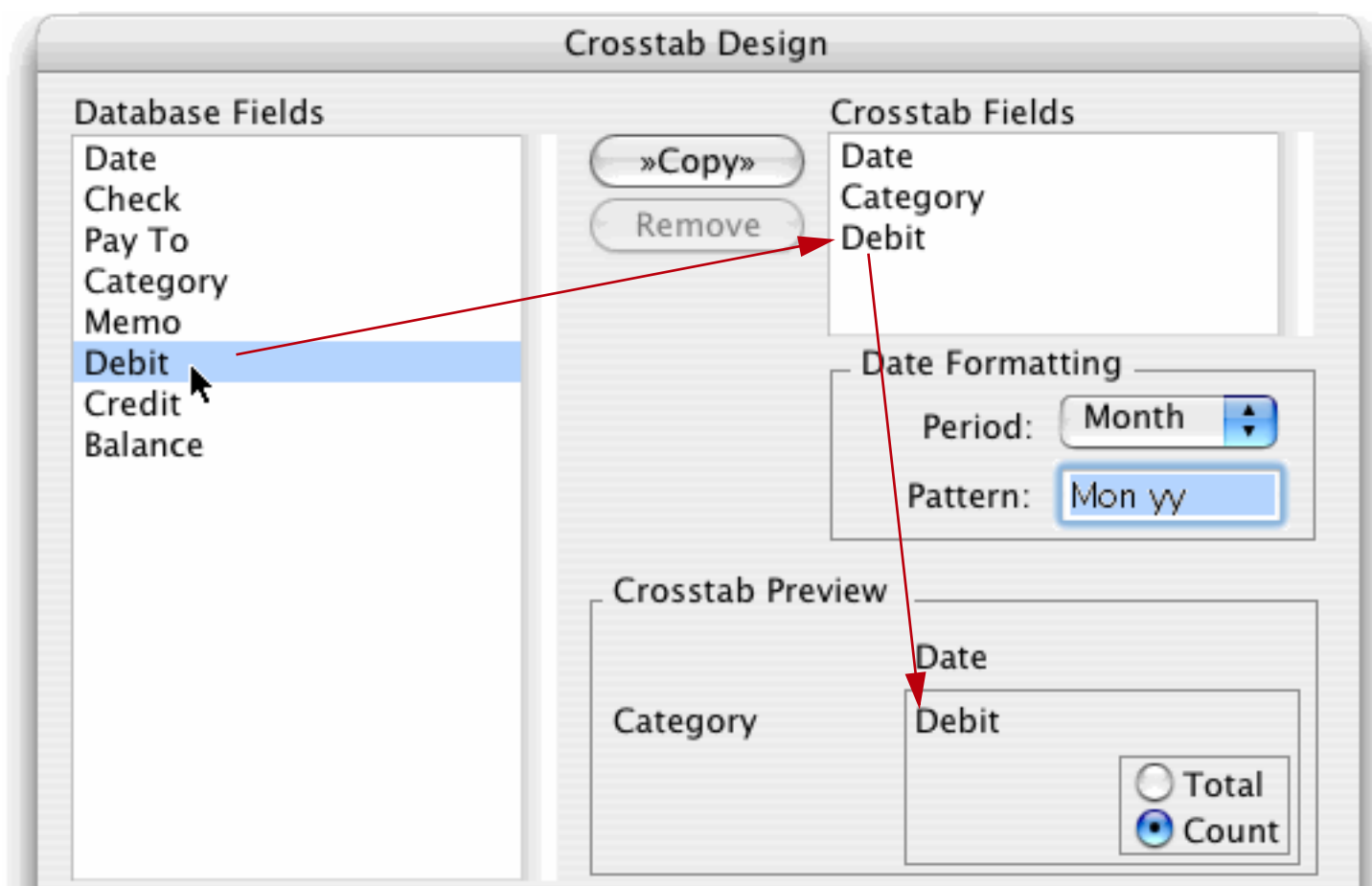
Finally, click the Total radio button so that the crosstab will add up the checks instead of counting them.

Press the OK button. Panorama will think for a few seconds, then the crosstab table will appear in a new window slightly below and to the right of the data sheet window (see "Opening More Than One Window Per Database" on page 351). The crosstab table displays a summary of the information in the database, showing categories down the left hand side and months across the top (see "Crosstabs" on page 561).

xtab	Jan 98	Feb 98	Mar 98	Apr 98	May
Advertising	1,114.85	3,874.92	2,202.67	2,631.00	2,396
DEPOSIT	0.00	0.00	0.00	0.00	0
Fixed Assets		1,974.81	1,363.94	727.11	2,828
Insurance	1,254.50	1,254.50	1,254.50	1,254.50	1,254
Legal				282.44	
Office Supplies	614.01	938.45	1,043.33	752.83	321
Payroll	7,319.30	6,966.12	9,123.23	6,726.87	7,172
Purchases	4,106.41	2,135.08	3,447.93	1,961.64	2,380
Rent	1,580.00	1,580.00	1,580.00	1,580.00	1,580
Shipping	540.39	298.76	1,228.69	1,106.24	1,486
Telecom	423.19	514.61	454.94	451.65	417

13 visible/13 total

Just as with the Data Sheet you can adjust the text size and column widths of the crosstab table (see "Adjusting Column Widths, Font and Size" on page 14).
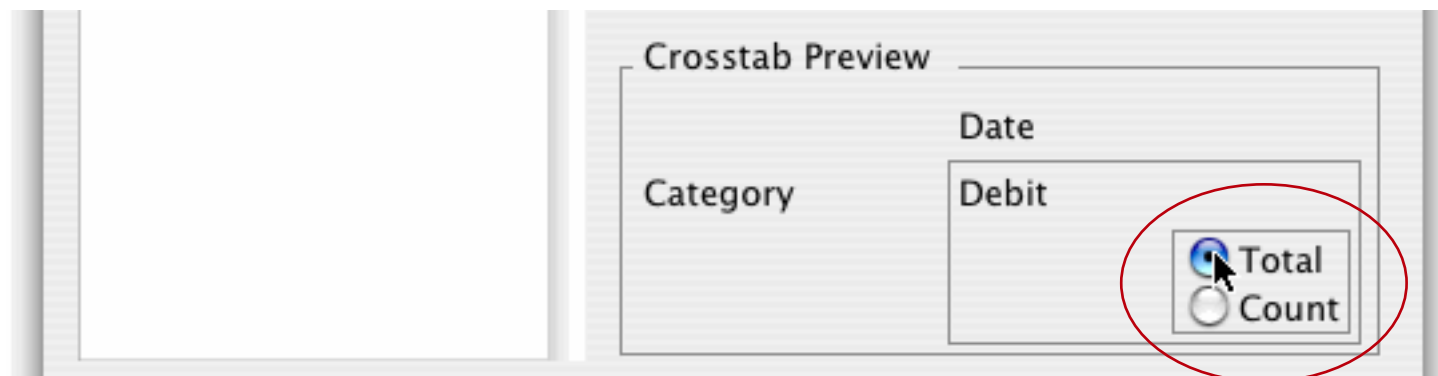

xtab	Jan 98	Feb 98	Mar 98	Apr 98	May 98	Jun 98	Jul 98
Advertising	1,114.85	3,874.92	2,202.67	2,631.00	2,396.43	2,653.66	1,198.08
DEPOSIT	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fixed Assets		1,974.81	1,363.94	727.11	2,828.50		
Insurance	1,254.50	1,254.50	1,254.50	1,254.50	1,254.50	1,254.50	1,254.50
Legal				282.44			
Office Supplies	614.01	938.45	1,043.33	752.83	321.54	481.47	690.04
Payroll	7,319.30	6,966.12	9,123.23	6,726.87	7,172.42	8,966.83	6,956.52
Purchases	4,106.41	2,135.08	3,447.93	1,961.64	2,380.31	2,567.58	2,264.56
Rent	1,580.00	1,580.00	1,580.00	1,580.00	1,580.00	1,580.00	1,580.00
Shipping	540.39	298.76	1,228.69	1,106.24	1,486.10	835.82	1,136.65
Telecom	423.19	514.61	454.94	451.65	417.80	402.95	530.83
Utilities	249.84	236.05	208.95	234.49	234.61	215.48	192.41
TOTAL	**17,202.48**	**19,773.29**	**21,908.19**	**17,708.77**	**20,072.21**	**18,958.28**	**15,803.58 2**

13 visible/13 total

You can split the window into two separate panes by dragging the **splitter** to the right. The **splitter** is the small black rectangle to the left of the horizontal scroll bar (see "Splitting a Window" on page 326).

Once the window has been split in two you can horizontally scroll each pane separately. If you scroll all the way to the right you will see the overall totals for each category.

To learn more about crosstabs see "Crosstabs" on page 561.

Auditing the Crosstab Table

As you examine a crosstab you may find that you need to check out the backup detail behind a certain number. Doing this is easy—just click on the number and then click the **Select Original Data** tool. For example, suppose you want to see the individual checks written for purchases in November of 1998. Simply click on the Nov 98 Purchases cell and click on the tool.

Date	Checl	Pay To	Category	Memo	Debit	Credit	Balance
01/01/98		OPENING BALANCE	DEPOSIT			12,739.00	12,739.00
01/01/98	100	Sparkletts	Office Supplies		14.20		12,724.80
01/01/98	101	Blue Cross	Insurance	Health Insurance group XBG-	975.00		11,749.80
01/01/98	102	Valley Gas	Utilities	Heating	49.90		11,699.90
01/01/98	103	AT&T	Telecom	Long Distance Phone Service	236.24		11,463.66
01/01/98	104	Surf Networks	Telecom	DSL	50.00		11,413.66
01/01/98	105	United Security	Utilities	Alarm	30.00		11,383.66
01/01/98	106	UPS	Shipping		144.02		11,239.65
01/01/98	107	Edison General	Utilities	January Electric	115.55		11,124.10
01/01/98	108	City Services	Utilities	Water	54.39		11,069.71
01/01/98	109	Pacific Properties	Rent	January Rent	1,580.00		9,489.71

My Checkbook:XTABS:Monthly Spending

xtab	Jan 98	Feb 98	Mar 98	Oct 98	Nov 98	Dec 98	TOTA
Advertising	1,114.85	3,874.92	2,202.67	3,416.08	2,607.82	2,528.52	30,011.3
	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Fixed Assets		1,974.81	1,363.94			1,063.90	10,222.6
Insurance	1,254.50	1,254.50	1,254.50	1,254.50	1,254.50	1,254.50	15,054.0
Legal				410.02	1,015.09		2,893.6
Office Supplies	614.01	938.45	1,043.33	792.24	415.42	349.14	7,425.4
Payroll	7,319.30	6,966.12	9,123.23	7,293.66	9,179.31	7,021.21	92,219.1
Purchases	4,106.41	2,135.08	3,447.93	1,881.3	2,930.92	2,501.53	29,666.4
Rent	1,580.00	1,580.00	1,580.00	1,580.00	1,580.00	1,580.00	18,960.0
Shipping	540.39	298.76	1,228.69	722.99	938.68	1,084.98	11,183.6
Telecom	423.19	514.61	454.94	445.13	468.80	449.00	5,450.3
Utilities	249.84	236.05	208.95	195.59	184.14	221.17	2,590.7
TOTAL	**17,202.48**	**19,773.29**	**21,908.19**	**17,991.62**	**20,584.69**	**18,053.95**	**225,677.**

Select Original Data

13 visible/13 total

After you click on the tool the data sheet shows the detail for the crosstab cell you clicked on, in this case the nine checks made for purchase in November of 1998.

You can use the **Select Original Data** tool with any cell in the crosstab. In this illustration it has been used to select all Fixed Assets regardless of month.
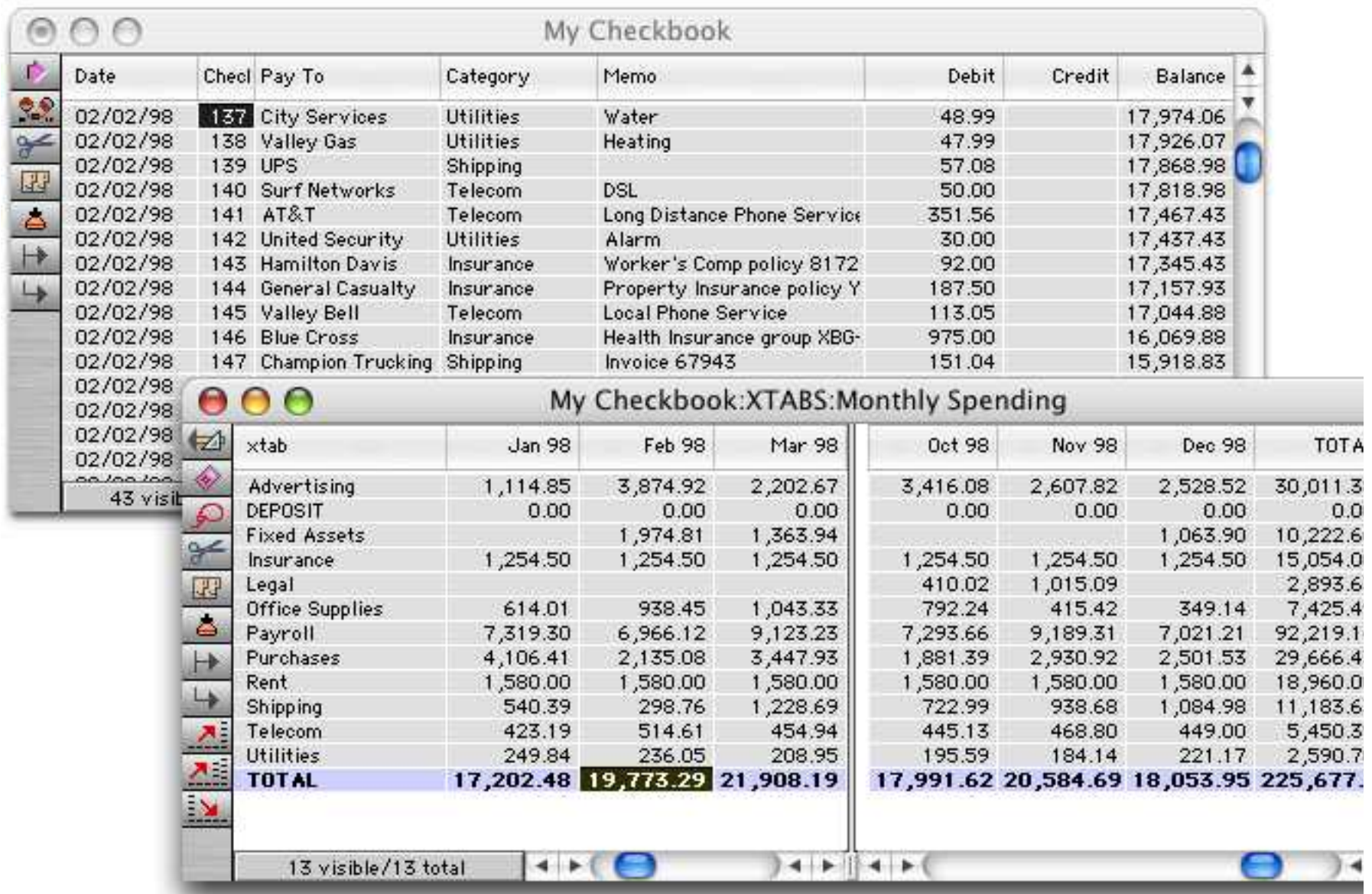
If you click on one of the cells in the bottom line and use the **Select Original Data** tool Panorama will select an entire month of checks, in this case all 43 checks written in February of 1998.

When you are done with the crosstab close the window and, if necessary, use **Select All** in the Search menu to make all the records in the data sheet visible again (see "Selecting All Records" on page 28). You can open the crosstab again later using the **View** menu. If the data has changed use the **Calculate Crosstab** tool to re-calculate the table values.
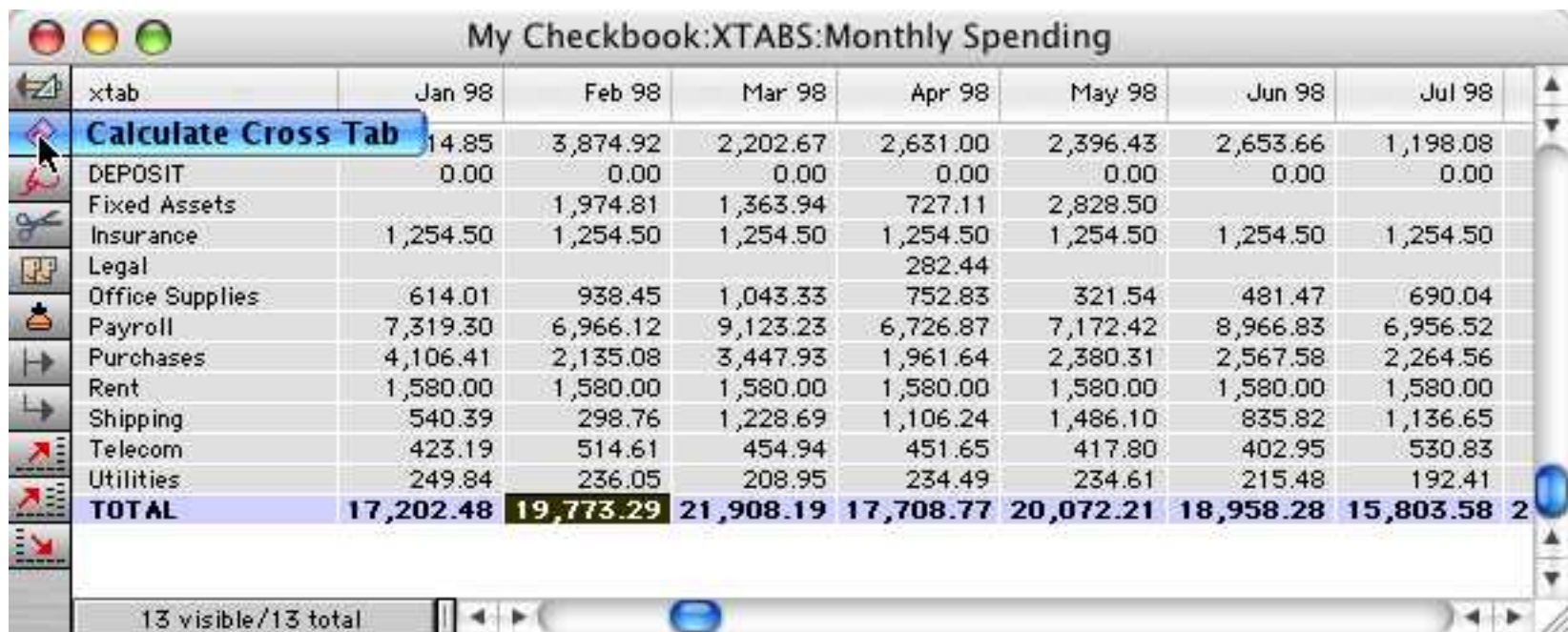
To learn more about crosstabs see "Crosstabs" on page 561.

Making a Bar Chart

Someone once said that a chart is worth a thousand numbers. Ok, that's not quite what they said, but let's create a chart anyway. Charts are usually displayed from summary records in the database (see "Calculating Subtotals" on page 90). These can be created with the **Group** and **Total** commands you learned about before. They can also be created with the **Summary & Outline Wizard**. To open this wizard choose **Summary & Outline Wizard** from the Utility submenu of the Wizard menu. The wizard contains eight pop-up menus that allow you to specify how to summarize the database.
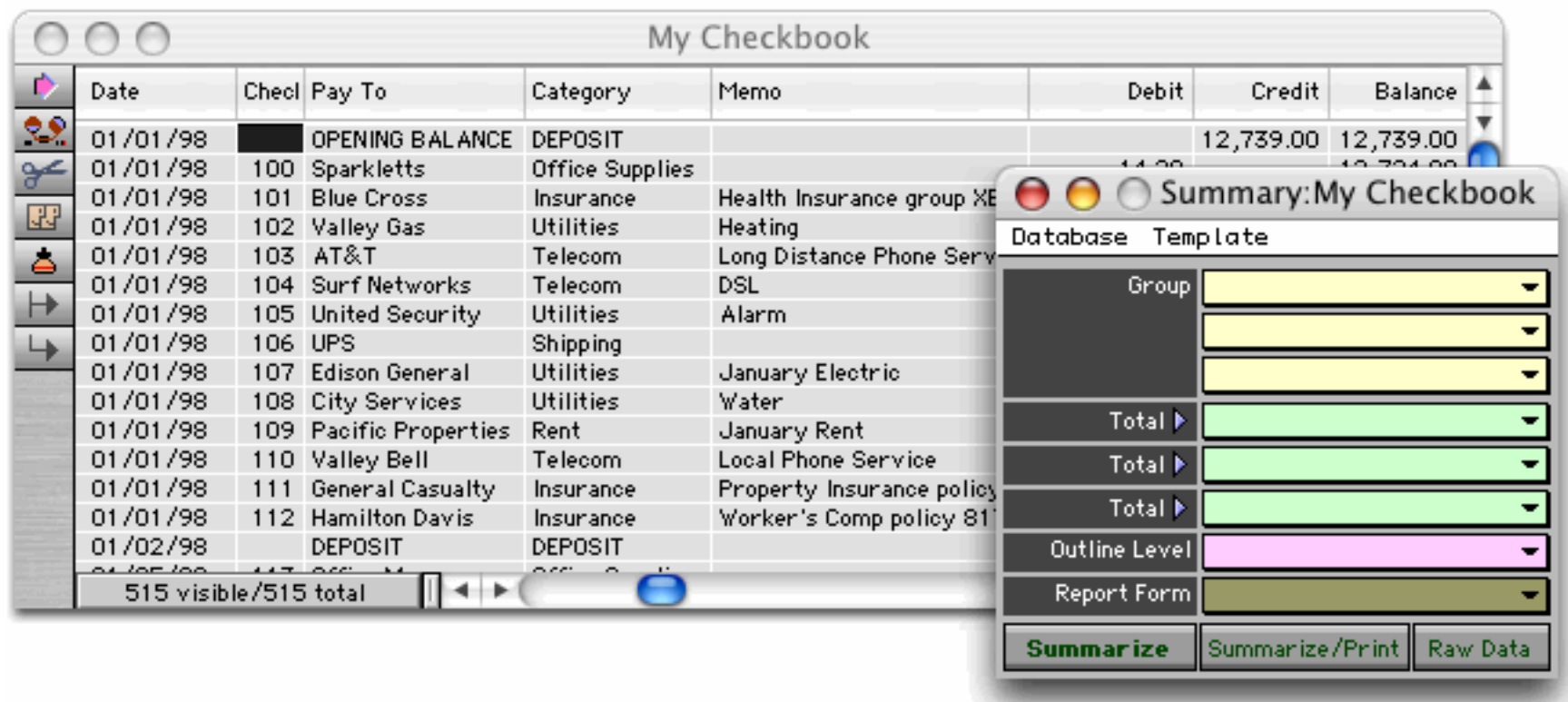
We'll make a chart to display spending per month, so choose **Date (by Month)** from the first Group pop-up menu.
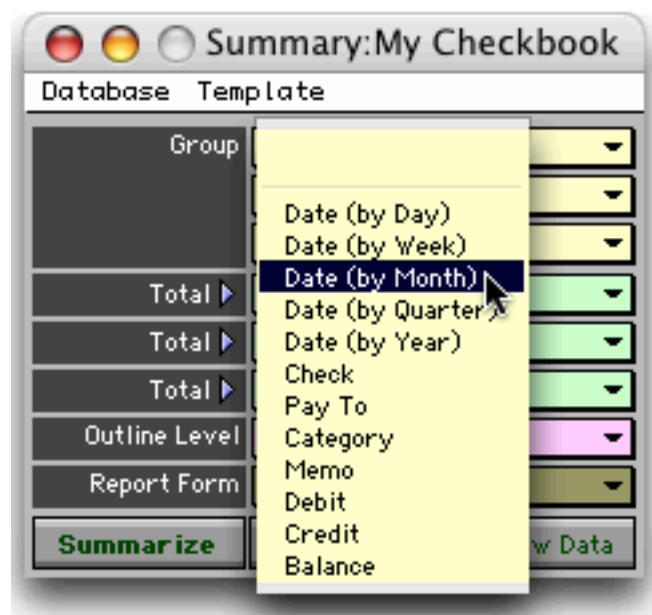
Using the pop-up menus set the first Total option to **Debit** and the Outline Level to **Date (by Month)**.
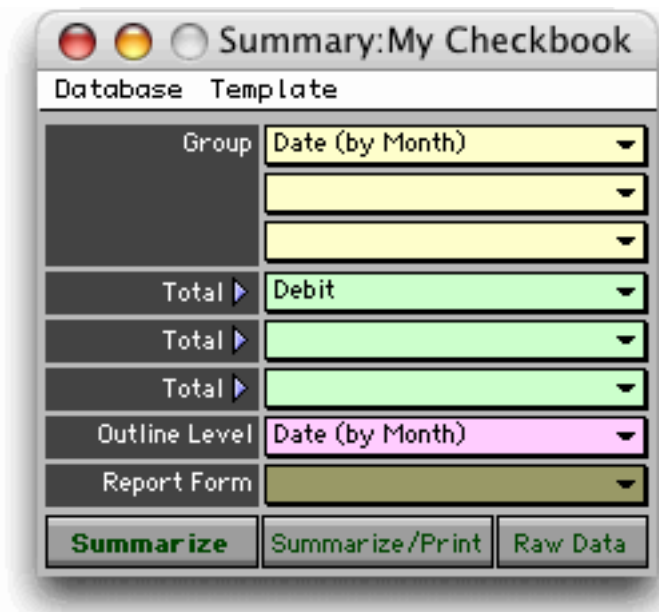
When these three options are set up press the **Summarize** button. Panorama will group, total, and collapse the database just as if you had performed these operations manually (see "Calculating Subtotals" on page 90 and "Hiding and Showing Detail" on page 94). To learn more about this wizard see "The Summaries & Outlines Wizard" on page 551.

The next step in building a chart is to create a new form. If you are using a Windows PC hold down the **Alt** key, if you are using a Macintosh hold down the **Control** key. Either way, select **New Form** from the View menu (see "Creating a New Form" on page 615).

You know the drill by now — type in the name of the new form (up to 25 characters).
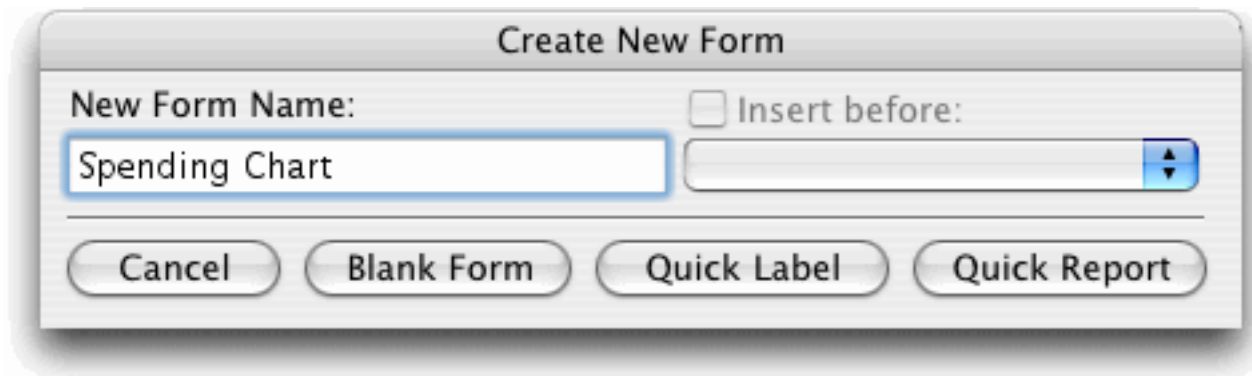
Press the **Blank Form** button to create the new form.
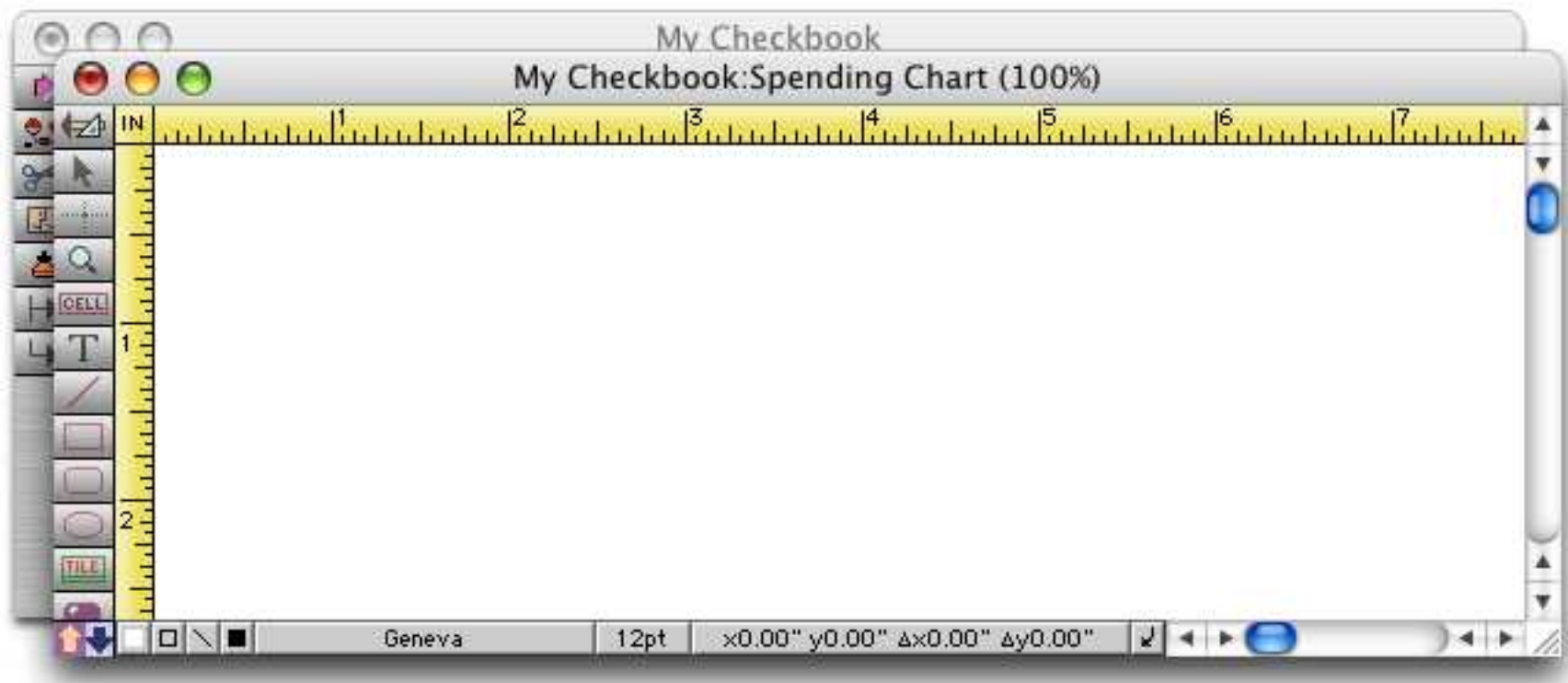
Adjust the window size to approximately the size of the chart you want to make, then click on the **Chart** tool.
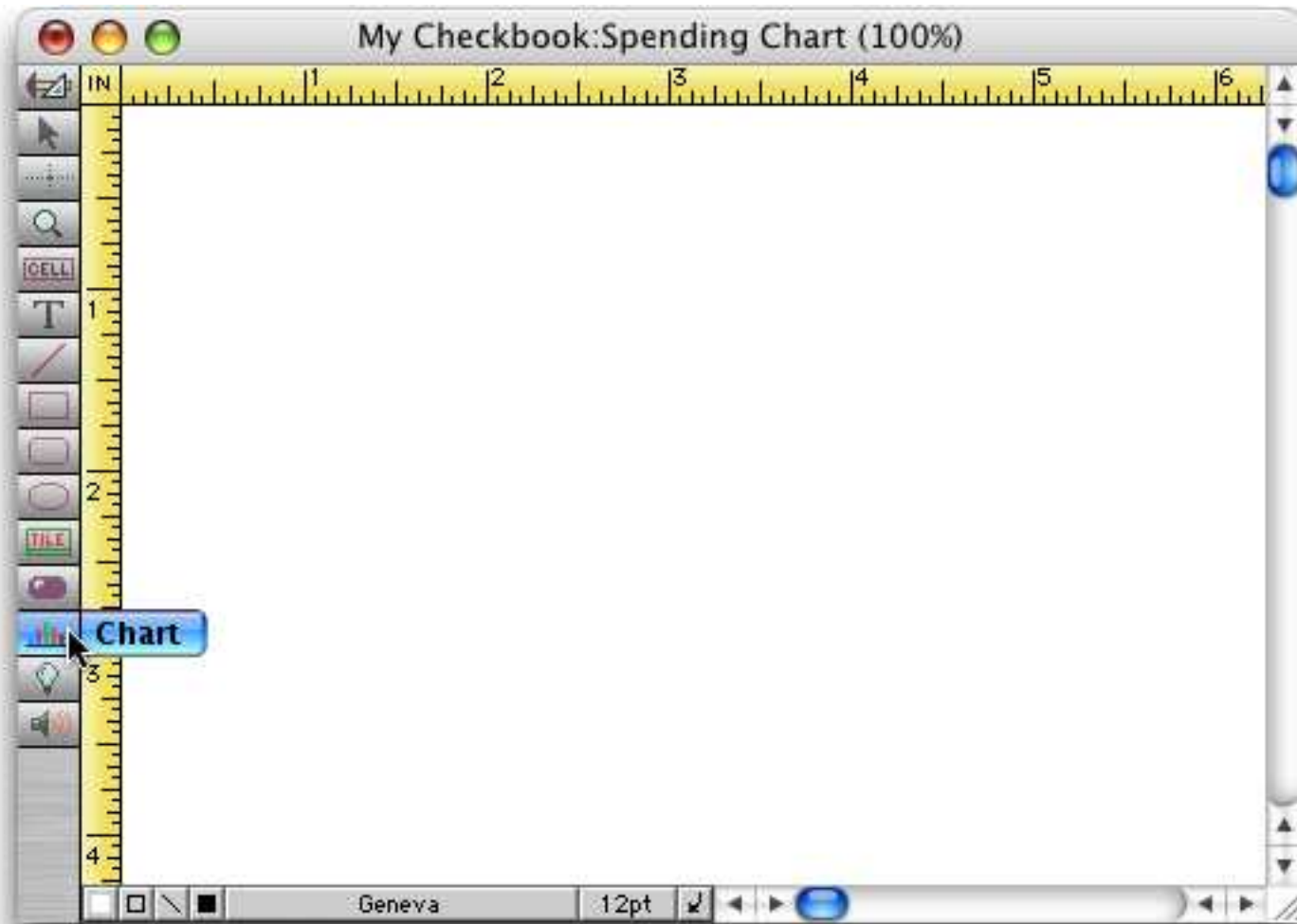
Move the mouse over the form and then drag from corner to corner to create the chart, just as you would to create a rectangle or a data cell.
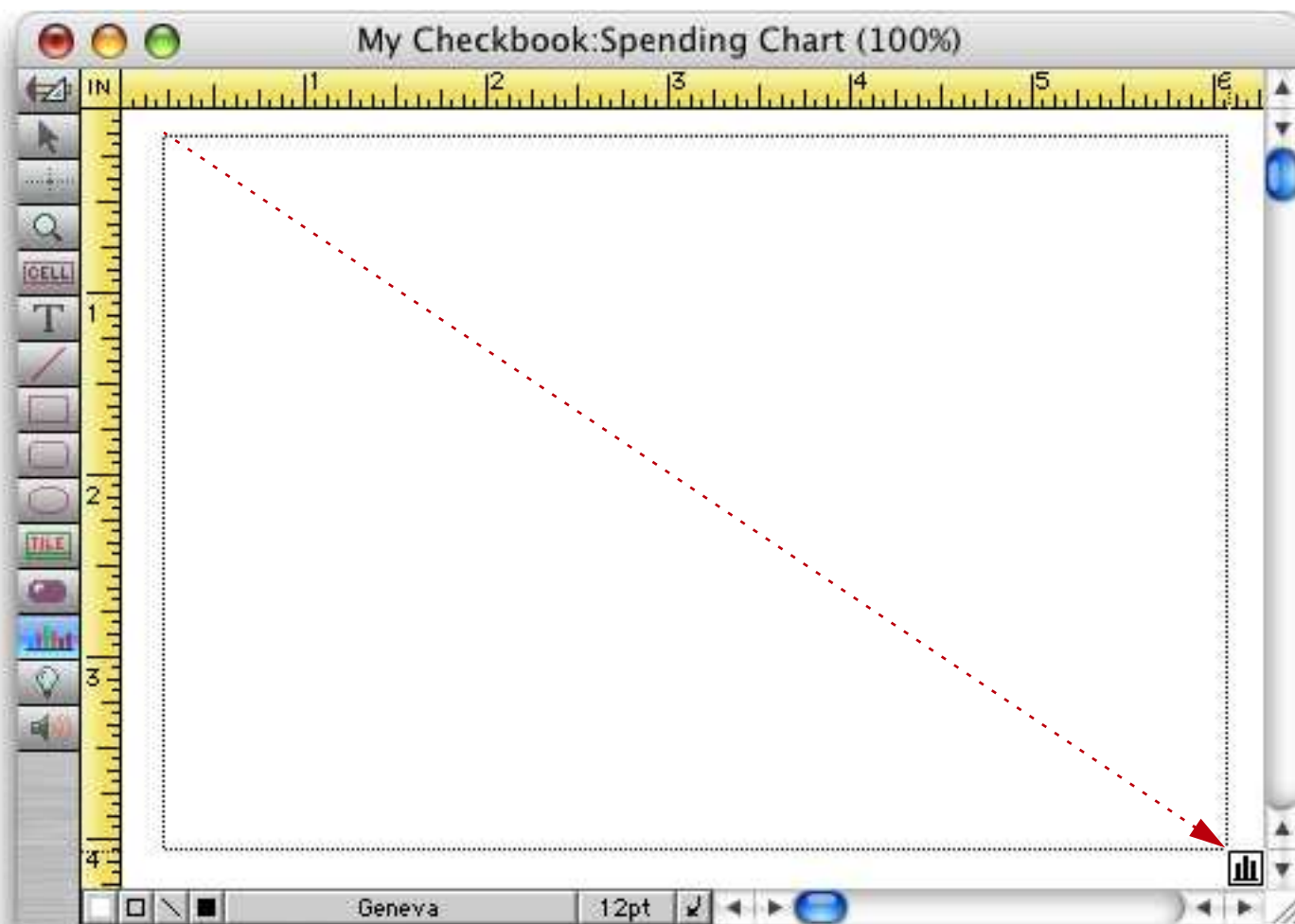
Your new chart doesn't look much like a chart yet, in fact it looks more like a dialog!
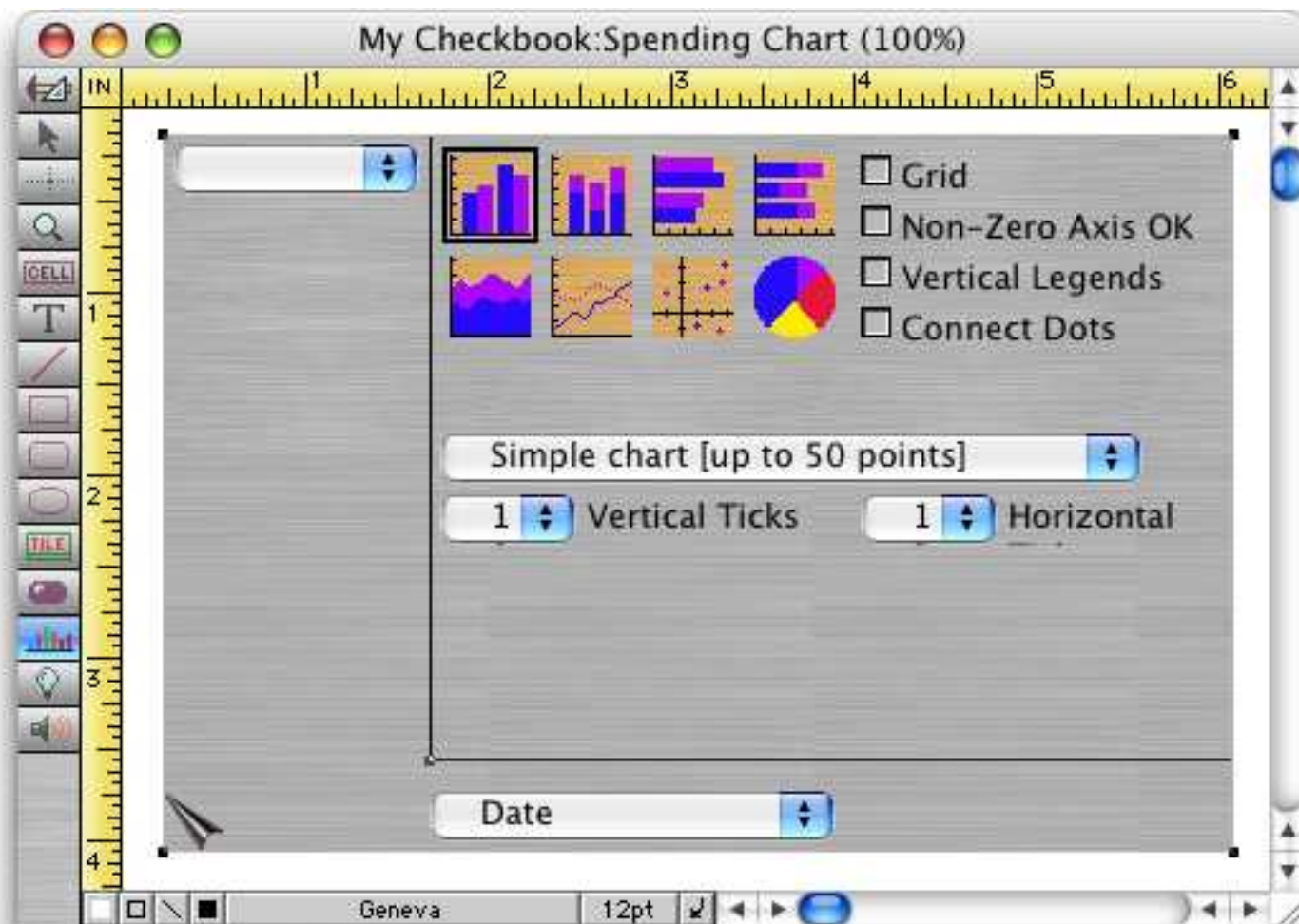
The buttons and pop-up menus in the dialog allow you to configure the chart. At a minimum, you must select a legend field and at least one value field (see "Setting Up Legend and Value Fields" on page 1116). In this case the legend field is already set to Date. Use the pop-up menu to set the value field to Debit.
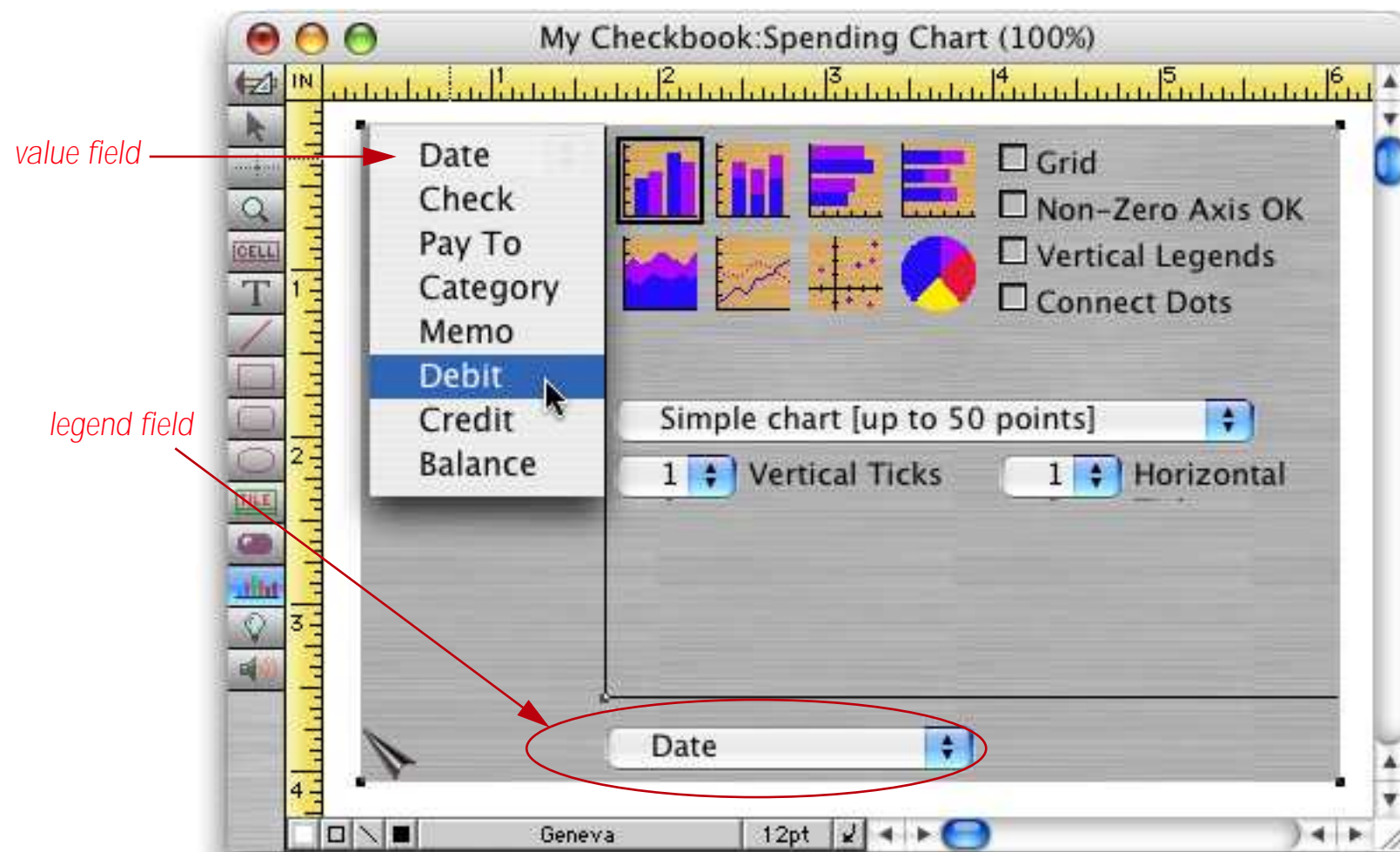
Switch to **Data Access Mode** to see the actual chart (see "<u>Form Modes: Data Access vs. Graphic Design</u>" on page 613).
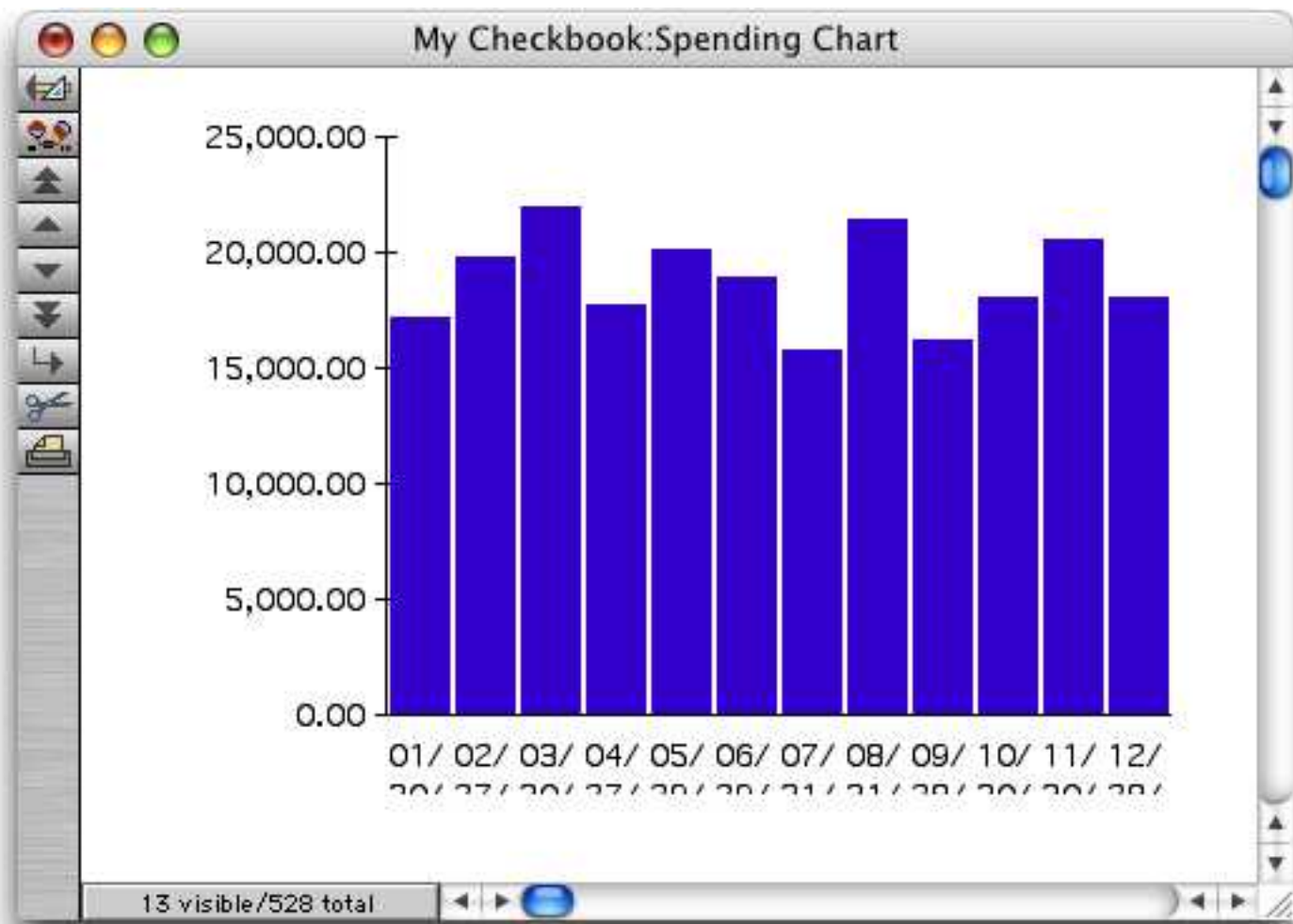
Customizing the Chart Appearance

Let's dress up the chart a little bit. To do that switch back to **Graphic Design Mode** (see "Form Modes: Data Access vs. Graphic Design" on page 613). Then click on the chart and change the font size to 9 point.
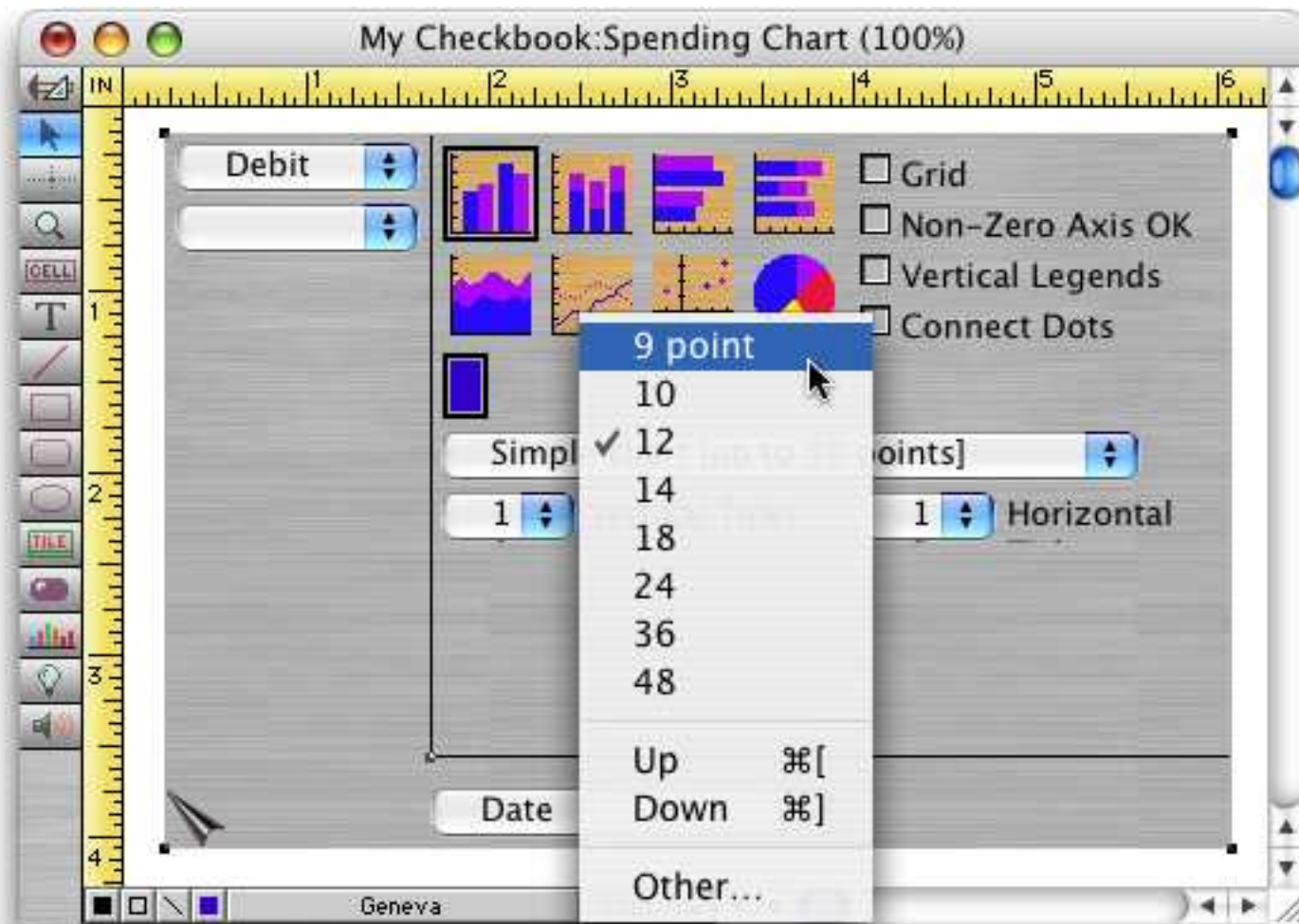
Now select the **Output Pattern** command from the Text menu.
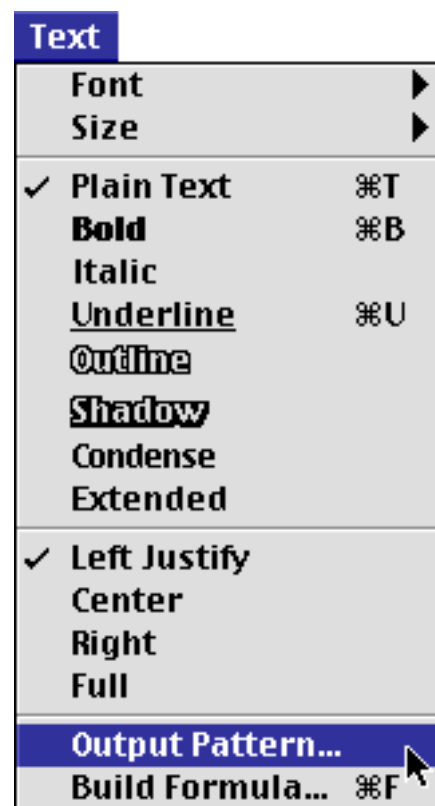
This command allows you to specify how the dates in the chart legend will be displayed. To display just the abbreviated month name (Jan, Feb, Mar, etc.) type in Mon (see "Date Output Patterns" on page 423).
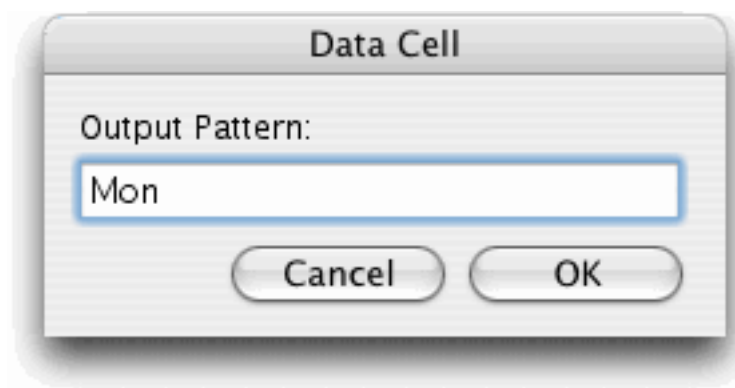
Use the color pop-up menu to select a different color for the chart bars (see "Graphic Attribute Icons" on page 1135).
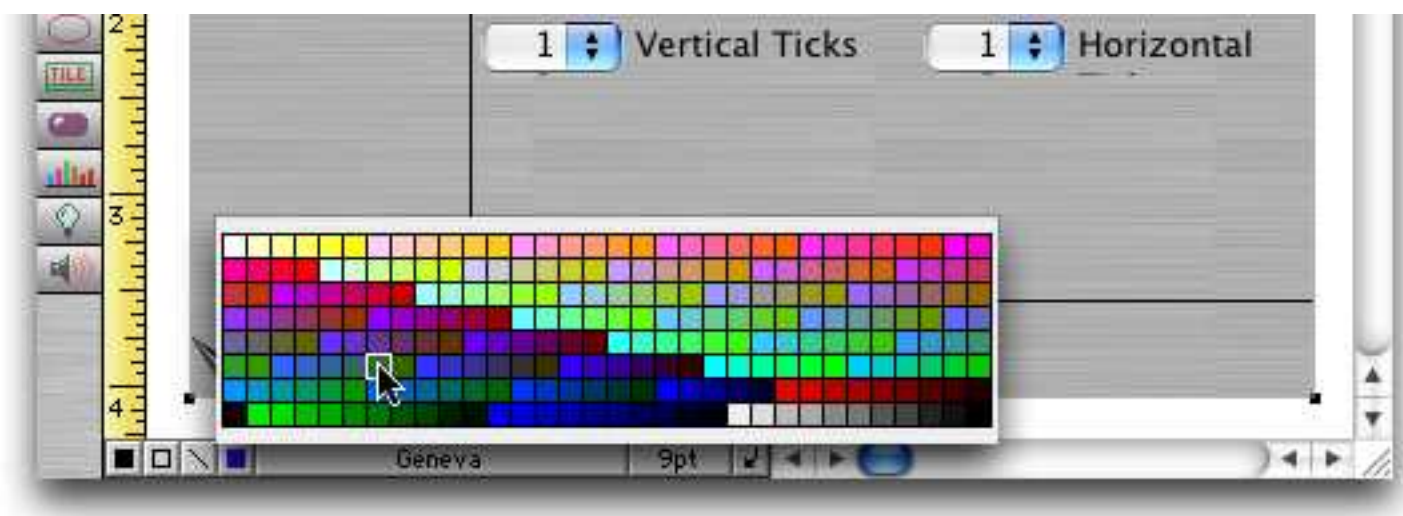
Click on the Grid option to display a dotted line from each tick mark.
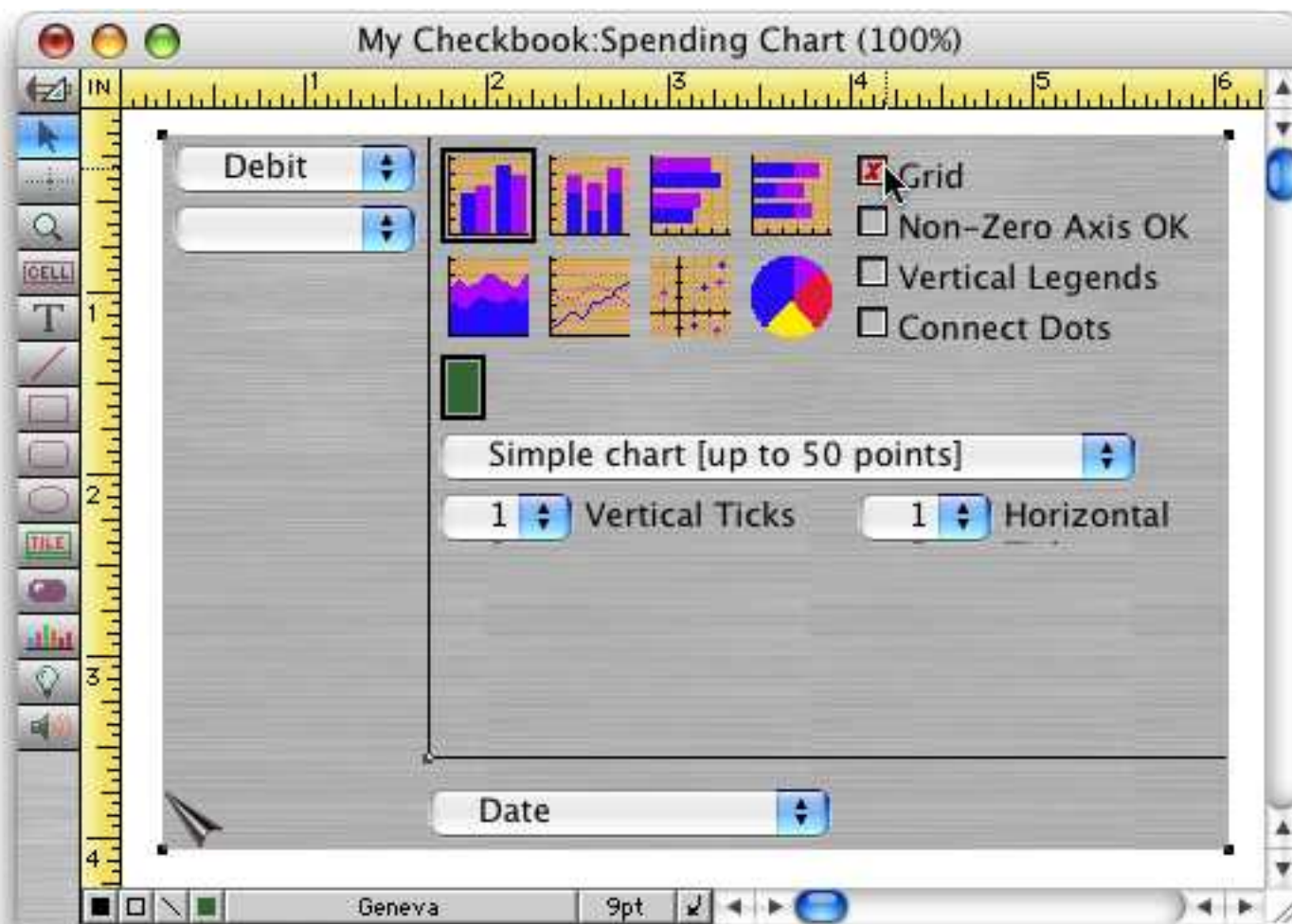
To preview the chart's appearance without going into Data Access Mode click on the **preview flap** in the lower left hand corner of the chart object. The preview flap is the small triangle that looks like a turned up page corner.
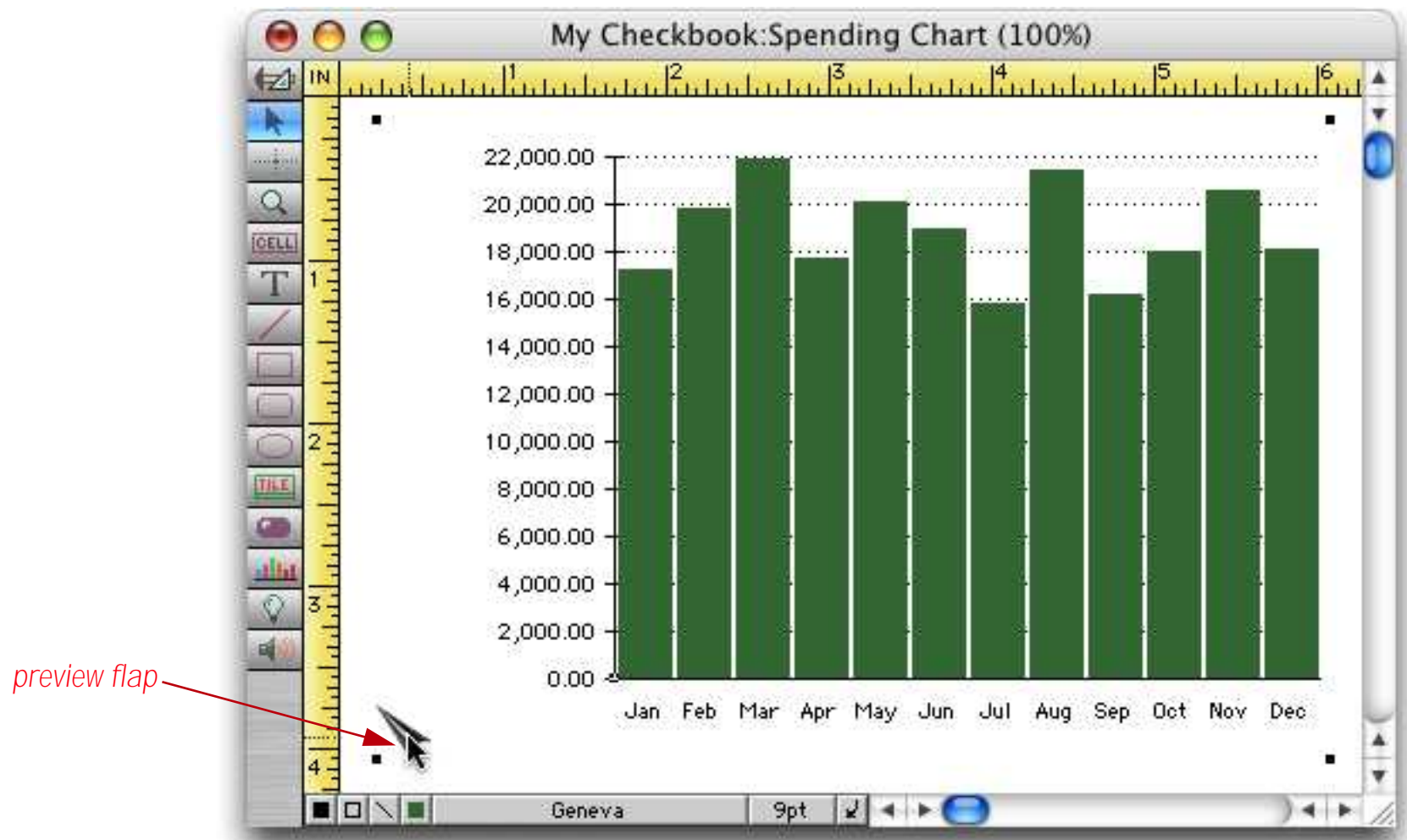
When in the preview mode you can use the extra fifth chart handle to adjust the margin where the chart legends appear.
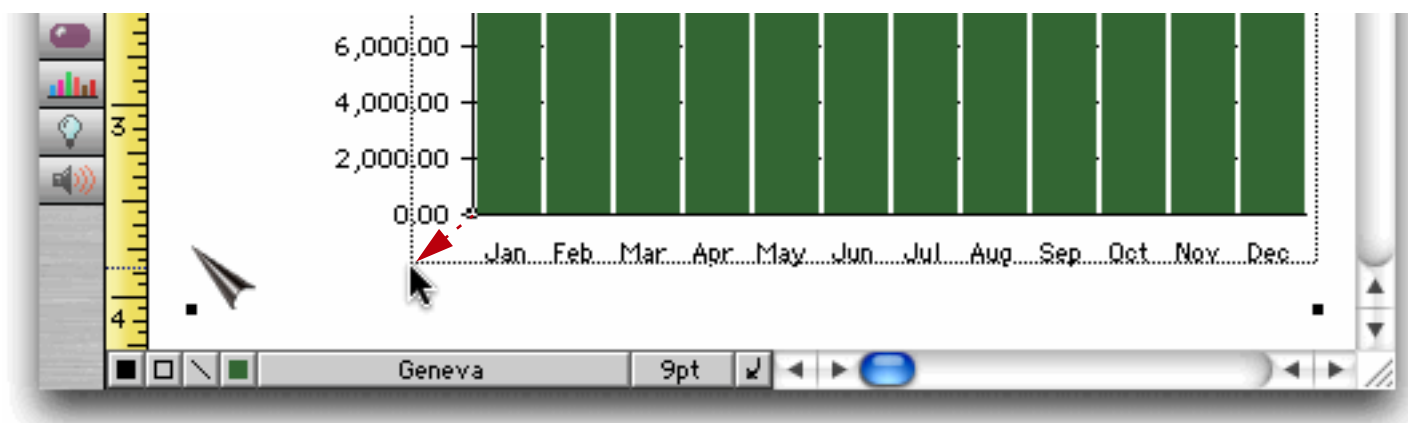
When the form is switched to Data Access Mode the chart will immediately show any changes made to the database.
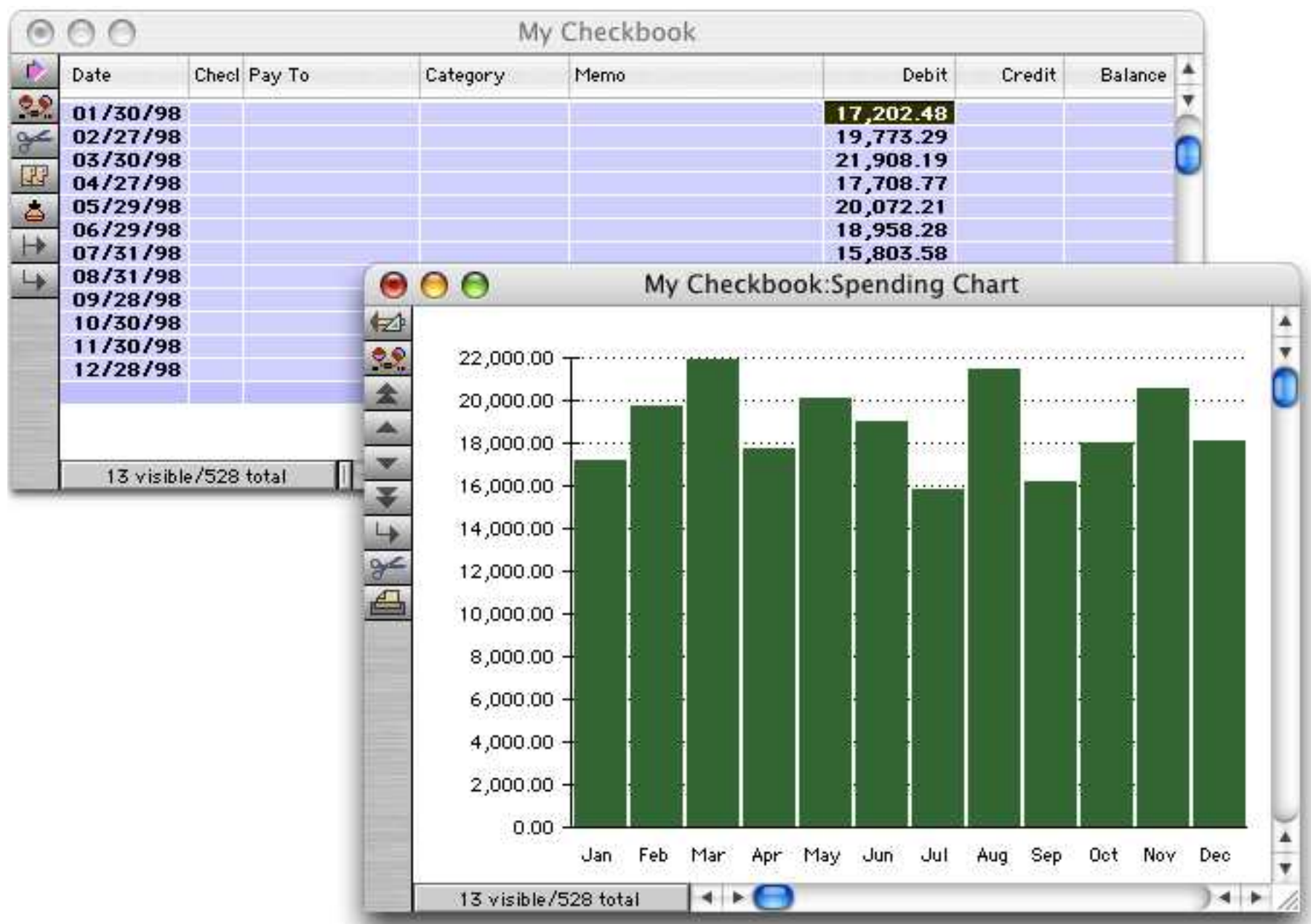
For example if you edit the summary value for March 1998 the chart will immediately update to reflect that change (of course it usually doesn't make any sense to edit a summary value like this). In the illustration shown below the summary value has been increased from 21908.19 to 27908.19.

We're finished with the chart, so close the window. Choose **Restore Original Data** from the Action menu, then **Save** the database. To learn more about charts see "Charts" on page 1111.

Data Entry Helpers

Now let's switch gears. Before you can analyze data you have to get the data into the database, and that usually means data entry with the keyboard. This job is never easy, but Panorama does have tools that can make data entry faster and less error prone. The next few sections will look at how the data entry process can be improved for each of the fields in the checkbook database.

Dates

The first field in the database contains the check date. You can modify the database to default to today's date when a new check is created. Start by clicking anywhere in the Date field and then choose the **Field Properties** dialog from the Setup menu (see "Field Properties" on page 378). (You can also open this dialog by double clicking on the field name at the top of the column.)
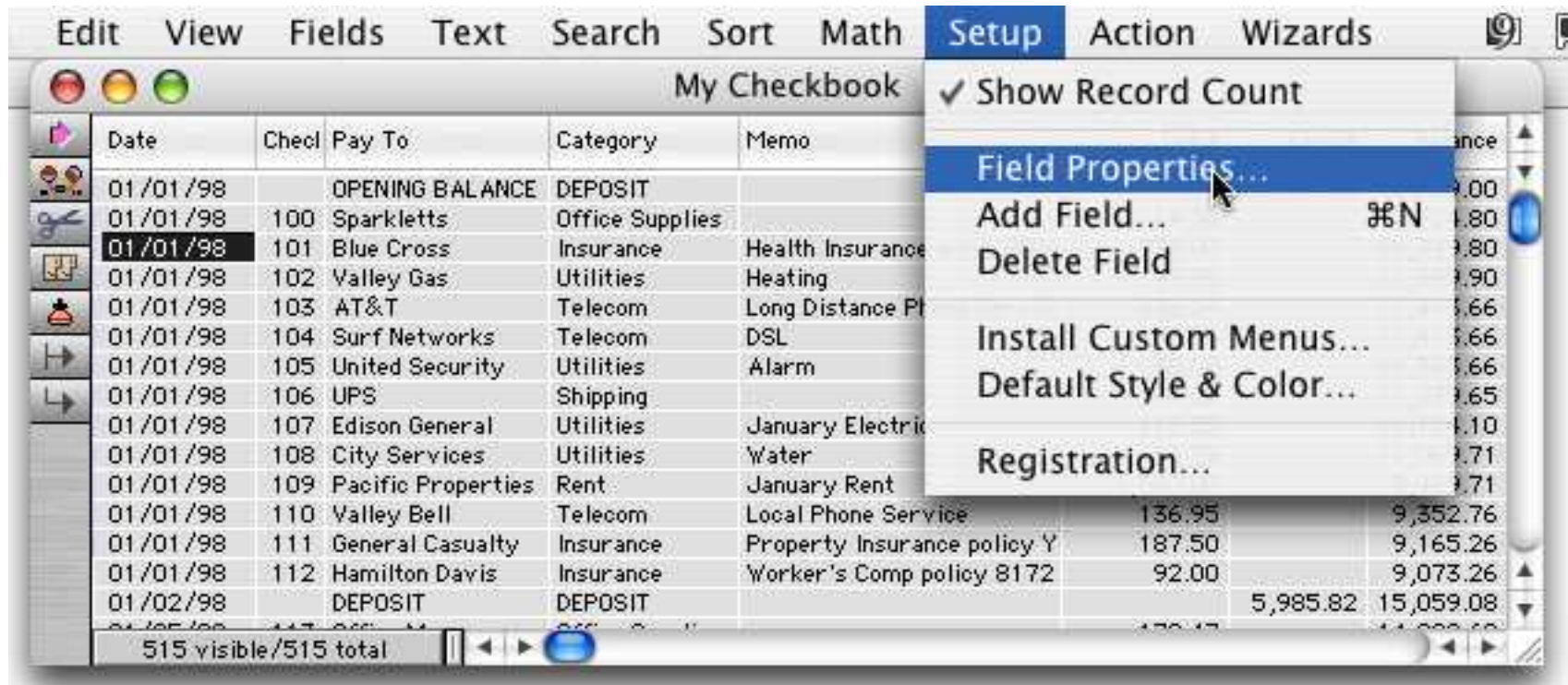
The **Field Properties** dialog allows you to modify many of the attributes of each field. The **New Database Wizard** has already set up some of the options in this dialog, including the Field Name and the Type.
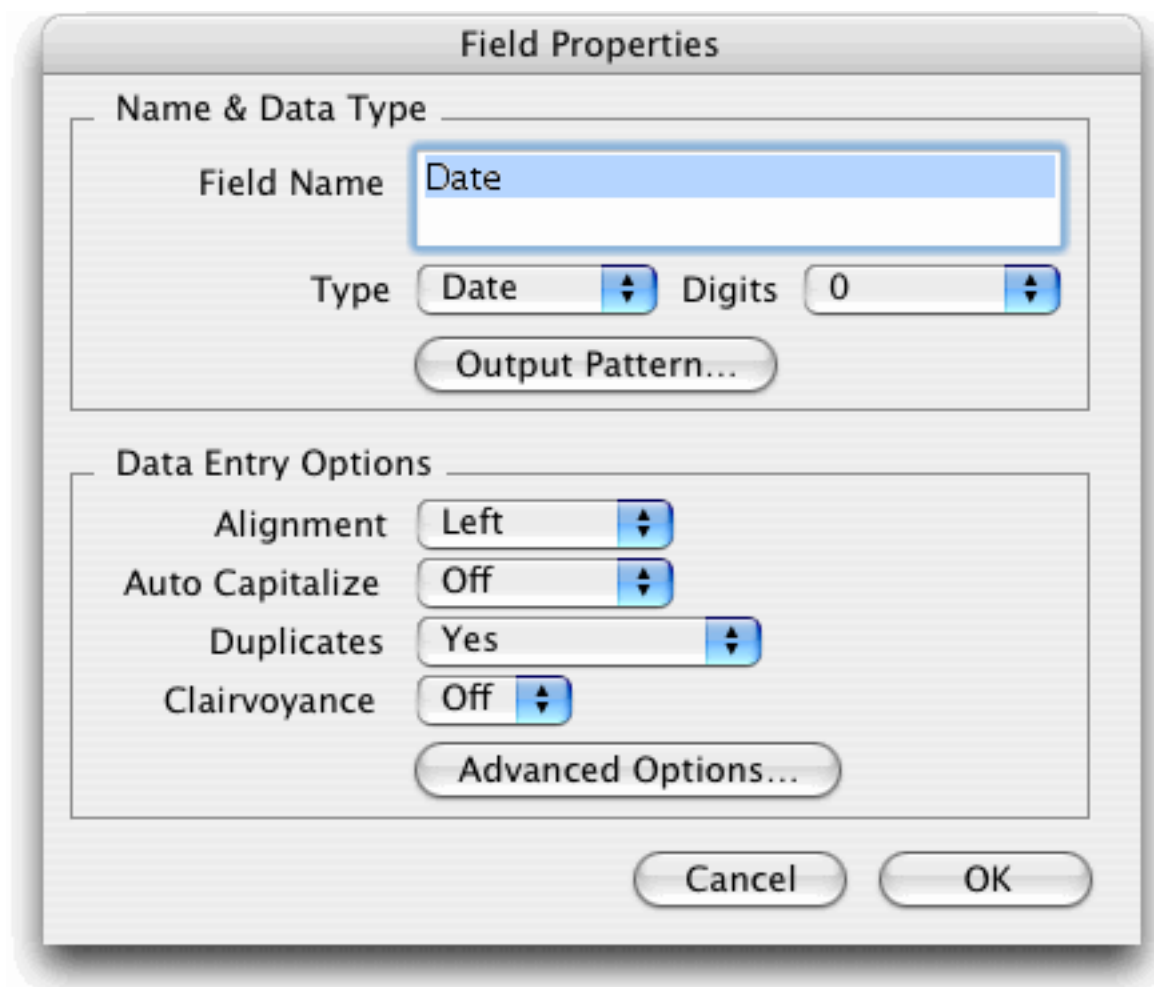
To set up the default value for this field press the **Advanced Options** button in the Data Entry Options area. The Advanced Data Entry options dialog has several radio buttons for different default values — click the Today's Date option.
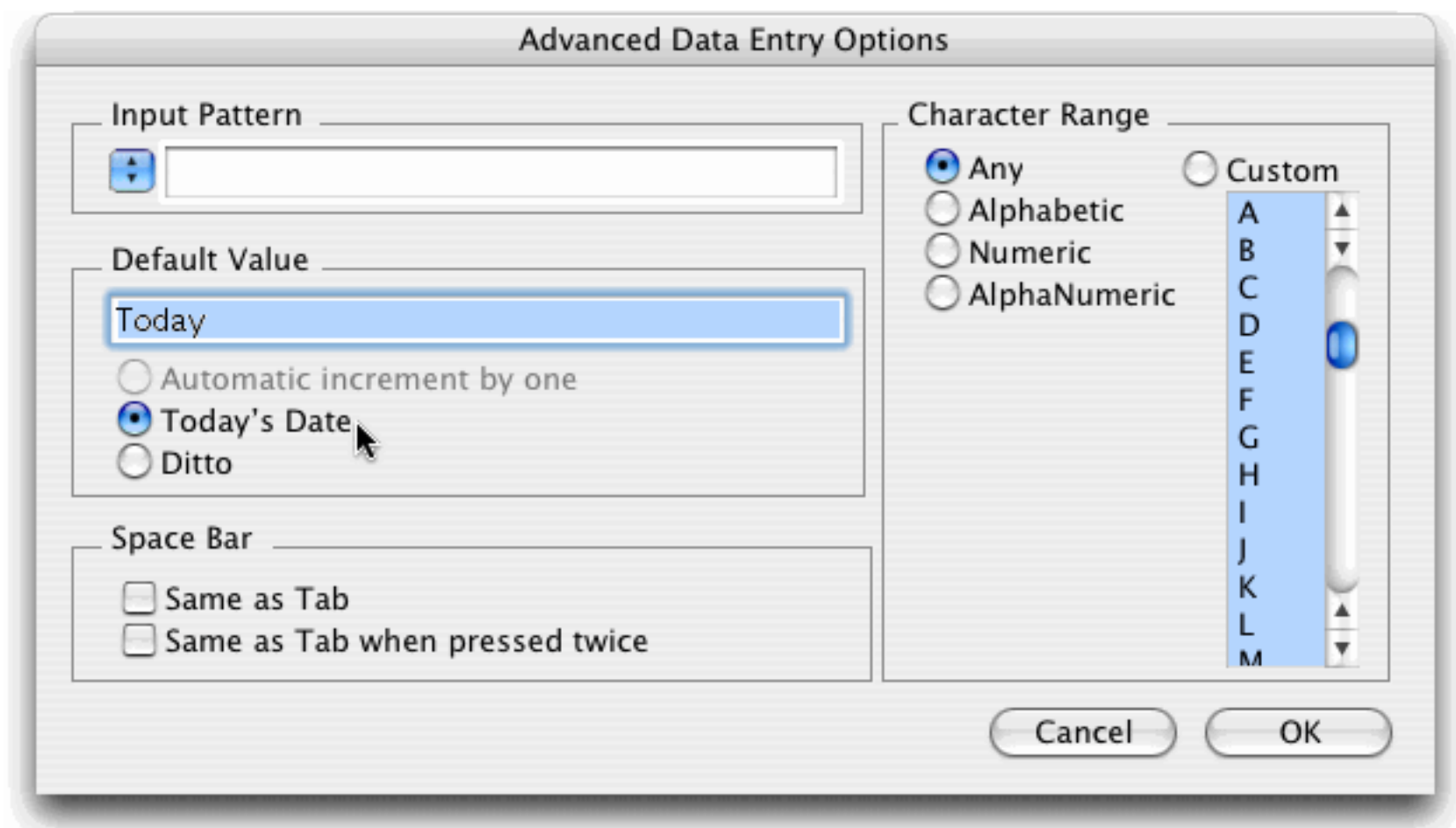
After you click this option press this **OK** button twice to get back to the data sheet. Then press the **Add New Record** tool (or select **Add New Record** from the Edit menu).
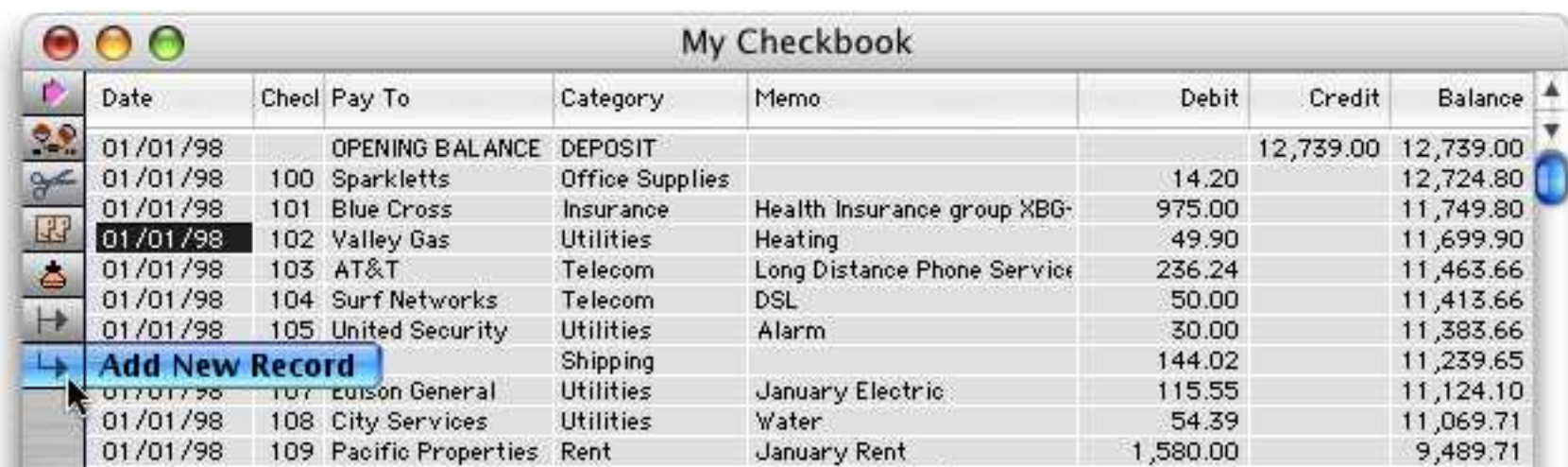
The new check automatically defaults to today's date.
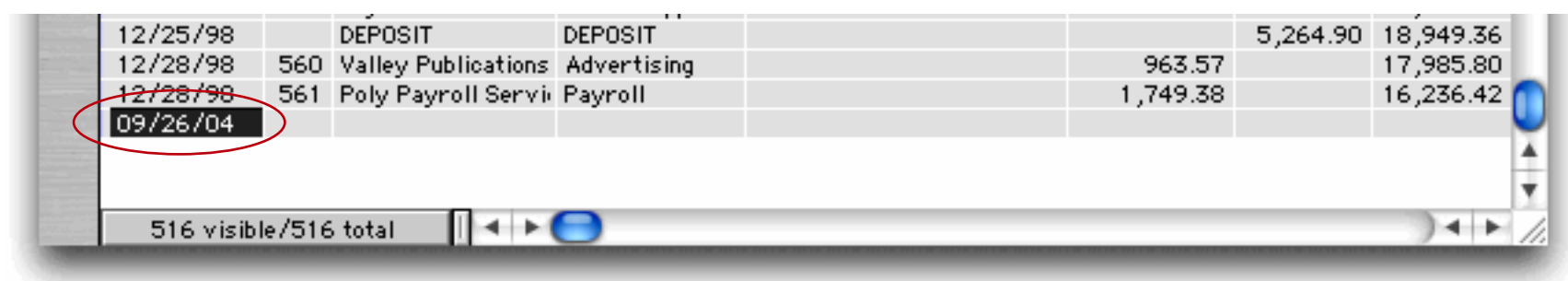
Smart Dates

Panorama is very flexible about how you type dates. We call this feature "smart dates." You can enter dates numerically (for instance **04/09/02** or **4/9/2**) or you can spell out the date (for instance **April 9th, 1997** or **Apr 9 97**). You can use any character as a separator between numeric dates, for example **4-9-01** or even **4.9.01**.

To enter today's date, simply type **today**. You can also enter **yesterday** or **tommorow**. Panorama will automatically convert these entries to the correct month, day and year.

If the date is in the current week, you can simply type in the name of the day, for example **saturday** or **tue**. To specify a day in the previous or upcoming weeks add the words last or next, for example **next tuesday** or **last saturday**.

Type…	Date Entered
today	10/26/00
may 17	05/17/00
yesterday	10/25/00
last friday	10/20/00
next wed	11/01/00

Play around with entering different dates, then use the **Cut Record** tool to delete the new record.

Check Number

The second field contains the check number. You can modify the Field Properties to automatically add one to create a new check number each time a new check is created. Click anywhere in the Check column and then choose the **Field Properties** dialog from the Setup menu (see "Field Properties" on page 378). (You can also open this dialog by double clicking on the field name at the top of the column.) The **New Database Wizard** has already set up some of the options in this dialog, including the Field Name and the Type.
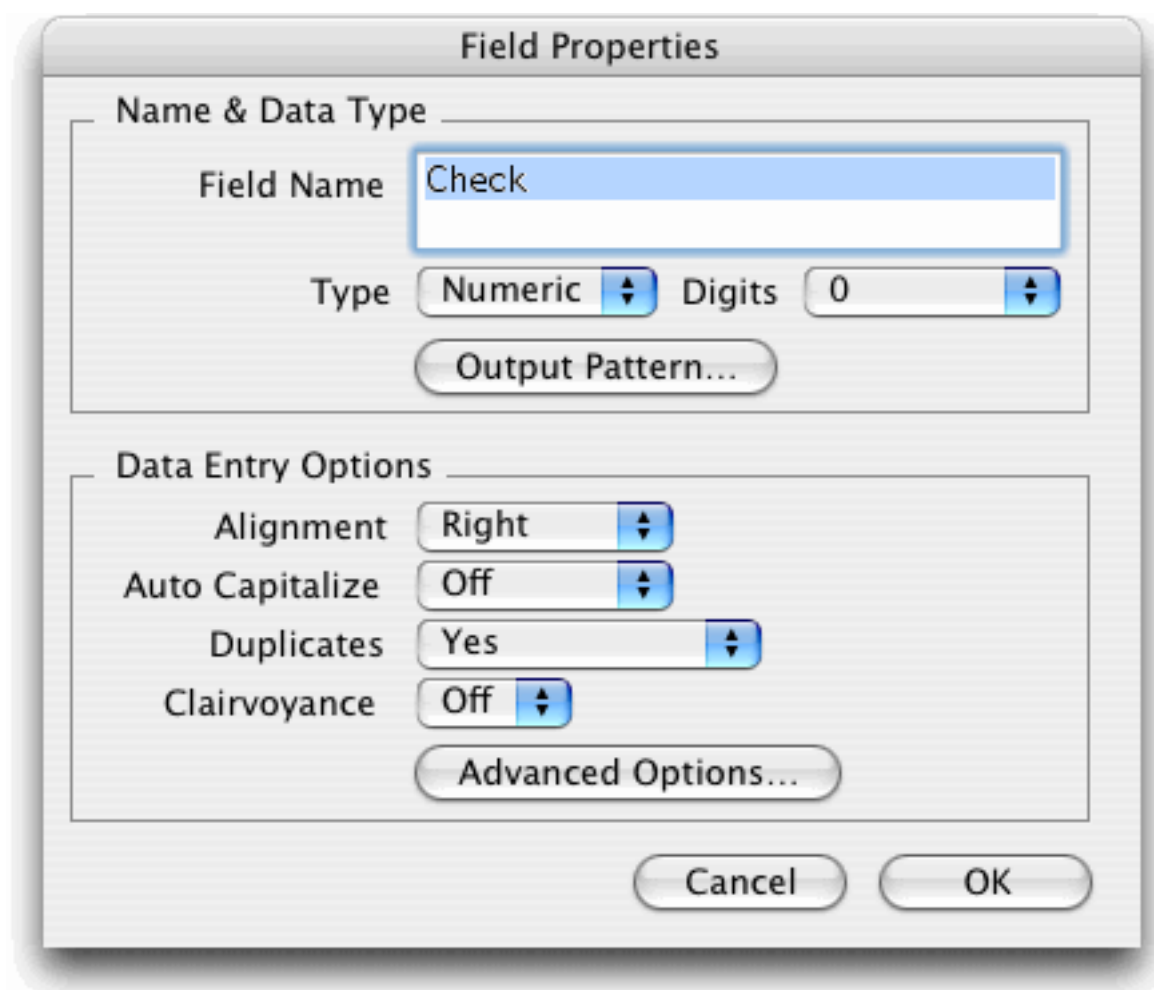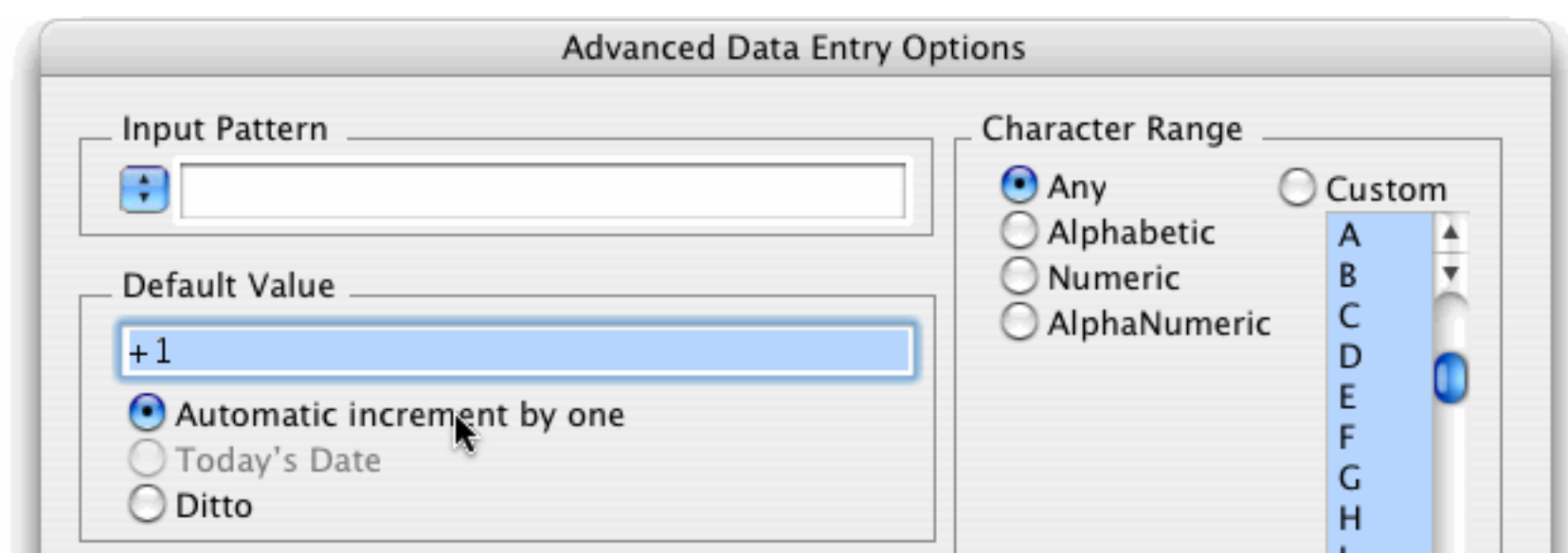

To set up the default value for this field press the **Advanced Options…** button in the Data Entry area. The Advanced Data Entry options dialog has several radio buttons for different default values — click the Automatic increment by one option.

After you click this option press this **OK** button twice to get back to the data sheet. Then press the **Add New Record** tool (or select **Add New Record** from the Edit menu).

The new check automatically defaults to today's date and is assigned the next check number, in this case 562.

Pay To

The third field contains the name of the person or company the check is made out to. Since you will often write checks out to the same people over and over again you can take advantage of a very cool Panorama feature called Clairvoyance®. Clairvoyance automatically finishes your typing for you as soon as it thinks it can identify what you are about to type based on the previous entries (see "Clairvoyance®" on page 449). Clairvoyance can be turned on and off with the **Field Properties** dialog. Click anywhere in the Pay To column and then choose the **Field Properties** dialog from the Setup menu (see "Field Properties" on page 378). (You may have also heard that you can open this dialog by double clicking on the field name at the top of the column. It's really true!). The **New Database Wizard** has already set up some of the options in this dialog, including the Field Name and Type and Auto Capitalize. Use the pop-up menu to turn on the Clairvoyance option, as shown below.
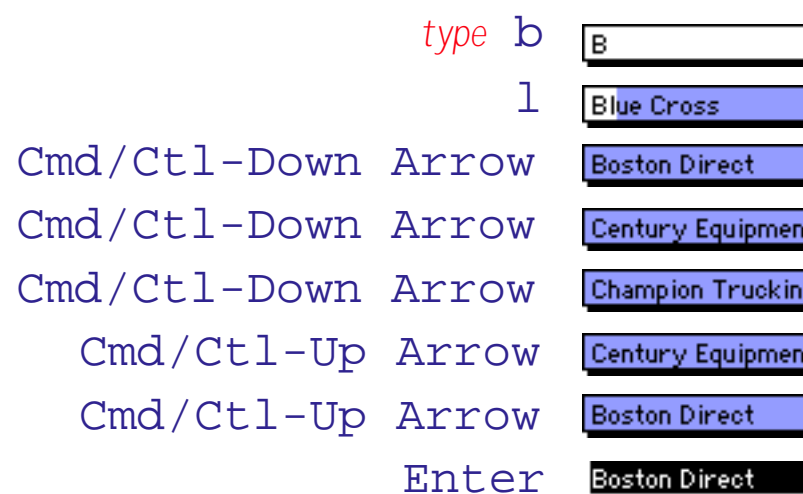
Press **OK** to close the dialog. Now try entering Blue Cross into the Pay To data cell. Leave your finger off the **Shift** key as you type because Panorama will automatically capitalize the first letter of each word for you! As soon as you press the letter l, Panorama's Clairvoyance® feature will complete the entry for you by typing ue Cross.
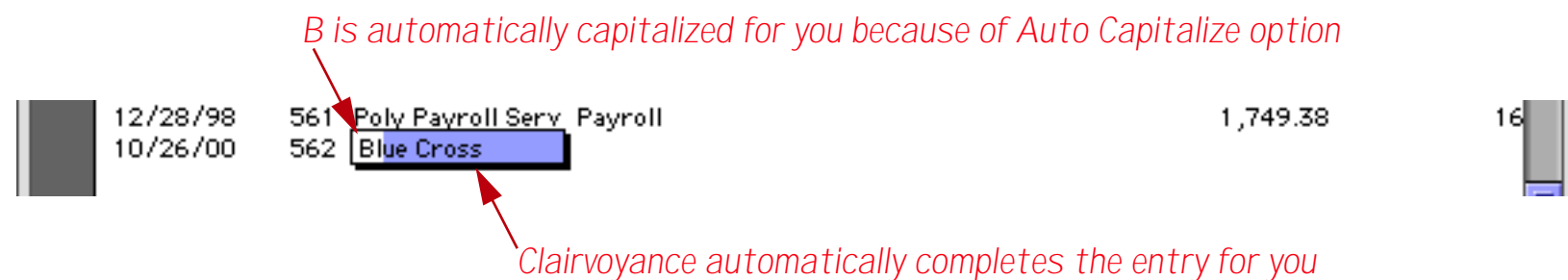
B is automatically capitalized for you because of Auto Capitalize option

| 12/28/98 | 561 | Poly Payroll Serv | Payroll | 1,749.38 | 16 |
| 10/26/00 | 562 | Blue Cross | | | |

Clairvoyance automatically completes the entry for you

Clairvoyance automatically finishes your typing for you as soon as it thinks it can identify what you are about to type based on the previous entries. If Clairvoyance guesses wrong (because this is a new entry that hasn't appeared before) just keep typing and complete the entry yourself.

Clairrows

When you hold down the **Command** key (Mac) or **Control** key (Windows), the up and down arrows on the keyboard become clairvoyant arrows, or "**clairrows**." With the key held down you can use the arrows to scan through the values that are already in the database. Each time you press **Command/Control-Down Arrow** the next value appears, while each time you press **Command/Control-Up Arrow** the previous value appears. You can scan through the values until you find the information you are looking for, then press the **Enter** key to enter the value. To give the clairrows a head start you can type in the first few letters of the information you are looking for.
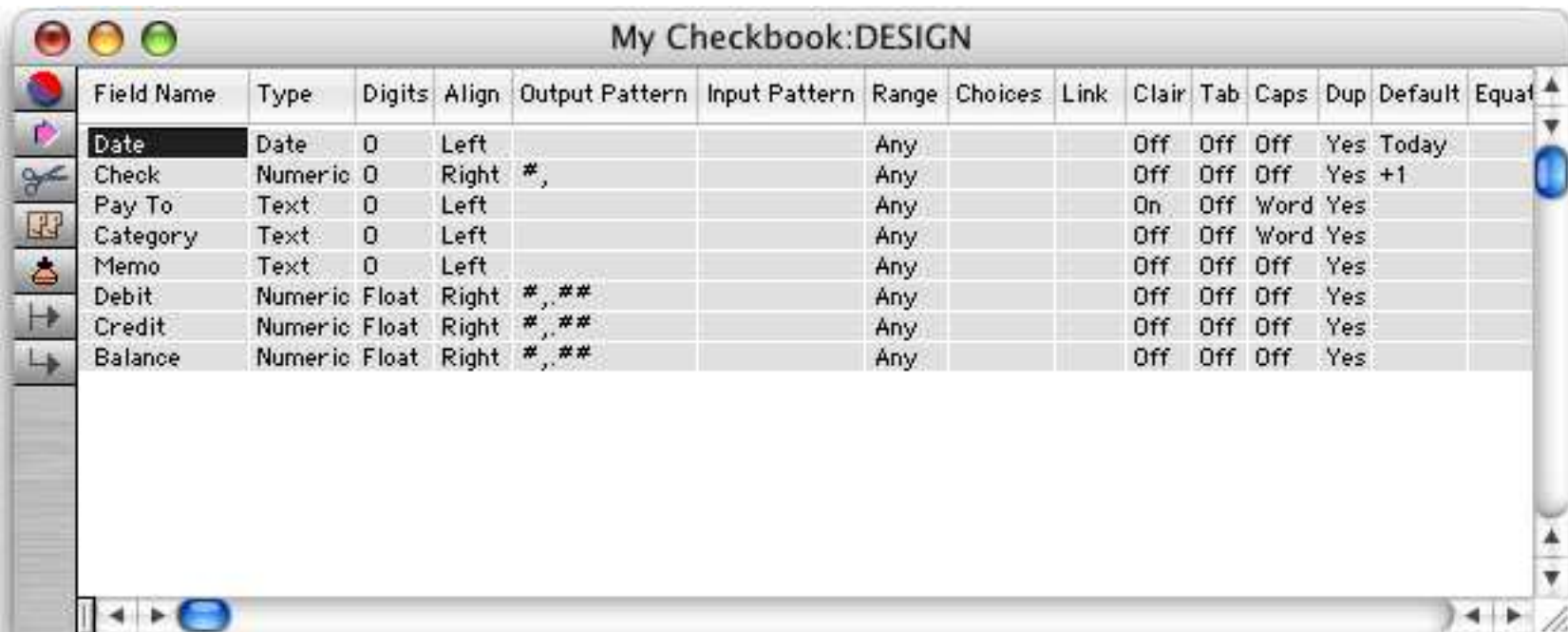
type b	B
l	Blue Cross
Cmd/Ctl-Down Arrow	Boston Direct
Cmd/Ctl-Down Arrow	Century Equipmen
Cmd/Ctl-Down Arrow	Champion Truckin
Cmd/Ctl-Up Arrow	Century Equipmen
Cmd/Ctl-Up Arrow	Boston Direct
Enter	Boston Direct

Category

The Category field places each check into one of 11 categories (Rent, Insurance, Telecom, etc.) One way to handle this field would be to use Clairvoyance® as described for the Pay To field. That way you would only have to type in the first letter or two of the category. However instead of using Clairvoyance you are going to set up a palette of radio buttons in the pop-up Input Box (see "The Choice Palette" on page 481). This palette will have a radio button for each category. To set up this palette you'll need to use the **design sheet**. Use the **View** menu to switch from the data sheet to the design sheet.
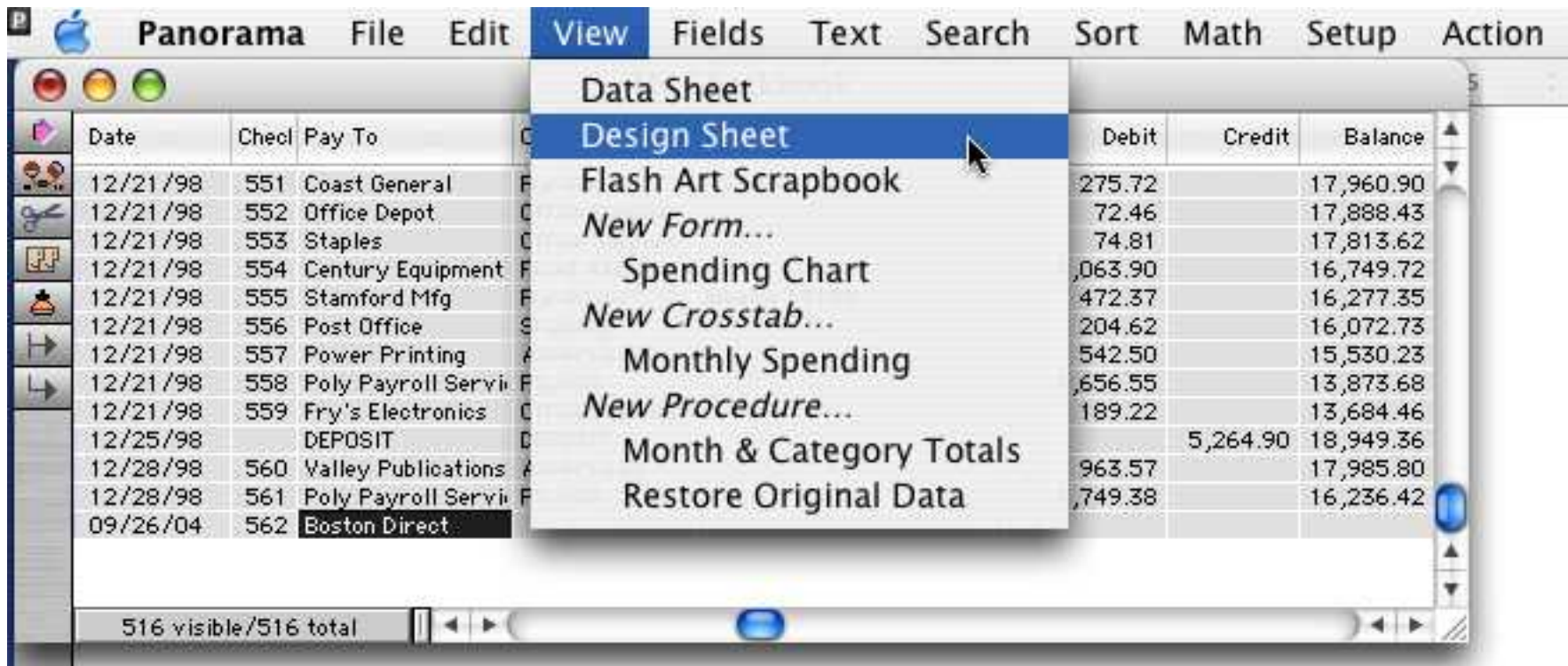

The **design sheet** is kind of like a super-duper **Field Properties** dialog (see "The Design Sheet" on page 380). It allows you to see and modify all the properties of every field at once. Each line in the design sheet corresponds to a field, with the name and properties listed from left to right.

To set up the radio buttons click on the Category field name.

Now choose the **Automatic Choices…** command from the Special menu. This command will build a list of the radio buttons from the existing data. If you leave the number at 2 the command will include every category that occurs two or more times in the existing data (see "Creating the List of Choices" on page 481).
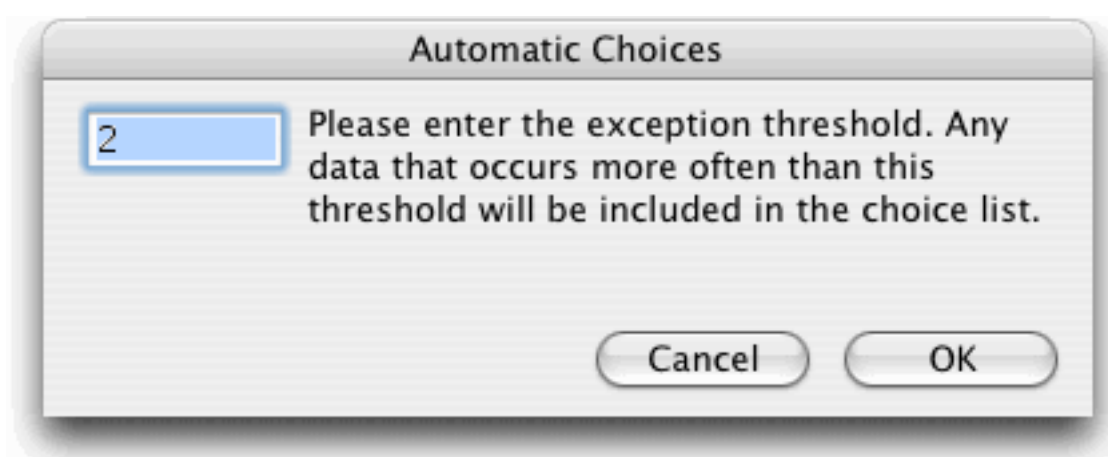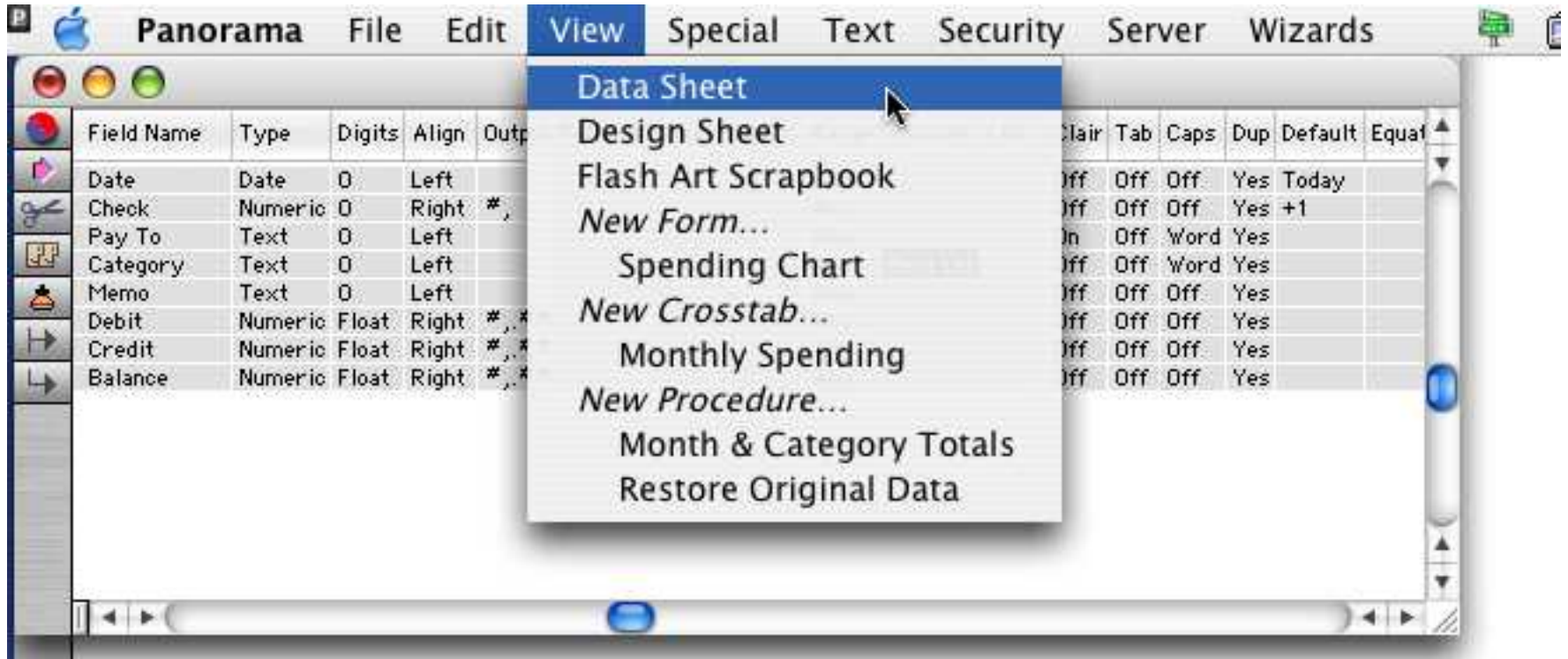

Press the **OK** button to create the list of choices. Since the width of the column is too narrow to see much of the list you can either make the column wider or double click on the list to see the entire list (as shown below). Notice that when a choice contains a space, for example Office Supplies, the space has been replaced with an _ underscore character, i.e. Office_Supplies.

Use the **View** menu to switch back to the data sheet.

Before it switches back to the data sheet, Panorama will ask you if you want a "new generation" of your database. What it is really asking you is to confirm the changes you just made to the design sheet (see "Database "Generations"" on page 380). Press the **Yes** button.


Double click on the empty data cell at the bottom of the Category column. The Input Box will appear, but it is so small you can only see the first button and part of the second.
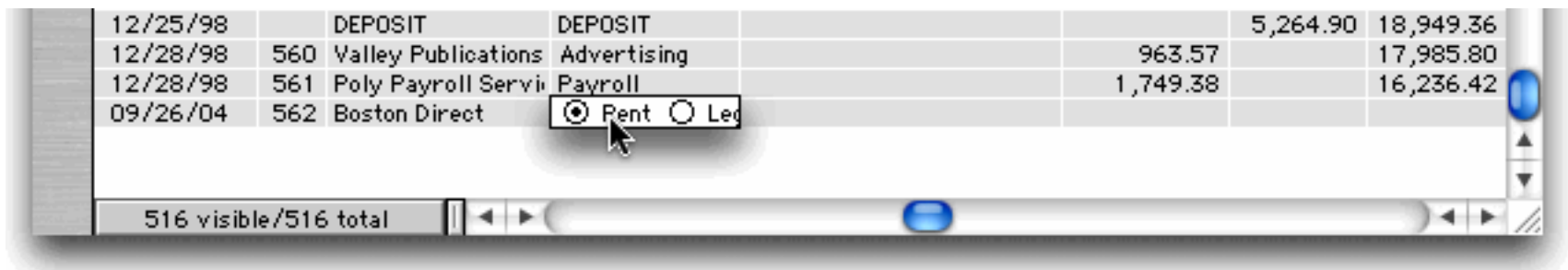
Move the mouse to the bottom right corner of the Input Box. The cursor will flip over (see "Expanding the Input Box" on page 439). Drag the mouse to expand the Input Box.
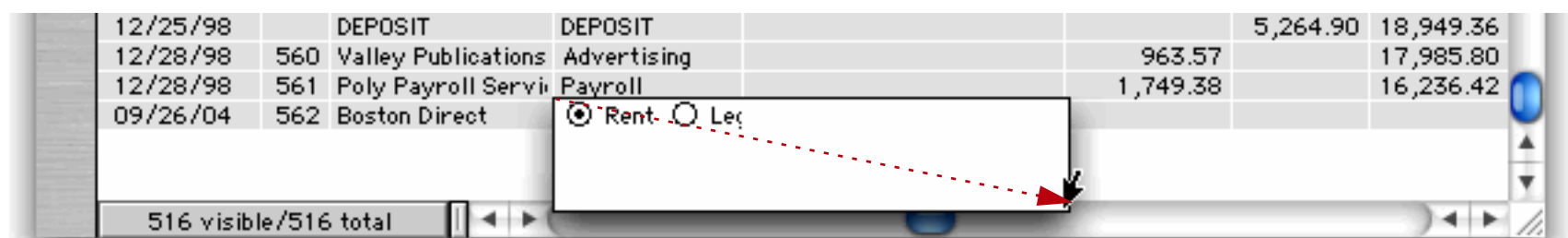

The radio buttons will automatically flow into the expanded box as you change its shape.
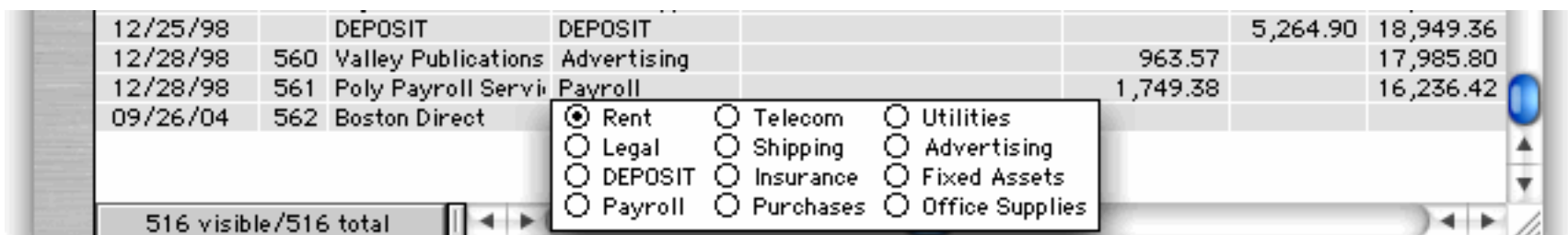

The box can be tall and skinny, short and fat, or anything in between. To select a value just click on the button and press **Enter** or **Tab**, or simply double click on the button. You can also select a value by typing in the first few letters of the value, for example U for Utilities or Pu for Purchases.

The radio buttons are great if you want to select from one of the predefined categories, but what if you want to add a check in a new category? To allow this you'll need to go back to the design sheet (use the **View** menu).
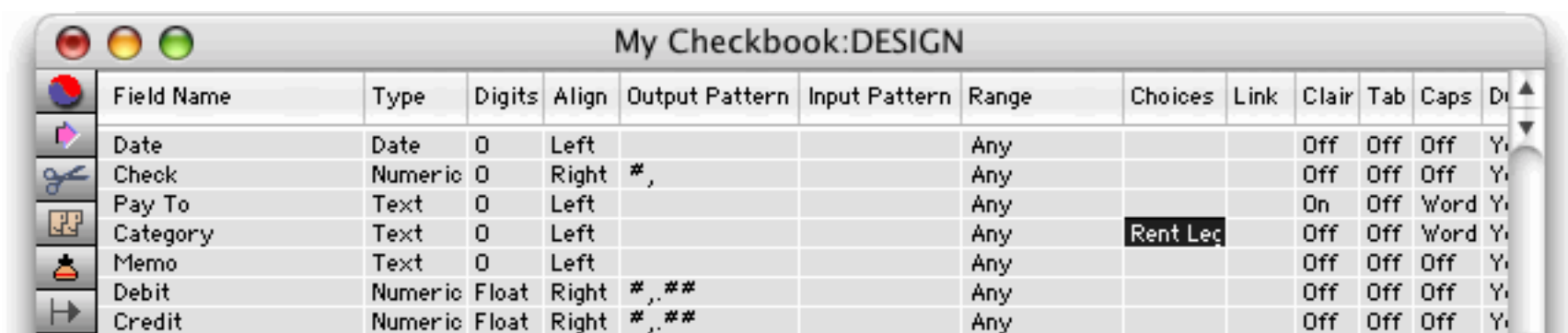
Double click on the list of choices, and then type a space and a dozen underscores at the end of the list. (The underscore is just to the right of the **0** key, hold down the **Shift** key and press -).
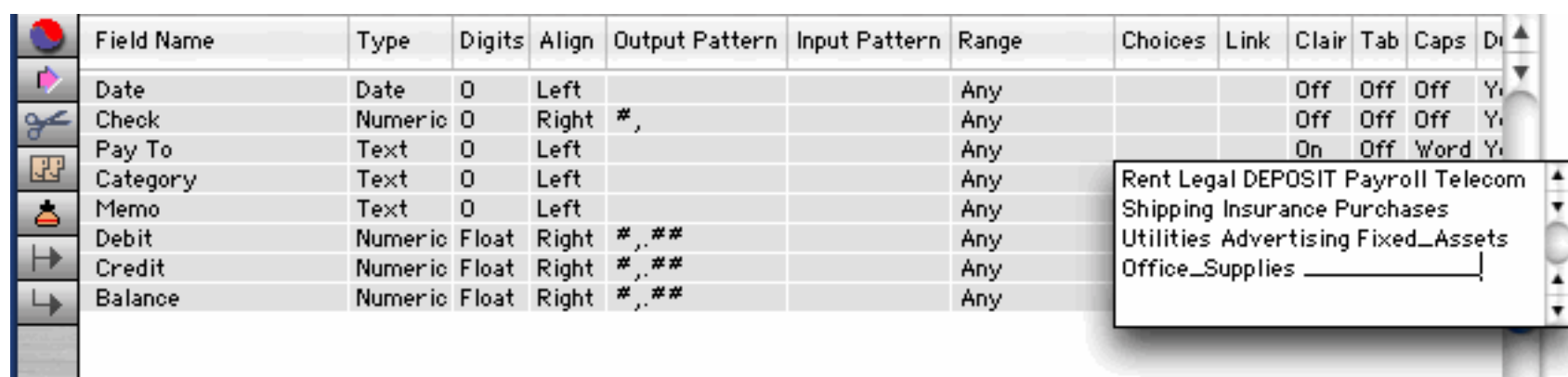
Press the **Enter** key and then use the **View** menu to go back to the data sheet. Double click on the Category field.
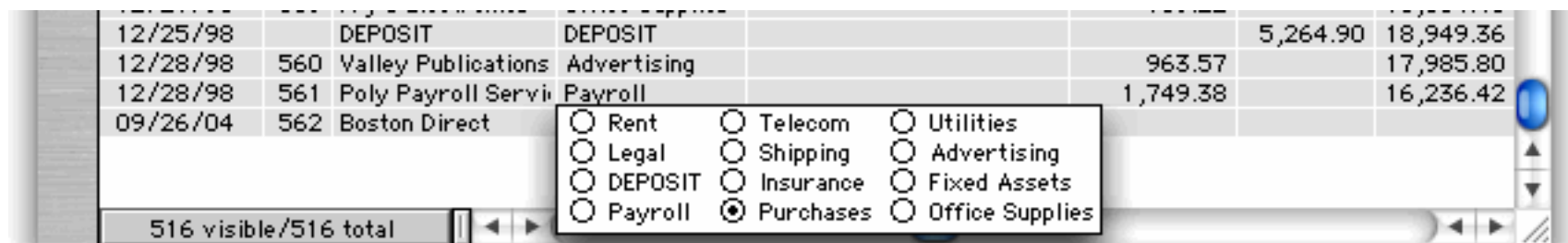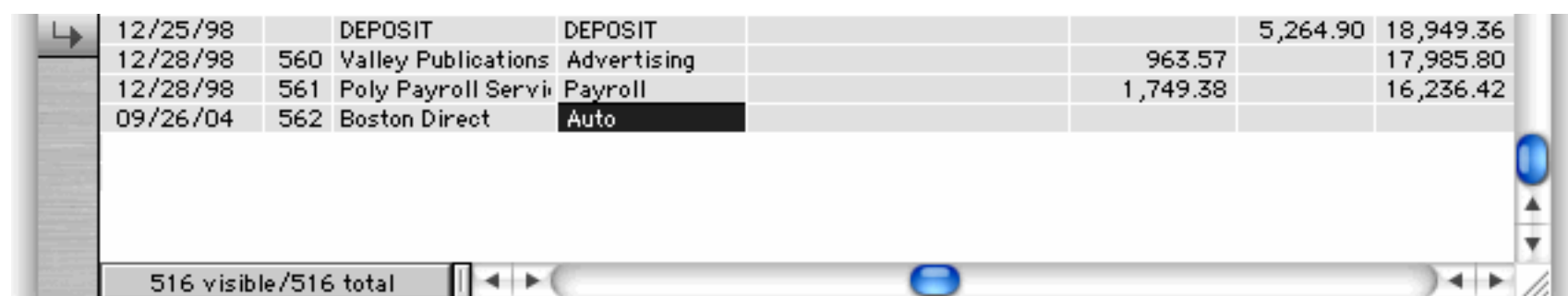

It looks just the same as before! What's up with that? To find out, expand the Input Box just a little bit more.

Now you can see that there is one additional radio button at the end of the list. To enter a new category click on this radio button and then type in the new category, in this case Auto.


Press the **Enter** key when the entry is completed.

To learn more about this feature see "Exceptions" on page 482. Before going on to the next step I recommend that you **Save** the database one more time.

**Looking Up the Category From a Previous Record**

In this database a particular Pay To will almost always go with a particular category. For example the category for checks to Blue Cross will always be Insurance, while the category for Staples will always be Office Supplies. Panorama can be set up to automatically look up the category from the previous record, if any. To do this you'll use the design sheet again. Use the **View** menu to switch to the design sheet again, then double click on the Equation column of the Category row (see "Automatic Calculations" on page 468).
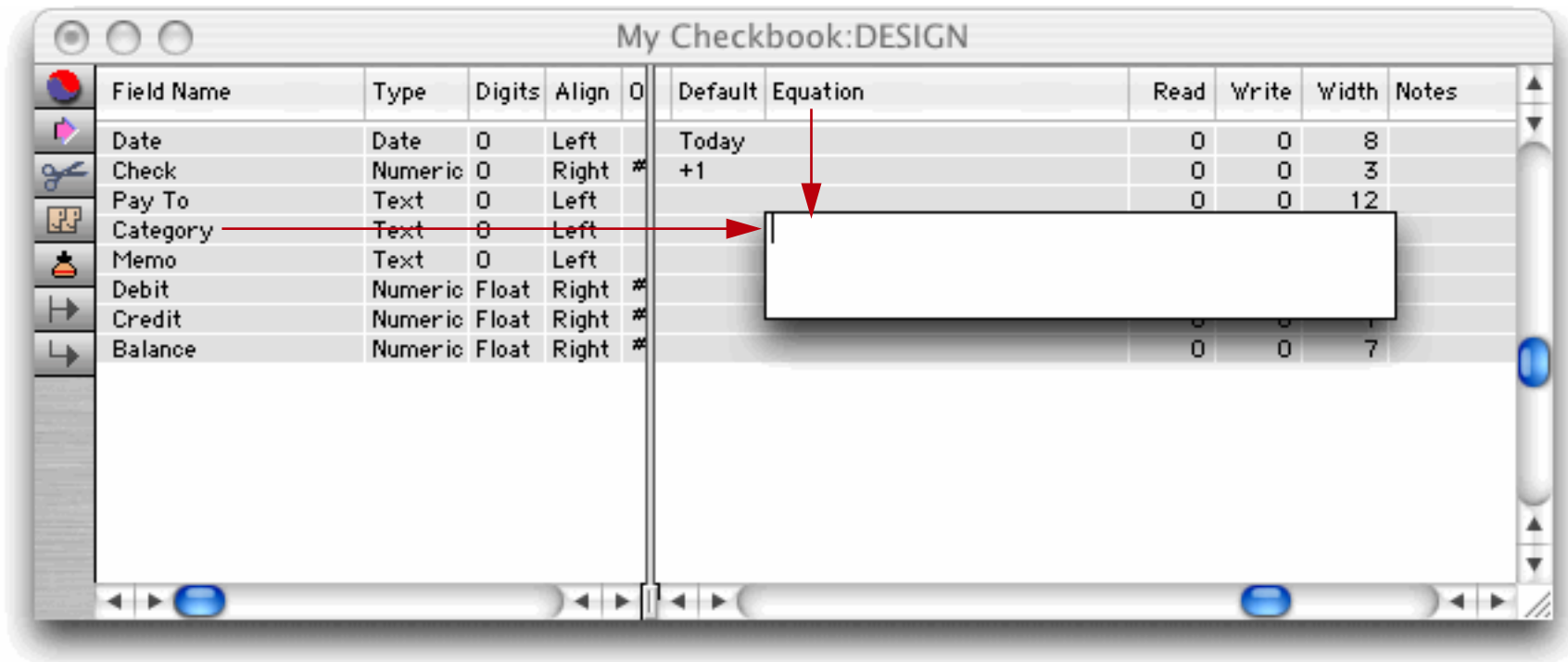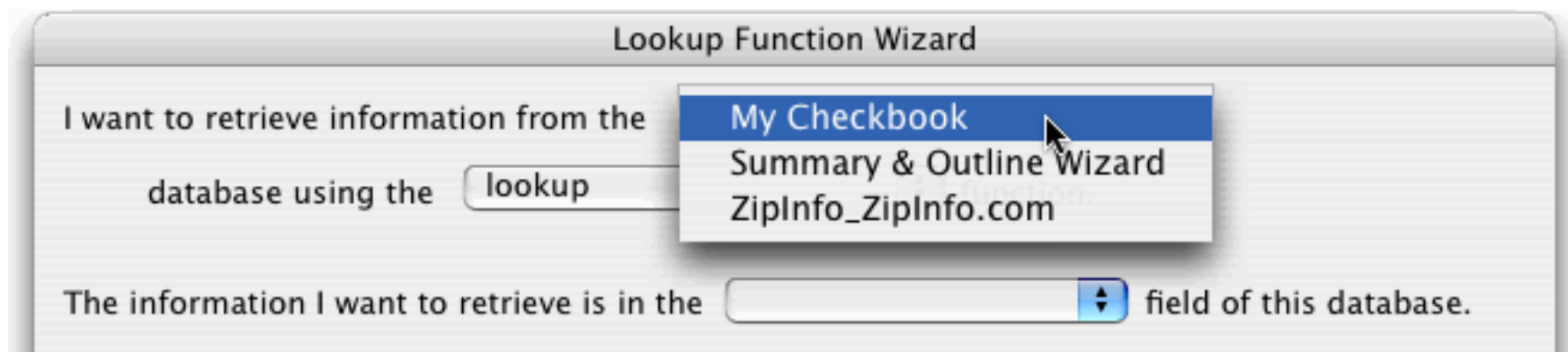

Now choose **lookup(…)** from the Functions menu (see "Functions Menu" on page 1319).
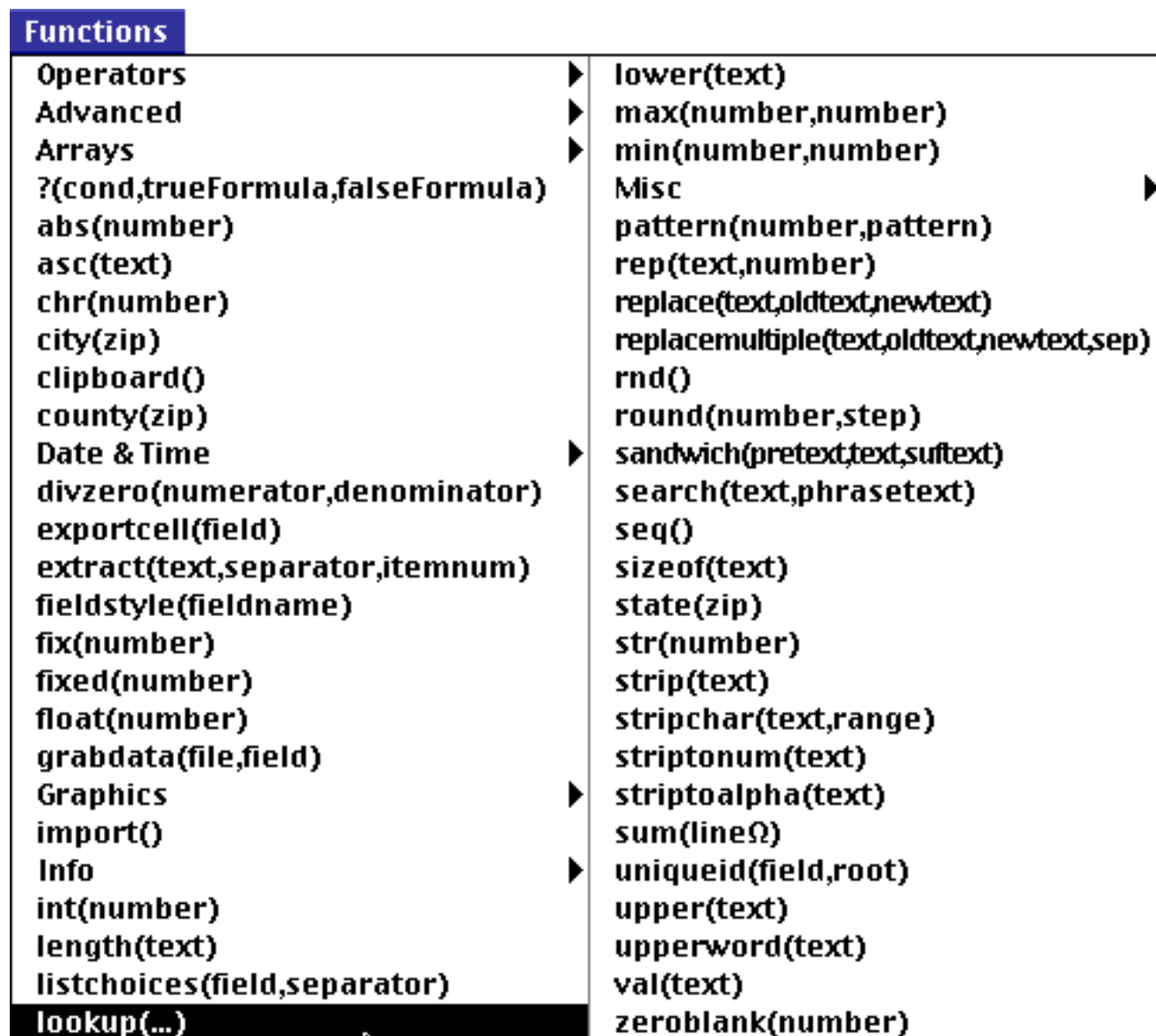
Choosing this menu item opens a dialog for setting up the `lookup(` function (see "Linking With Another Database" on page 1400).
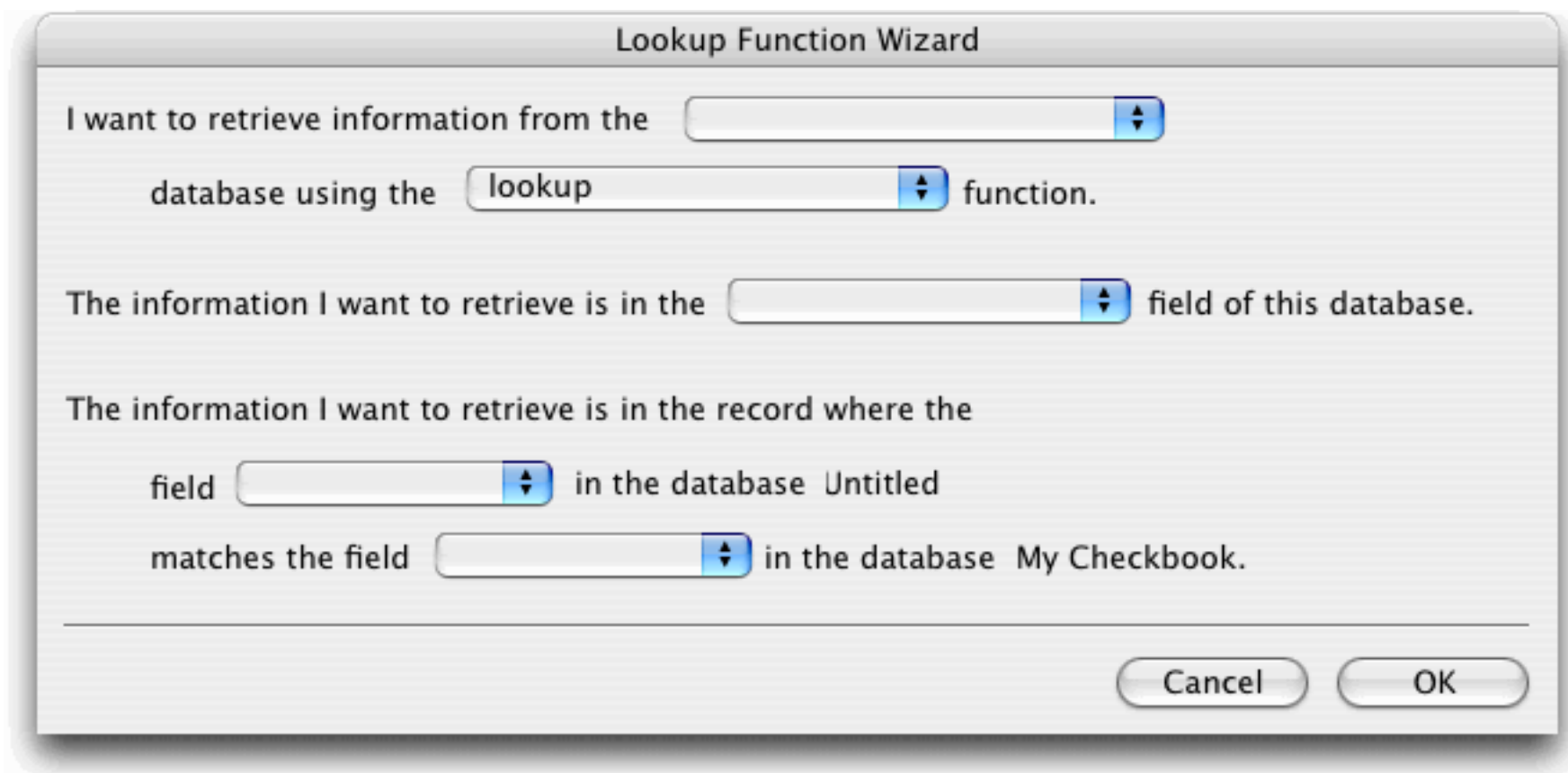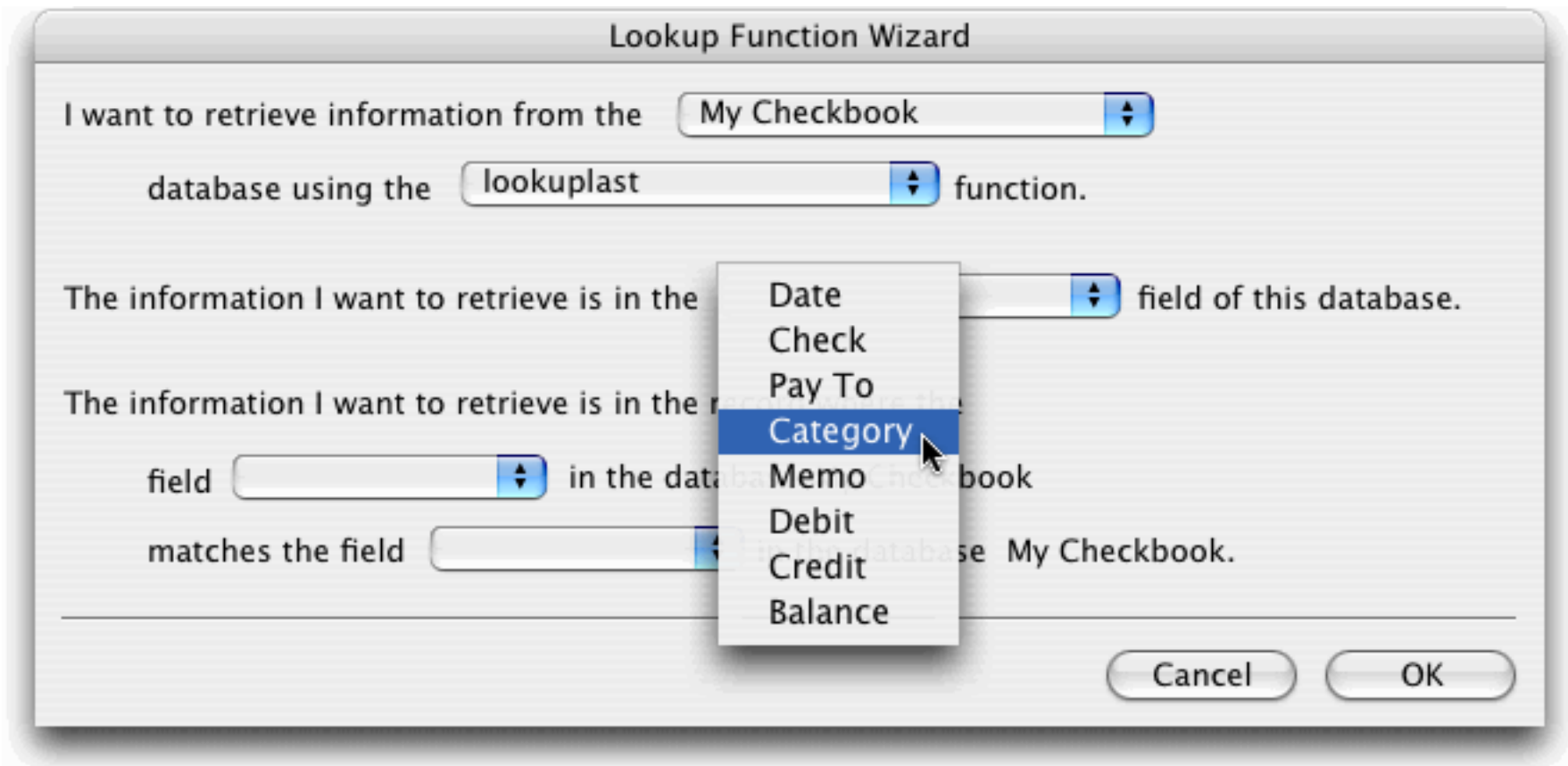

Start by selecting the database you want to look up data from, in this case the current database.


Next, tell Panorama that if there is more than one match in the database you are interested in the last match (closest to the bottom), not the first (see "Lookup Variations" on page 1405).
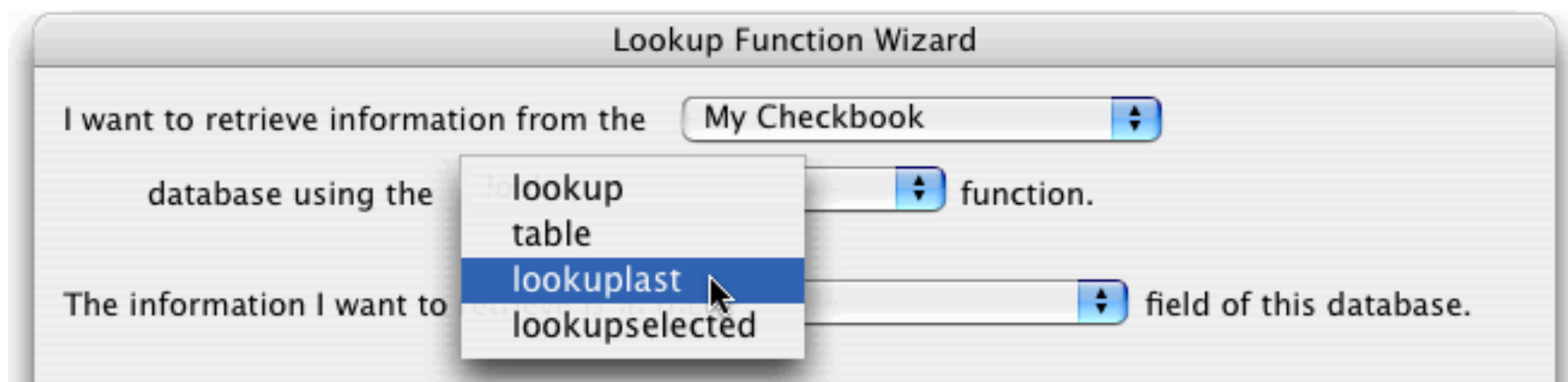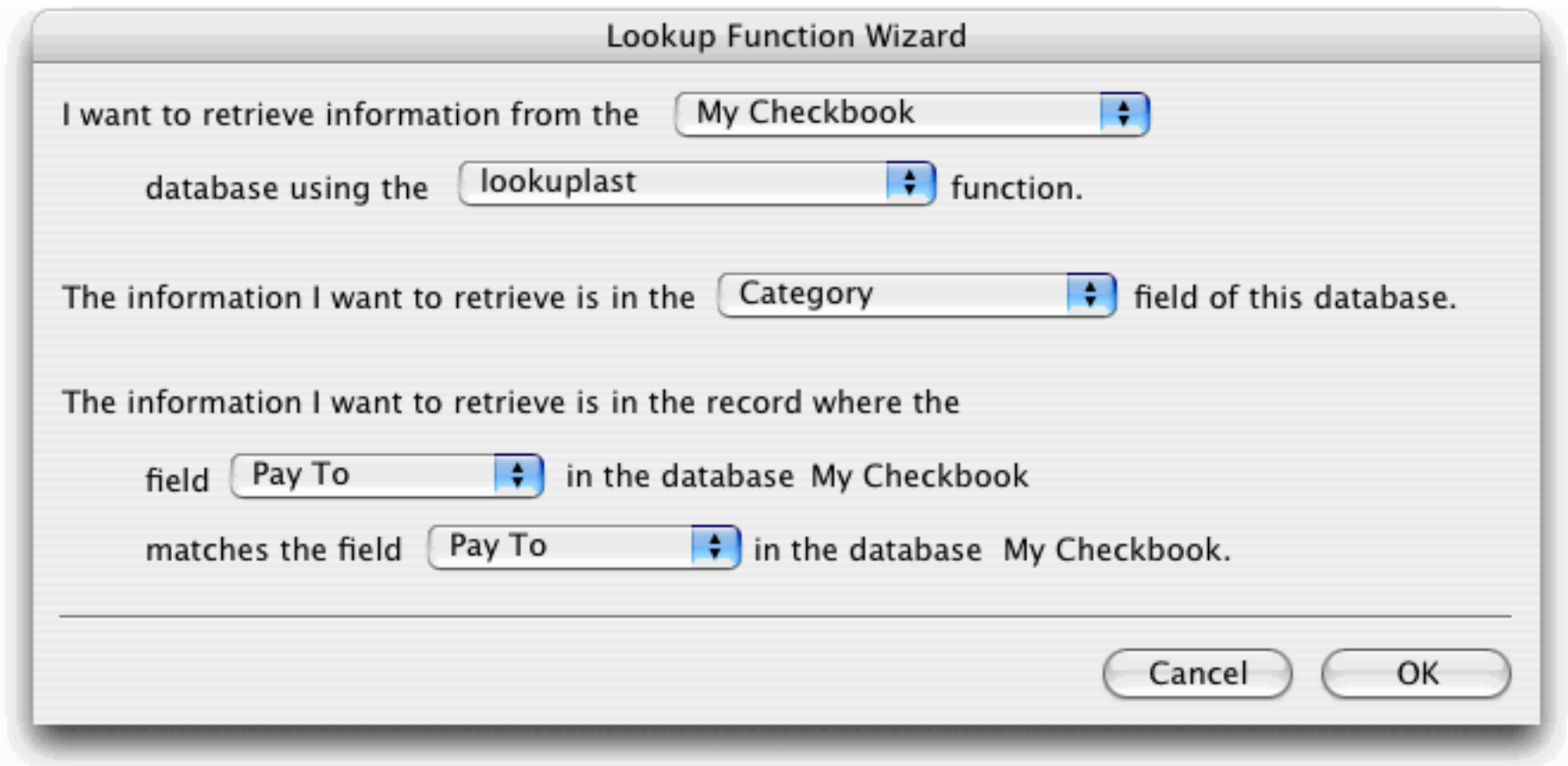
Now tell Panorama what you want to look up, in this case the Category.
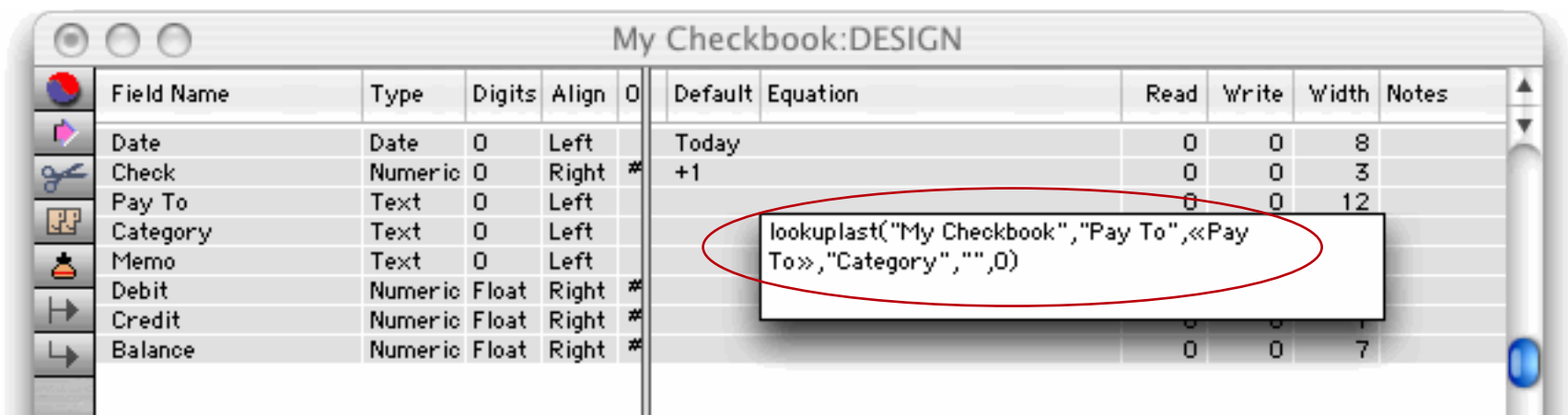
We want to look up the category in the last record in the database where the Pay To value matches the Pay To value in the current field. So select **Pay To** for both of the last two pop-ups.
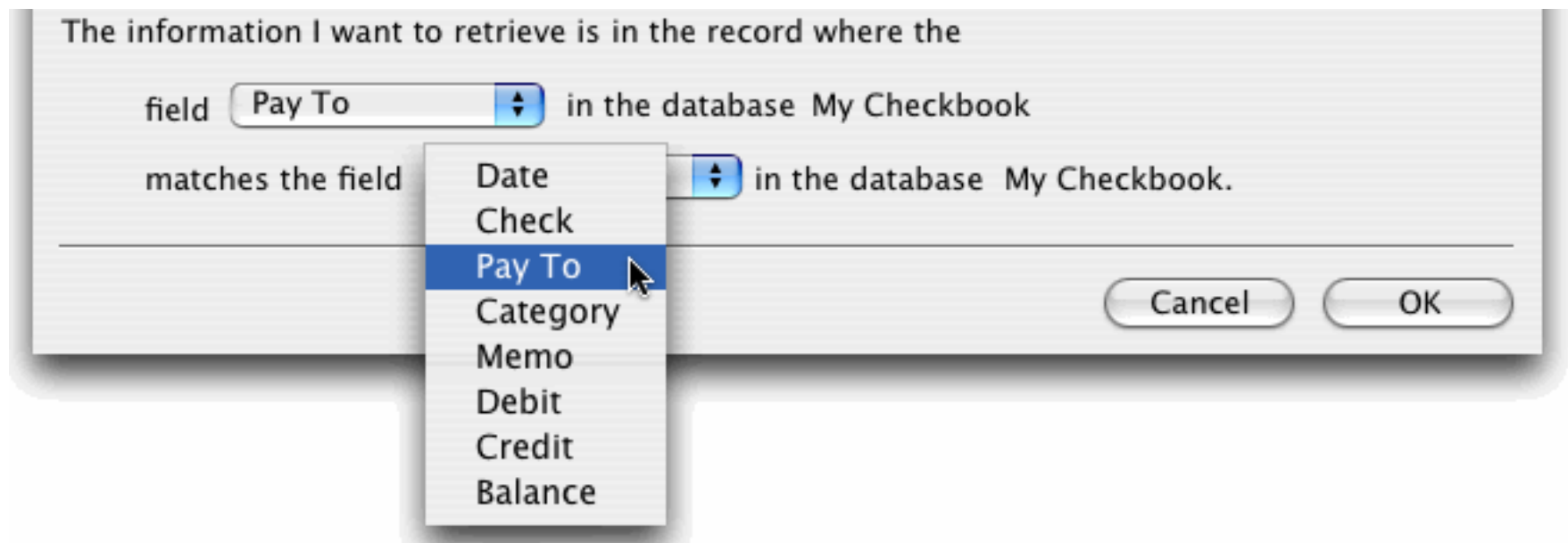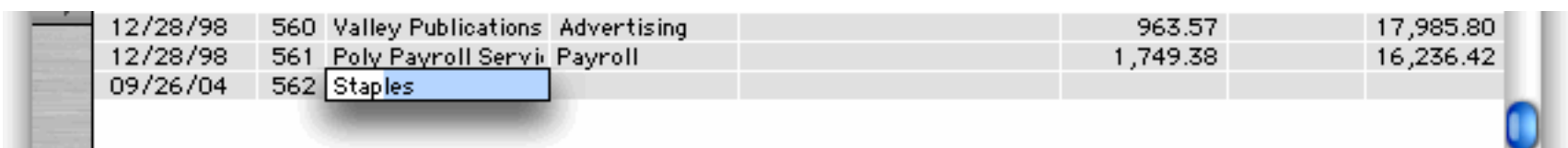
Here's the finished dialog with everything filled in.


Press the **OK** button to build the formula for looking up the previous category.

To learn more about how this formula works see "Linking With Another Database" on page 1400. For now just press the **Enter** key and use the **View** menu to switch to the data sheet. Then start typing Staples into the Category field.


When you press the **Enter** key Panorama will automatically look up the appropriate category, in this case Office Supplies.
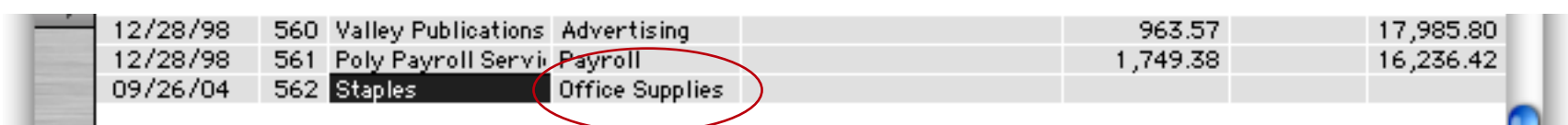
Sometimes the check amount is the same from check to check also, for example a rent or subscription payment. You can go back to the design sheet and use the same technique to build a formula to look up the previous check amount. The formula is almost the same as before, but this time it looks up the Debit field and has a default value of 0 instead of "" (see "Linking With Another Database" on page 1400).
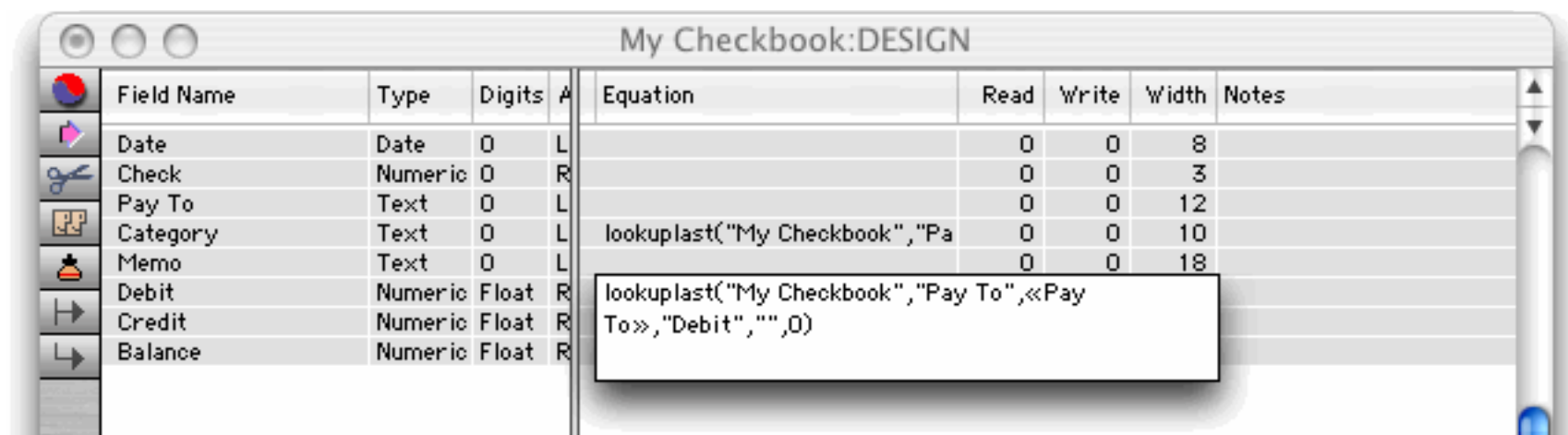
One potential problem with both of these formulas is that they will stop working if the name of the checkbook file changes — it's hard coded as My Checkbook. To fix that you can replace "My Checkbook" with info("databasename"), as shown below (see "Looking Up Data in the Current File" on page 1413).
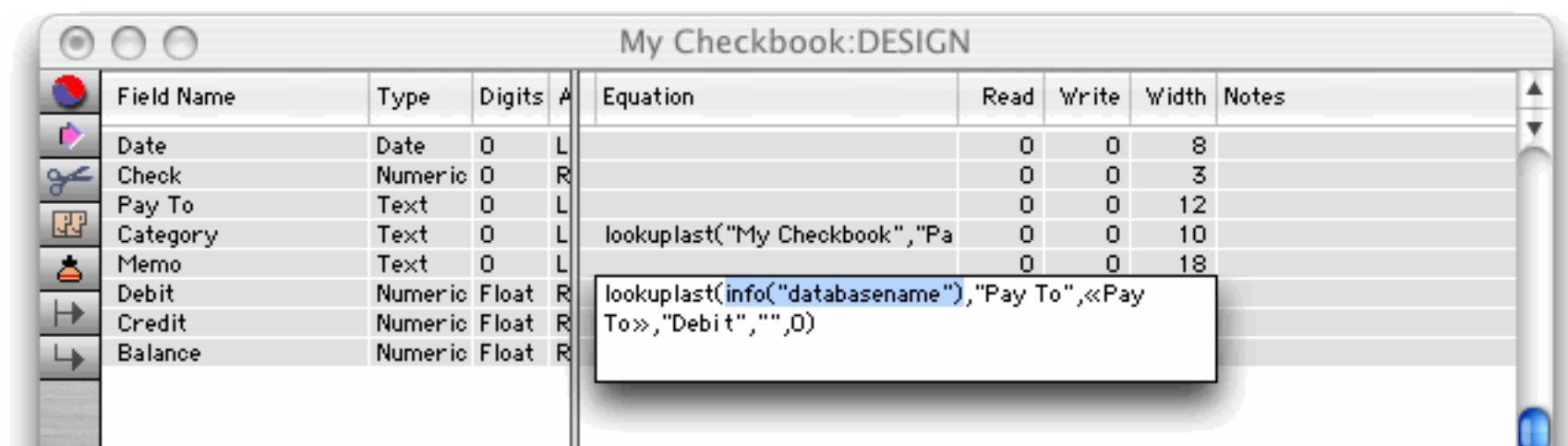
Press the **Enter** key, use the **View** menu to go back to the data sheet, then start typing Pacific Properties into the Category field.

When you press the **Enter** key Panorama will look up both the category and the amount from the previous check to Pacific Properties.

If this isn't the correct amount you can simply tab over to the Debit field and type in the actual amount. If you haven't done so already, **Save** the database again now.

Calculating the Checkbook Balance

To calculate the running checkbook balance you'll need to record a quick procedure. Start by turning the recorder on (see "Creating a Procedure with the Recorder" on page 1476).

Scroll over to the Balance field and click somewhere in the field.
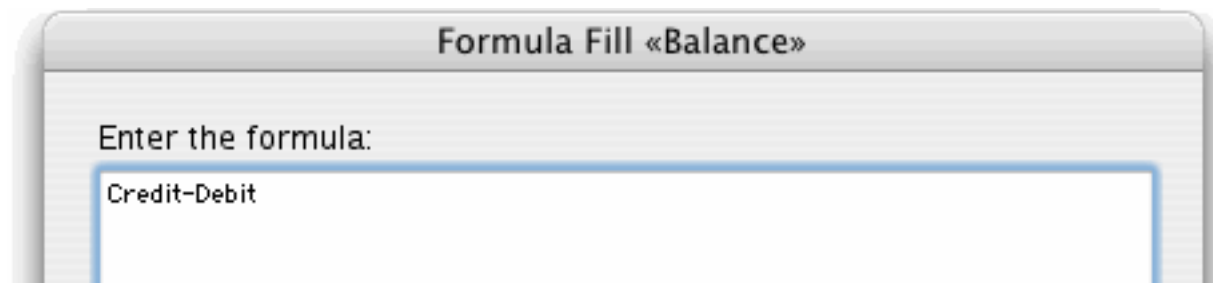

Choose the **Formula Fill…** command from the Math menu (see "Filling a Field with a Formula" on page 581).
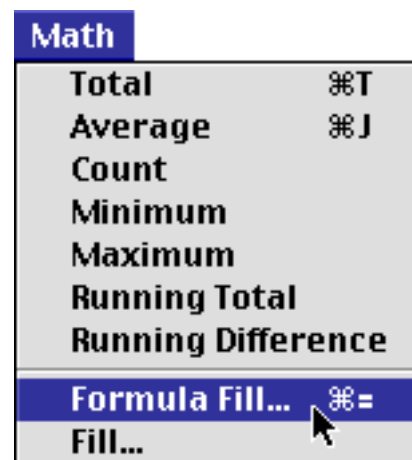
Enter the formula `Credit-Debit`. You can use the **Fields** menu to help you type in the field names.
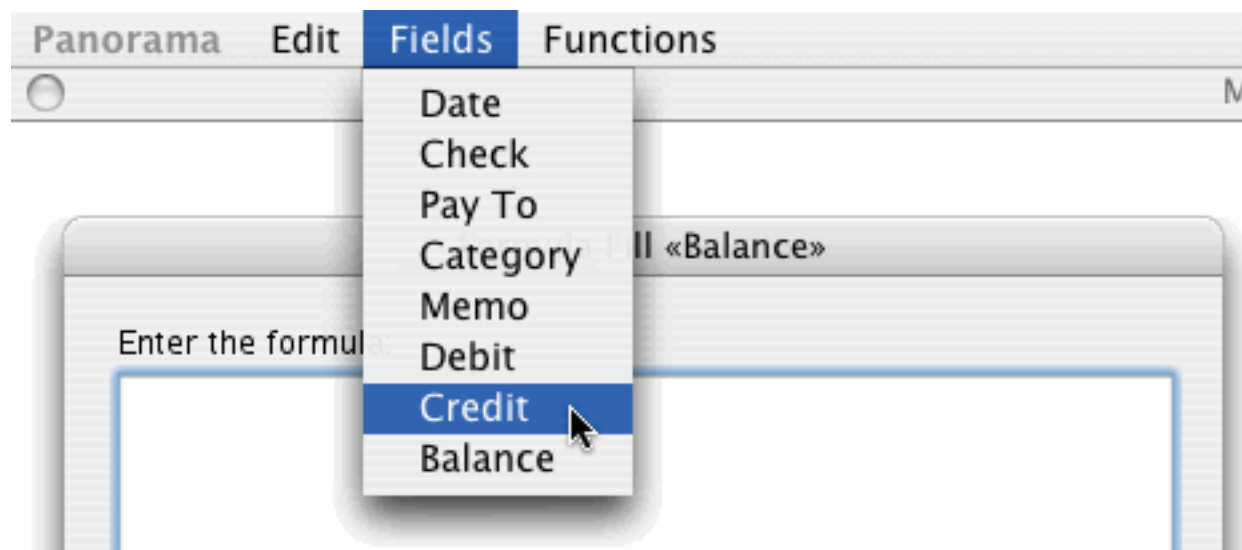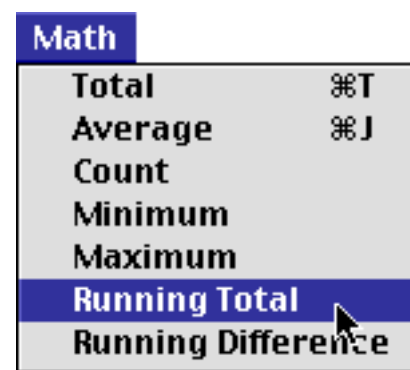
The finished formula should look like this.

When you press the **OK** button Panorama will perform this calculation over and over again for every record in the database (see "Filling a Field with a Formula" on page 581).

To complete the balance calculation choose the **Running Total** command from the Math menu (see "Running Total" on page 532).

This command will calculate the balance after each check or deposit (see "Using Running Total to Balance a Checkbook" on page 532).

To finish the recording select the recorder tool again.

Pick a name for the new procedure and type it in, then press the **Create Procedure** button.

Now any time you need to update the checkbook balance you can simply select your new procedure from the **Action** menu.

If you are curious to see what the code in your new procedure looks like you can use the **View** menu to open it (see "Editing a Procedure" on page 107).
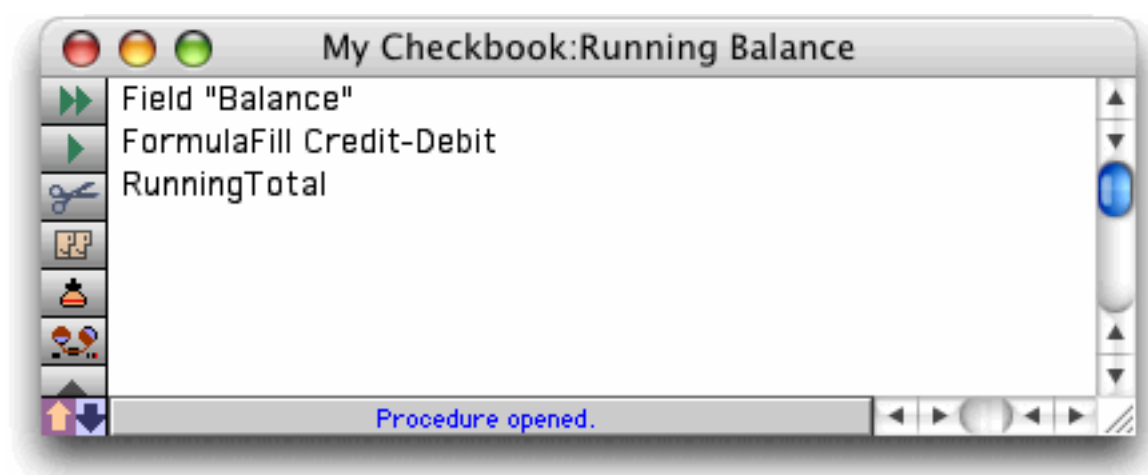
Before moving on to the next step it's a good idea to… you guessed it, **Save** the database.

Drawing a Check Form

To complete your check database you'll create a check form that can be used for data entry. If you are using a Windows PC hold down the **Alt** key, if you are using a Macintosh hold down the **Control** key. Either way, select **New Form** from the View menu (see "Creating a New Form" on page 615). Type in the name of the new form (up to 25 characters).
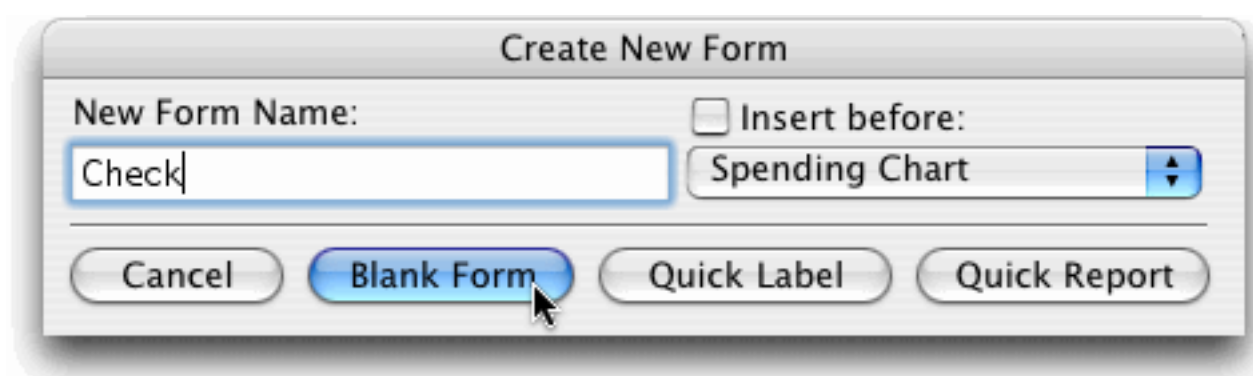
Press the **Blank Form** button to create the new form, then adjust the window to the approximate size of a check.
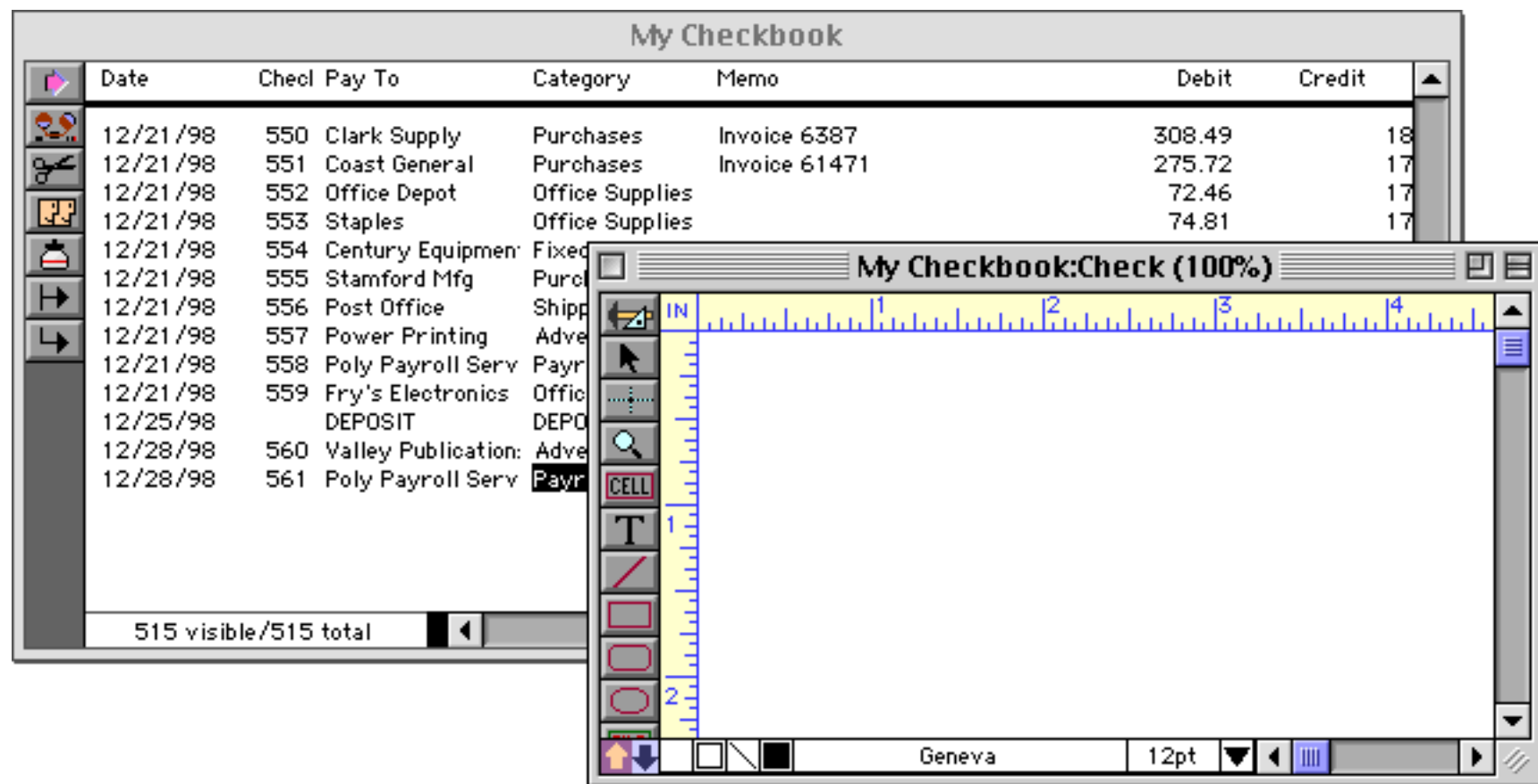
Now choose the **Form Preferences…** command from the Setup menu and use the pop-up menu to set the form's background color to light green.
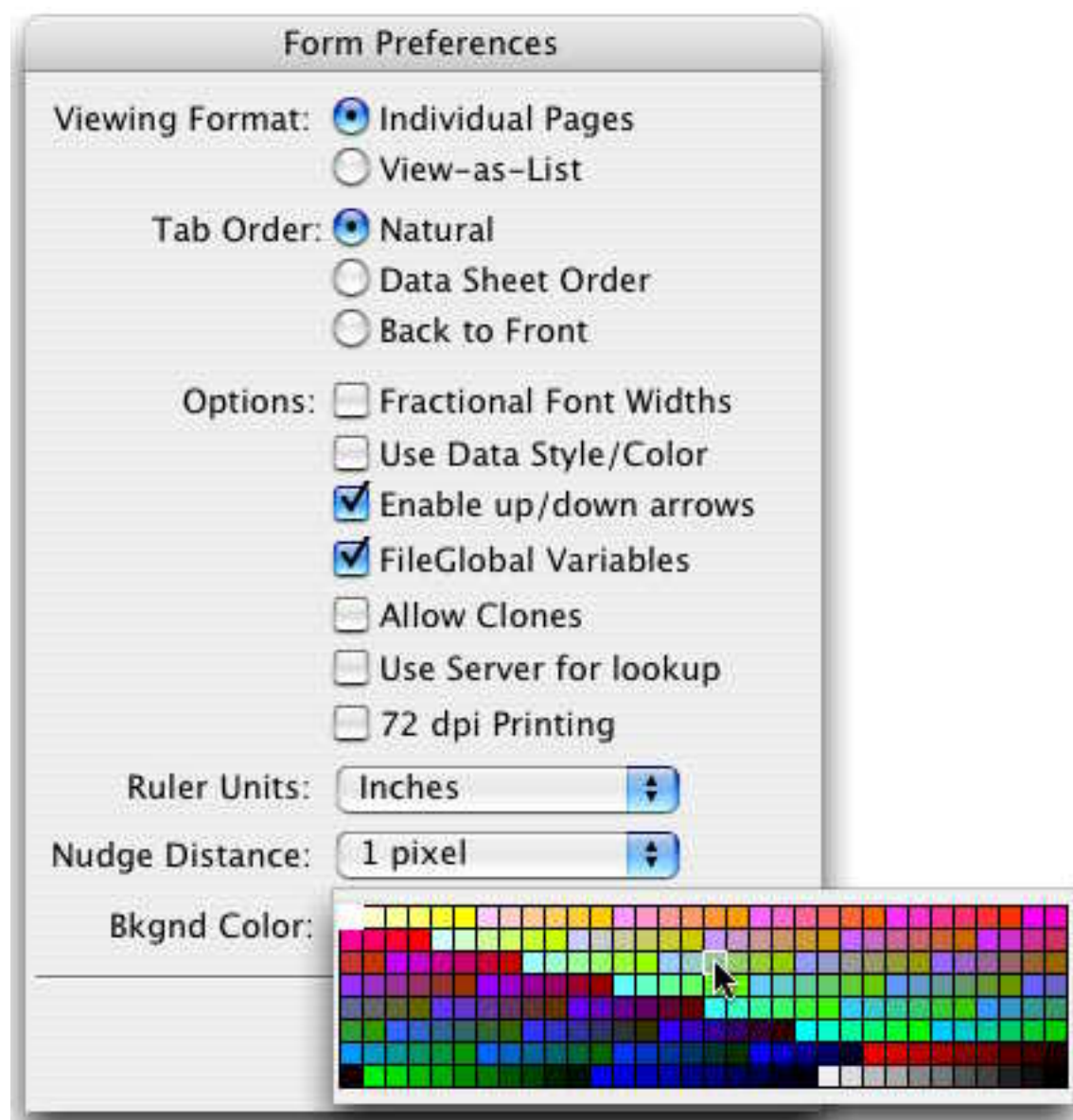
Before you actually start building the form you need to customize the graphic tool palette. Use the **Tool Palette** command in the Setup menu to open the tool configuration dialog.
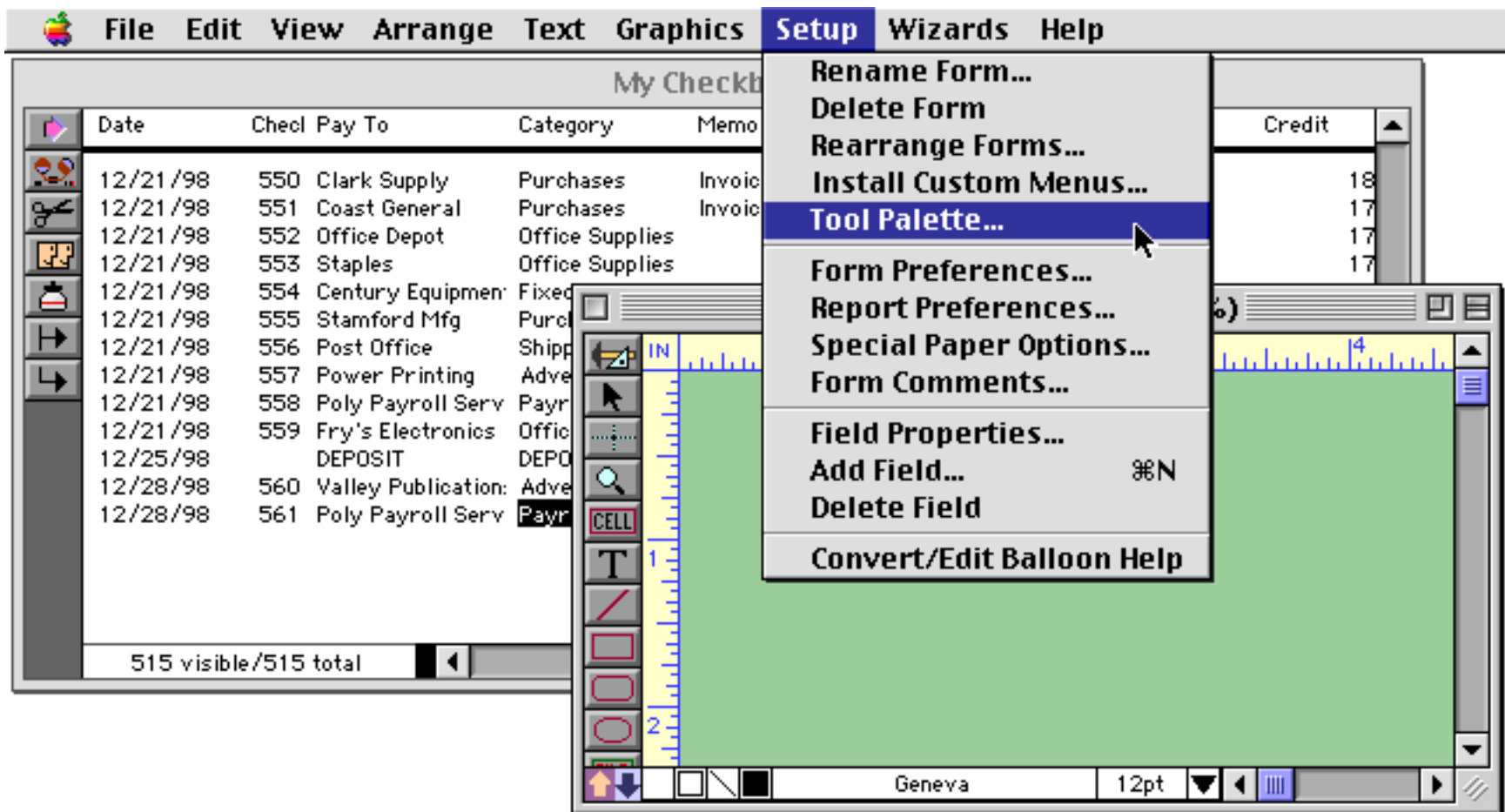
There are a total of 29 graphic tools available for use in Panorama (shown in the list below on the left). Many computer screens are not large enough to handle this complete palette of tools (and we expect the number of tools to increase in future versions). To get around this problem, Panorama allows you to customize the graphic tool palette on the fly (see "Customizing the Tool Palette" on page 625). You can configure the palette to contain only the tools that you need right now in any order you want. If your needs change later, you can simply reconfigure the palette at any time.
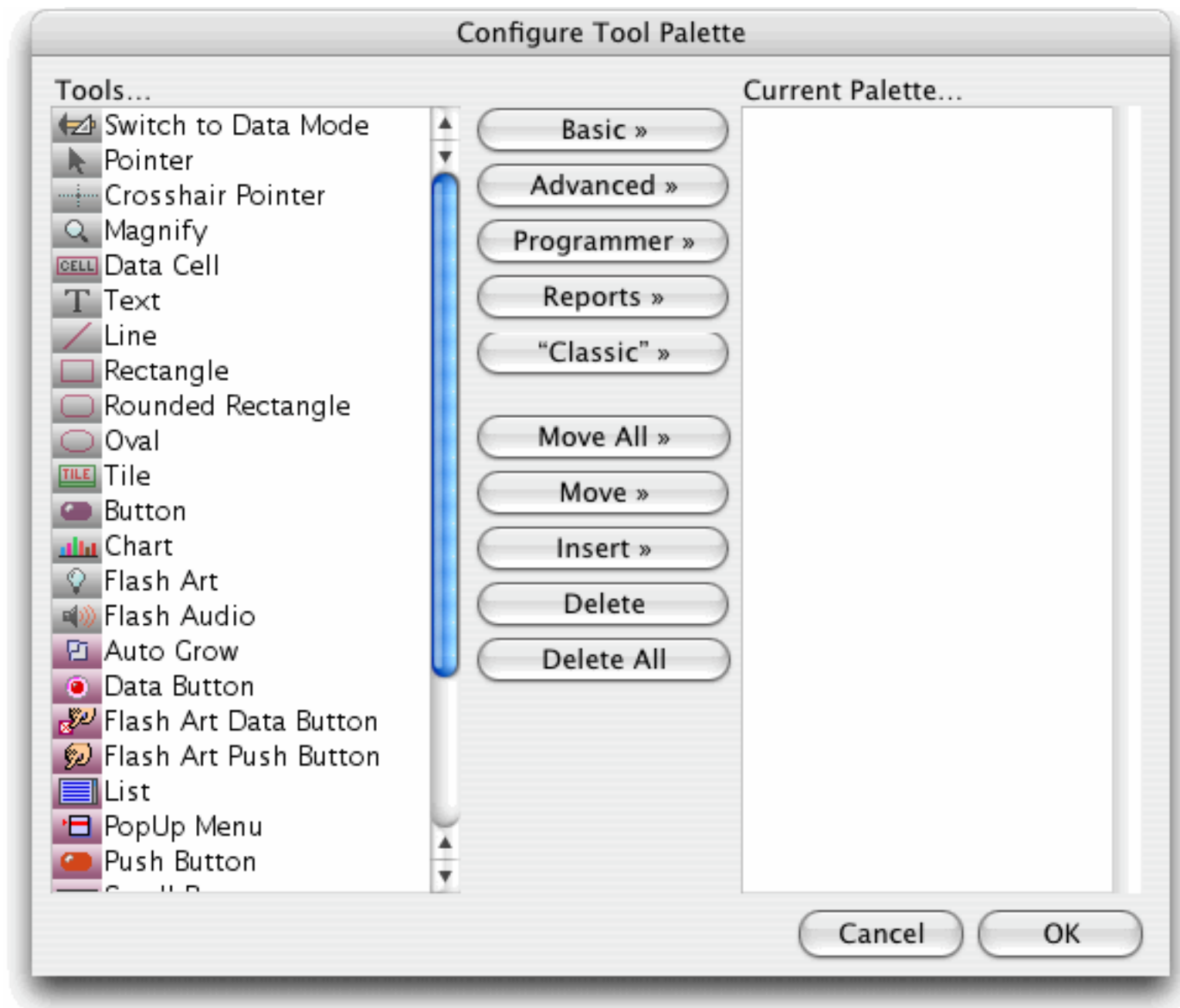
On the right is a list of the tools you currently have installed. If this list is empty, Panorama will use the default tool palette. To move a tool from the left to the right, double click on the tool in the left. Or you can select the tool (or tools) and press the **Move** or **Insert** button. Move the nine tools shown below into the list on the right.
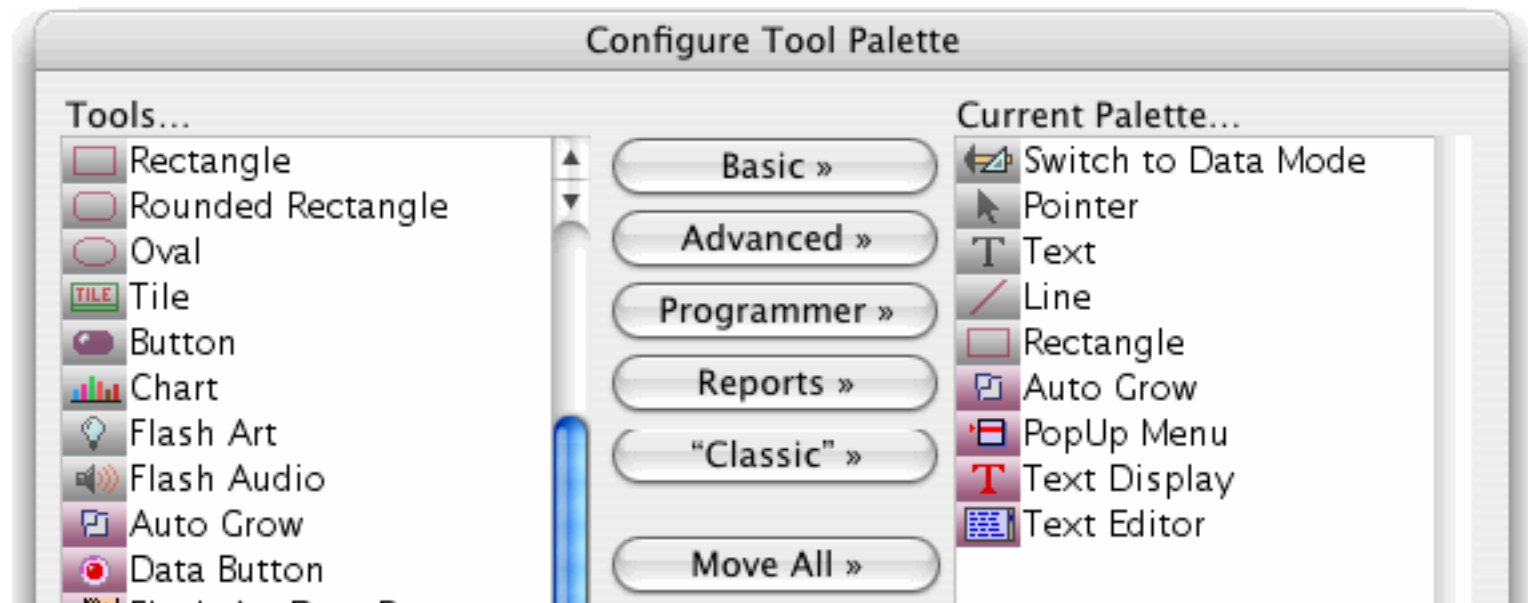
When you press the **OK** button the tool palette in the form will be updated.
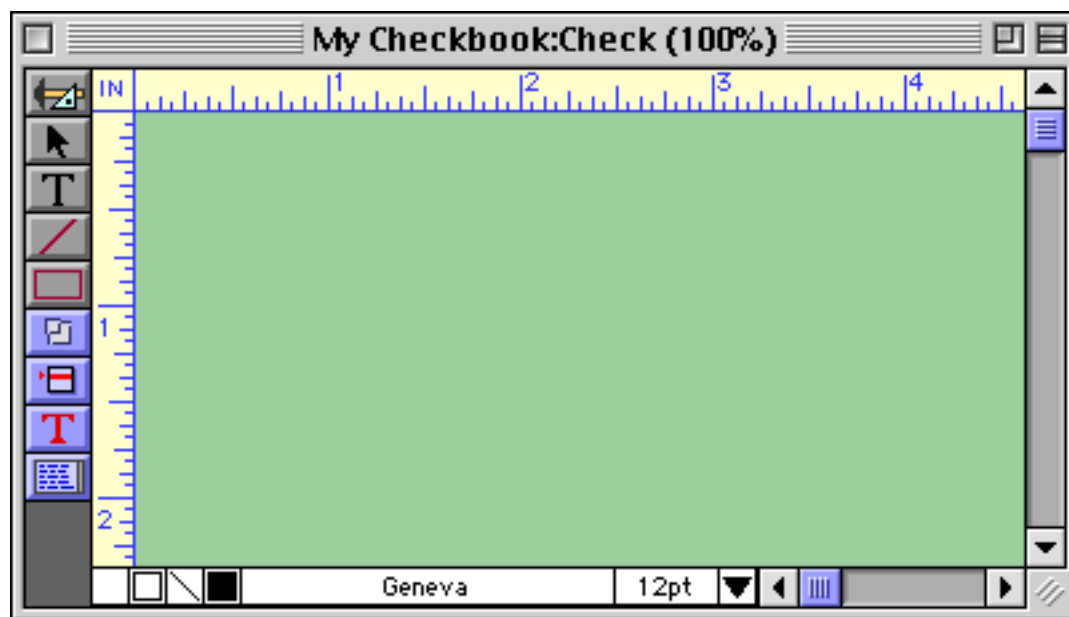
Creating the Text Editor SuperObjects

Using the **Text** menu or the Graphic Control Strip set the text size to 9 points (see "Text Font, Size and Style" on page 721).
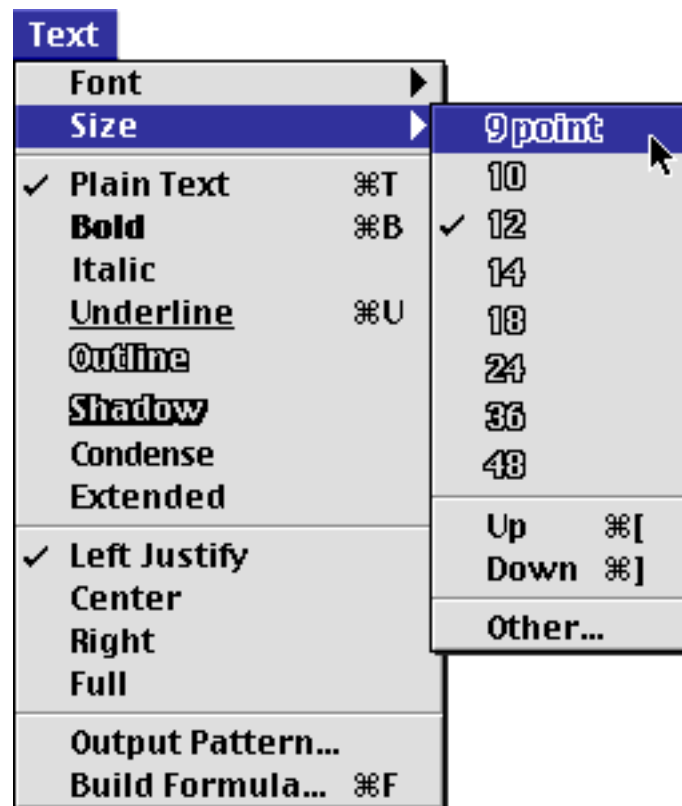
With the **Pointer** tool selected, click the mouse in approximately the location shown below.
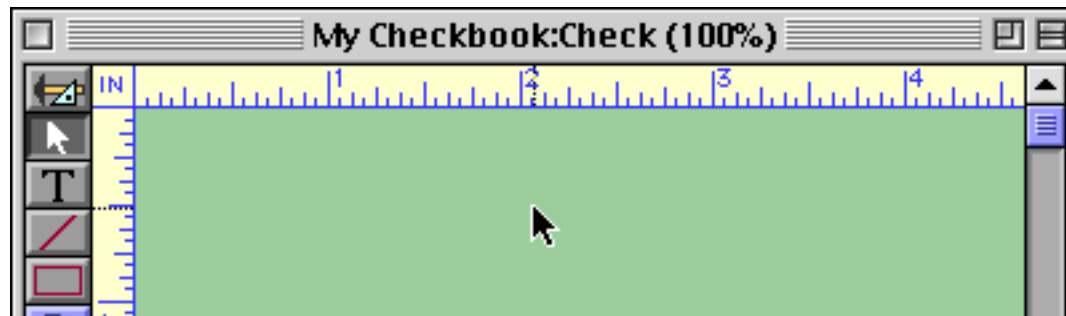
Now select the **Auto Cell Layout** command from the Arrange menu (see "Automatically Creating Rows or Columns of Data Cells or Text Editor SuperObjects" on page 790). You used this command in your My Mailing List database to create data cells, now you'll use it to create **Text Editor SuperObjects** (see "Types of Data Editing Objects" on page 760).
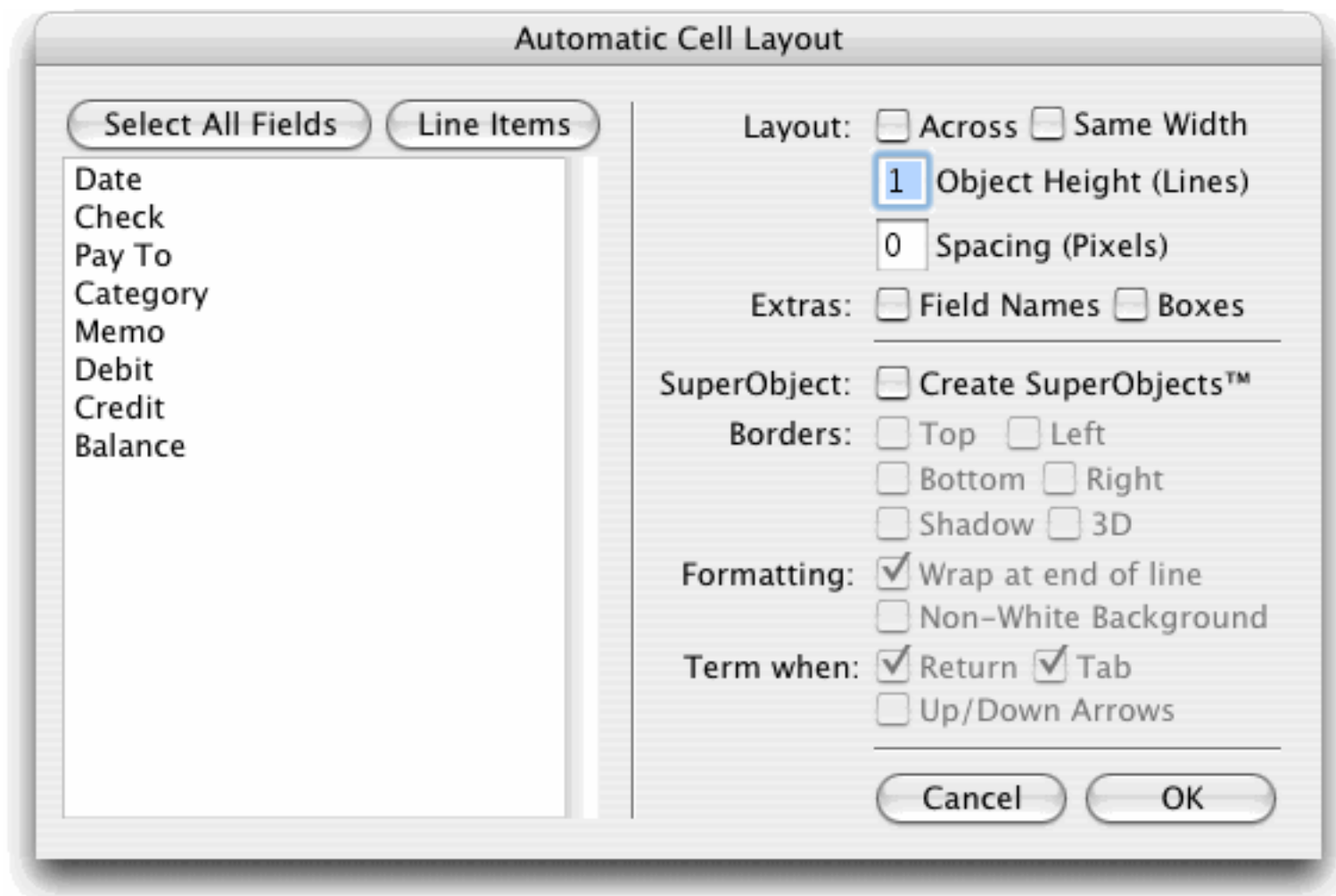
Start by holding down the **Shift** key and clicking on each of the first six fields.
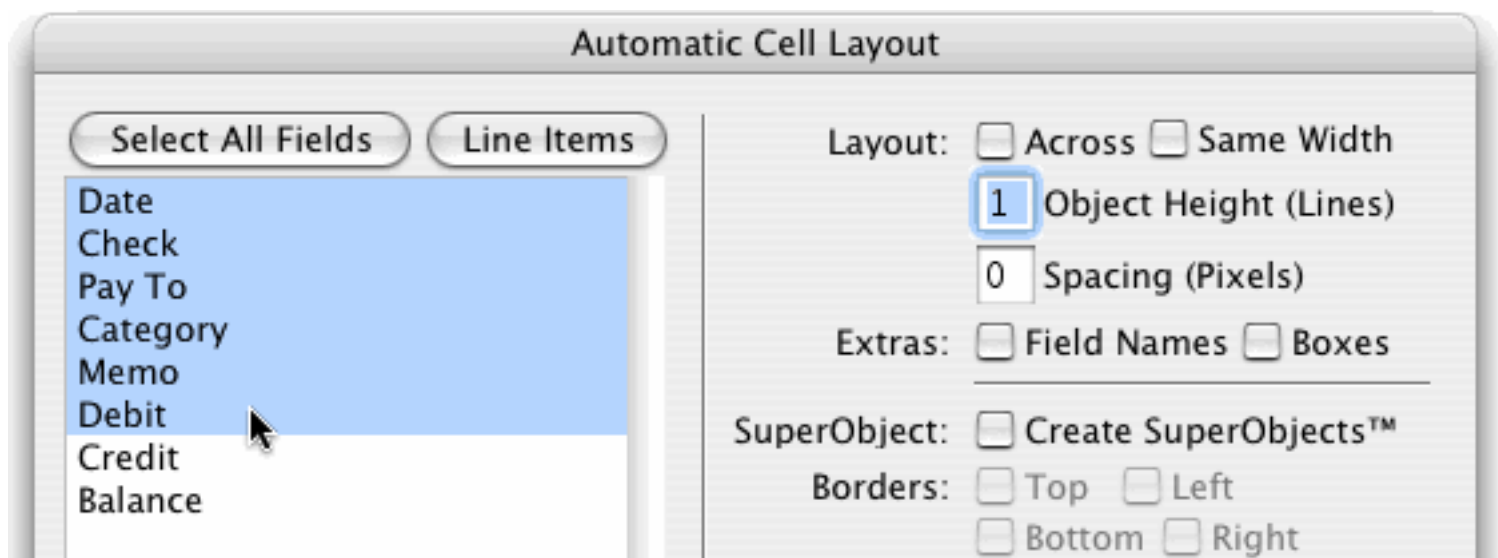
Next click on the Create SuperObjects™ and 3D checkboxes.
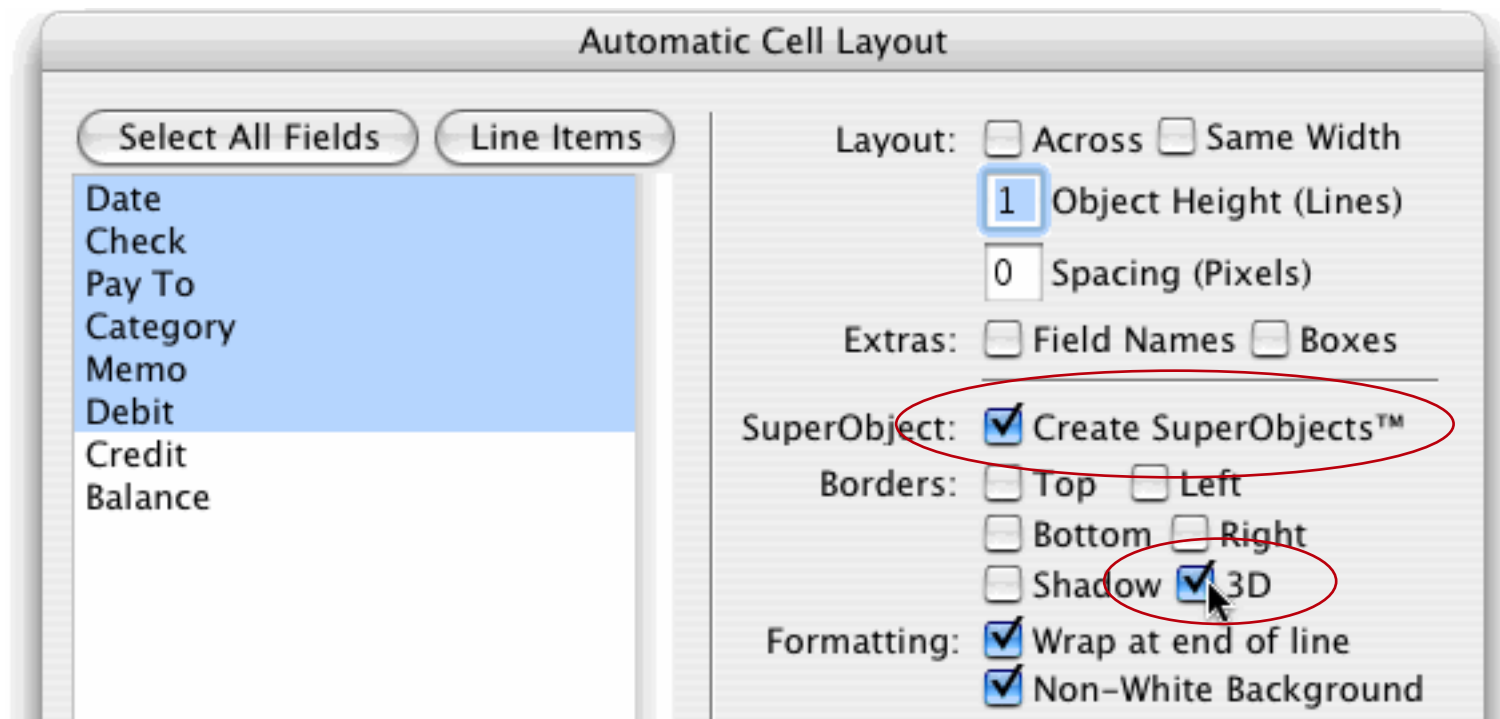
Press the **OK** button to create the Text Editor SuperObjects.
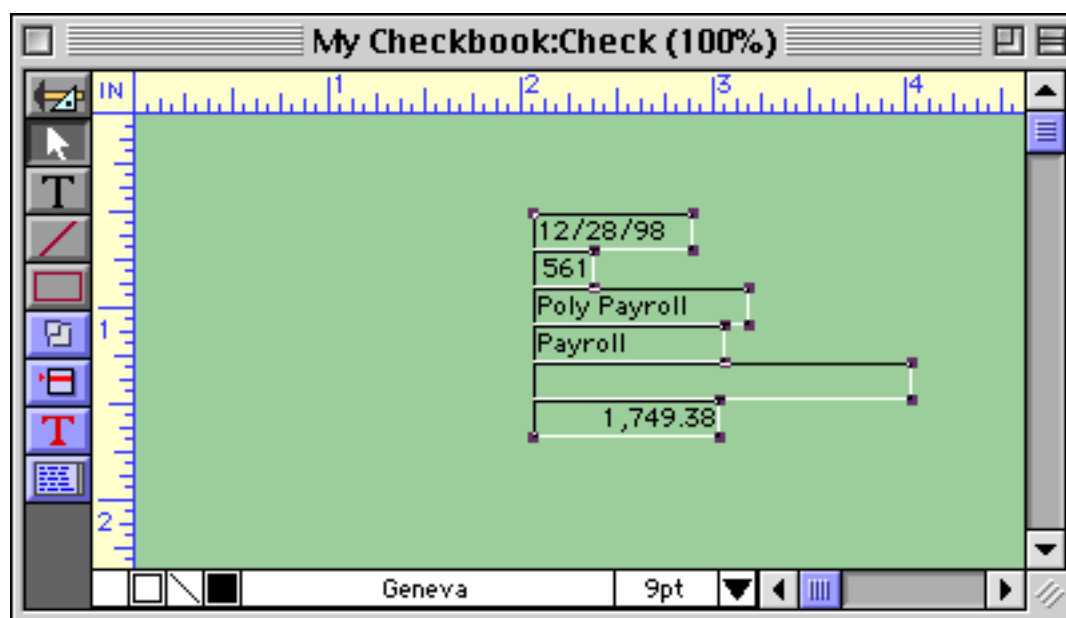
Text Editor SuperObjects may be used as an alternative to data cells for editing text within a form. You can already see one difference between these two types of objects — the Text Editor SuperObject displays data even in **Graphic Design Mode**, not the field name. To see the major difference between these two types of objects switch the form to **Data Access Mode** (see "Form Modes: Data Access vs. Graphic Design" on page 613).
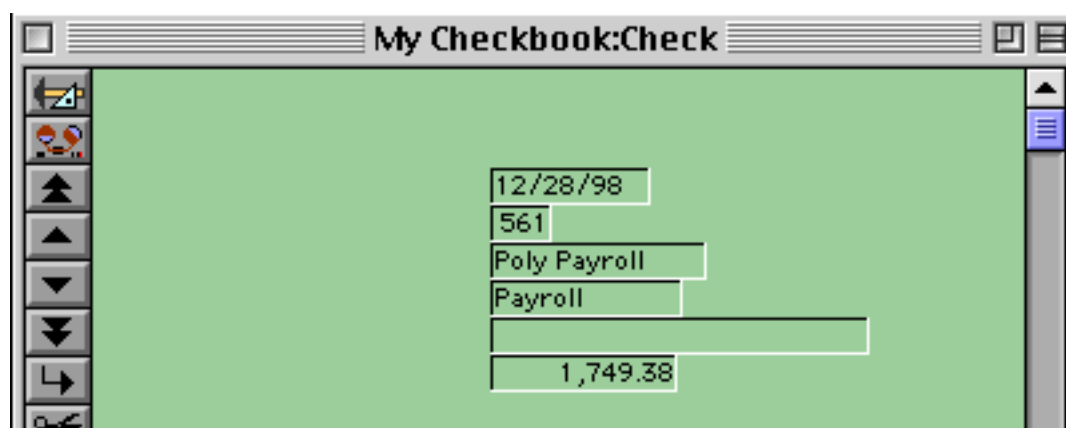
Text Editor SuperObjects allow you to edit text right in the form window—no double click is required. You can simply click or drag on the text to begin editing. Press **Enter** when you are finished. The illustration below shows the effect of double clicking on the word Poly. As you can see, instead of opening an Input Box this selects the word for editing.
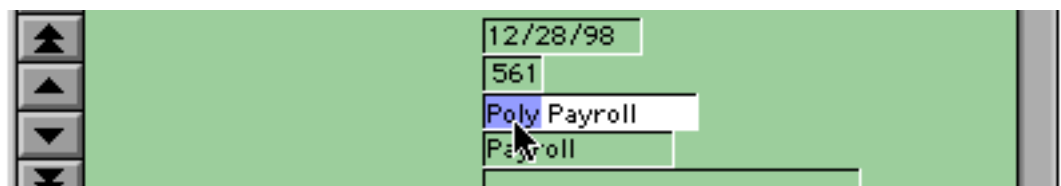
Since the Text Editor SuperObject doesn't use an Input Box, you cannot expand the size of the editing area "on-the-fly" the same way you can with data cells. The editing area must be defined in advance. On the other hand, the Text Editor SuperObject doesn't require the extra double click, and works more like other standard applications you may be used to. See "Creating and Modifying Text Editor SuperObjects" on page 767 to learn more about Text Editor SuperObjects. For now, however, switch the form back to Graphic Design Mode so that you can continue designing your new form.

Dressing Up the Check Form

Select the **Rectangle** tool and draw a rectangle next to the check date (see "Creating a Graphic Object" on page 622).
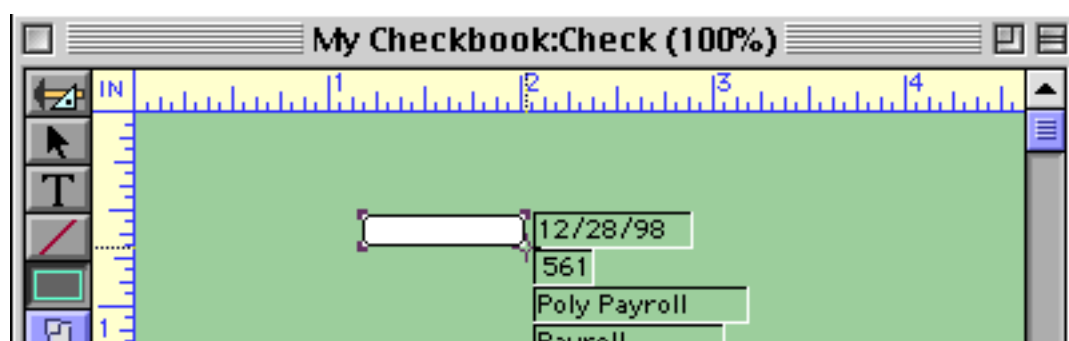
Change the **Fill Pattern** of the rectangle to solid black (see "Fill Pattern" on page 649).
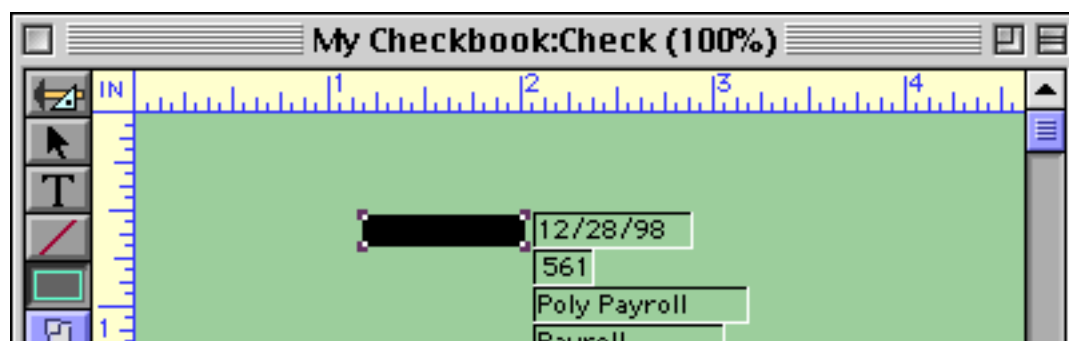
Select the **Text** tool and create a click-text object that says Date. (see "Fixed Text Objects" on page 715).
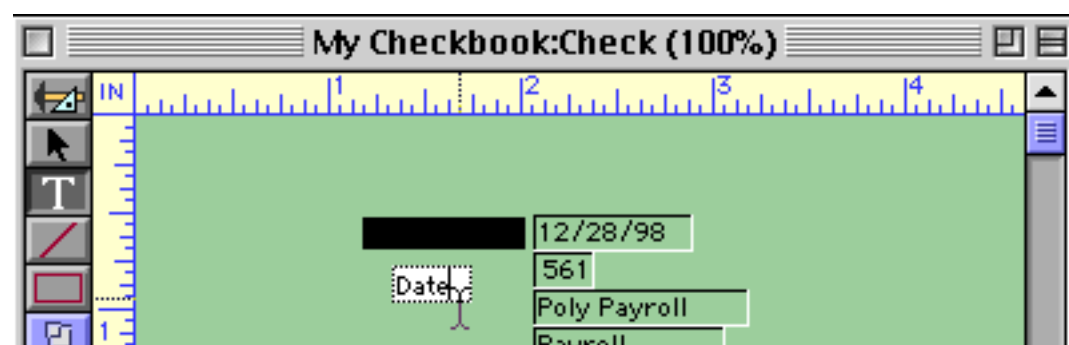
Select the **Pointer** tool and then click on the new text object.
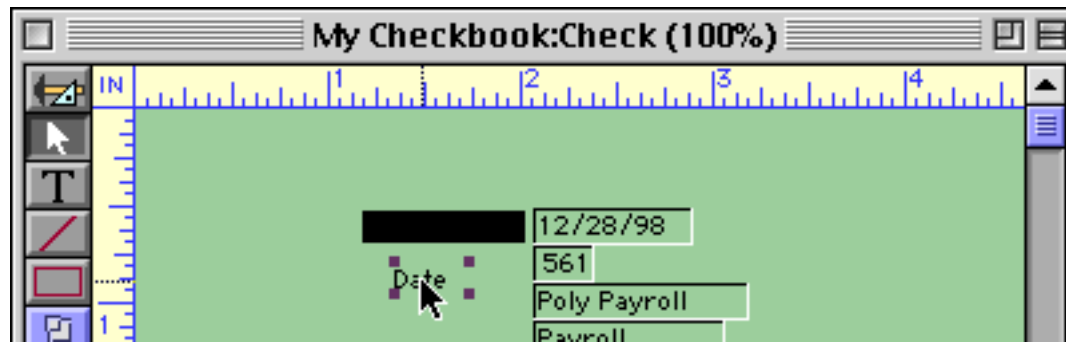
Use the **Graphic Control Strip** to set the text color to light yellow (see "Color" on page 654).
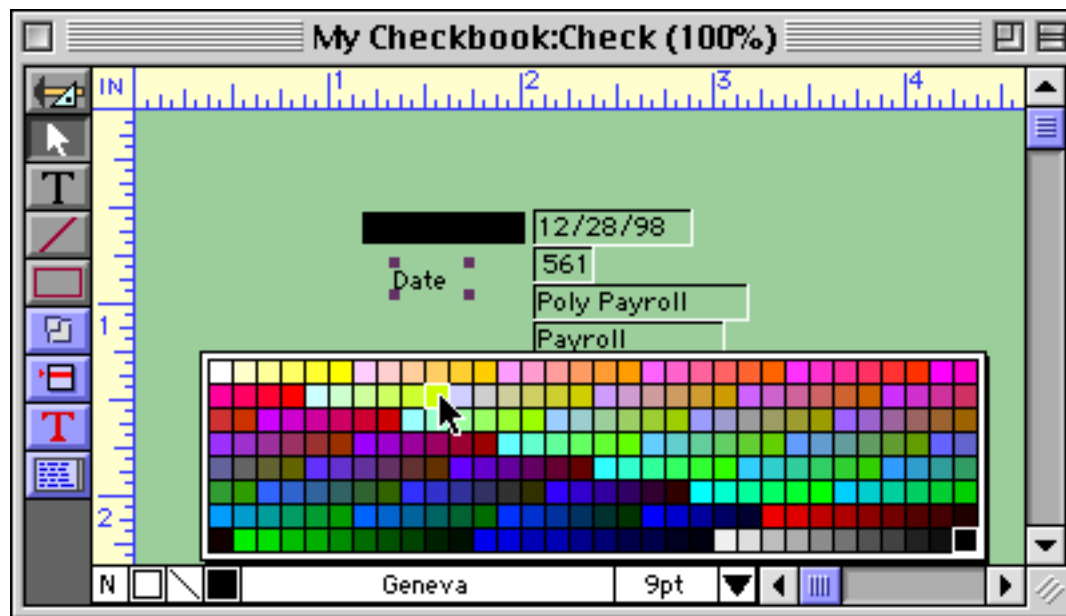
Drag the text over the black box.
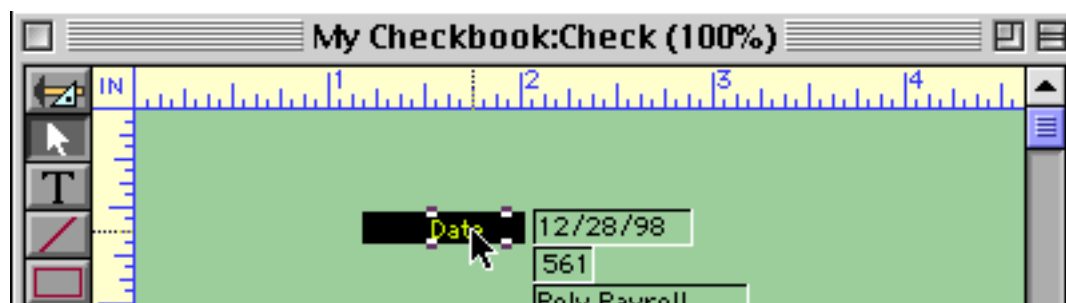
Adjust the black box and the text until they line up with the Text Editor SuperObject as shown below. To adjust these objects you can drag them (see "Moving a Single Object" on page 636 and "Changing the Size of a Single Object" on page 641) and nudge them with the arrow keys (see "Nudging an Object (or Objects)" on page 637 and "Nudging the Size of an Object" on page 641).
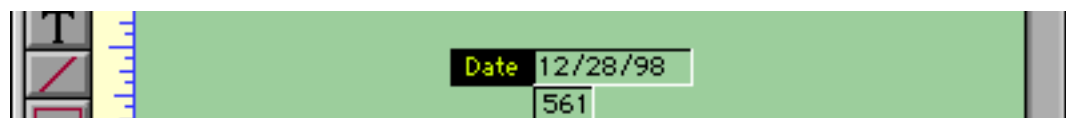
Drag a marquee around these objects to select them (see "Selecting Multiple Objects at Once" on page 630).
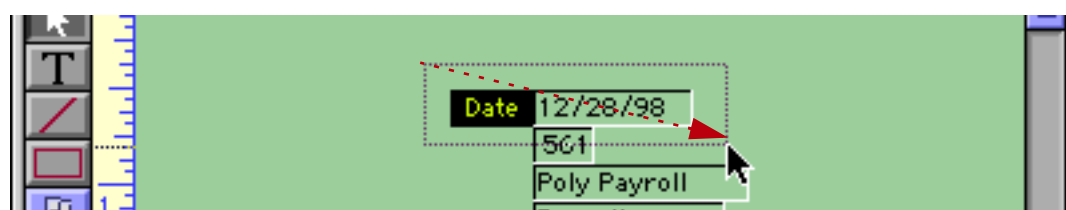
Then drag the objects into the upper left hand corner of the form.
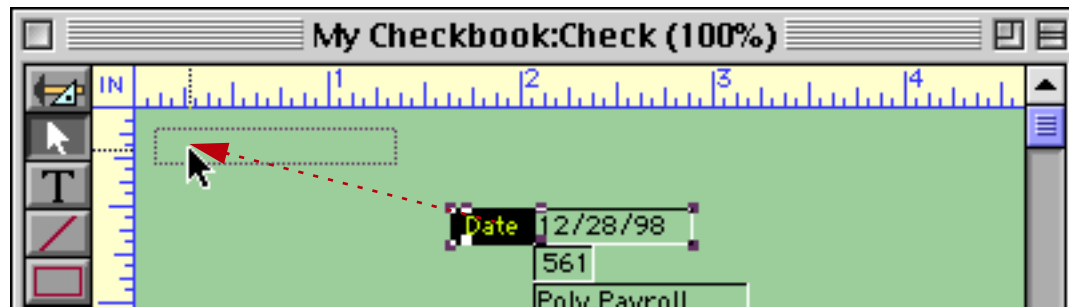
Now drag a marquee just around the box and text objects.
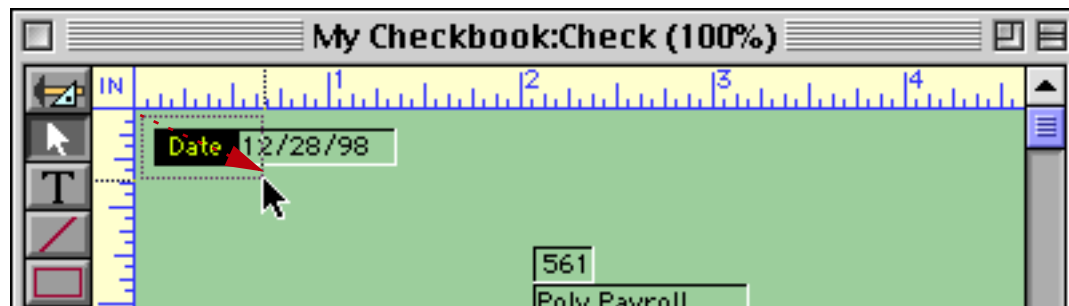
Hold down the **Shift** and **Option** keys on the Mac, or **Shift** and **Alt** keys on the PC. With these two keys held down drag the two objects to the right.
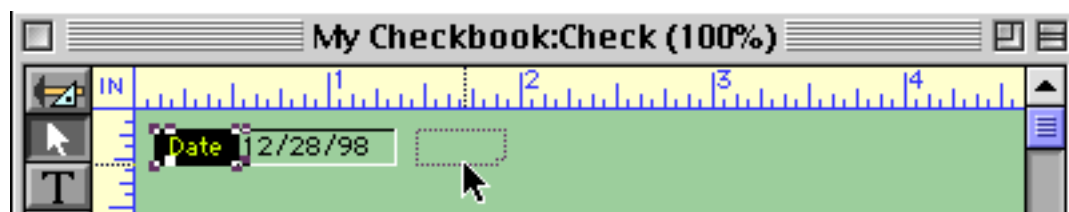
Holding down the **Shift** key insures that you drag the objects at 90 degrees, either perfectly up and down or perfectly left and right (as in this case). Holding down the **Option/Alt** key tells Panorama to duplicate the objects. When you release the mouse you'll have two copies of these objects.
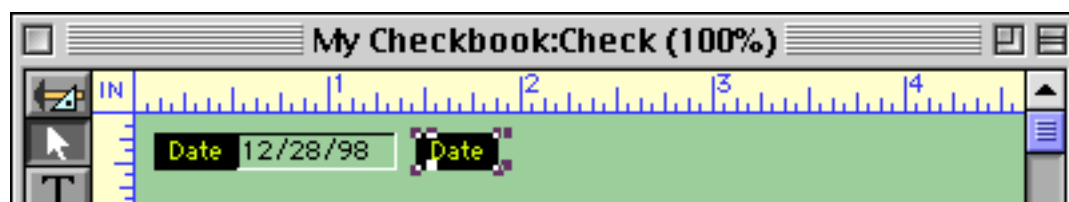
Select the **Text** tool and click on the new text object.
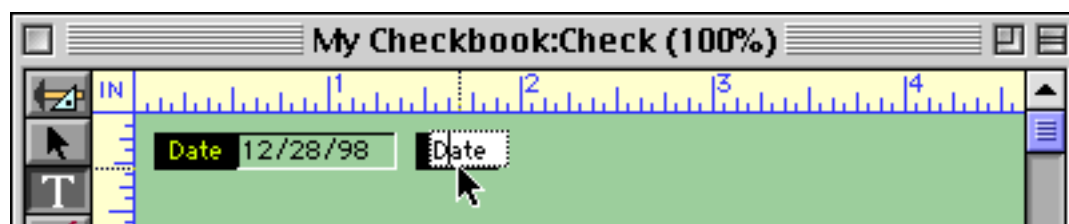
Edit the text to say Number instead of Date.
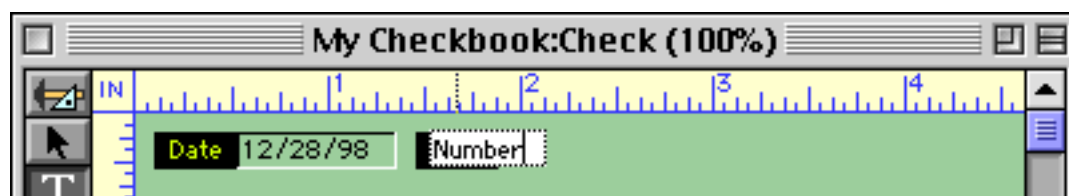
Select the **Pointer** tool and adjust the rectangle size to match the new text.
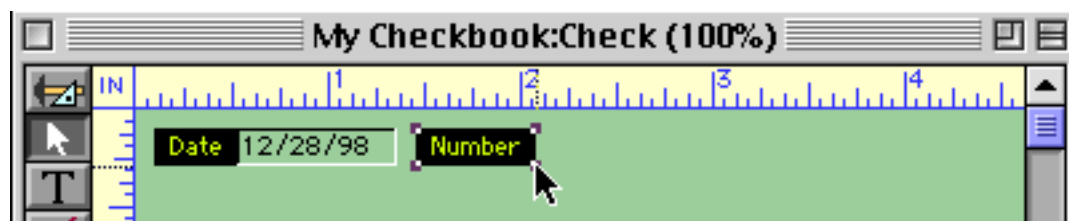
Drag the check number up next to these objects.
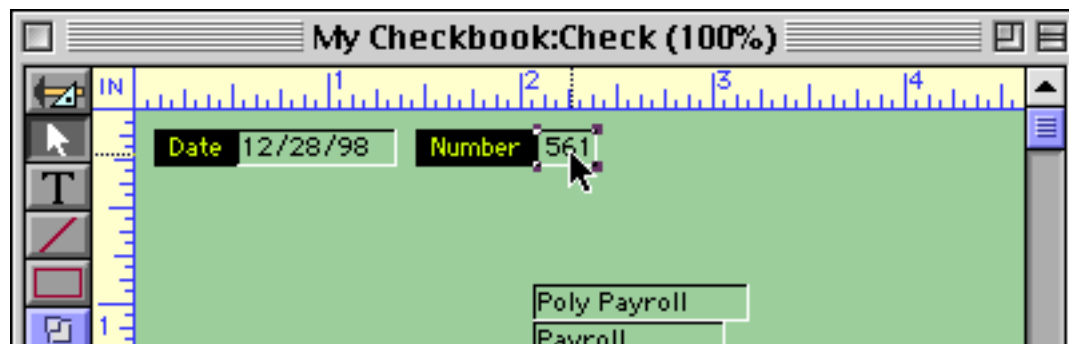
Using the techniques you've just learned continue re-arranging the form until it looks like this.
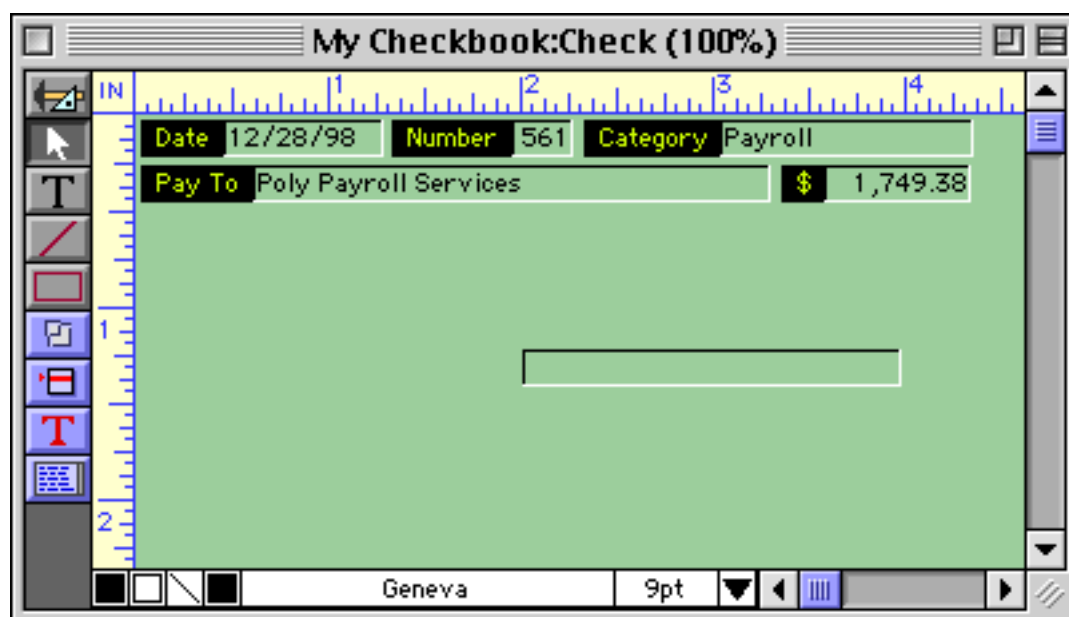
Make a copy of the Pay To caption.
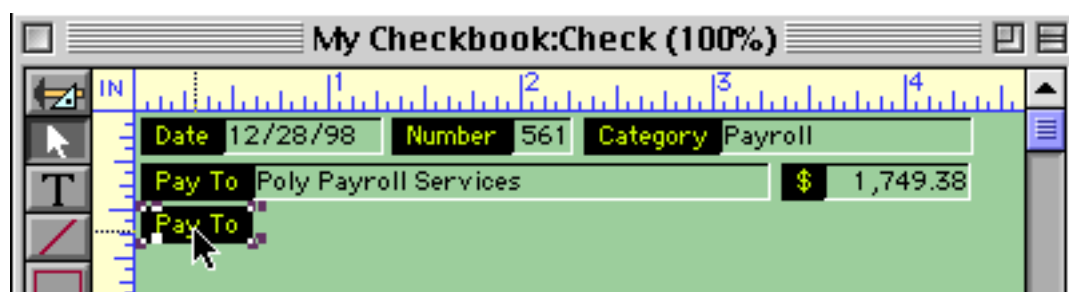
Change the text to Memo and expand the rectangle to about 1 inch high.
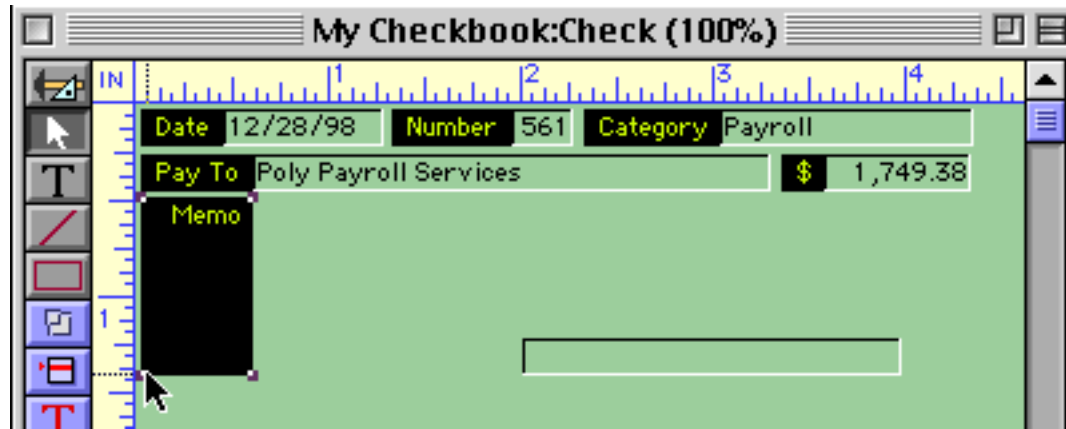
Slide and resize the memo field itself into place.
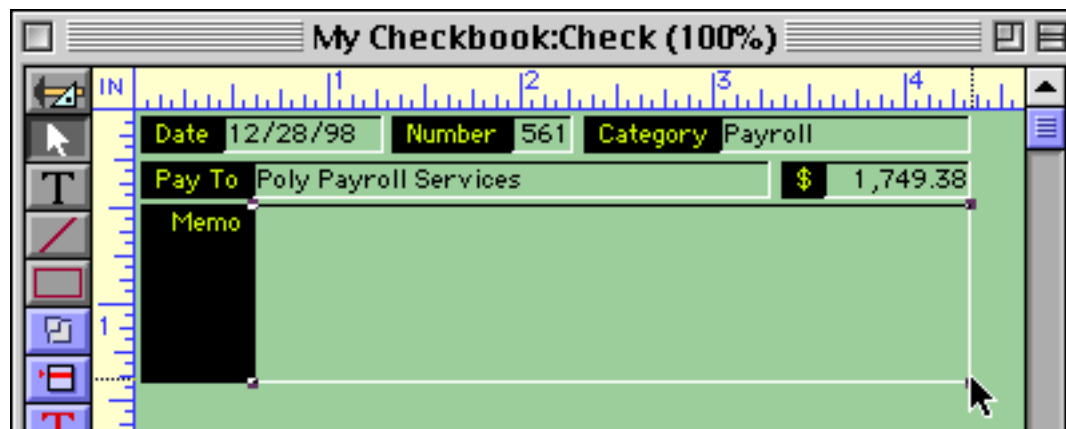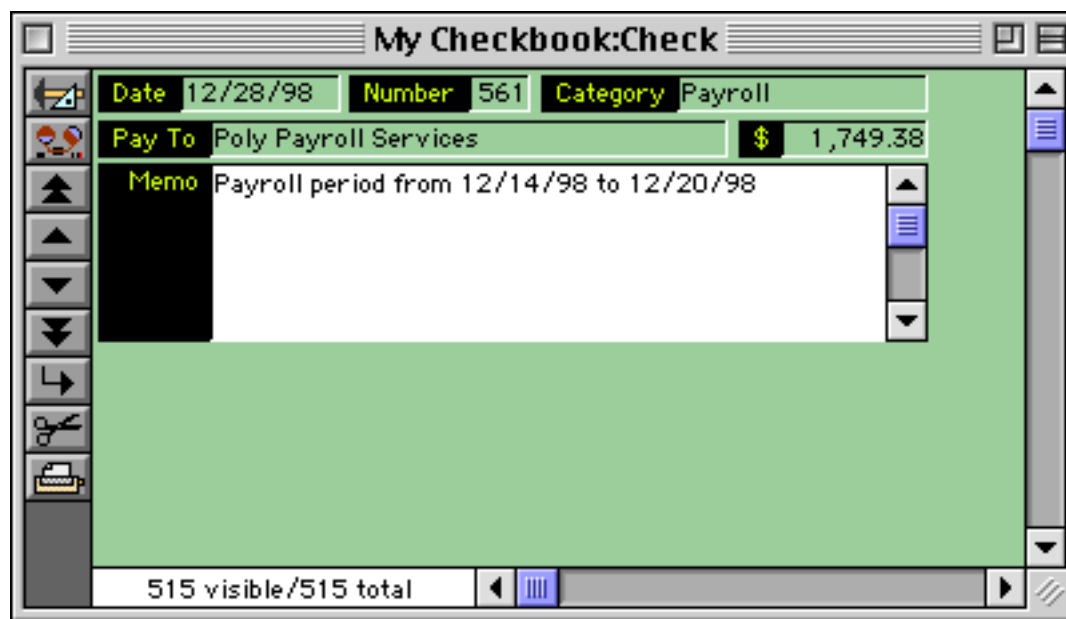
To add a scroll bar to the memo field double click on the Text Editor SuperObject to open the object properties dialog. This dialog lets you turn various object options on and off. Click on the Vertical Scroll Bar checkbox.
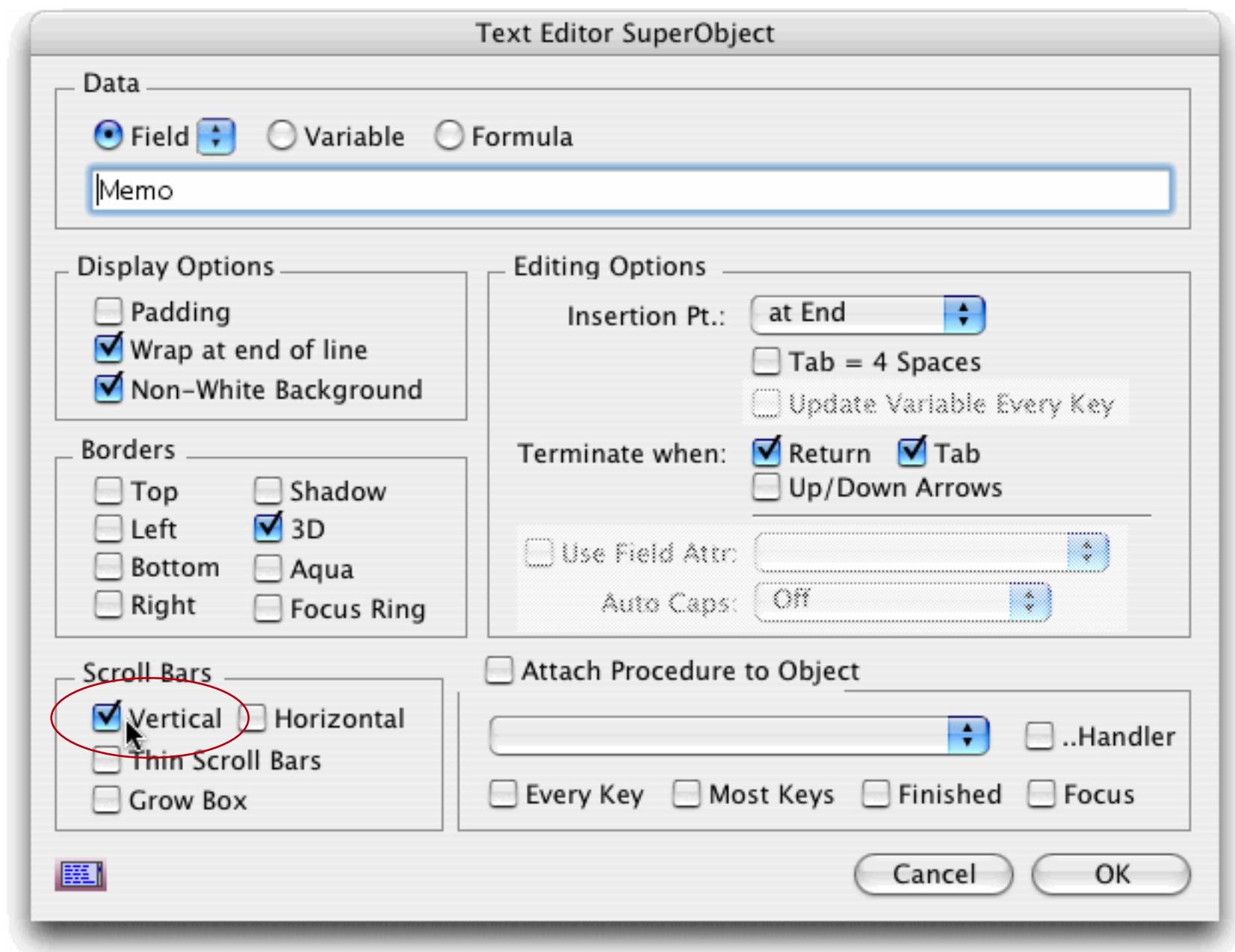
When you press the **OK** button the memo field gets a vertical scroll bar.
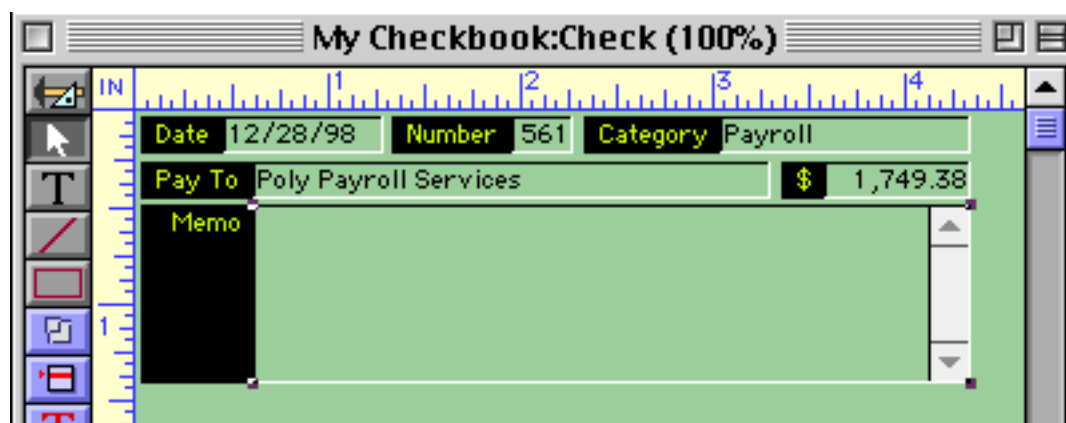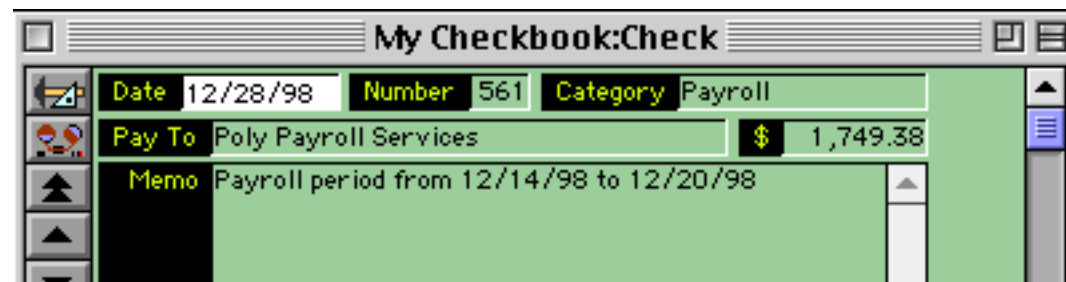
To actually use the form you must switch into Data Access Mode. Notice that the background of the field being edited turns white (in this case the memo field).

Use the **Tab** key to move from field to field.

Making the Form Elastic

An ordinary form is fixed — it stays the same no matter what the size of the window is. By adding a single object to your form you can make it **elastic**. An elastic form adjusts automatically to fit the window — it grows when the window grows and shrinks when the window shrinks. Start by switching back to Graphic Design Mode. Then double click on the memo field to open the object properties dialog.
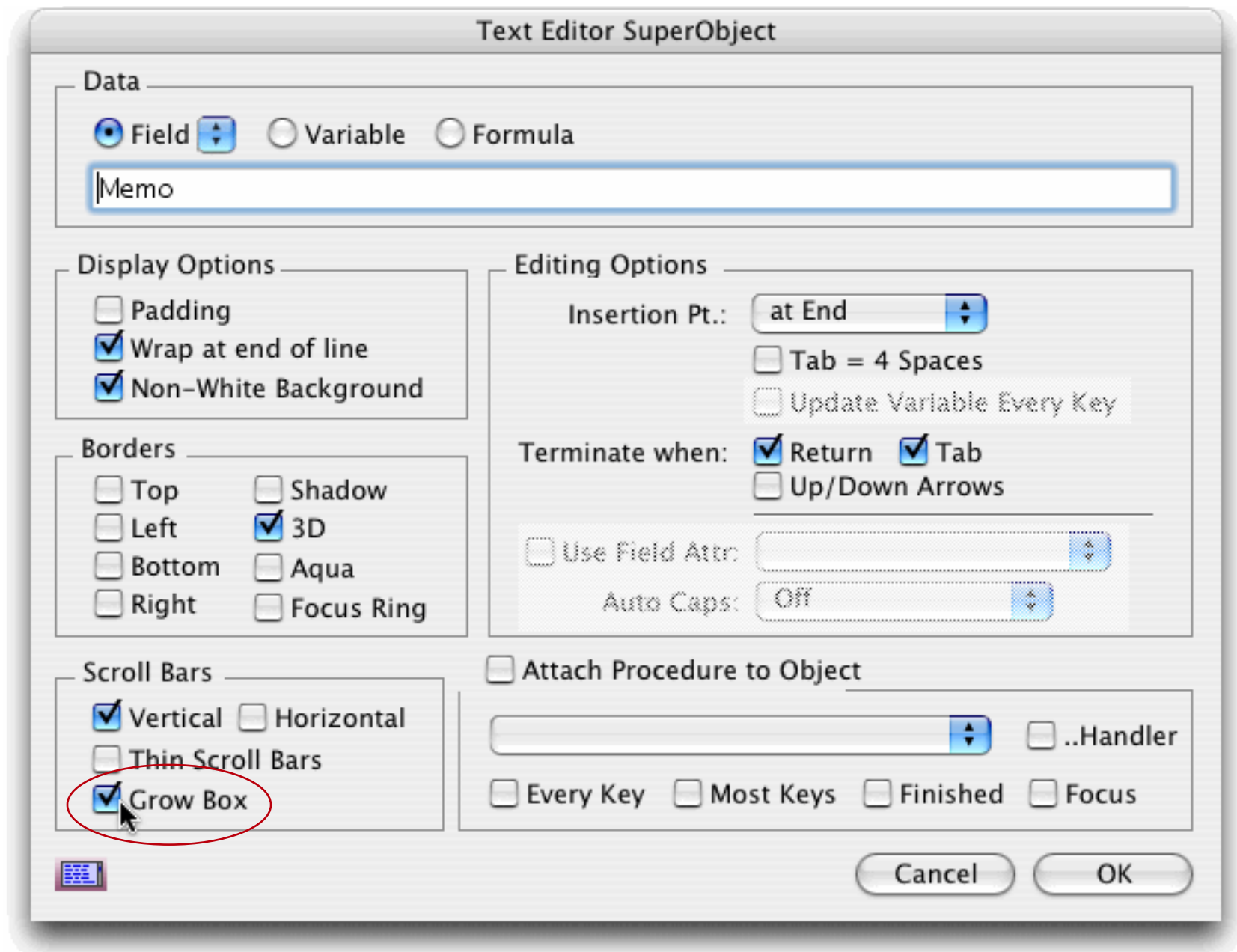
Turn on the Grow Box option, then press the OK button. The memo field now reserves a spot for the window's grow box.

corner reserved for grow box
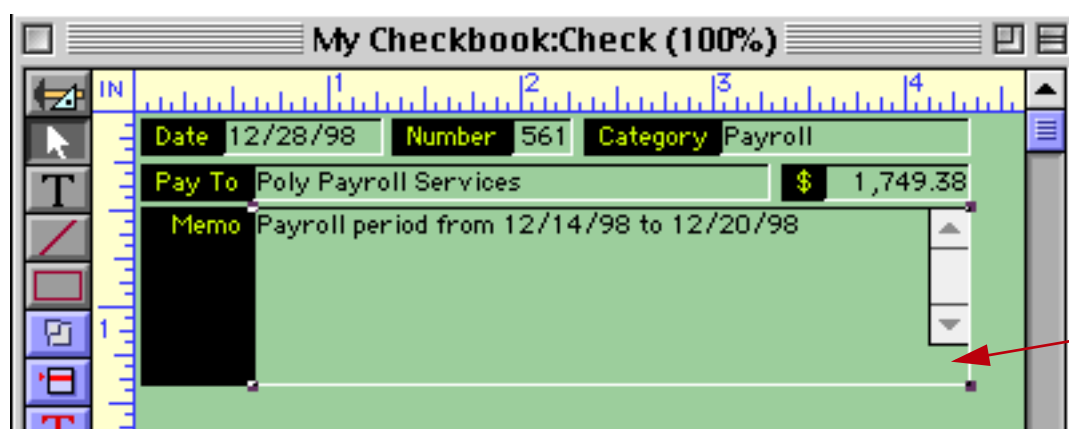
Using the **Rectangle** tool draw a box in the spot reserved for the grow box.
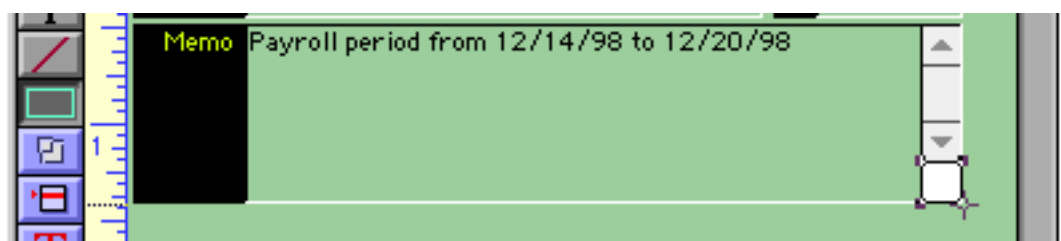
Using the **Duplicate** command in the Edit menu, make a copy of the box (see "Duplicate" on page 689).

Set the Fill Pattern of the new box to solid black (see "Fill Pattern" on page 649).

Set the color of the new box to the same green color as the background (see "Color" on page 654).

Use the arrow keys to nudge the green box until it covers the white area but leaves the black border.

Now to make the form elastic. Start by selecting the **Auto Grow** tool. (If you can't find the **Auto Grow** tool you need to customize the tool palette. See "Customizing the Tool Palette" on page 625.)
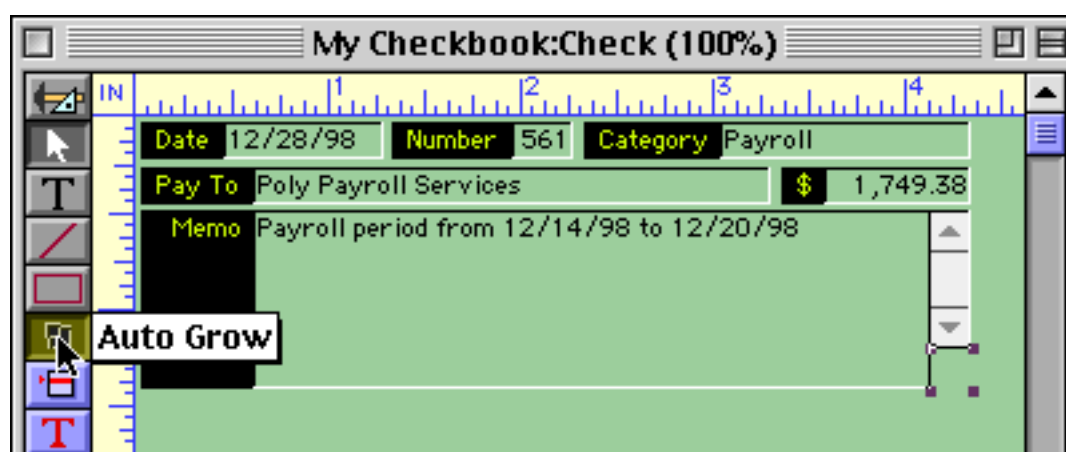
Starting from the bottom right hand corner of the form, drag the mouse up and to the left. Release the mouse somewhere between the left edge of the Category field and the right edge of the Pay To field, as shown in the illustration below. (The blue and green lines in the illustration below have been added to highlight the location of these edges.)
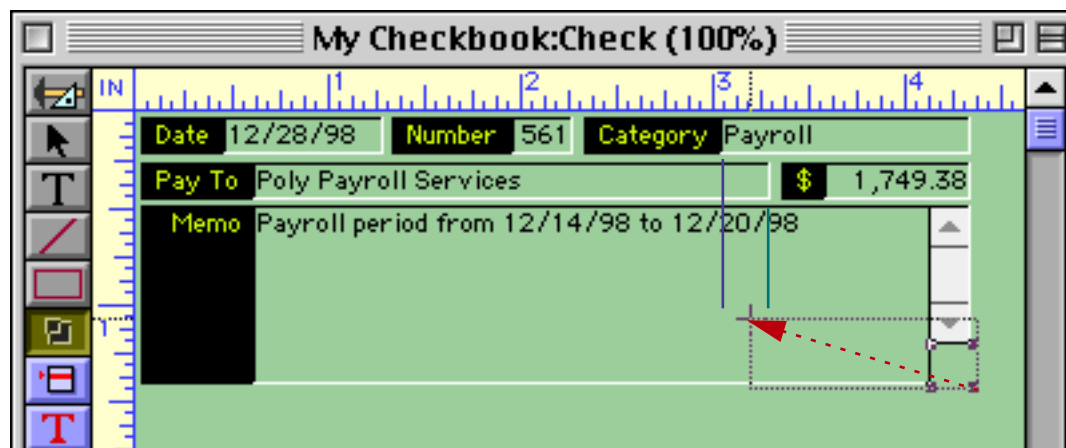
When you release the mouse the **Auto Grow** configuration dialog appears. The dialog is already filled out for you except that you need to turn on the Draw Grow Icon checkbox.
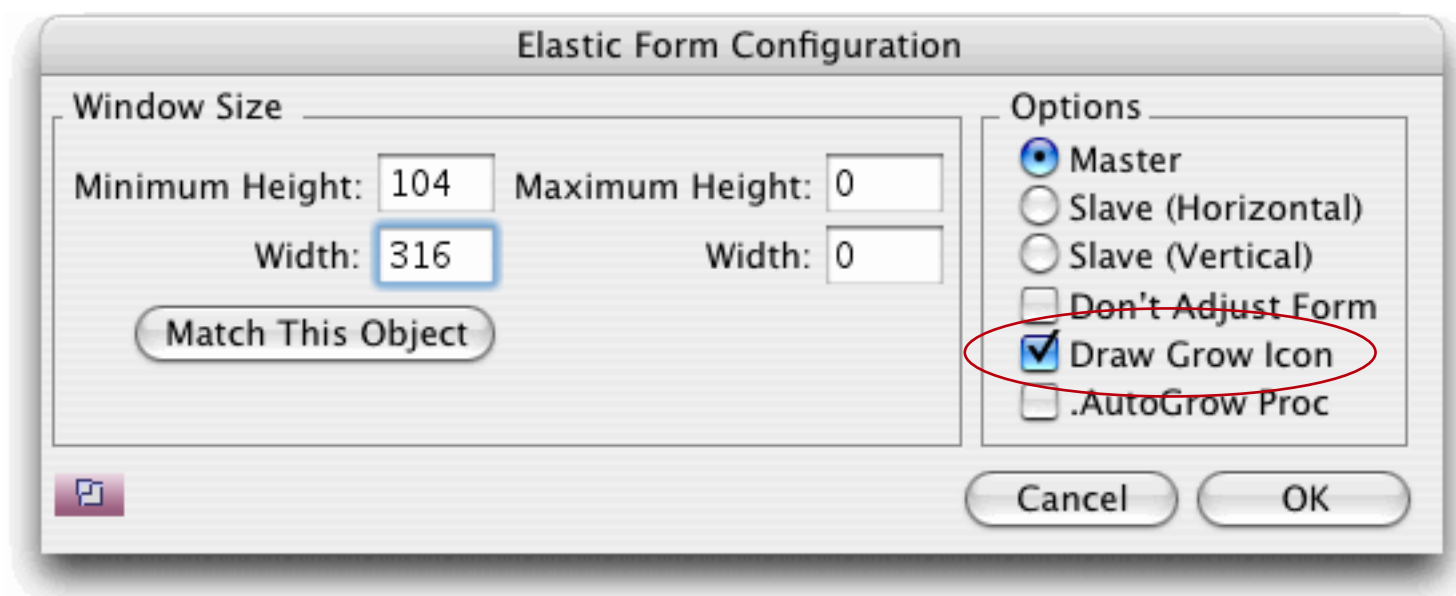
Press the **OK** button to finish creating this object.
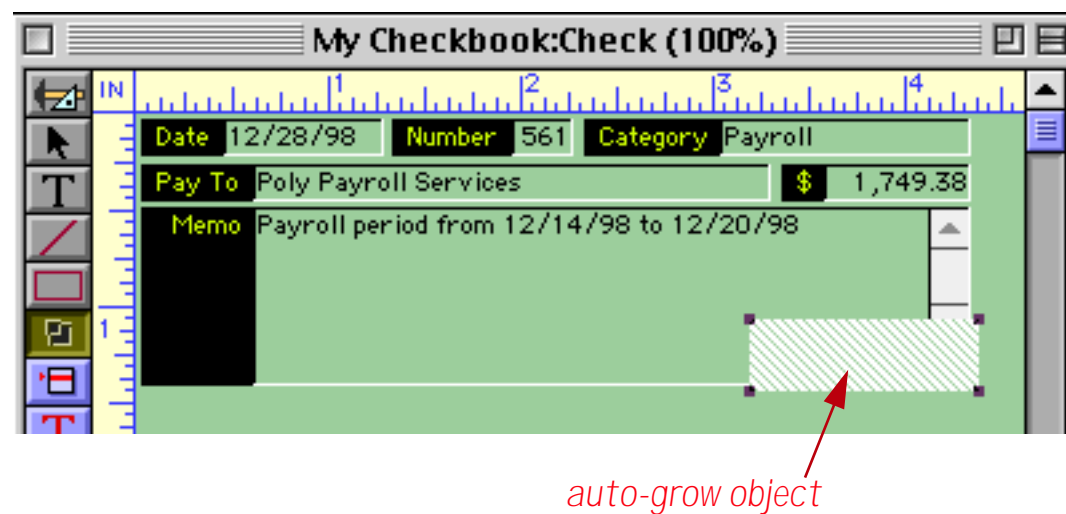
auto-grow object

The auto-grow object is covering up some of the memo field. To fix this use the **Send To Back** command in the Arrange menu (see "Changing the Stacking Order" on page 697).
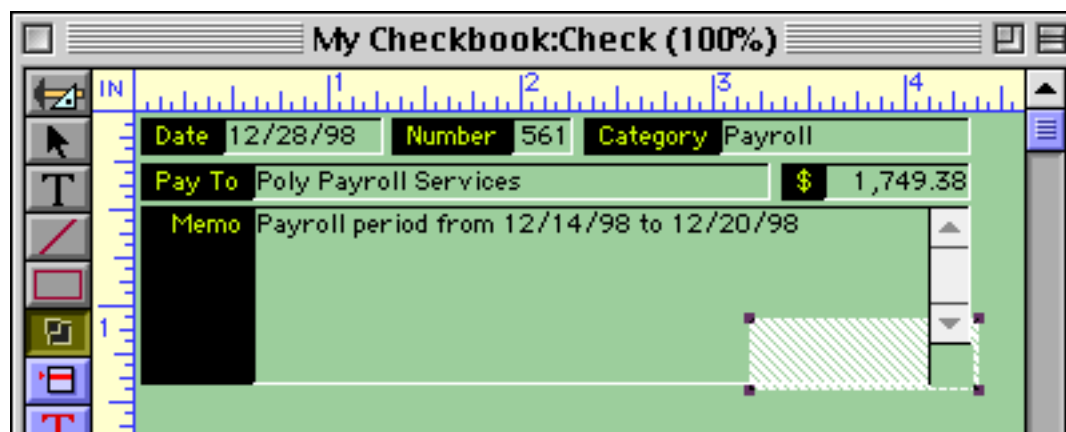
When you switch the form to Data Access Mode the auto-grow object completely disappears.
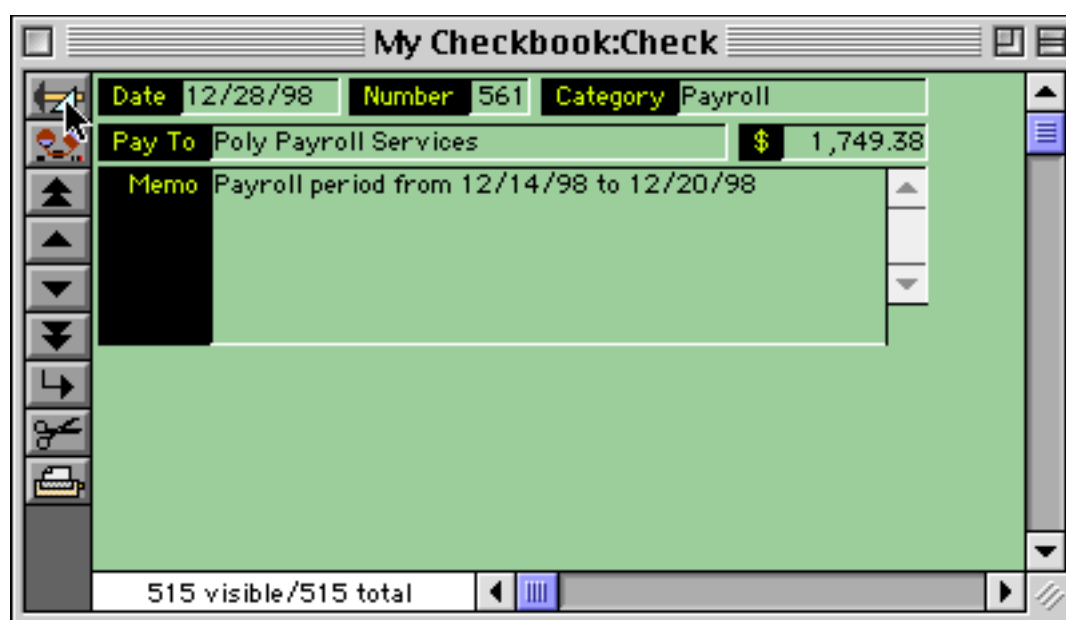
But the real fun starts when you adjust the size of the window. The form adjusts automatically to the new size! See "Elastic Forms" on page 1040 for a complete explanation of how this magic works.
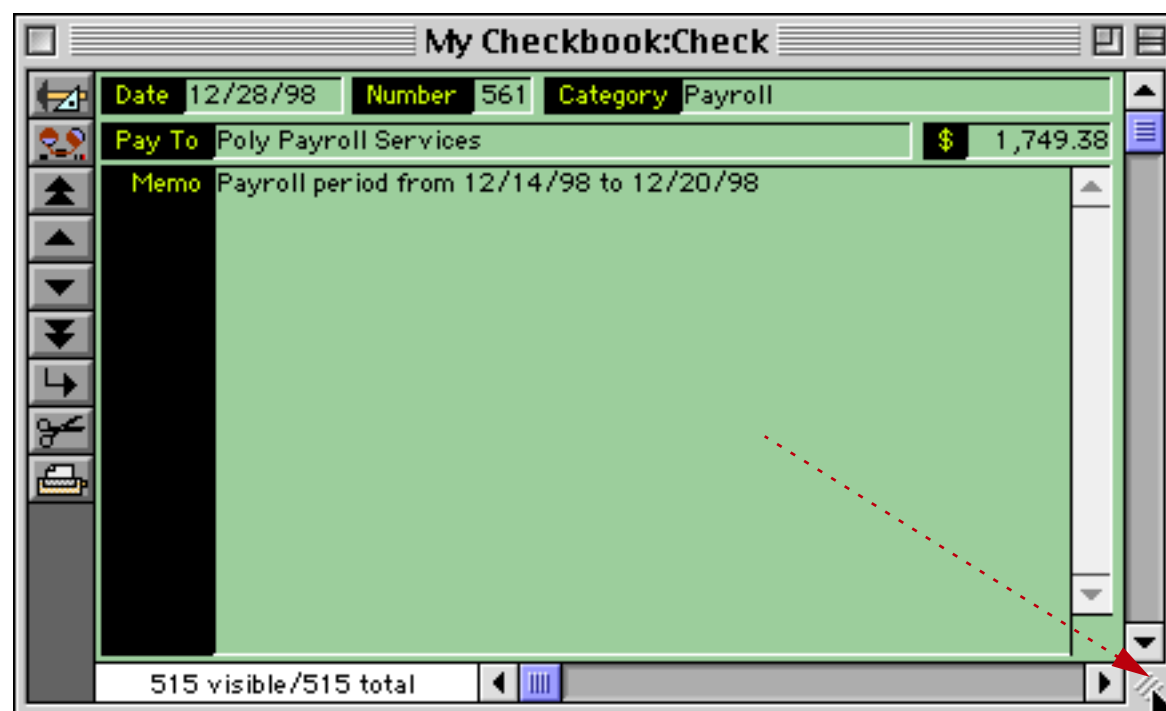
To get rid of the extra scroll bars and tool palette choose the **Window Tweak** command from the Form Tools submenu of the Wizard menu (see "Turning Window Components On and Off (Window Tweak Wizard)" on page 331).
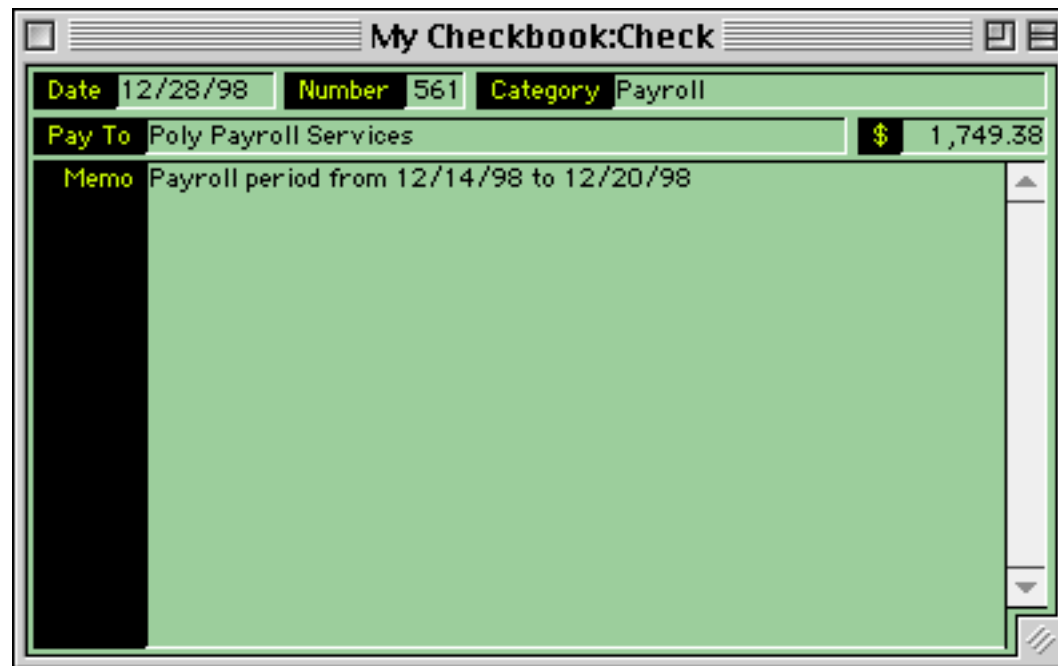
In this case you may want to use the tool palette. To get it back uncheck the Tool Palette option in the Window Tweak window.

Then press the **Tweak** button twice. Here's the final result.
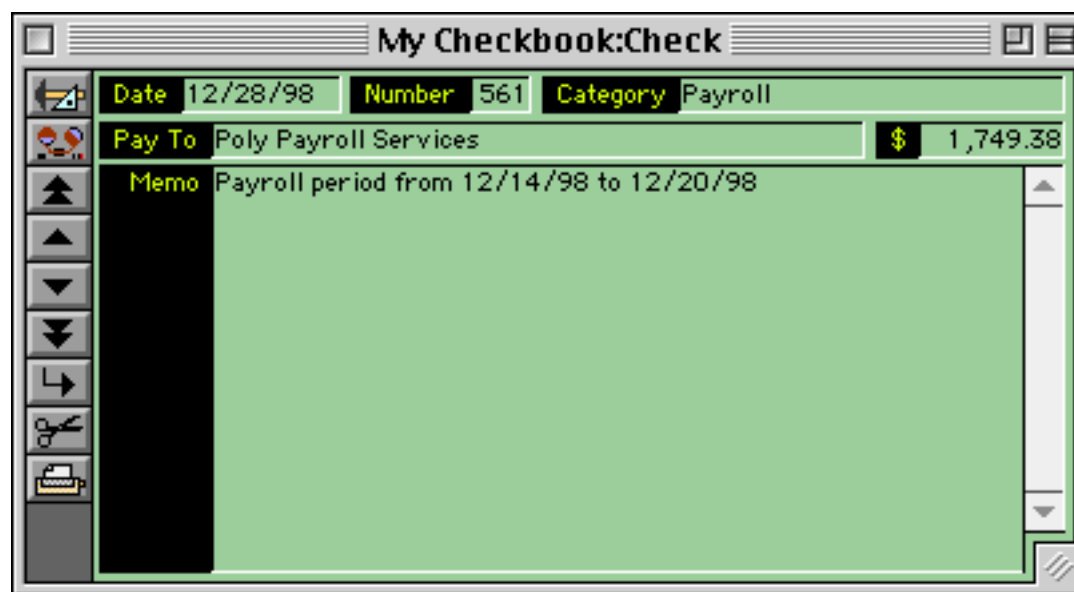
Oh yeah, one more thing. You have been remembering to **Save**, right? Well, go for it now, and you're done.

Lesson 3: Building an Invoice Database

Now that you've mastered basic skills in building databases, forms and procedures you're ready to tackle a more complicated task. Organizing invoices (or similar forms like statements, purchases, quotes, expense reports etc.) is one of the most common jobs performed by database programs. Just as with the other two databases you'll start by launching Panorama and the **New Database Wizard**. Instead of building this database from scratch you're going to use the pre-built Invoice template in the **Template** menu.
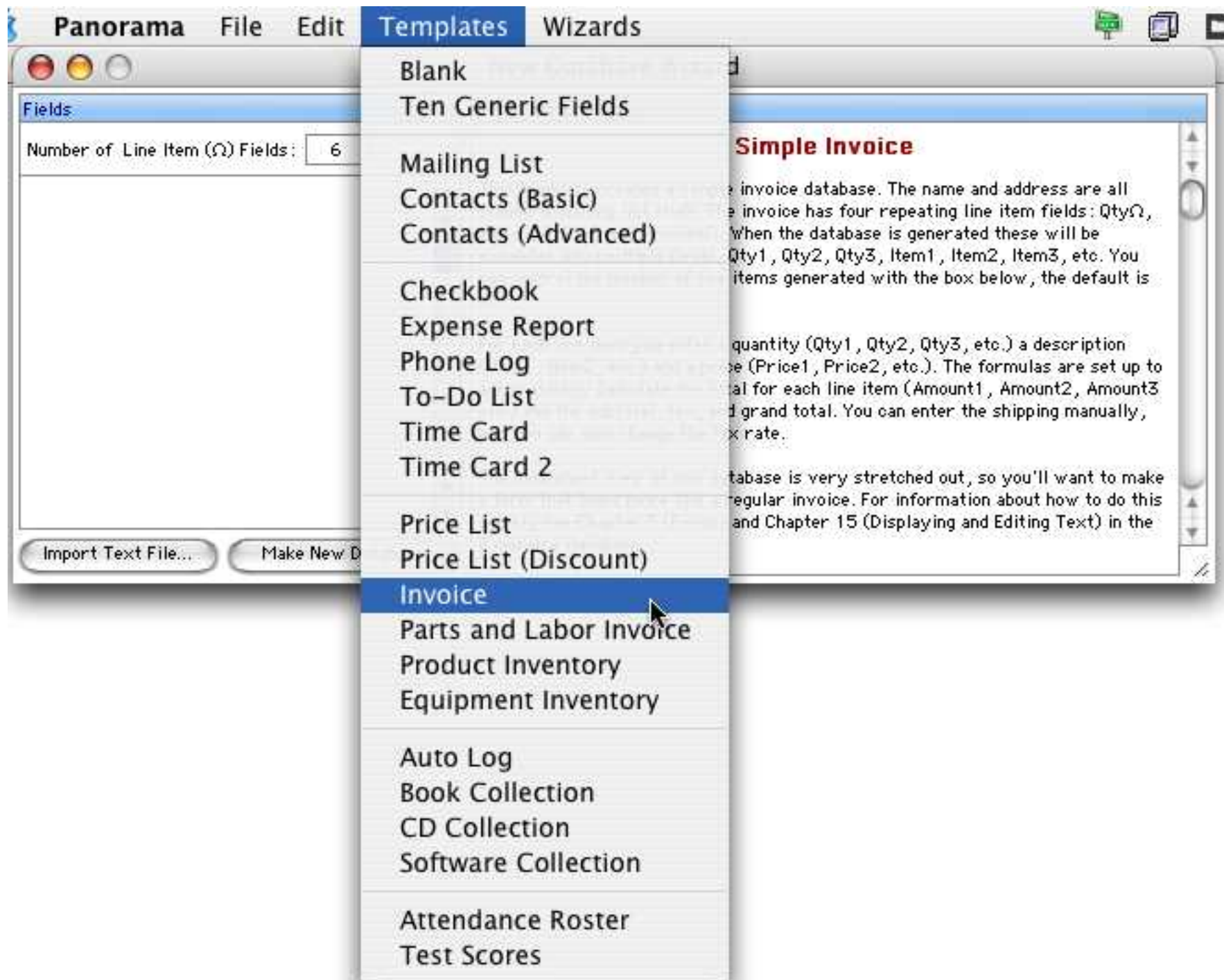
When you select this template the wizard will call up a list of definitions for the twenty fields required for an invoice, including default values and calculations.
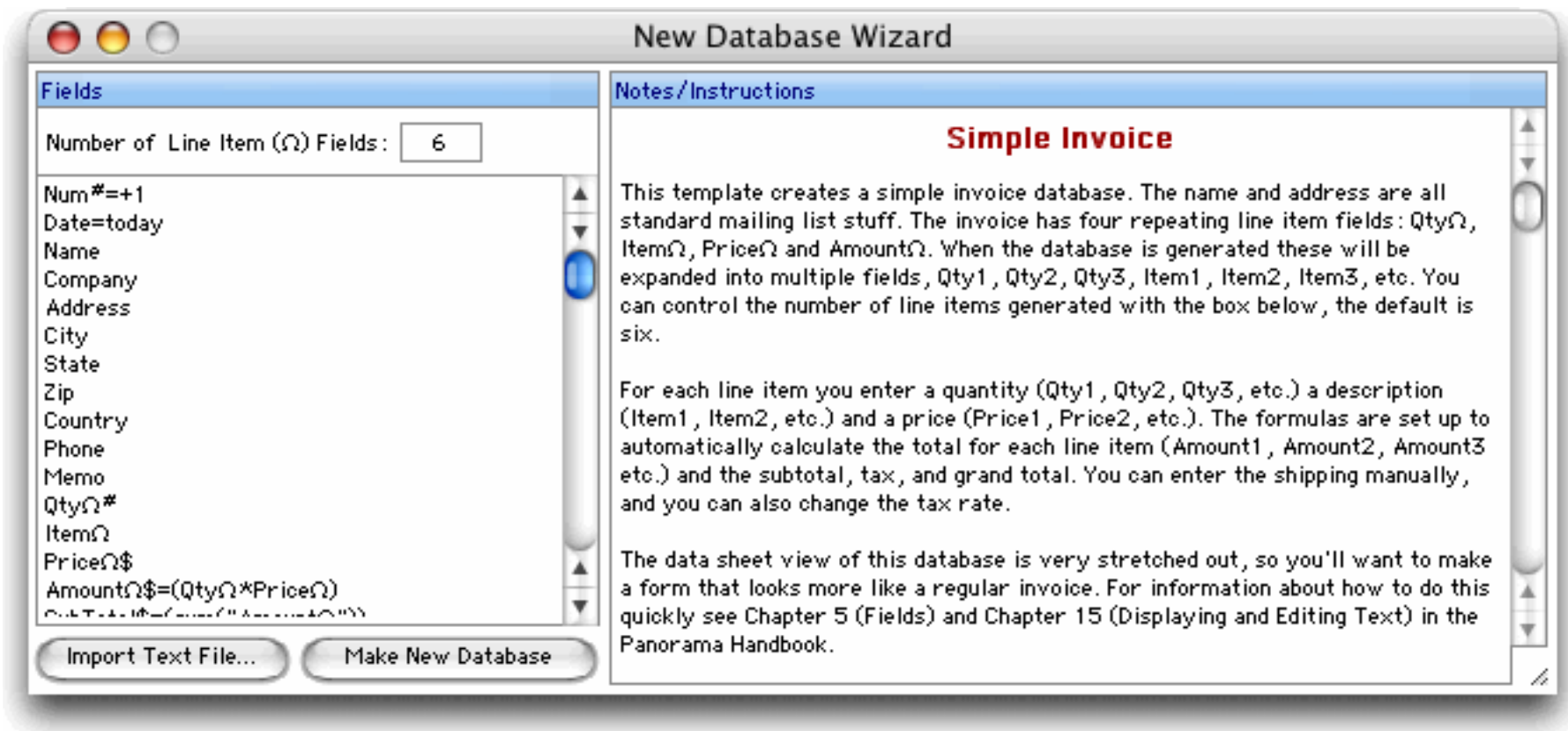
By default the wizard will create a database that allows up to six **line items** per invoice. Let's increase this to twelve line items per invoice.
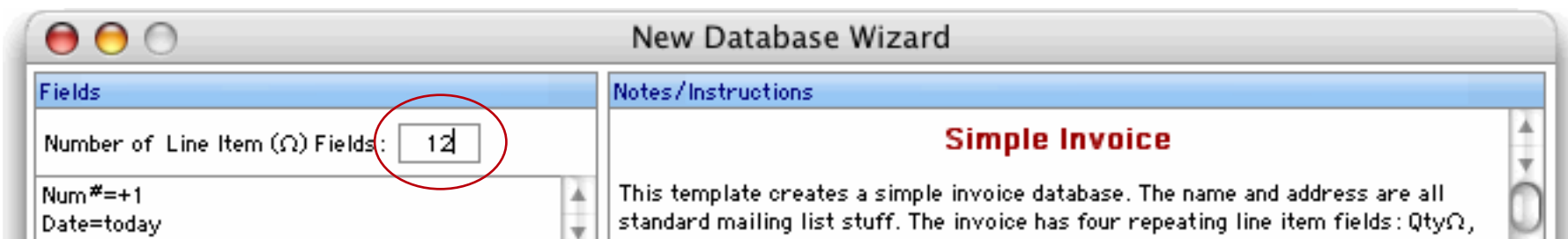
Press the **Make New Database** button to actually create the database. The new database has so many fields that we can only see a small portion of them at once using the data sheet.

Before going any further you should **Save** the new database. Give it the name My Invoices and save it in the same folder as your first two databases. Be sure to check the Save Window Positions option in the **Save As** dialog.

Line Item Fields

The New Database Wizard invoice template contained 20 fields. However, if you look in the design sheet (use the **View** menu) you will see that the database actually contains 64 fields.

| Field Name	Type	Digits	Align	Output P	Input Pattern	Range	Chc	Link	Clair	Tab	Caps	Dup	Default	Equation
Num	Numeric	0	Right	#,		Any			Off	Off	Off	Yes	+1	
Date	Date	0	Left			Any			Off	Off	Off	Yes	today	
Name	Text	0	Left			Any			Off	Off	Word	Yes		
Company	Text	0	Left			Any			Off	Off	Word	Yes		
Address	Text	0	Left			Any			Off	Off	Word	Yes		
City	Text	0	Left			Any			Off	Off	Word	Yes		
State	Text	0	Left			Any			Off	Off	All	Yes		
Zip	Text	0	Left			Any			Off	Off	All	Yes		
Country	Text	0	Left			Any			Off	Off	Word	Yes		
Phone	Text	0	Left		(___) ___-__	Any			Off	Off	Off	Yes		
Memo	Text	0	Left			Any			Off	Off	Off	Yes		
Qty1	Numeric	0	Right	#,		Any			Off	Off	Off	Yes		
Item1	Text	0	Left			Any			Off	Off	Off	Yes		
Price1	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		
Amount1	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		QtyΩ*PriceΩ
Qty2	Numeric	0	Right	#,		Any			Off	Off	Off	Yes		
Item2	Text	0	Left			Any			Off	Off	Off	Yes		
Price2	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		
Amount2	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		QtyΩ*PriceΩ
Qty3	Numeric	0	Right	#,		Any			Off	Off	Off	Yes		
Item3	Text	0	Left			Any			Off	Off	Off	Yes		
Price3	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		
Amount3	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		QtyΩ*PriceΩ
Qty4	Numeric	0	Right	#,		Any			Off	Off	Off	Yes		
Item4	Text	0	Left			Any			Off	Off	Off	Yes		
Price4	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		
Amount4	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		QtyΩ*PriceΩ
Qty5	Numeric	0	Right	#,		Any			Off	Off	Off	Yes		

| Field Name	Type	Digits	Align	Output P	Input Pattern	Range	Chc	Link	Clair	Tab	Caps	Dup	Default	Equation
Qty10	Numeric	0	Right	#,		Any			Off	Off	Off	Yes		
Item10	Text	0	Left			Any			Off	Off	Off	Yes		
Price10	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		
Amount10	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		QtyΩ*PriceΩ
Qty11	Numeric	0	Right	#,		Any			Off	Off	Off	Yes		
Item11	Text	0	Left			Any			Off	Off	Off	Yes		
Price11	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		
Amount11	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		QtyΩ*PriceΩ
Qty12	Numeric	0	Right	#,		Any			Off	Off	Off	Yes		
Item12	Text	0	Left			Any			Off	Off	Off	Yes		
Price12	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		
Amount12	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		QtyΩ*PriceΩ
SubTotal	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		Amount1+Amount2+Amou
TaxRate	Numeric	Float	Right			Any			Off	Off	Off	Yes	7.75	
Tax	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		TaxRate*SubTotal/100
Shipping	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes	5.00	
Total	Numeric	Float	Right	#,.##		Any			Off	Off	Off	Yes		SubTotal+Tax+Shipping

The solution to this is that four of the fields in the template, QtyΩ, ItemΩ, PriceΩ and AmountΩ, are actually a special kind of field called line item fields. The wizard expanded each of these into 12 fields, Qty1, Qty2, Qty2, etc., Item1, Item2, Item3, etc. This allows the invoice to contain information about up to 12 separate items. It's difficult to work with so many fields in the data sheet view, so you'll create a form that allows you to display and edit the data in a format that looks like a traditional paper invoice.

Creating an Invoice Form

You already know how to create a new form, so make one named Order Entry. There's no need to open it in a separate window, you won't be needing the data sheet again.
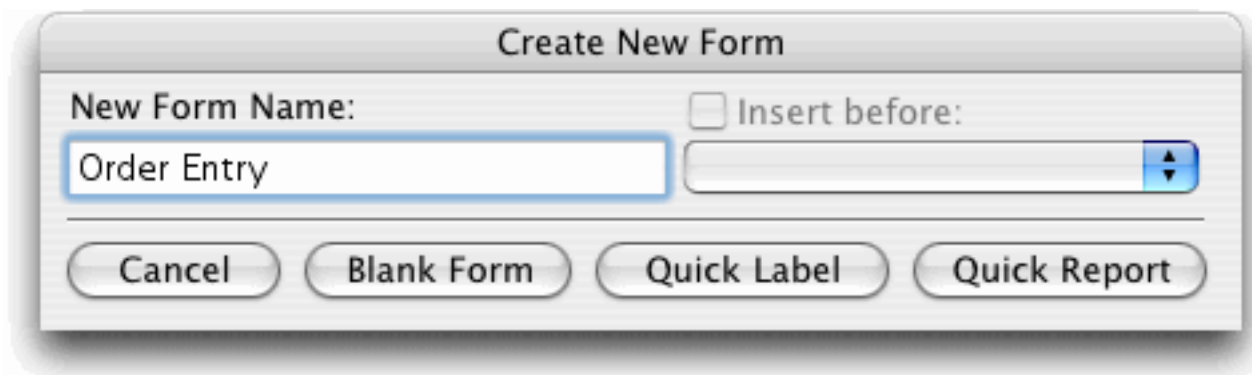

Using the techniques you've learned make the form look like the illustration below. If you need to review these techniques see "Creating a Data Entry Form" on page 49 and "Drawing a Check Form" on page 149. You may find it easier to switch the rulers to **pixels** instead of inches as shown in the illustration below, see "Rulers" on page 634 to learn how to do this.
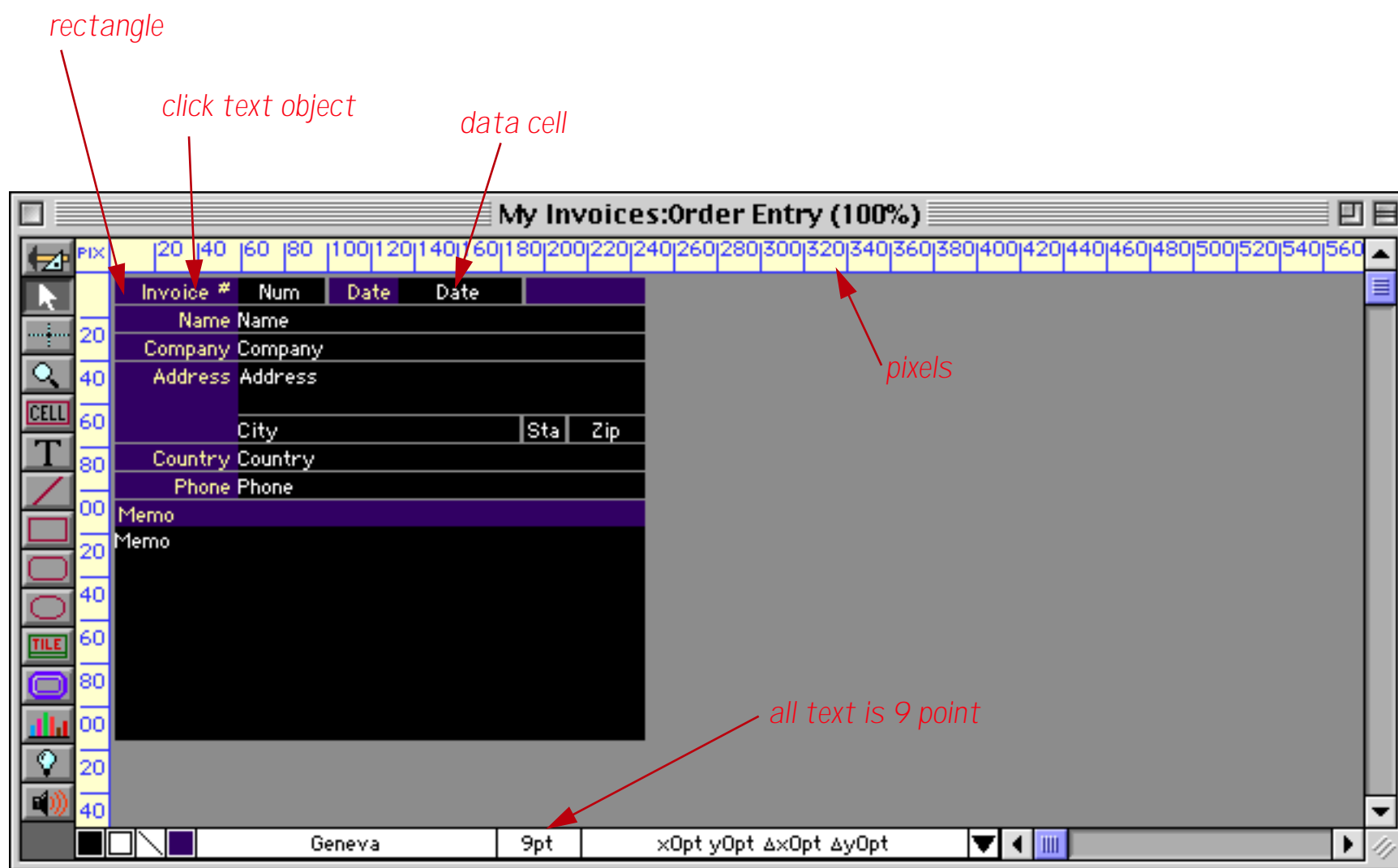
Adding Line Items to the Form

The heart of the order entry form is the line items. This section of the form will contain 56 objects — 48 data cells (4 columns by 12 rows) plus 4 text objects and 4 rectangles for column captions. Fortunately the **Auto Cell Layout** dialog will create most of these objects for you automatically. You're going to create the line items in the blank area to the right of the objects you've already created. Start making sure that black is the currently selected color (see "Color" on page 654), then click the mouse in the upper left hand corner of this blank area.
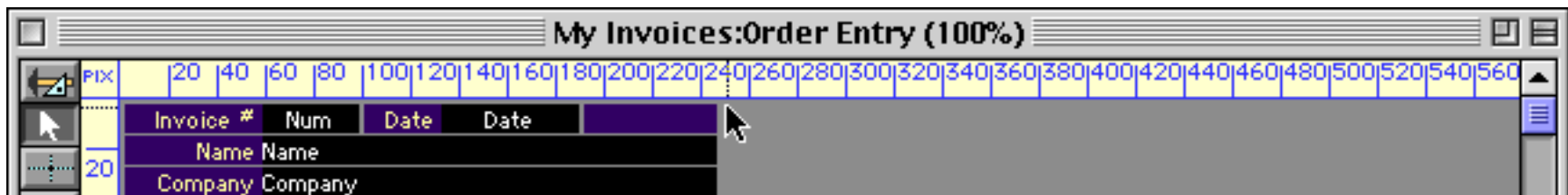
Now choose the **Auto Cell Layout** command from the Arrange menu. You've seen this dialog before. Since we want to create line items press the **Line Items** button. This selects all of the line item fields.
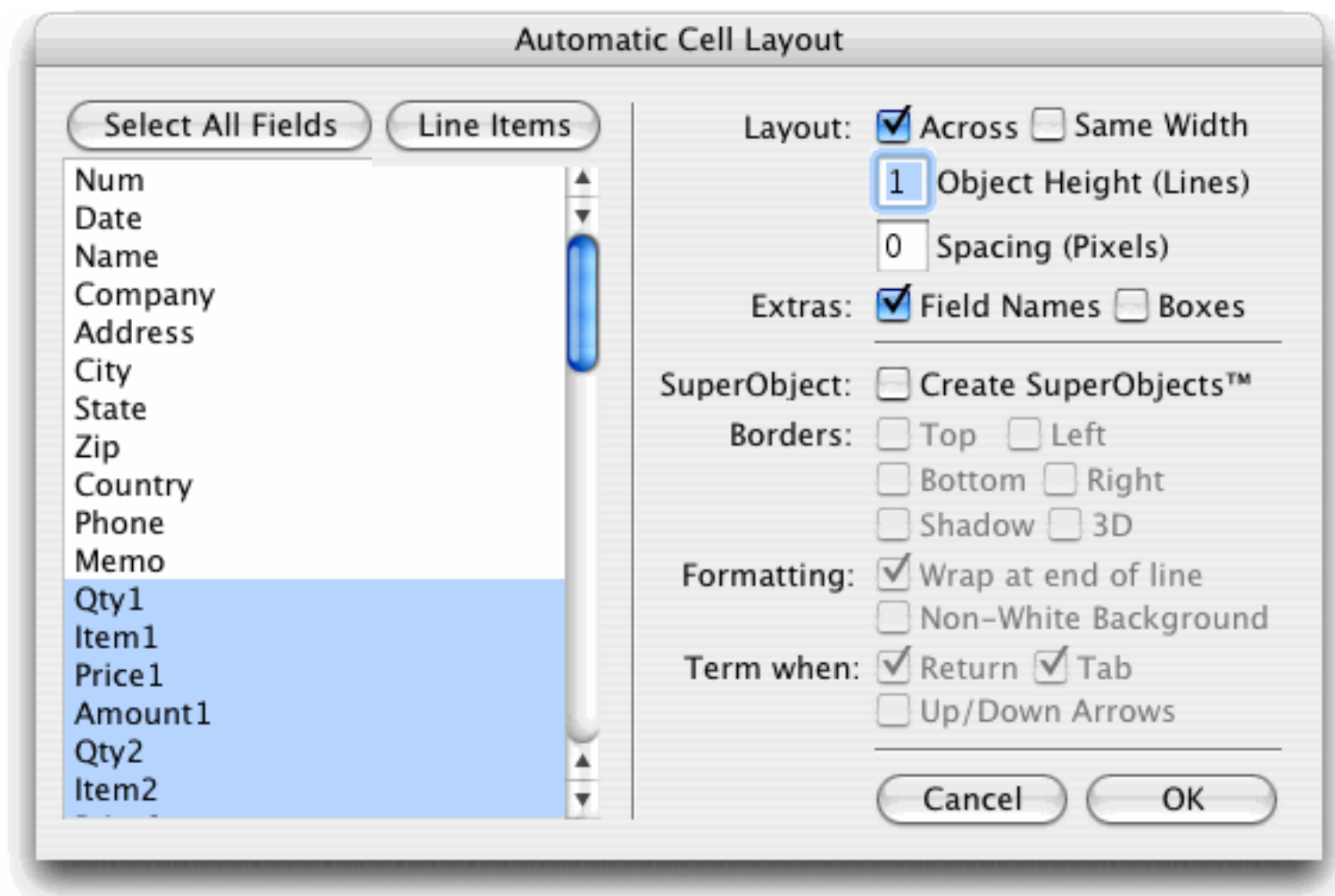
You don't need to change any of the other options, just press the **OK** button. Panorama will automatically create all 48 data cells you need in 12 rows by 4 columns.
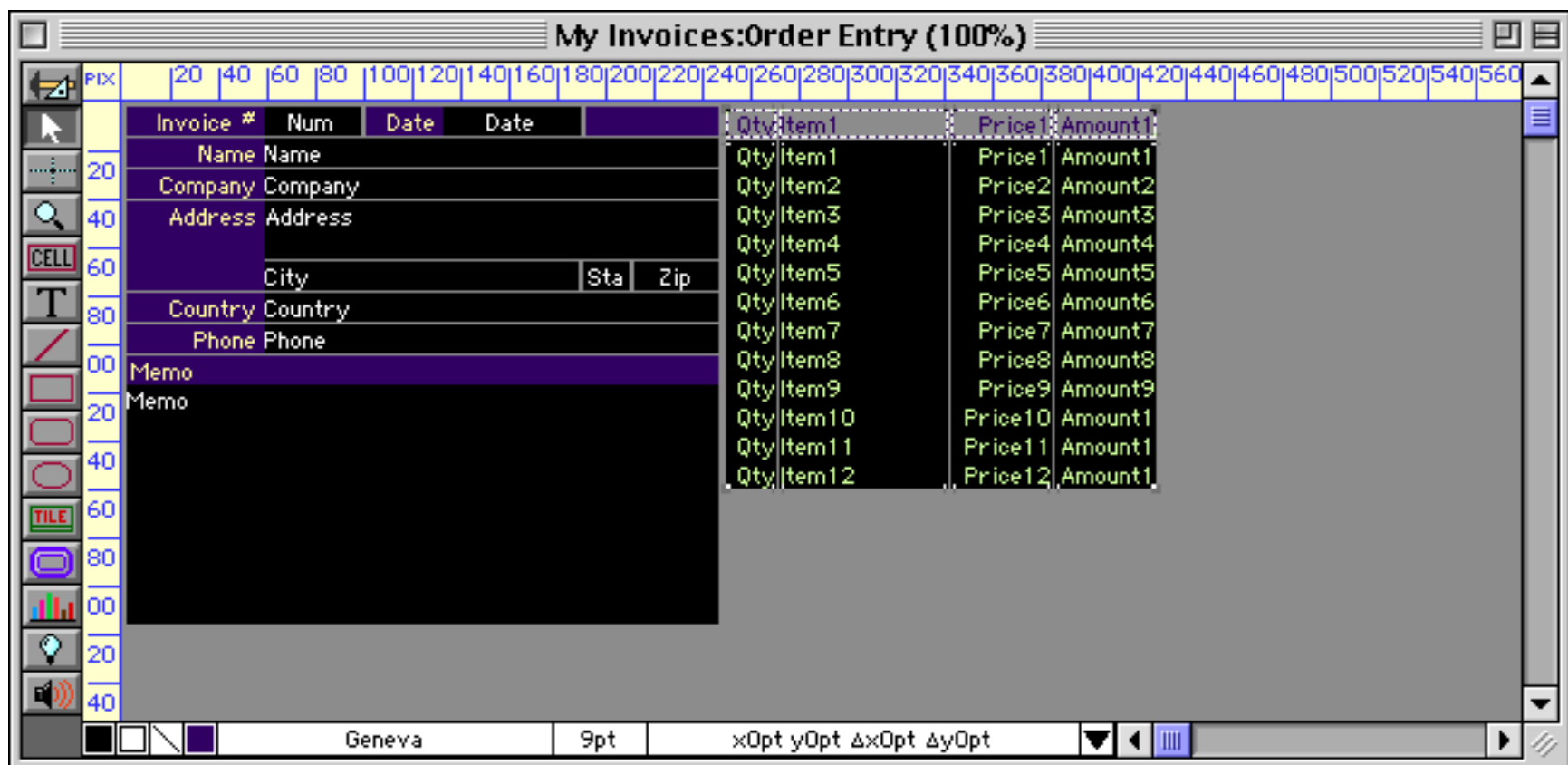
You'll need to make some adjustments to make the line items look right in your invoice. Start by choosing the **Spacing** command in the Edit menu (see "Adjusting Spacing Between Multiple Objects" on page 684).
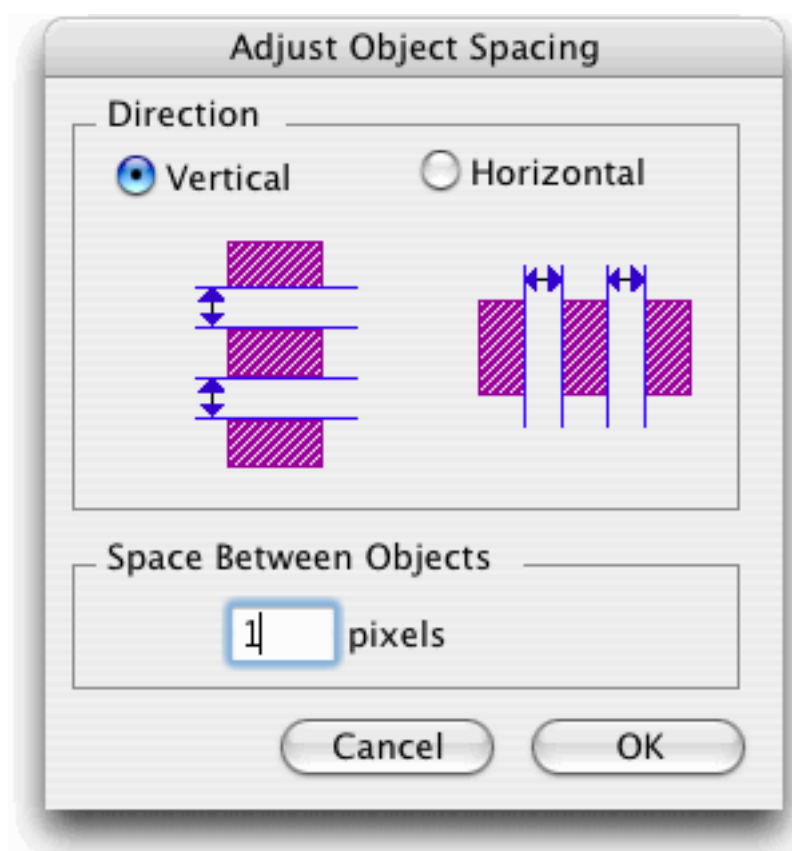
Click the **Vertical** option and type in **1** for the **pixel spacing**. Then press **OK** to adjust the vertical spacing between the lines. There is now one pixel in between each line.
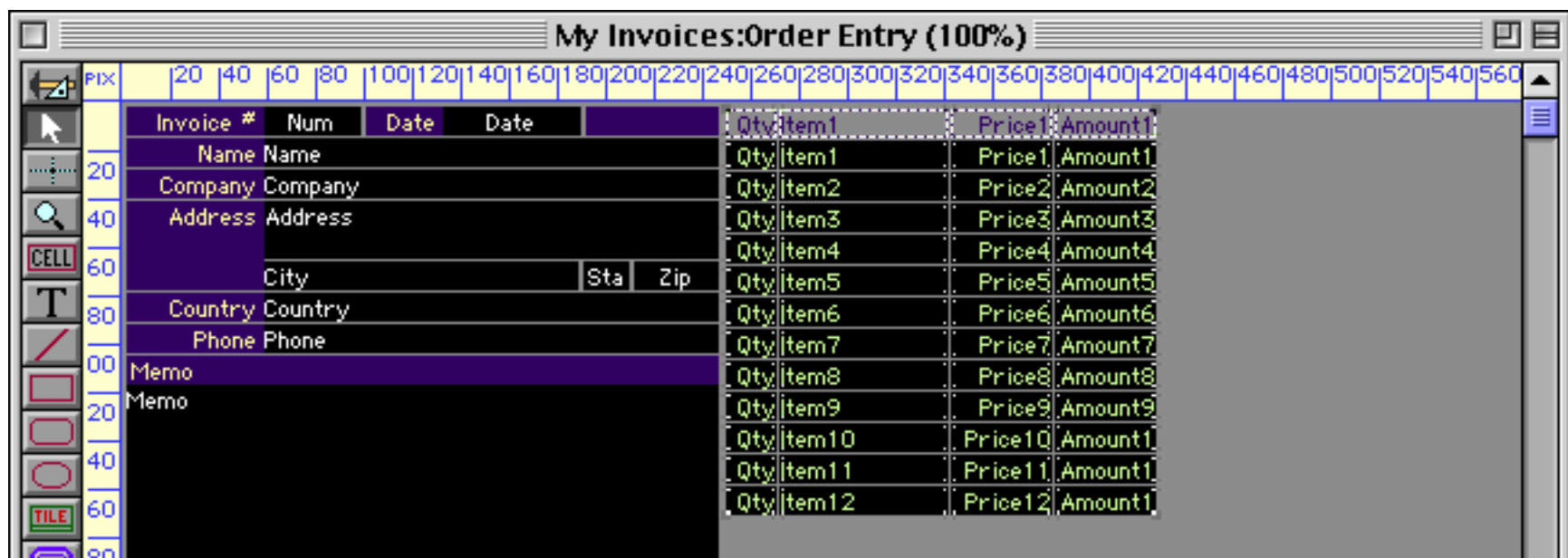
Next you'll want to adjust the width of the columns, starting with the Item column. To adjust the width, move the mouse over the lower right hand handle of one of the objects in the column, then press and drag to the right. Hold down the **Shift** key to make sure that you don't change the height of the object, only the width. If you hold down the ⑤ key (the letter **S**) you don't have to exactly press on the handle itself, anywhere close to the bottom right hand corner of the object will do (see "<u>Resizing Without Handles</u>" on page 644).
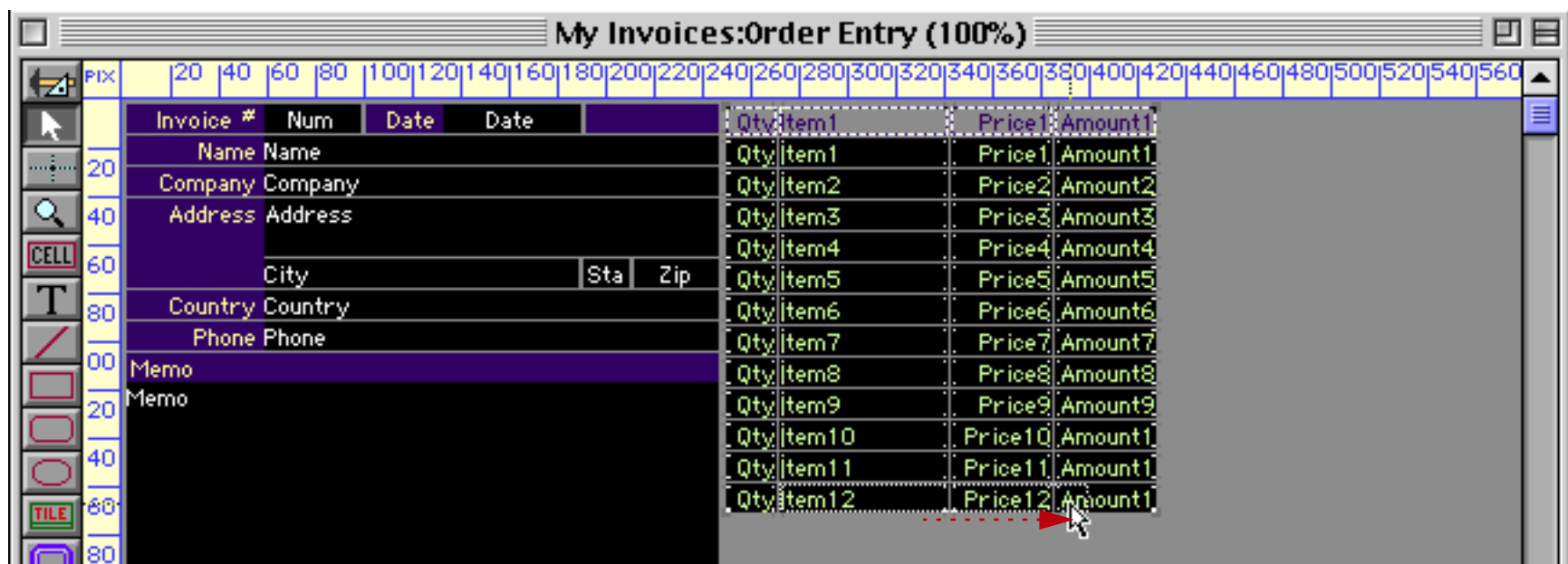
When you release the mouse all of the selected objects will adjust to the new width (see "Cluster Resize" on page 669).
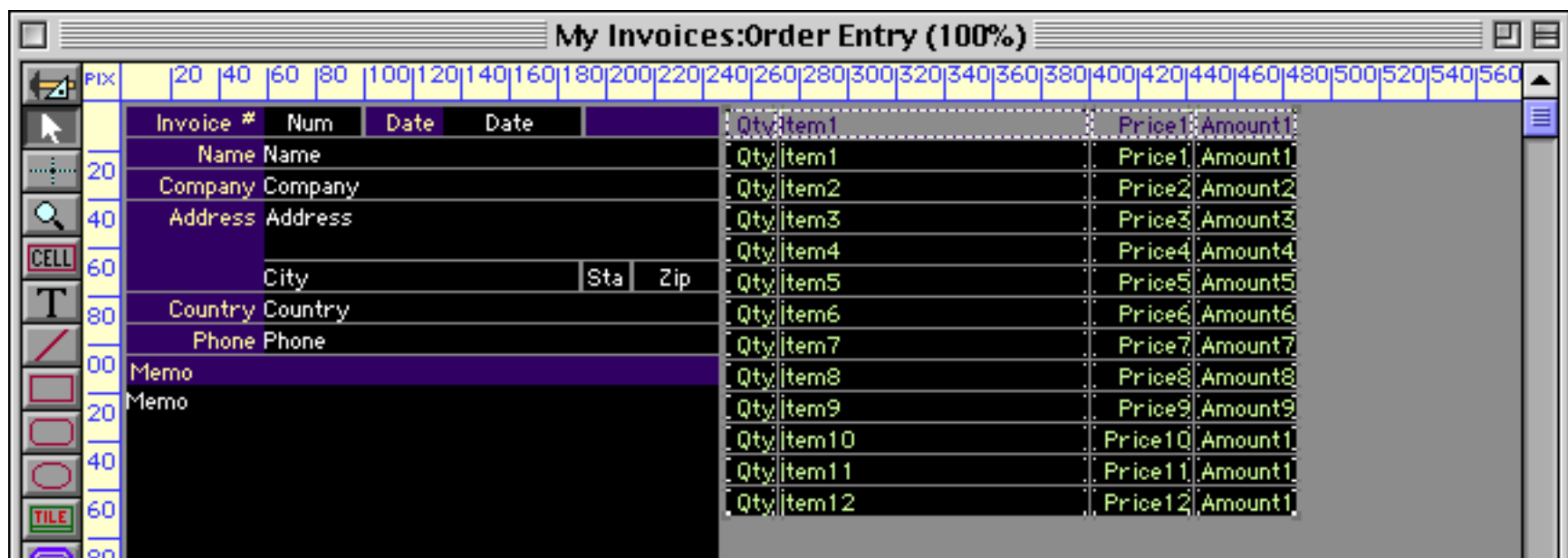
Repeat as necessary until all the widths look the way you want. You can also nudge the widths with the arrow keys for fine adjustments (after dragging the width, see "Nudging the Size of an Object" on page 641).
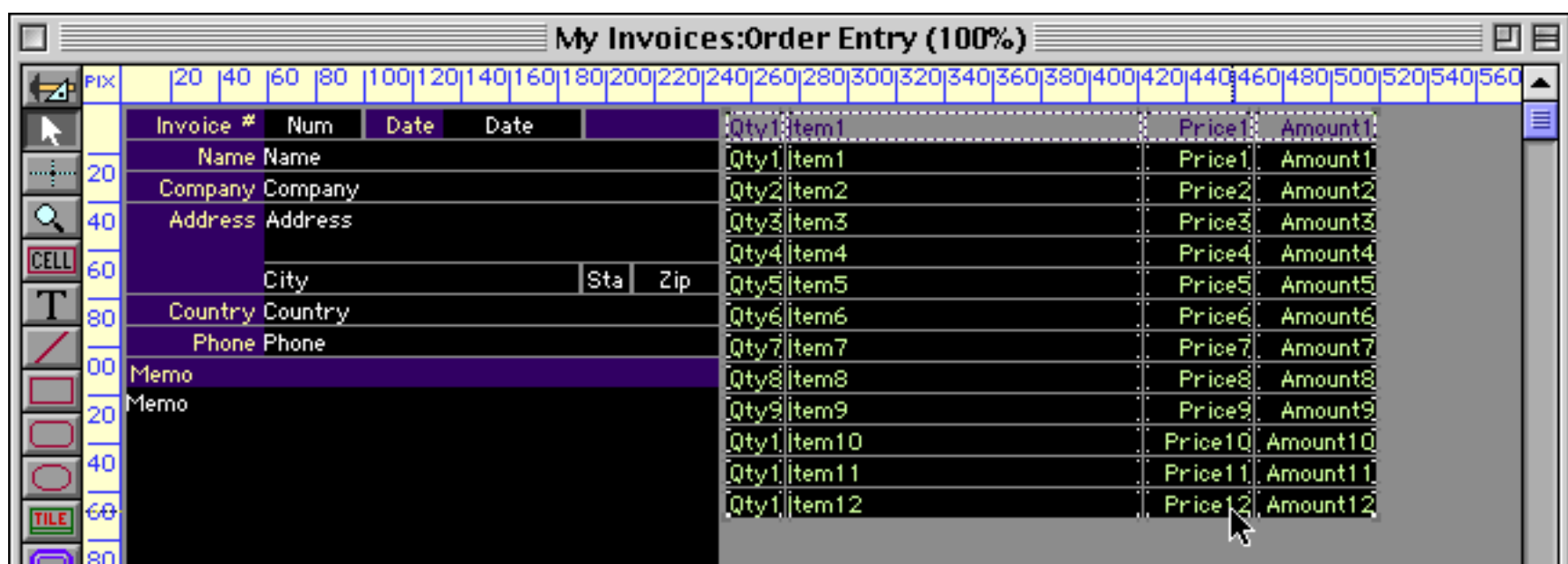
While holding down the **Option** key (Macintosh) or **Alt** key (PC) drag the small purple rectangle next to the Date cell over the Qty1 text.
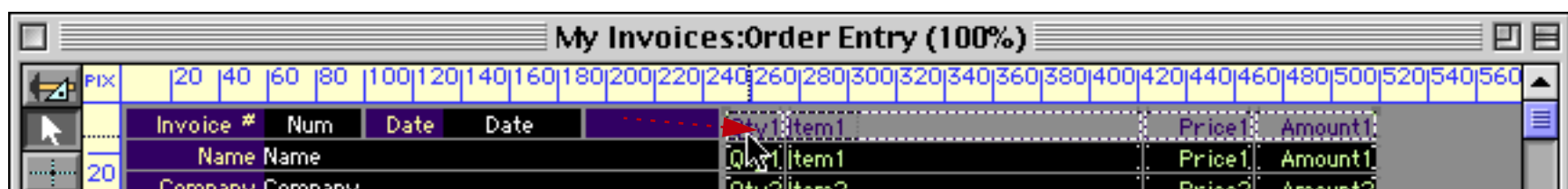
When you release the mouse there will be a new purple rectangle covering the text.
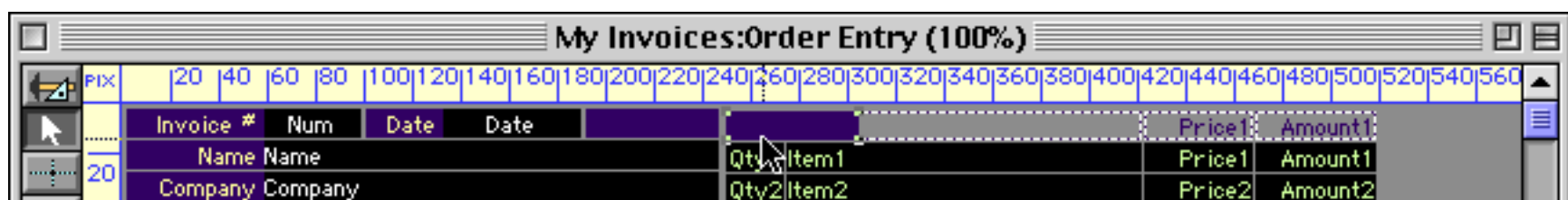
Adjust this rectangle so that it exactly covers the Qty1 text (see "Nudging the Size of an Object" on page 641).

While holding down the **Shift** key and the **Option** key (Mac) or **Alt** key (PC) drag this rectangle to the right over the Item1 text.
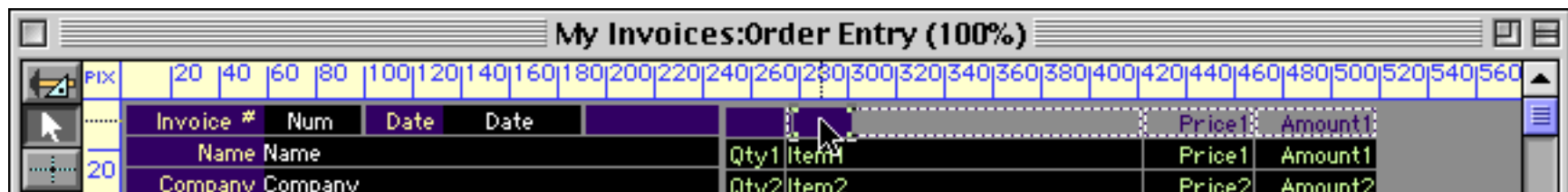
Adjust this new rectangle so that it covers the Item1 text.

Repeat for the Price and Amount columns.

While holding down the **Shift** key, click on each of the four purple rectangles you just created. This selects all four objects (see "Selecting Multiple Objects at Once" on page 630).

hold down SHIFT key and click on each object you want to select
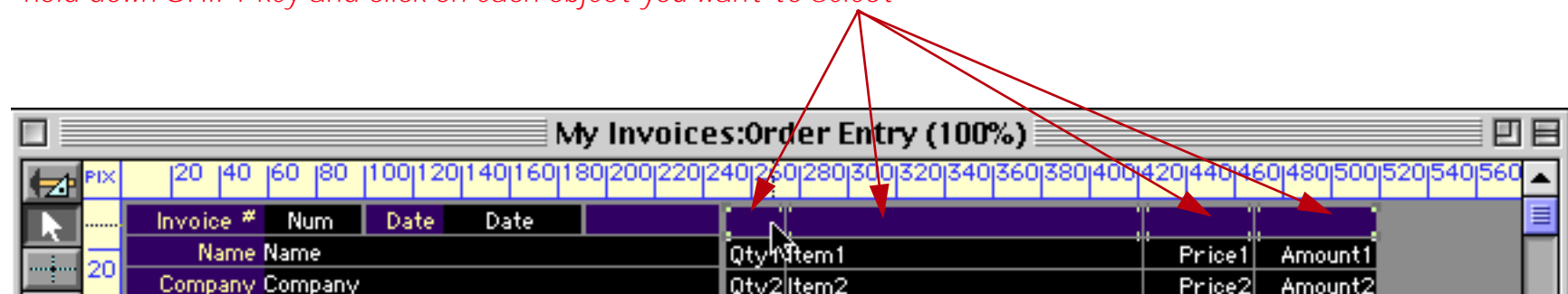
Now choose the Send to Back command from the Arrange menu (see "Changing the Stacking Order" on page 697).
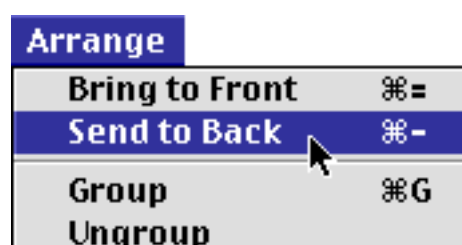
Using this command moves the four purple rectangles behind the four text objects, making the text objects visible again (see "Overlapping Objects" on page 696).

Because the text objects are black on a purple background they aren't very easy to see. To change that, start by clicking on an empty spot on the form. Clicking on an empty spot makes sure that the four purple rectangles are no longer selected.
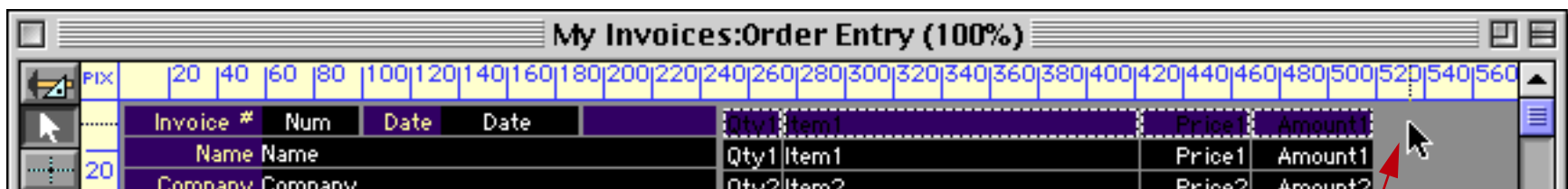
click on any empty spot to make sure that no objects are selected

Now hold down the **Shift** key and click on each of the four text objects. With the four objects selected change the color to light blue to match the other caption text (see "Color" on page 654).

hold down SHIFT key and click on each object you want to select
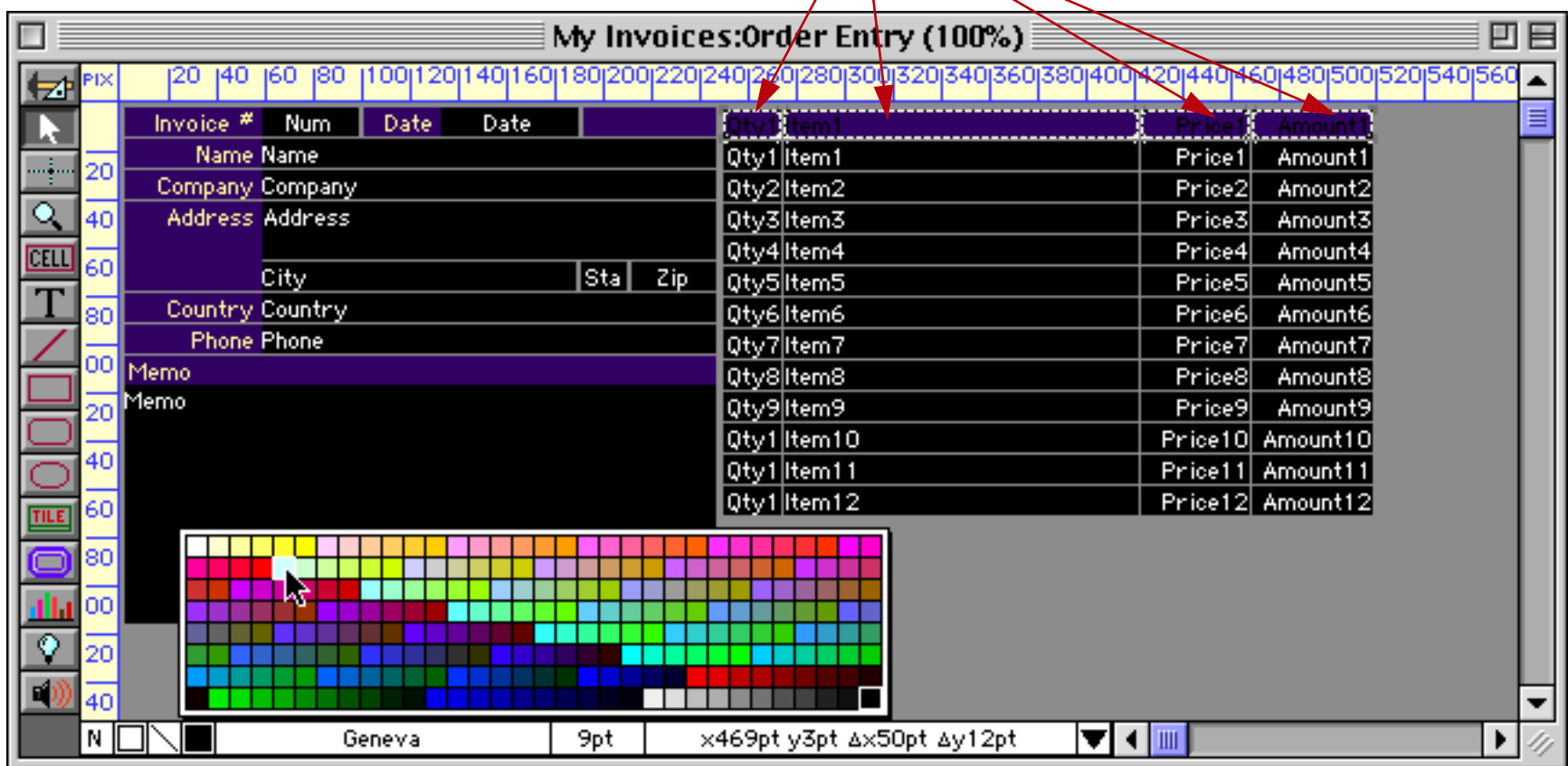
The text will turn light blue, almost white.

The annoying white border around the text objects is because these are auto-wrap text objects (see "Fixed Text Objects" on page 715). The border will go away when you switch to Data Access Mode. However, we are going to convert these objects from Auto Wrap text into Click text. To do this drag the lower right hand handle of the object up over the upper right hand handle (see "Moving and Resizing Fixed Text Objects" on page 718).

When you release the mouse the text is converted into click text, and the annoying border disappears.
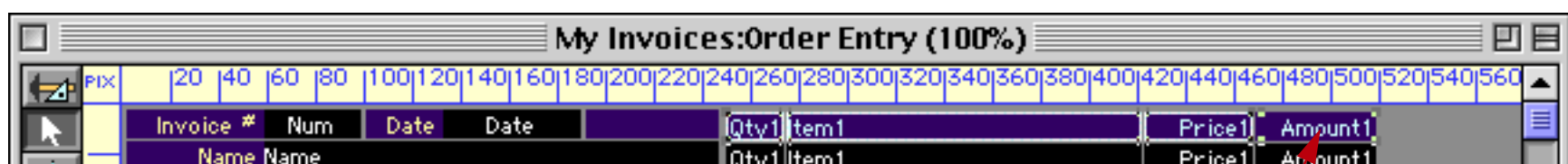
converted to click text

Repeat this conversions for each of these four objects.

Now select the **Text** tool and edit the text to remove the 1 from the end of each object.

Switch back to the **Pointer** tool and drag a marquee around all of the line item objects (see "Selecting Multiple Objects at Once" on page 630). Because of the arrangement of objects in the form it is probably easiest to do this from the bottom right to the upper left.
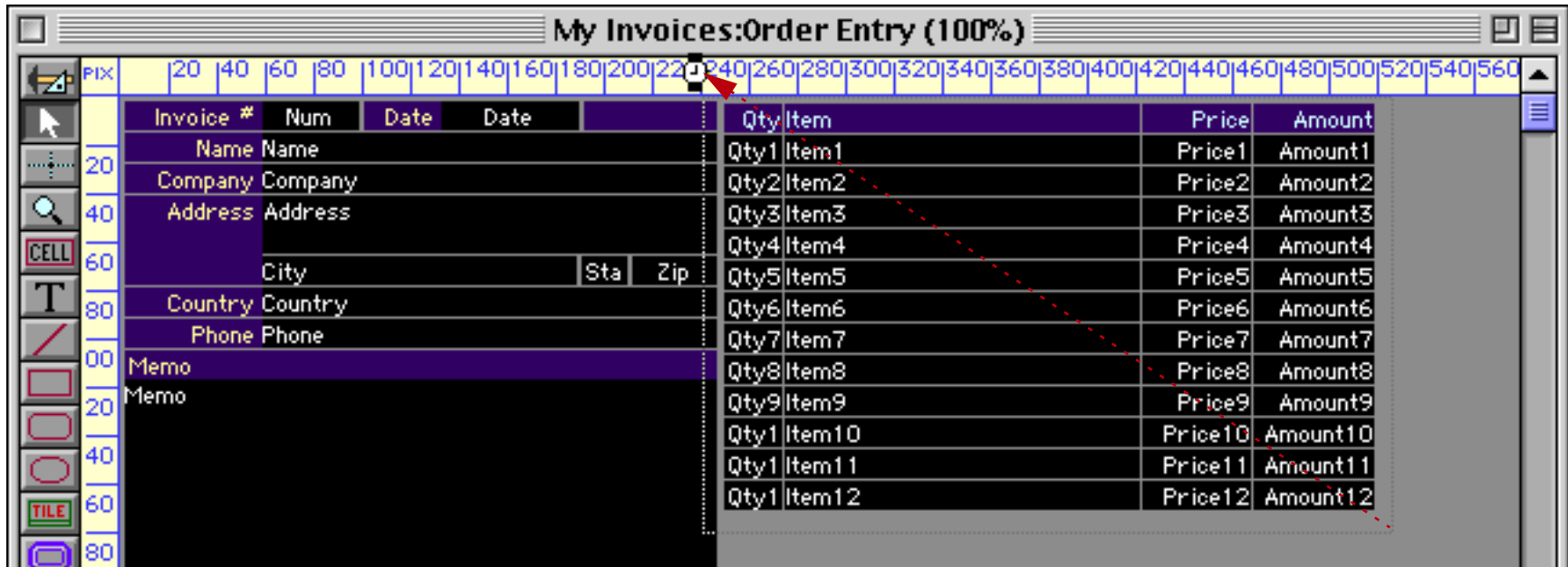
Now nudge the objects into alignment with the objects on the left hand side of the form (see "Nudging an Object (or Objects)" on page 637).
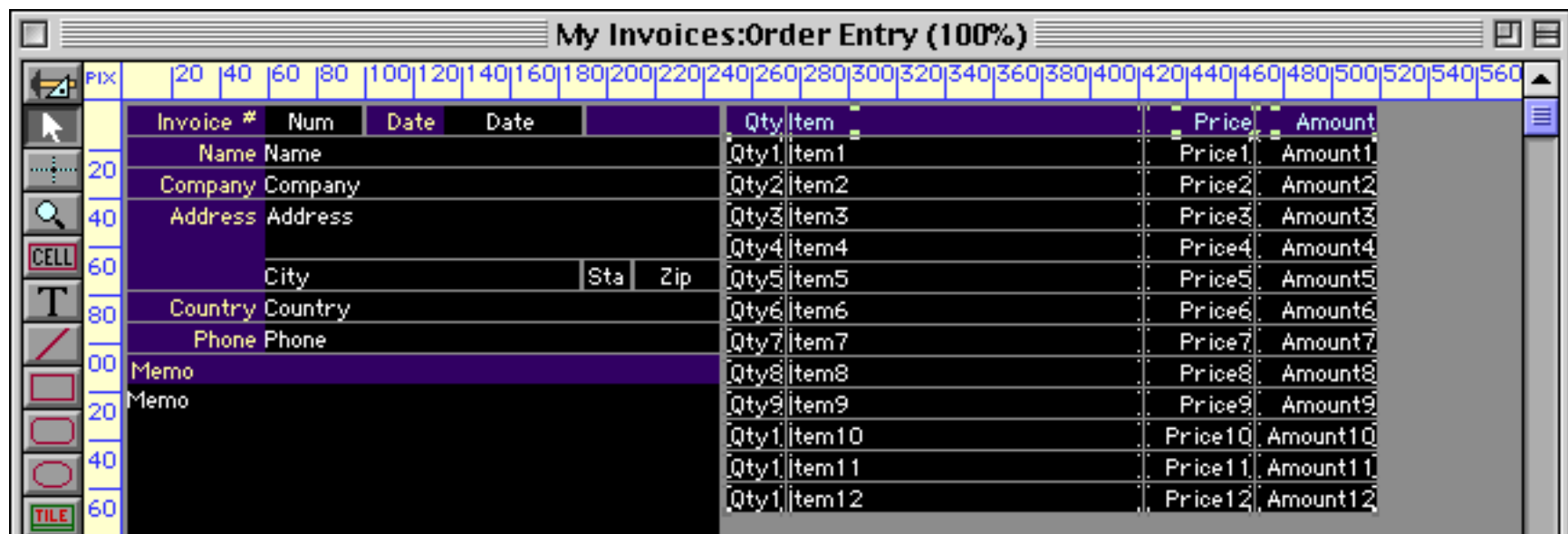
Now you need to create the data cells for the subtotal, tax, shipping and grand total. Start by clicking on an empty spot on the form (to make sure no objects are selected) and then drag a marquee around the Amount9 through Amount12 data cells.
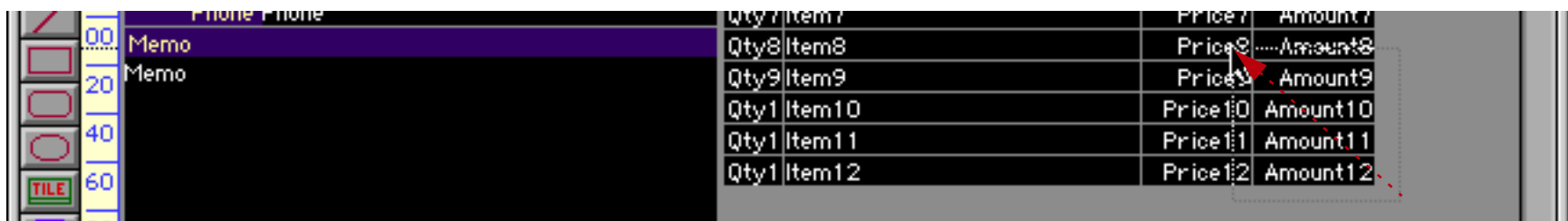
While holding down the **Shift** key and the **Option** key (Mac) or **Alt** key (PC) drag these four rectangles down below the other line items (see "Drag Duplicating" on page 689).

Use the up arrow key to nudge the objects so that they are snuggled up with the Amount12 cell, then select the **Data Cell** tool.

Move the mouse over the new Amount9 data cell you have created. The mouse arrow will turn into a tiny menu icon (see "Working with Data Cell Objects" on page 763).

Press the mouse and select **SubTotal** from the pop-up menu.
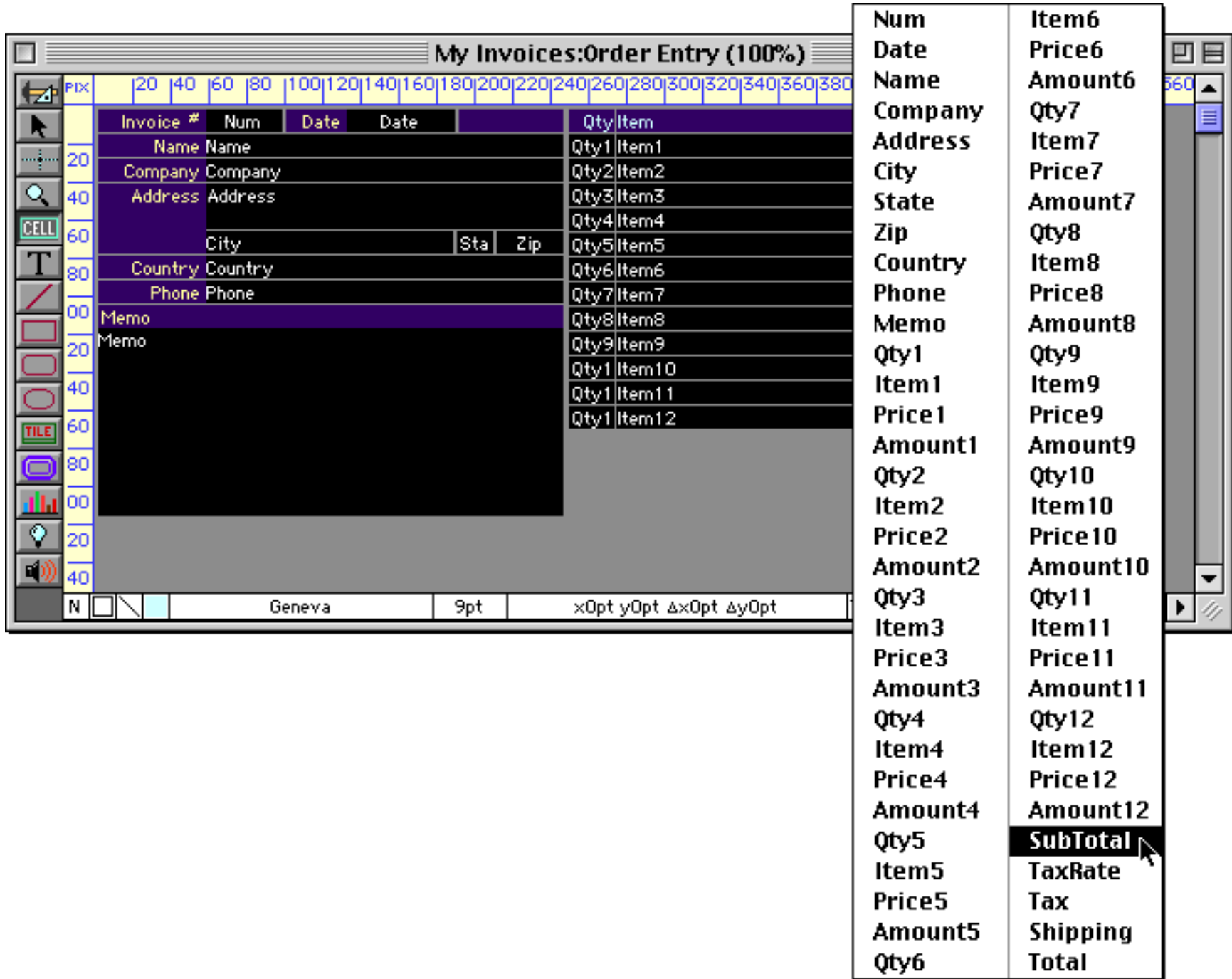
When you release the mouse the data cell will be assigned to the SubTotal field.
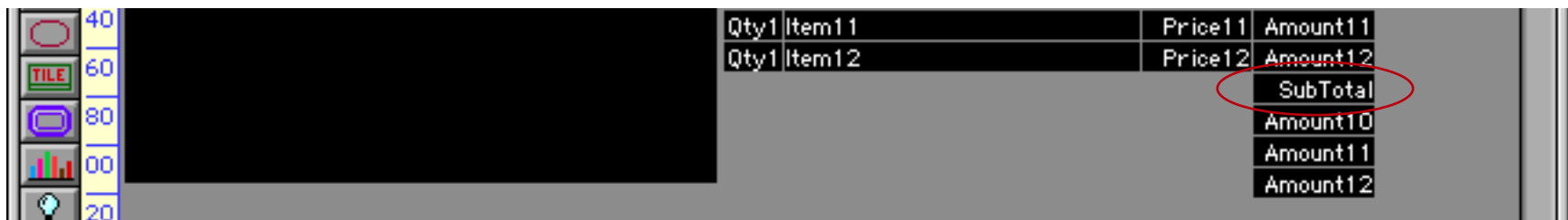
Repeat this for each of the other three data cells.
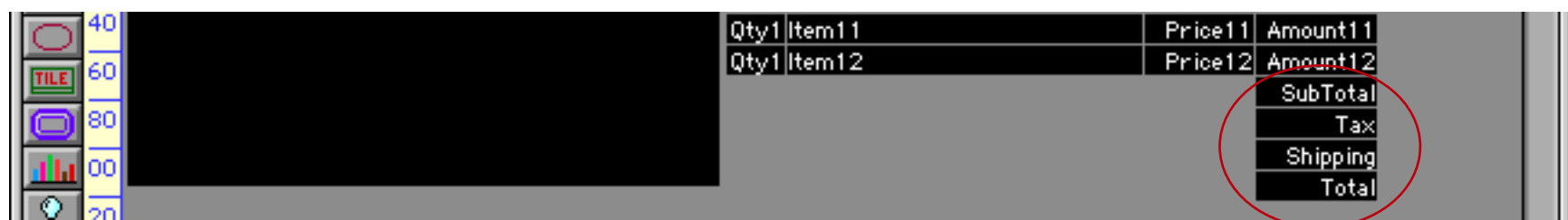
Since you're pretty much a professional by now you should have no problem finishing up this form so that it looks like this.
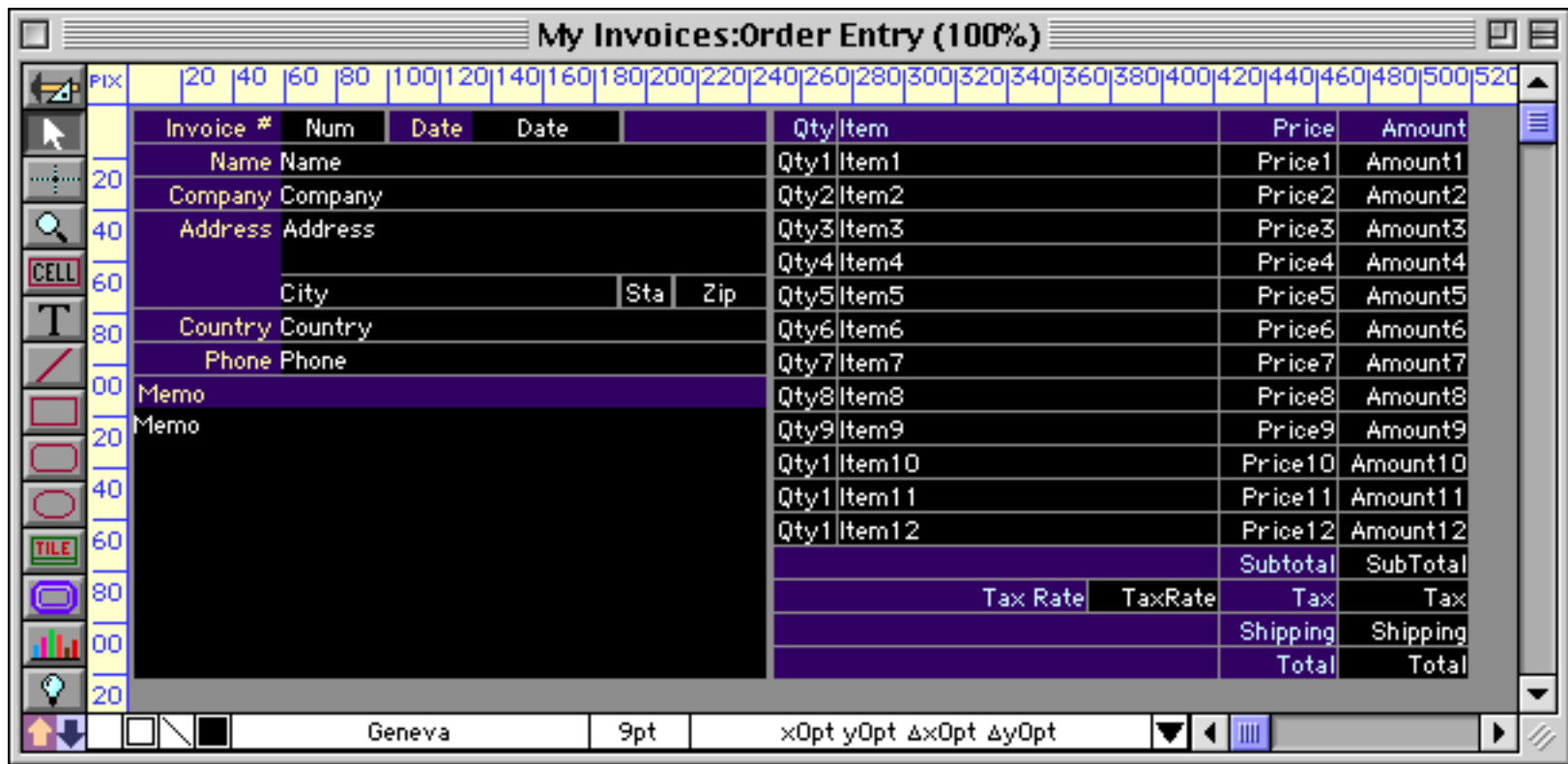
Be sure to **Save** this masterpiece before you go any further.

Entering Data into the Invoice

Before you can enter data into the invoice you must switch to Data Access Mode. You may also want to adjust the size of the window to match the size of your form.
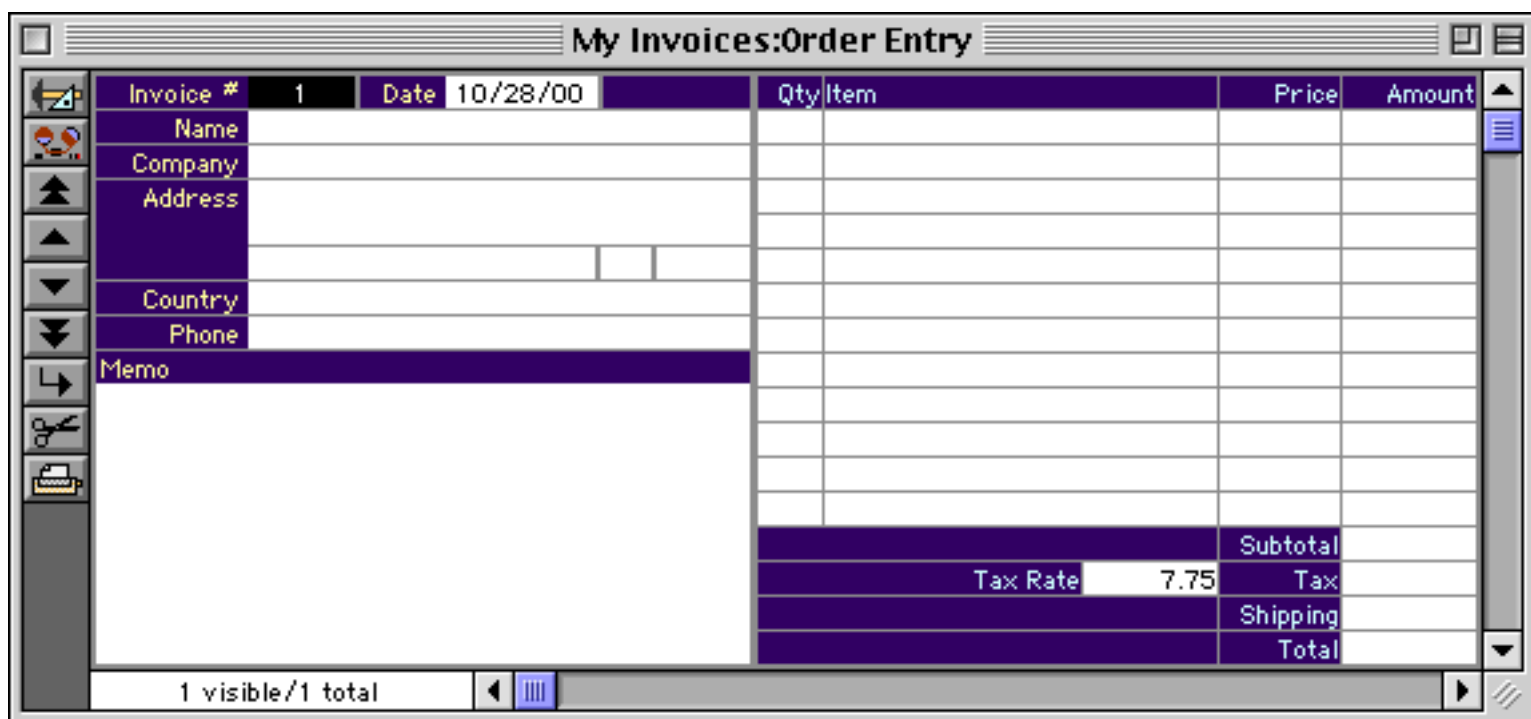
As you start typing data you'll quickly discover a problem. Pressing the **Tab** key after you enter the name causes Panorama to tab into the first Qty line item instead of the Company field. Oops!
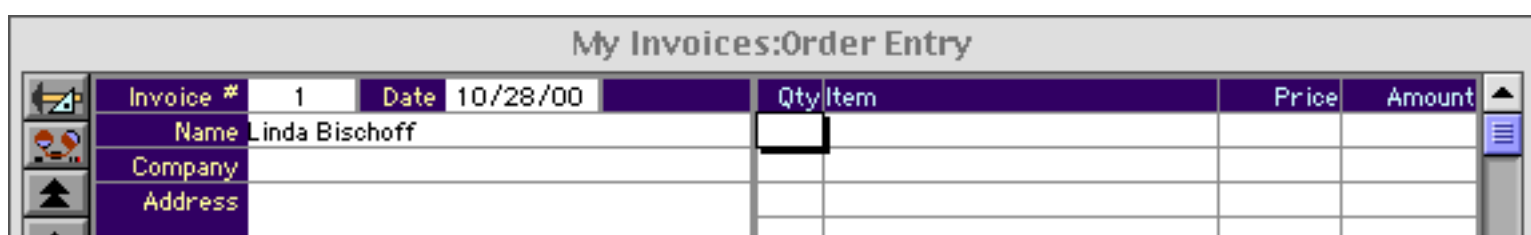
To fix this problem switch back into Graphic Design Mode. While holding down the **Shift** key click on the Name, Company, Address, City, State, Zip, Country, Phone and Memo data cells
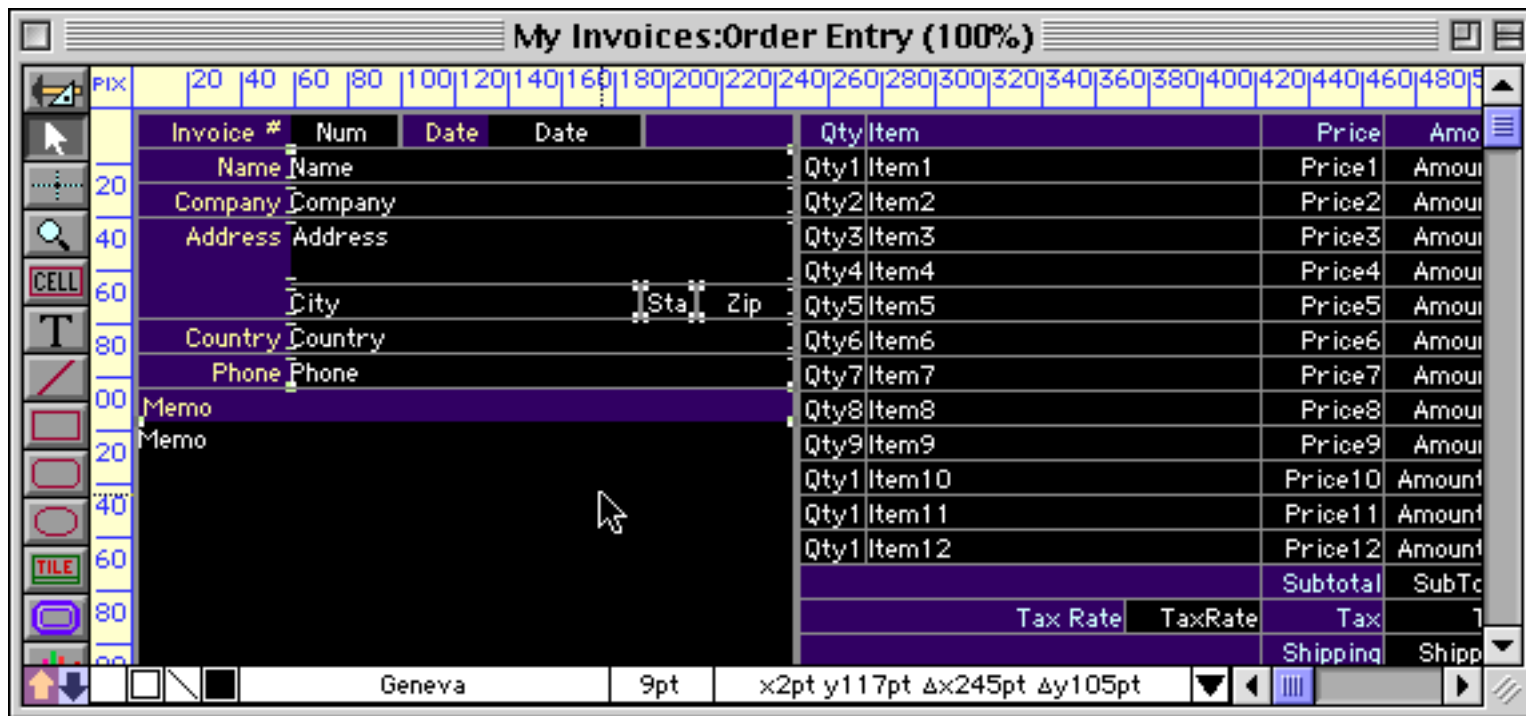
Now select the **Group** command from the Arrange menu.

This command combines the nine objects into one combined object (see "Grouping Objects Together" on page 664). Instead of having handles around each individual object (see illustration above) there are now only four handles around the four corners of the combined object.
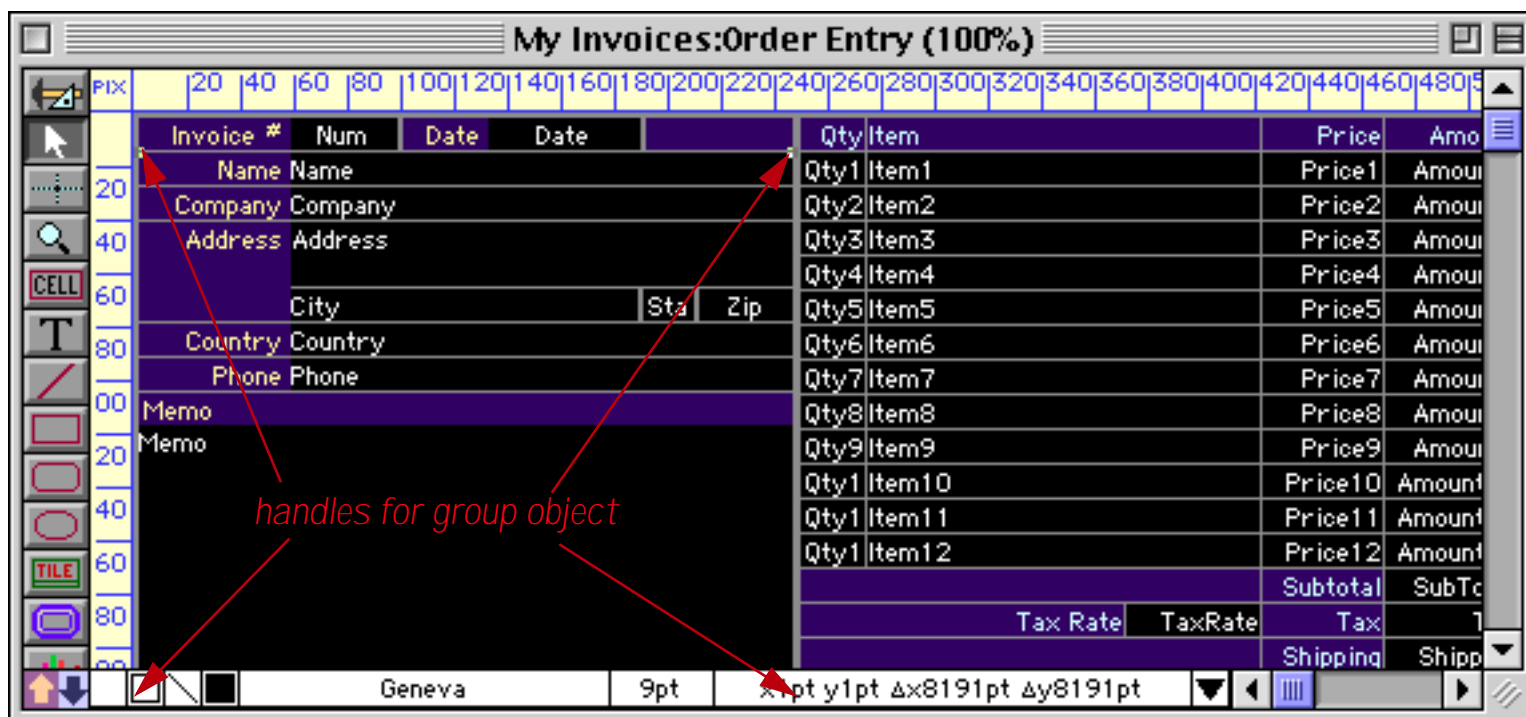
Now each time you press the **Tab** key Panorama will advance to the next cell within the group (see "Tab Order in Forms" on page 798).

The next tab will bring you to the first line item field. Enter the quantity, item and price.

When you press the **Enter** key Panorama will calculate the line item total, subtotal, tax and grand total.

These calculations were set up for you by the **New Database Wizard**. To learn how to set up or modify these calculations yourself see "Automatic Calculations" on page 468.

Lesson 4: Building a Price List

Now that the invoice is complete you will build a price list database and link the price list to the invoice. Start by launching Panorama and the **New Database Wizard**. The price list database will have two fields — Item and Price. (See "Fields" on page 375 for a complete explanation of fields.) Type in the name of each field into the wizard, with each name on a separate line. The Price field will contain money values so it should have a suffix of $.

When you press the **Make New Database** button the wizard will create a new database for you. The database is displayed using a row and column format called the **data sheet**. The new database contains one blank record (line) and two fields (columns).

Loading the Data

To use the price list you'll need to type in a bunch of data. That still doesn't sound like much fun, so we've created a database that is programmed to automatically fill your new price list database with sample data. Start by choosing **Favorite Databases** from the Wizard menu (see "The Favorite Databases Wizard" on page 237). The database you need is called Sample Price List. To locate it, type **sample** into the search area at the top. The wizard will show you a short list of files including the one we want.
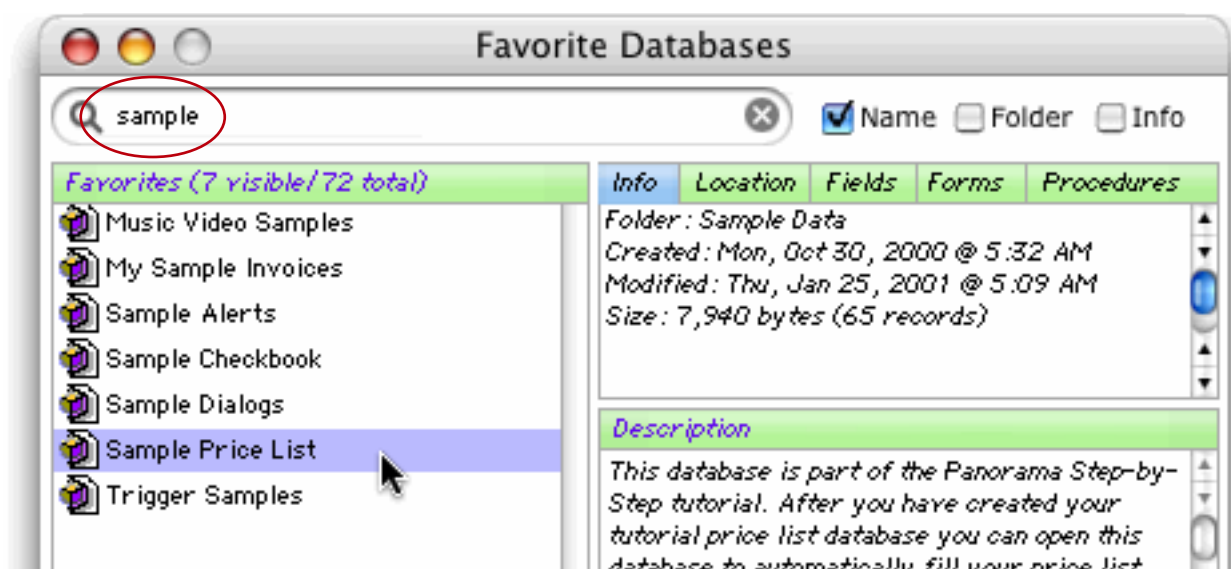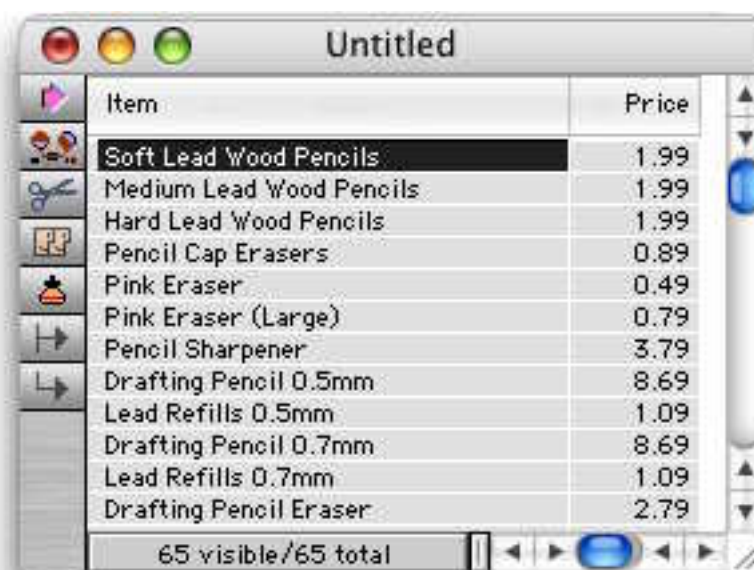
Double click on the Sample Price List file to open it. A small window will appear briefly. The database has been pre-programmed to automatically transfer the price list data into the new database you have created.

You may want to adjust the font size and the widths of some of the columns (see "Adjusting Column Widths, Font and Size" on page 14).

Before continuing you should use the **Save** command in the File menu to save your new creation. The first time you save any file Panorama will ask you to give it a name. You'll also want to check the Save Window Positions option (see "Saving Window Positions" on page 260). When everything is set up press the **Save** button. (To see what this dialog looks like on the PC see "Saving Your Work" on page 8.)

select folder you want to save file in

type in name of file
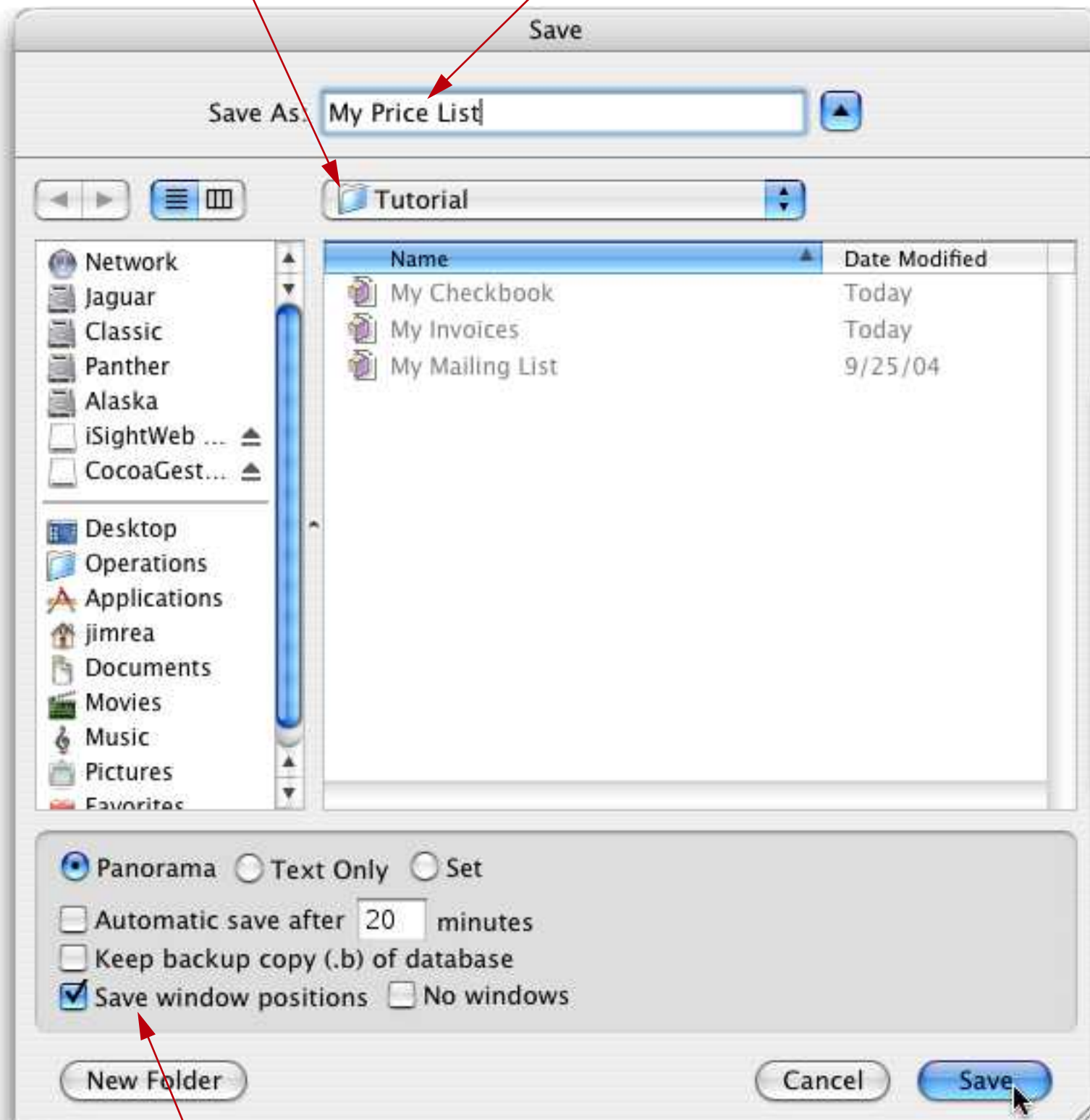
tell Panorama to save window positions

You may also want to add your new file to the **Favorite Database** wizard. See "Adding A Database To Your List Of Favorites" on page 29 for a refresher on how to do this.

Linking the Price List to the Invoice

The price list is now ready to link to the invoice. The link will be designed to look up a price automatically when an item is entered into the invoice. Start arranging the invoice and price list windows so that both are visible, with the invoice window on top (something like the illustration shown below).
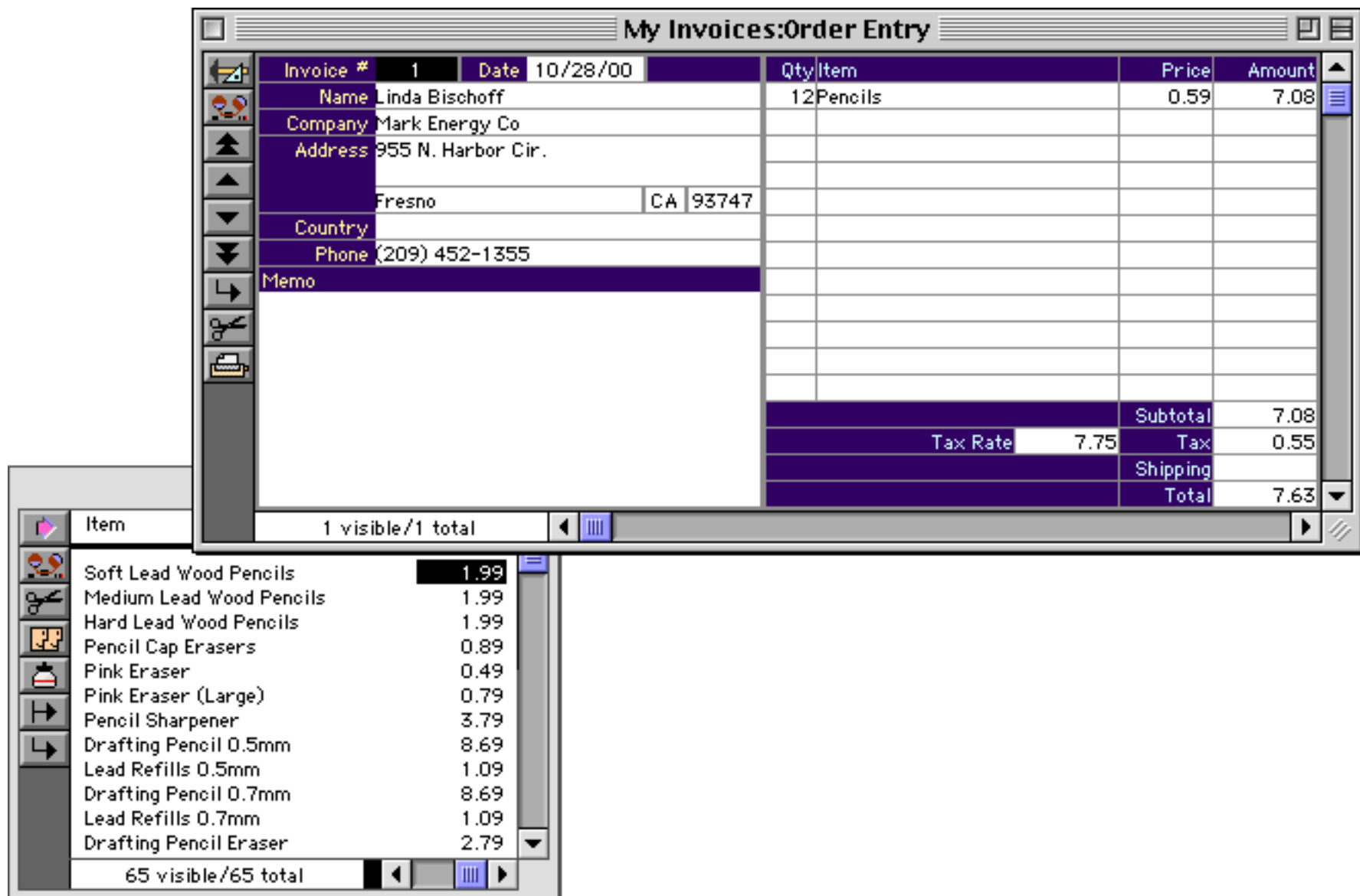
Using the **View** menu, switch from the invoice form to the invoice design sheet (see "The Design Sheet" on page 380).
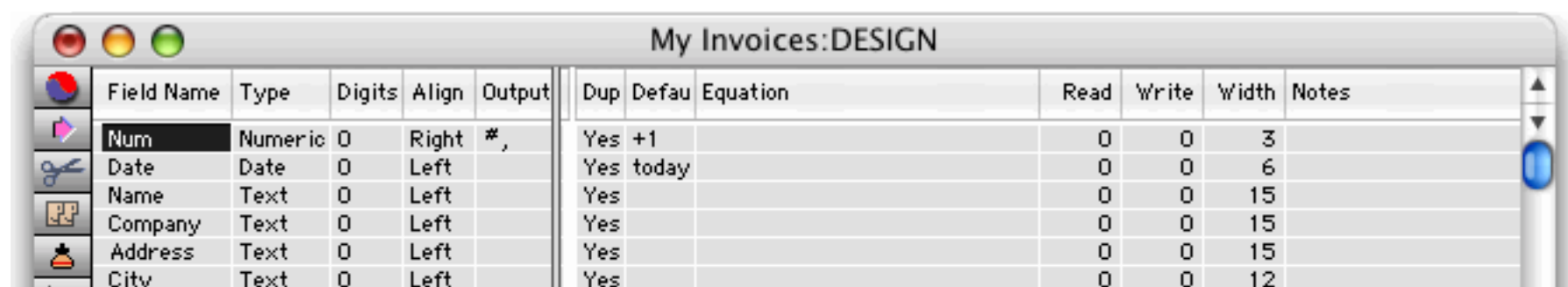
Double click on the Equation cell in the Price1 row.
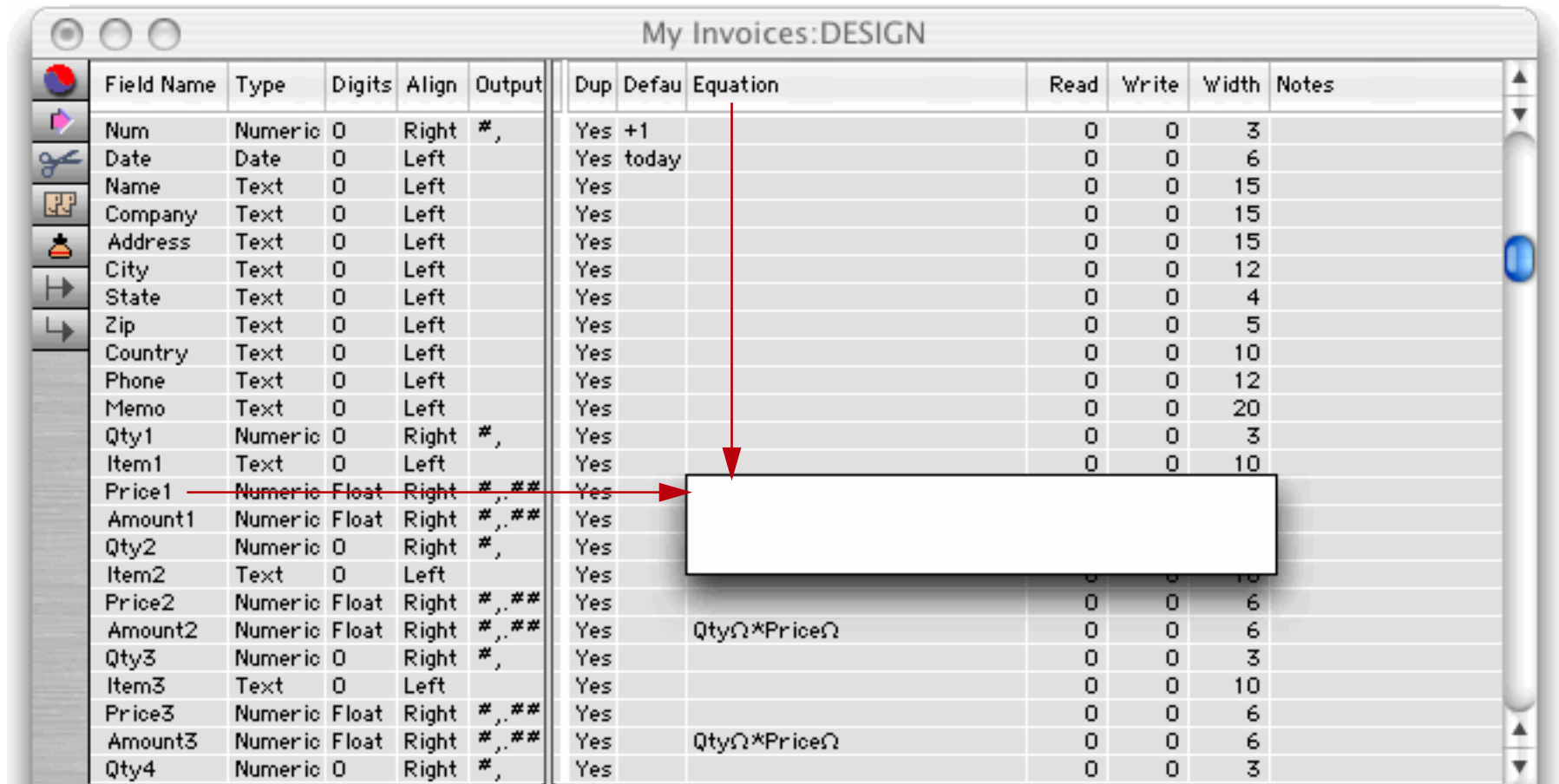
Now choose **lookup(…)** from the Functions menu (see "Functions Menu" on page 1319).
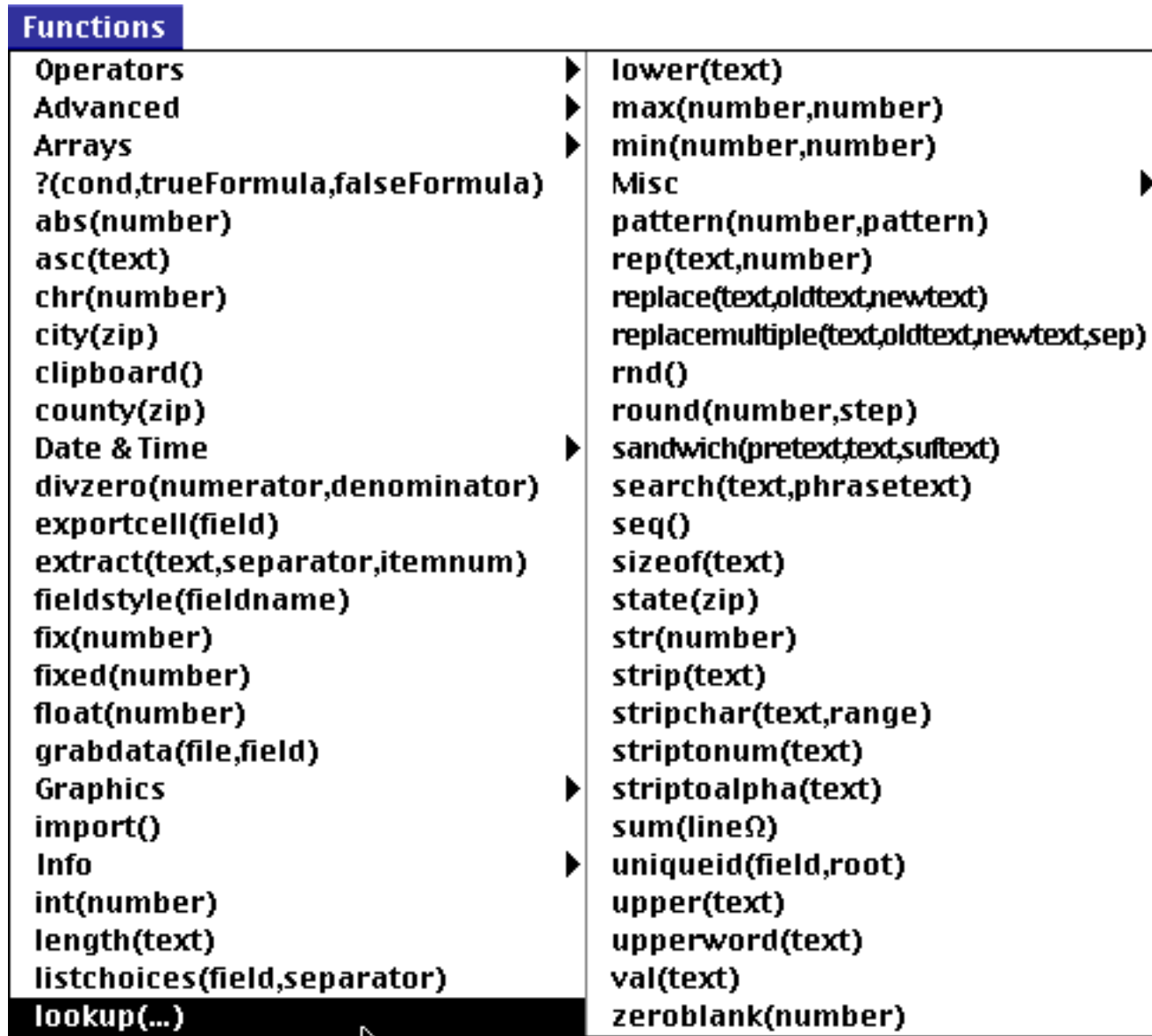
Choosing this menu item opens a dialog for setting up the `lookup(` function (see "Linking With Another Database" on page 1400).
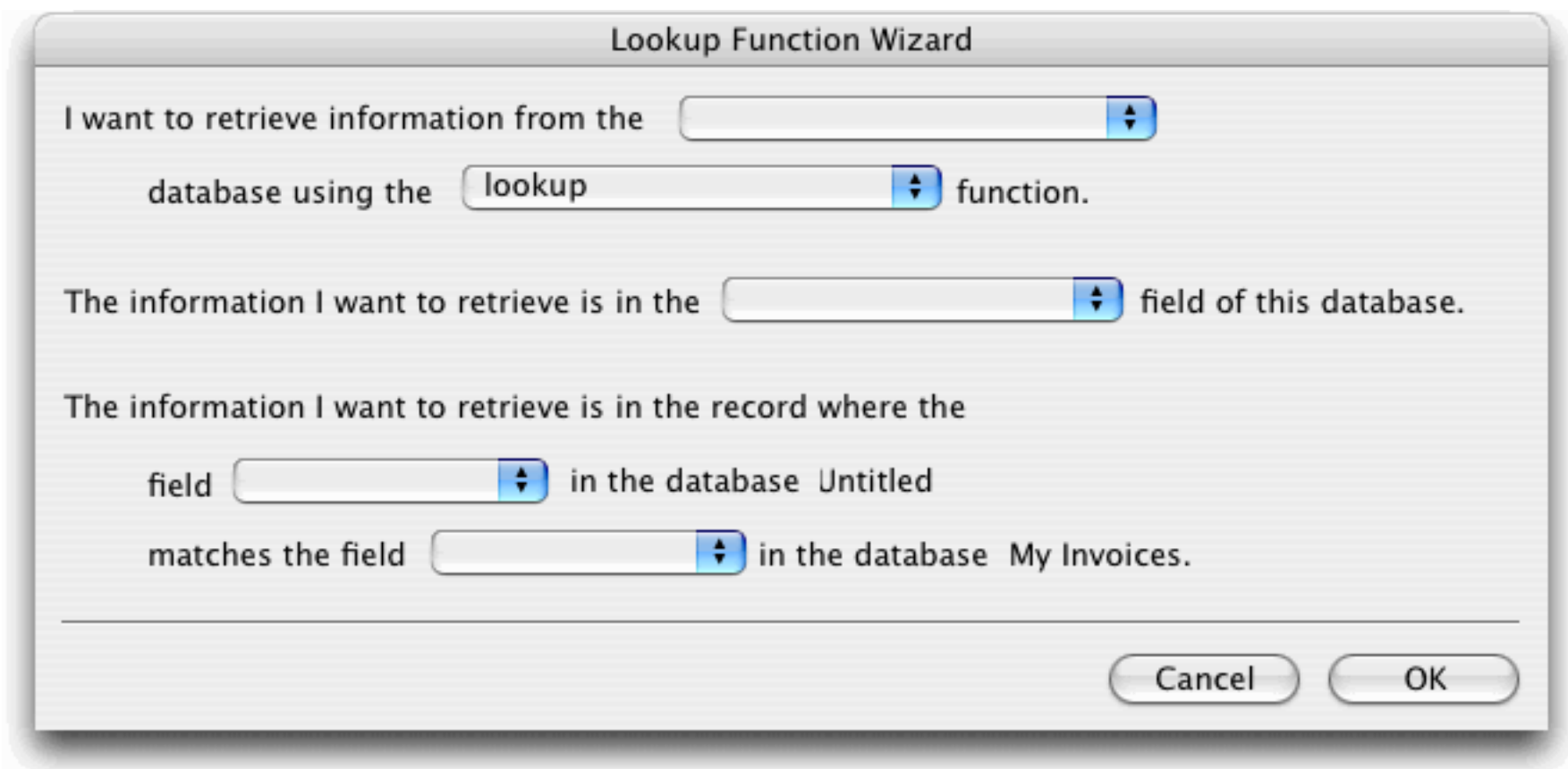
Start by selecting the database you want to look up data from, in this case the My Price List database.
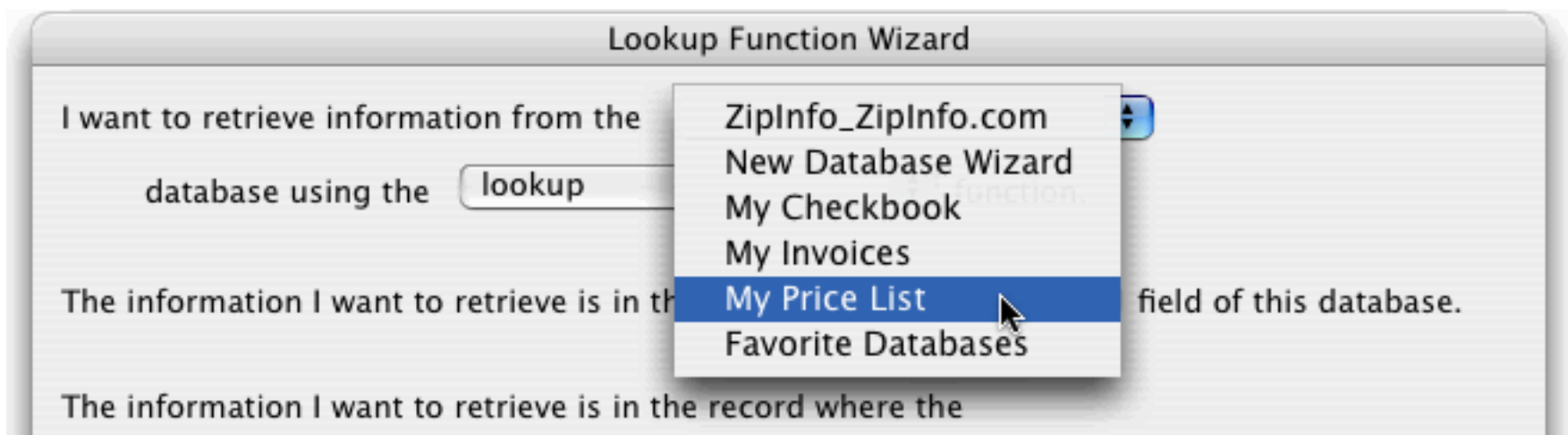
Now tell Panorama what you want to look up, in this case the Price.
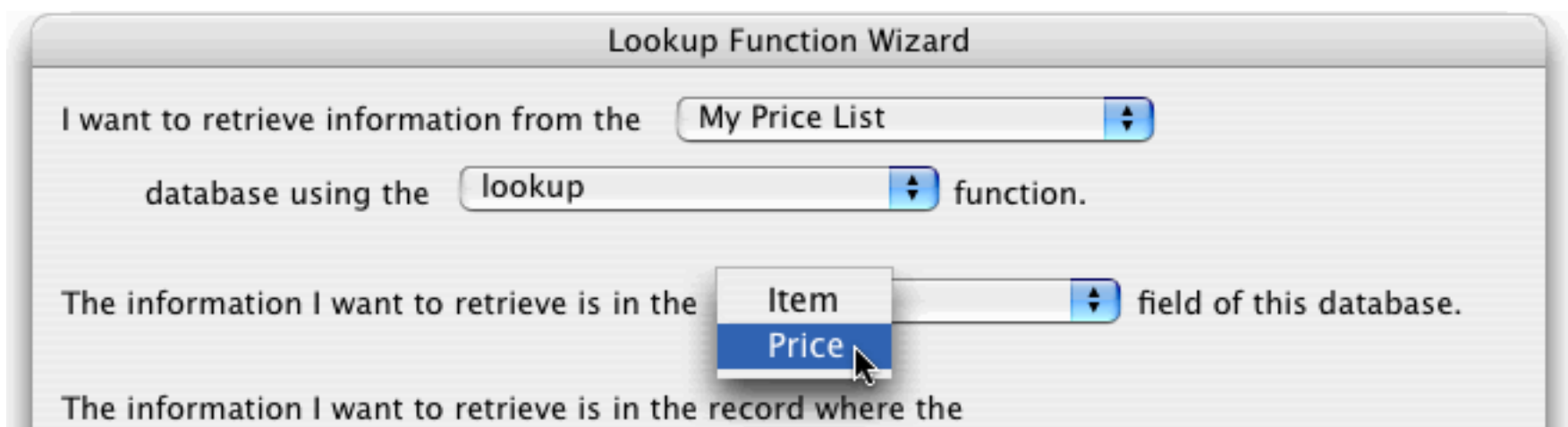
We want to look up the price where the Item in the price list matches the Item value in the invoice. So select Item from My Price List.

The information I want to retrieve is in the record where the

field [**Item** ▸] [▲▼] in the database My Price List
       [Price]

matches the field [▲▼] in the database My Invoices.

[Cancel]   [OK]
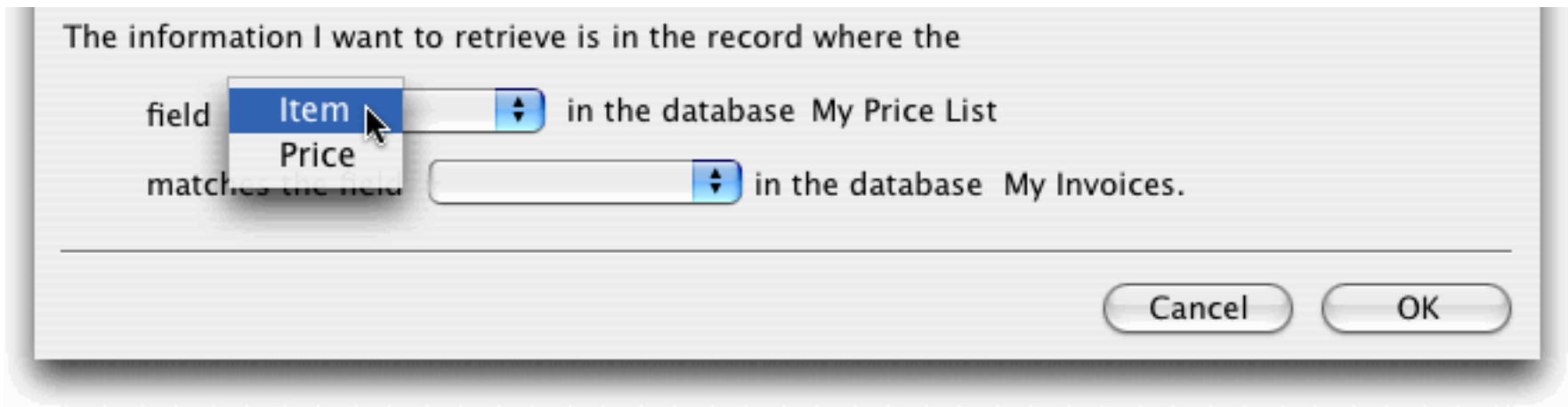
Select **Item1** for the last pop-up.
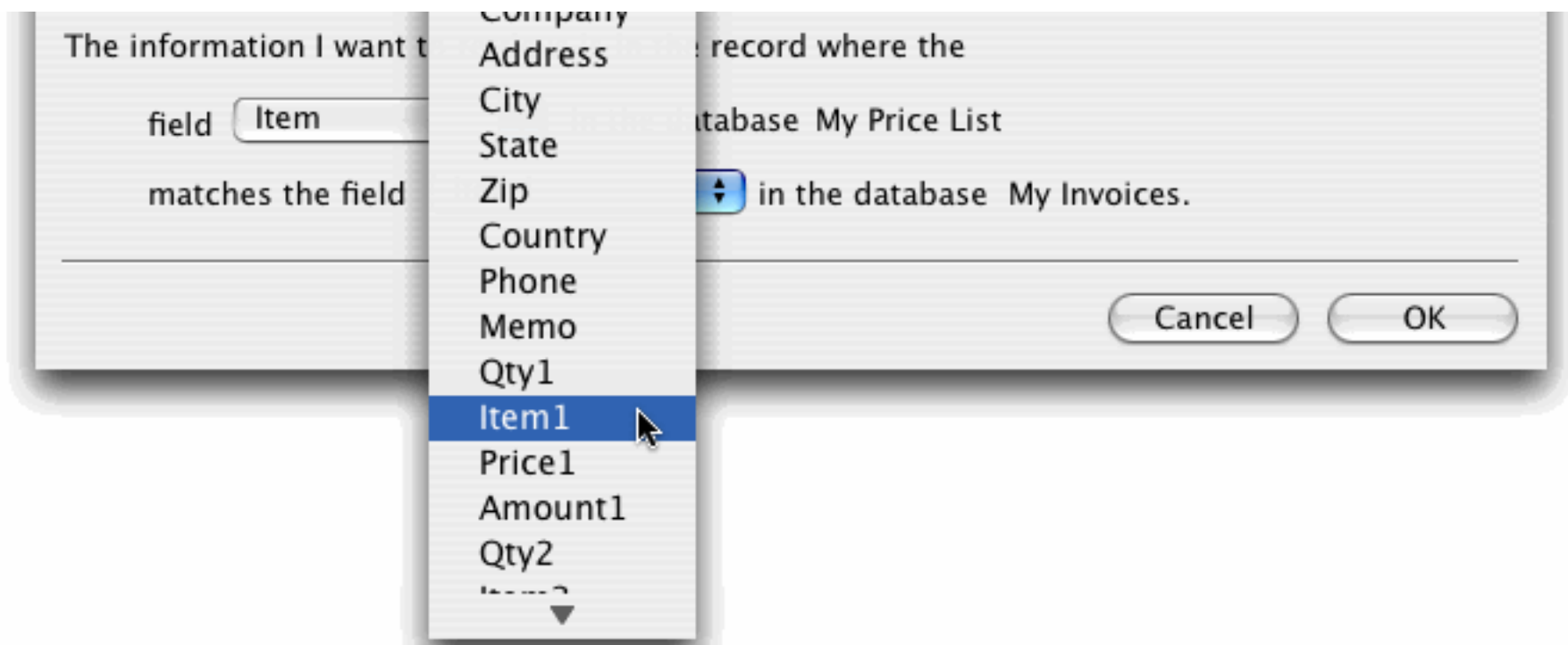
The information I want t ~~Company~~   record where the
                          Address
                          City
field [Item   State   tabase My Price List
                          Zip
matches the field   Country   [▲▼] in the database My Invoices.
                          Phone
                          Memo
                          Qty1   [Cancel]   [OK]
                          Item1 ▸
                          Price1
                          Amount1
                          Qty2
                          ▼

Here's the finished dialog with everything filled in.
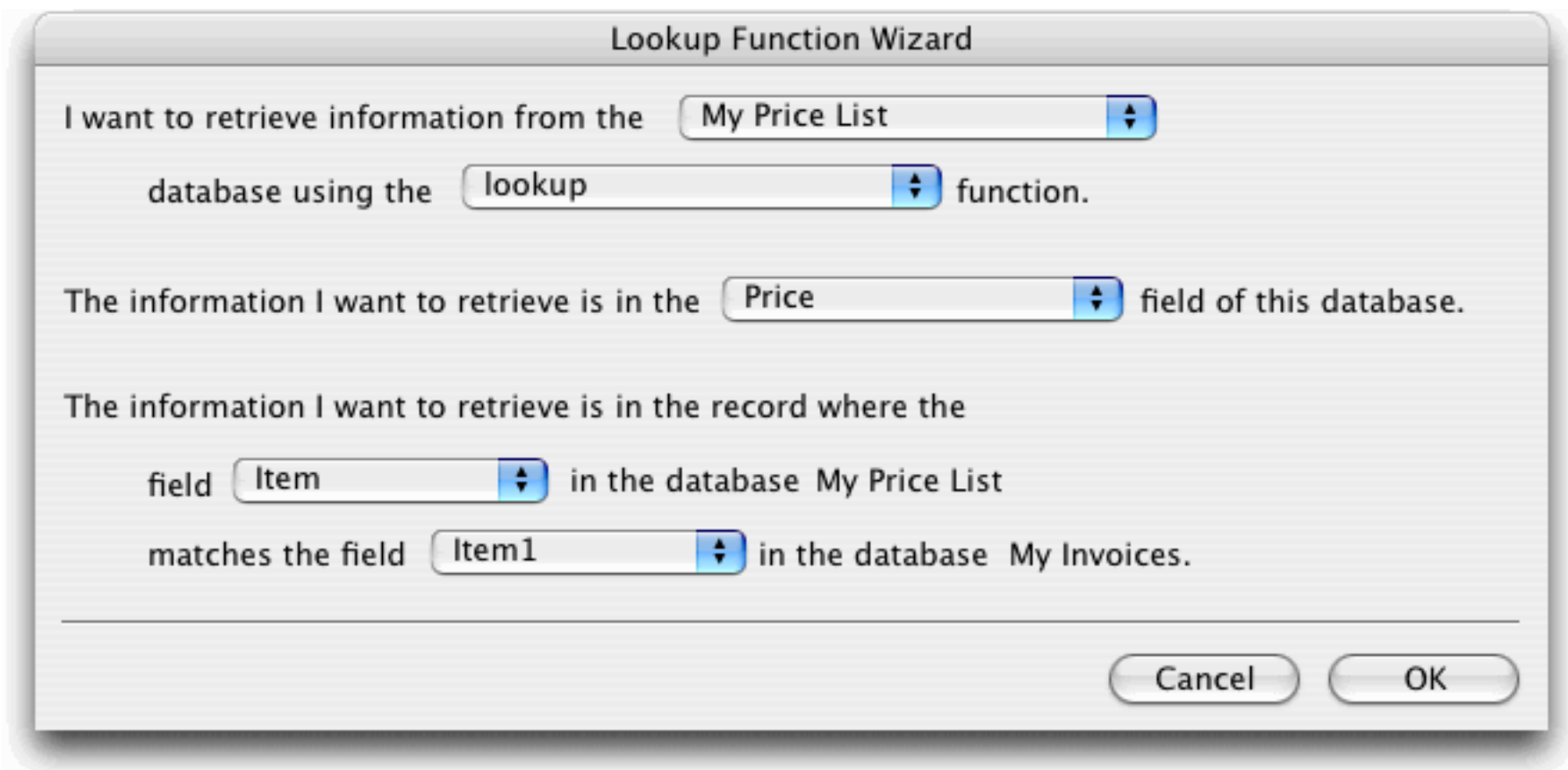
Press the **OK** button to build the formula for looking up the price.

My Invoices:DESIGN

Field Name	Type	Digits	Align	Output	Dup	Defau	Equation	Read	Write	Width	Notes
Num	Numeric	0	Right	#,	Yes	+1		0	0	3	
Date	Date	0	Left		Yes	today		0	0	6	
Name	Text	0	Left		Yes			0	0	15	
Company	Text	0	Left		Yes			0	0	15	
Address	Text	0	Left		Yes			0	0	15	
City	Text	0	Left		Yes			0	0	12	
State	Text	0	Left		Yes			0	0	4	
Zip	Text	0	Left		Yes			0	0	5	
Country	Text	0	Left		Yes			0	0	10	
Phone	Text	0	Left		Yes			0	0	12	
Memo	Text	0	Left		Yes			0	0	20	
Qty1	Numeric	0	Right	#,	Yes			0	0	3	
Item1	Text	0	Left		Yes			0	0	10	
Price1	Numeric	Float	Right	#,.##	Yes		lookup("My Price List","Item",«Item1»,"Price",0,0)				
Amount1	Numeric	Float	Right	#,.##	Yes						
Qty2	Numeric	0	Right	#,	Yes						
Item2	Text	0	Left		Yes					10	
Price2	Numeric	Float	Right	#,.##	Yes			0	0	6	
Amount2	Numeric	Float	Right	#,.##	Yes		QtyΩ*PriceΩ	0	0	6	

To learn more about how this formula works see "<u>Linking With Another Database</u>" on page 1400. The formula generated by the dialog needs one slight adjustment — `Item1` must be replaced by `Item‰`. To type the ‰ character use **Option-Z** on the Macintosh and **Alt-0166** on the PC (see "<u>Special Characters</u>" on page 1330 and "<u>Line Item Fields</u>" on page 1326).

Field Name	Type	Digits	Align	Output	Dup	Defau	Equation	Read	Write	Width	Notes
Memo	Text	0	Left		Yes			0	0	20	
Qty1	Numeric	0	Right	#,	Yes			0	0	3	
Item1	Text	0	Left		Yes			0	0	10	
Price1	Numeric	Float	Right	#,.##	Yes		lookup("My Price List","Item",«ItemΩ»,"Price",0,0)				
Amount1	Numeric	Float	Right	#,.##	Yes						
Qty2	Numeric	0	Right	#,	Yes						
Item2	Text	0	Left		Yes					10	
Price2	Numeric	Float	Right	#,.##	Yes			0	0	6	
Amount2	Numeric	Float	Right	#,.##	Yes		QtyΩ*PriceΩ	0	0	6	
Qty3	Numeric	0	Right	#,	Yes			0	0	3	

Once this adjustment has been made press the **Enter** key. Panorama will respond with this dialog (see "Modifying Line Item Fields" on page 393).
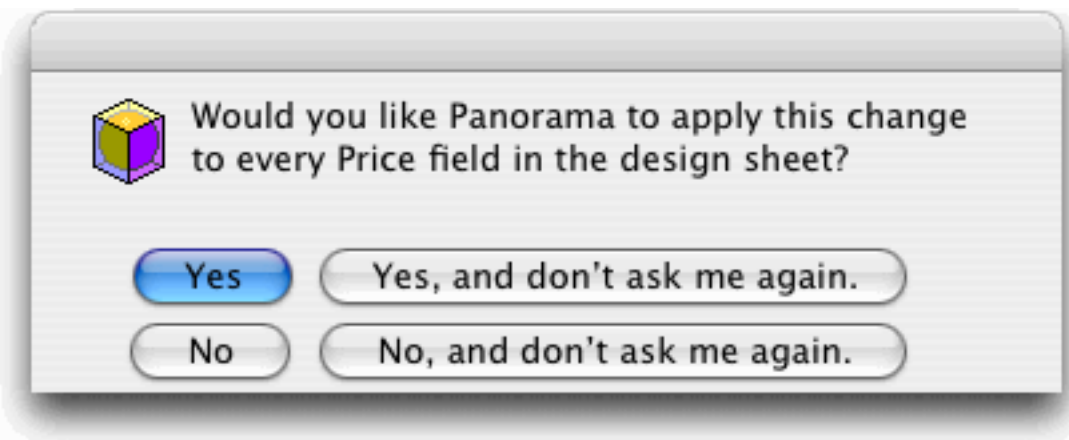
Press the **Yes, and don't ask me again** button. Panorama will update not only the Price1 field definition, but also Price2, Price3, Price4 etc. You can see this by scrolling down the design sheet. (We've split the window into two panes (see "Splitting a Window" on page 326) and expanded the width of the Equation column to make this easier to see.)

Now click on the Item1 field name (we've also unsplit the window and reduced the width of the Equation column).

Choose the **Set Up Link** command from the Special menu (see "Clairvoyance® Across Multiple Files" on page 451).
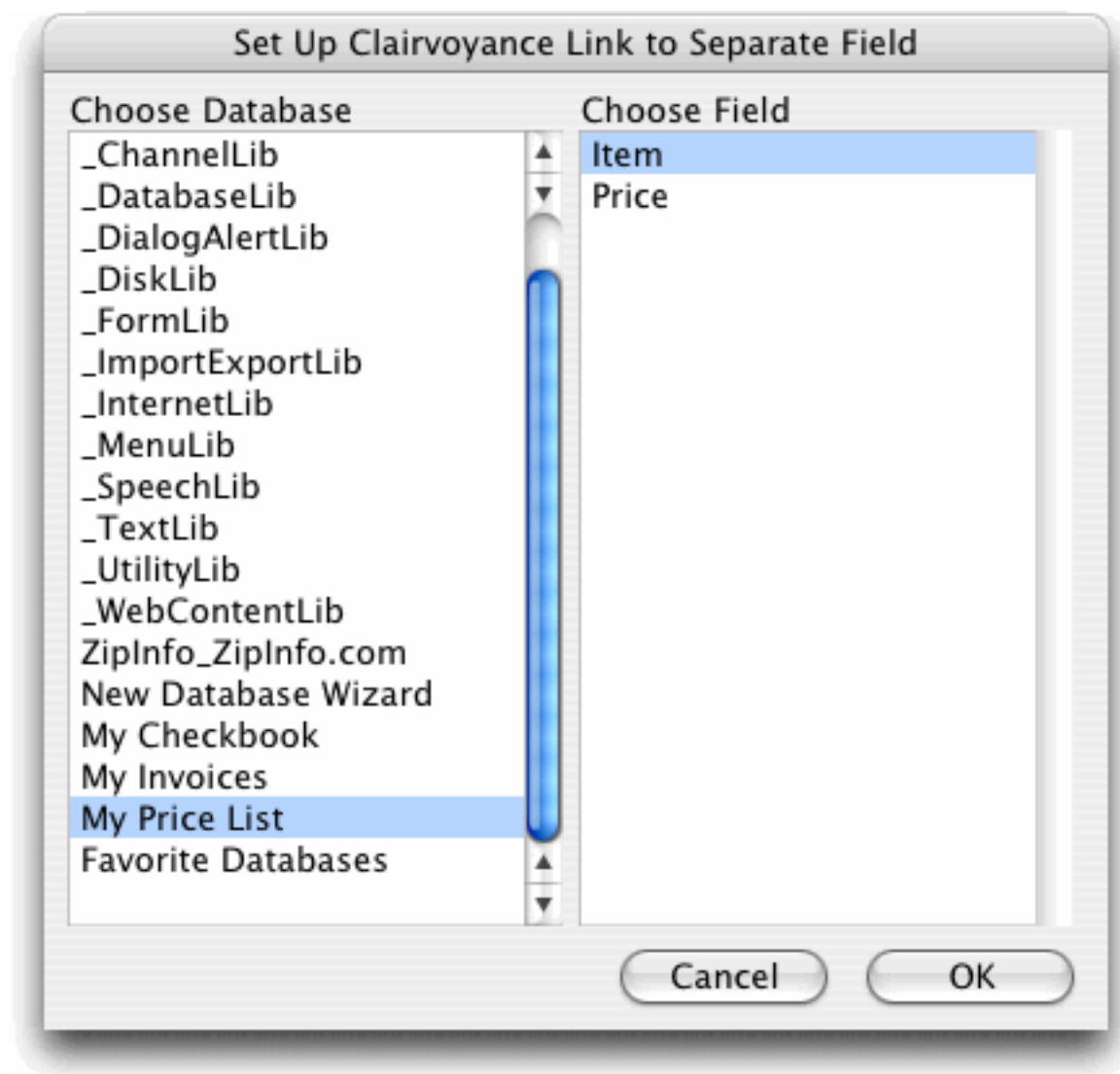
On the left hand side select My Price List. Then select Item on the right hand side (as shown above).

Press **OK** to set up the link.

The link must be copied to all of the other item fields (Item2, Item3, Item4, etc.) To do this, double click on the link.

When you press the **Enter** key the link specification will be copied to all of the other Item fields.

Use the **View** menu to switch back to the Order Entry form. When Panorama asks you if you want to create a new generation, press the **Yes** button (see "Database "Generations"" on page 380). Then **Save** the database before continuing.

Using the Linked Invoice & Price List

Since you've set up a Clairvoyant link between the invoice and the price list you'll only need to enter the first few letters of a description.

When you press the **Enter** key Panorama will look up the price from the Price List database. Once the price is looked up Panorama will then automatically calculate the subtotal, tax and grand total.

You can enter up to 12 items in each invoice.

Creating a Procedure to Add an Item

Now you'll write a very short procedure. Start by clicking on the Price List database.
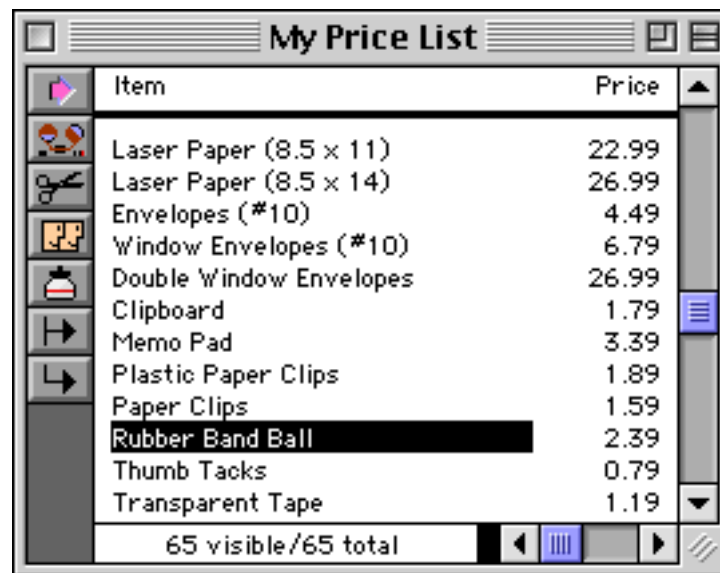
Use the **View** menu to create a new procedure named Add Item to Invoice (see "Writing a Procedure from Scratch" on page 1480). Type in the four lines shown below, exactly as they are shown. (Remember, the Ω character is typed in by pressing **Option-Z** on the Macintosh or **Alt-0166** on the PC. Depending on the fonts installed on your system the character may not look like Ω, but it will work if you press the right keys.)
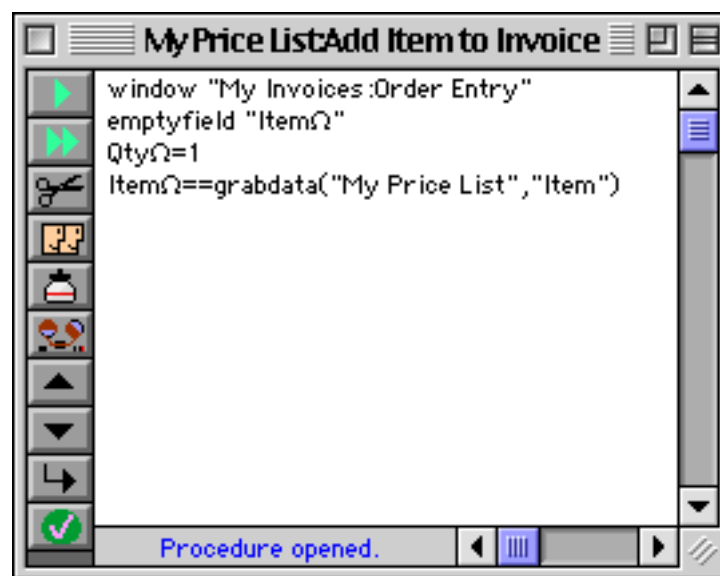
To check your typing use the **Check Procedure** tool. This tool can spot most typing mistakes (see "Checking for Mistakes" on page 1485).
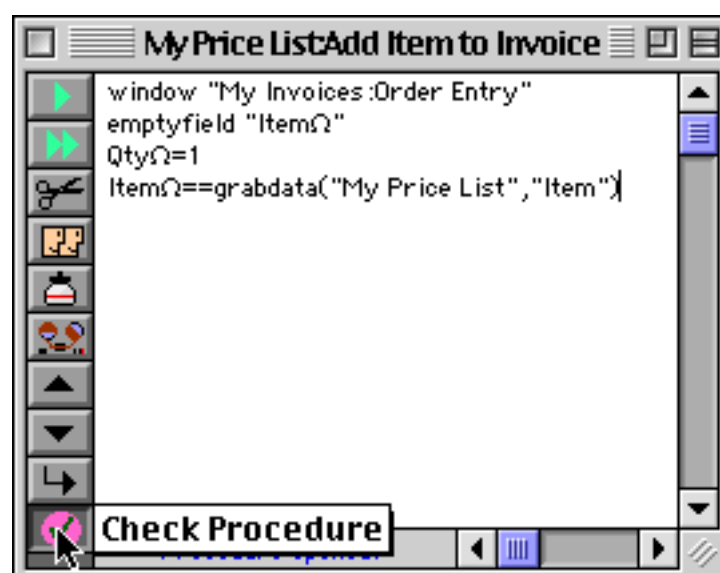
Assuming there are no errors use the **View** menu to switch back to the data sheet. (If there are any errors - fix them!) Then pick the item you want to add to the invoice and choose **Add Item to Invoice** from the Action menu.

The procedure will automatically add the selected item to the invoice.

To learn more about how this procedure actually works see "Assignment Statements" on page 1496, "Windows" on page 1700 and "Moving Left and Right" on page 1768.

Creating a Price List Form with Buttons

Now you'll create a price list form with buttons for adding items to the invoice. Start by using the **View** menu to create a new form named Add.

You're going to make a **View-As-List** form (see "View-As-List Forms" on page 1017). To do this start by selecting the **Tile** tool. You may need to scroll the tool palette to access this tool (see "Scrolling the Tool Palette" on page 325).
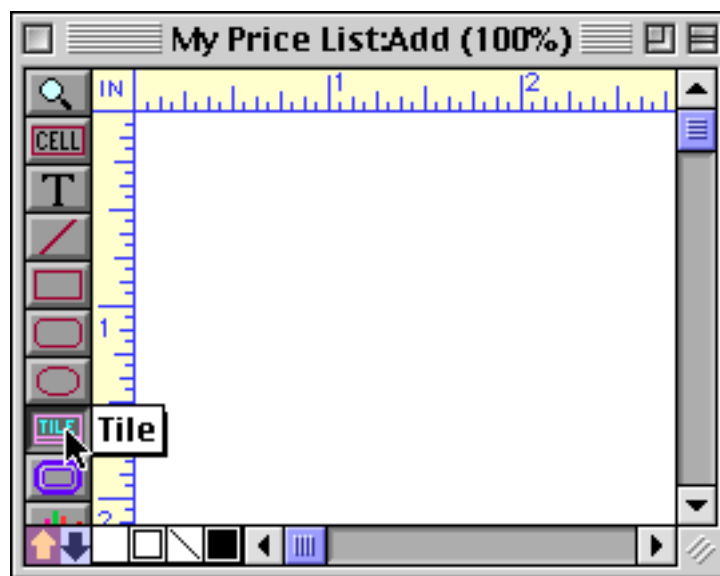
Expand the width of the window slightly, then drag the mouse across the form to create a tile (see "Working with Tiles" on page 1026).
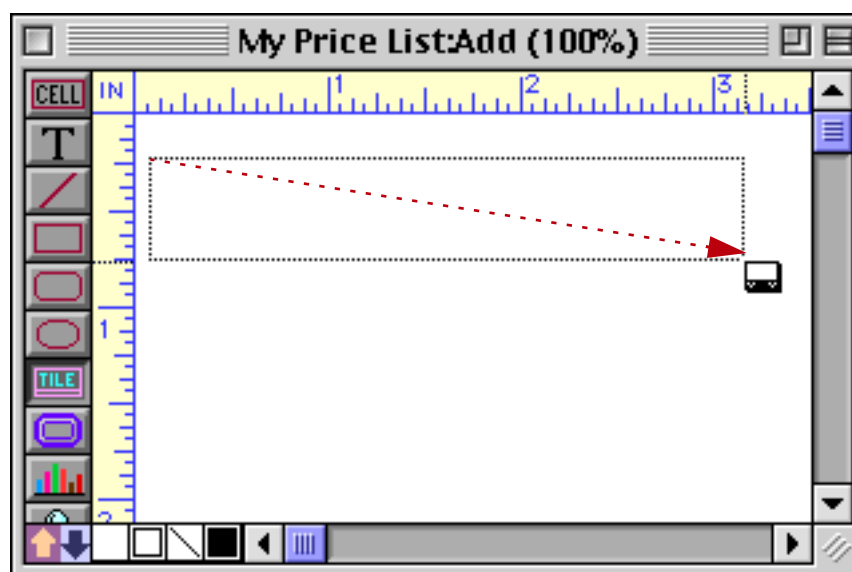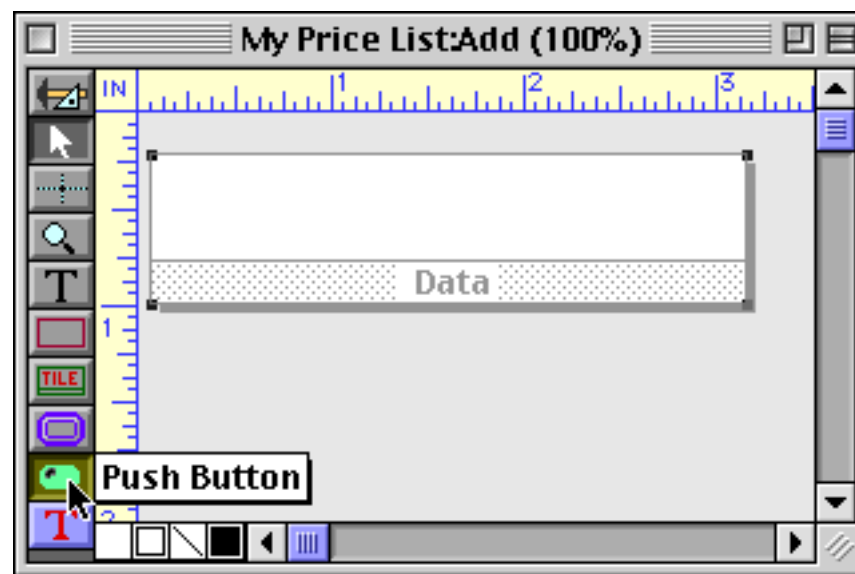

When you release the mouse a new **data tile** appears.
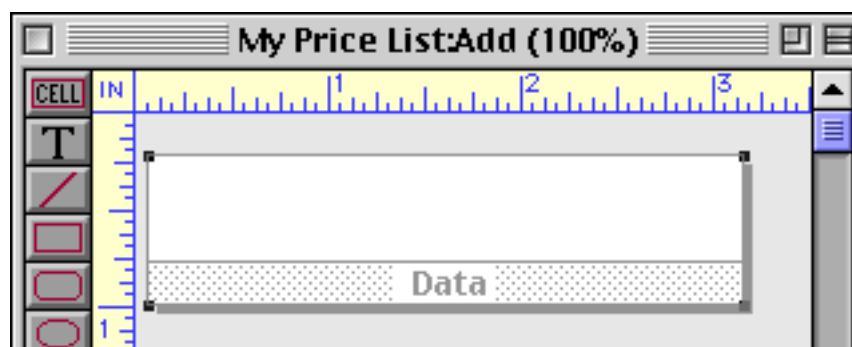
Before you continue with the next step you'll need to customize the tool palette. To do this choose **Tool Palette** from the Setup menu and then arrange the tools as shown below (see "Customizing the Tool Palette" on page 625).
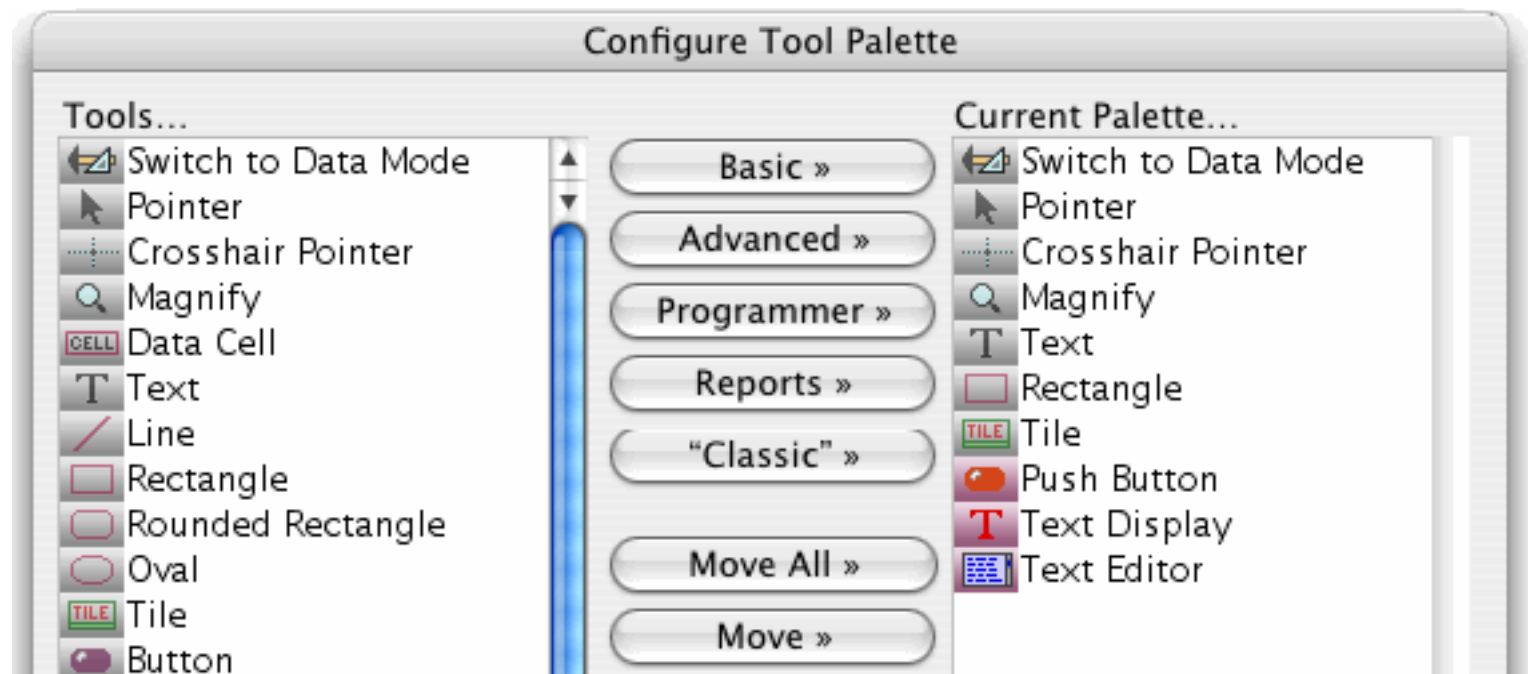
Press the **OK** button, then select the **Push Button** tool (see "Push Buttons" on page 941).

Now drag to create a button in the upper left hand corner of the data tile.
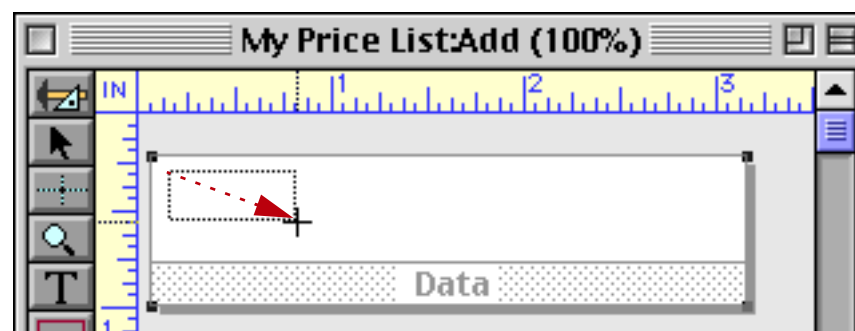
Now you'll need to select three options for the new push button. Using the pop-up menu select the procedure linked to this button, in this case Add Item to Invoice. (This means that when this button is pressed the Add Item to Invoice procedure will be triggered, just as if you had selected it from the **Action** menu.) Type in the title you want to appear in the button, in this case Add. Click on the button style you want to use, in this case 3D Rounded Rectangle.
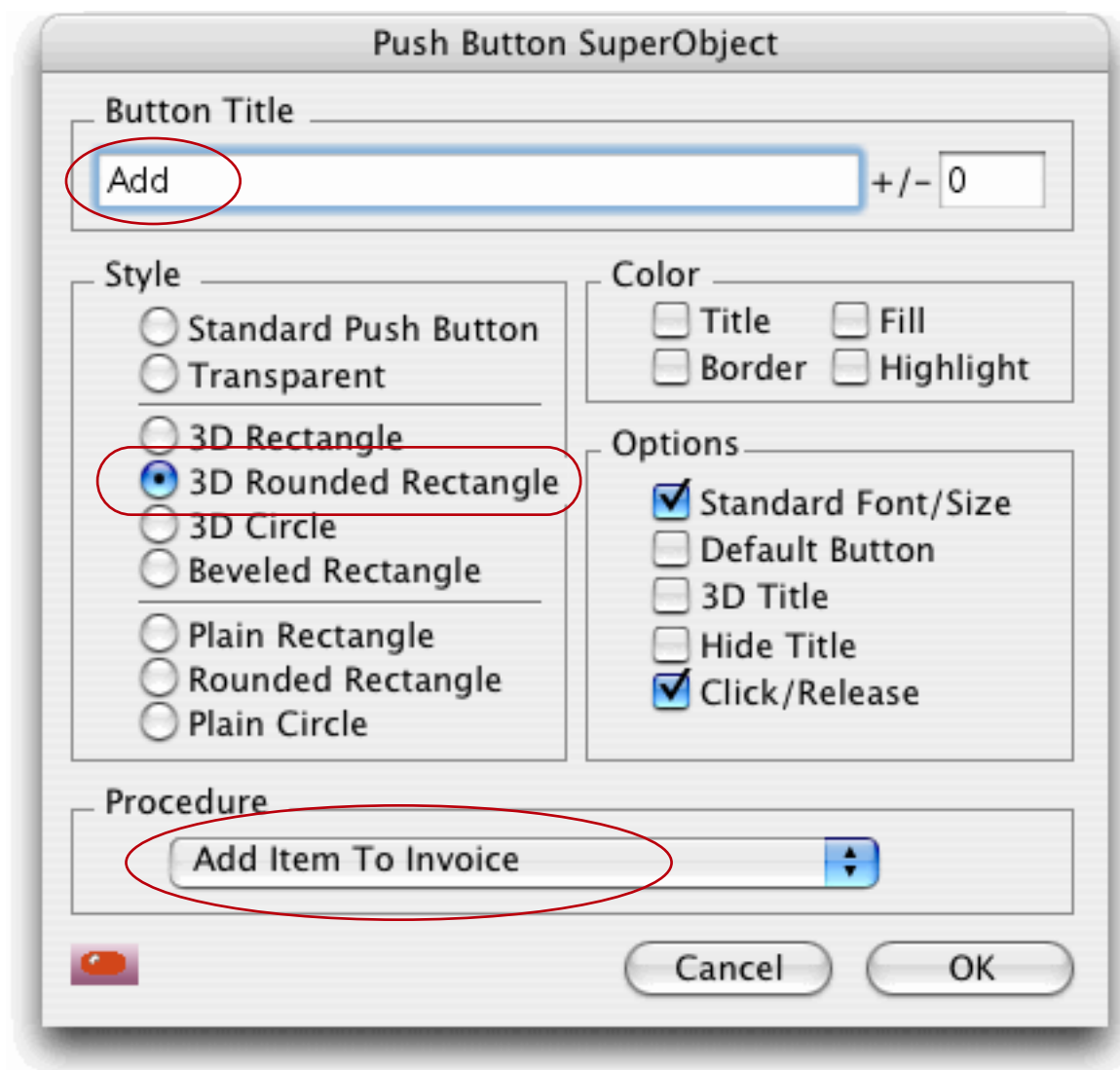
When you press the **OK** button the new push button will appear on your form.
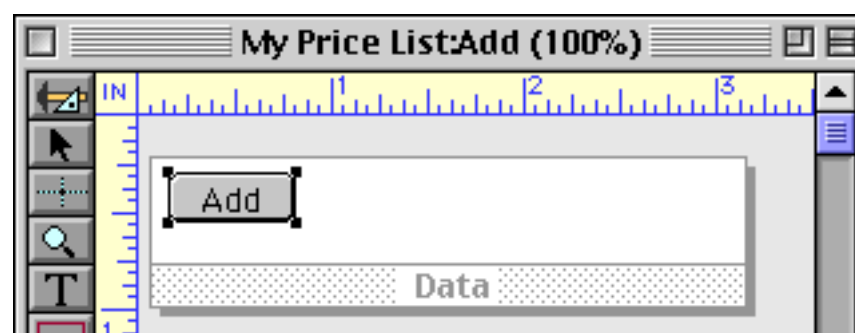
Select the **Pointer** tool and adjust the text size and overall dimensions of the button (see "Text Size" on page 659).

Now select the **Text Editor** tool (see "Text Editor SuperObject" on page 767).
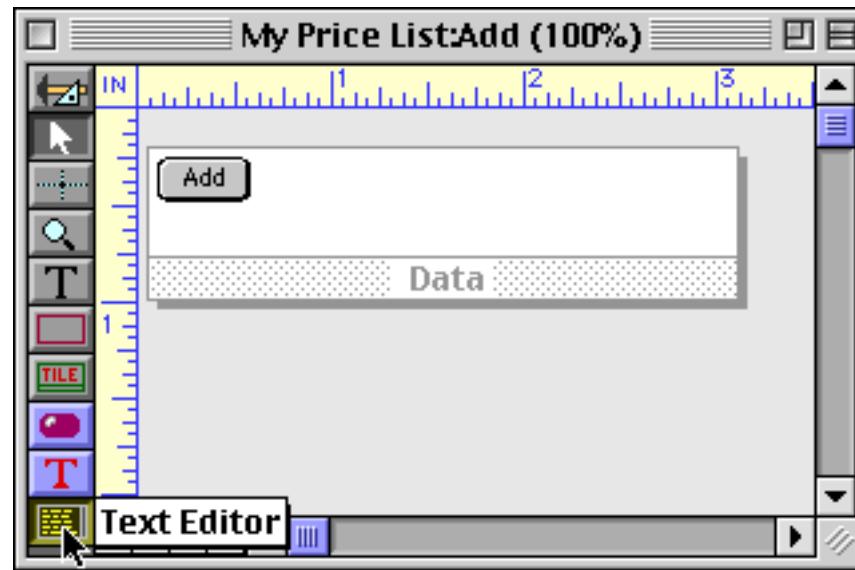

Drag the mouse to create a text editor object.
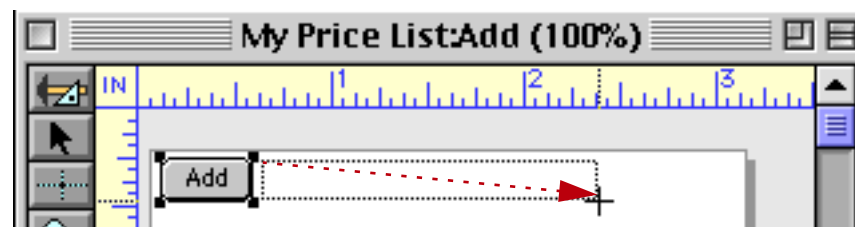
When you release the mouse the Text Editor SuperObject configuration dialog appears (see "Text Editor Options" on page 771). Set the options as shown in the illustration below.
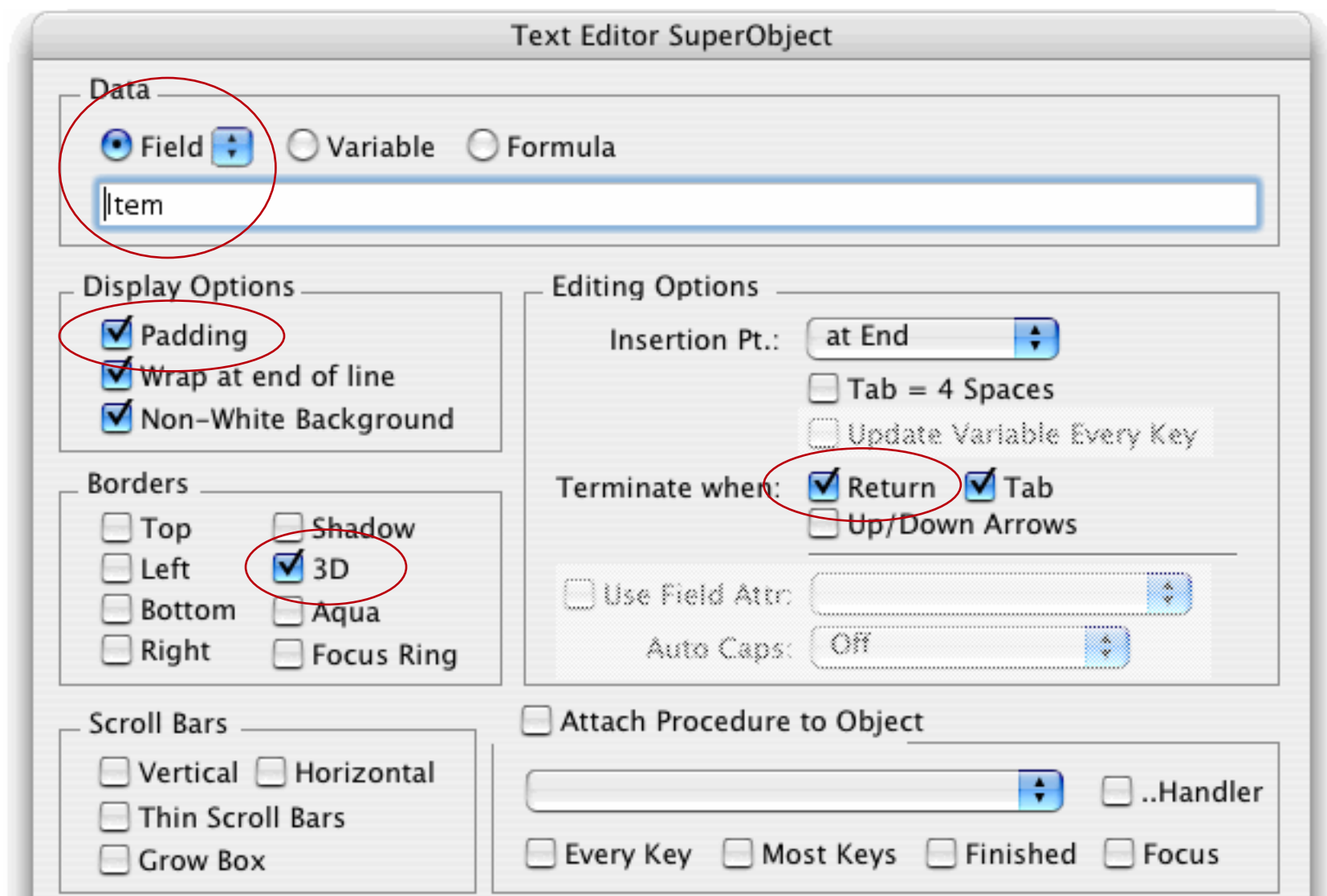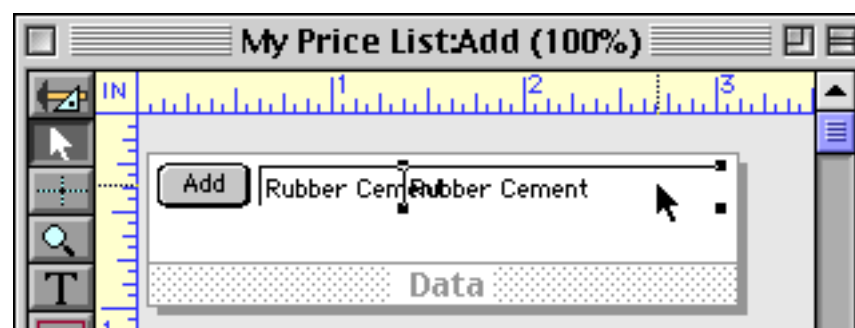
When you press the **OK** button the new Text Editor SuperObject will appear.
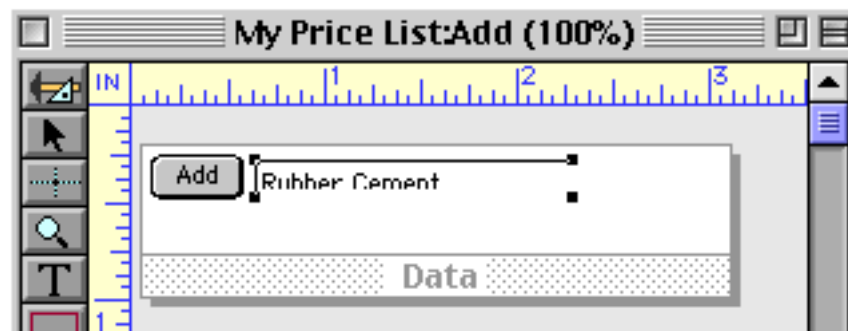
Select the **Pointer** tool and adjust the size and position of the new object (see "Nudging the Size of an Object" on page 641).
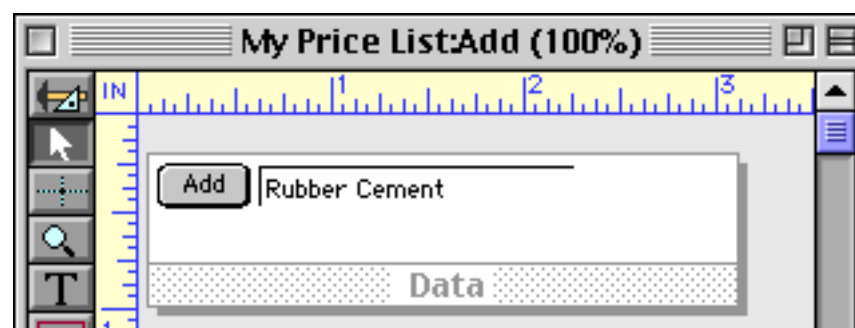
Hold down the **Option** key (Mac) or the **Alt** key (PC) and drag the Text Editor object to the right (see "Drag Duplicating" on page 689).
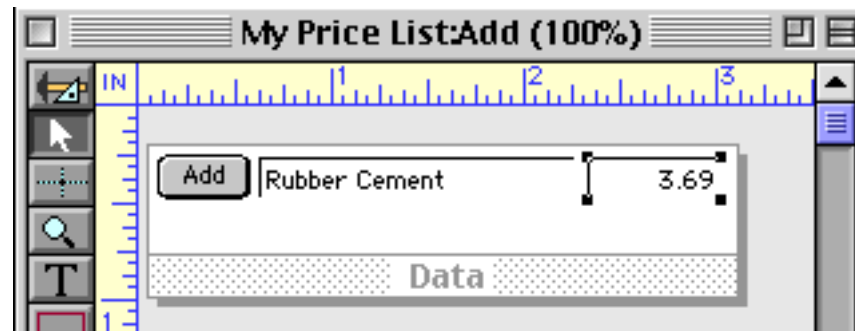

Adjust the size of the new object and select the **Right** command from the Text menu (see "Text Alignment" on page 722).
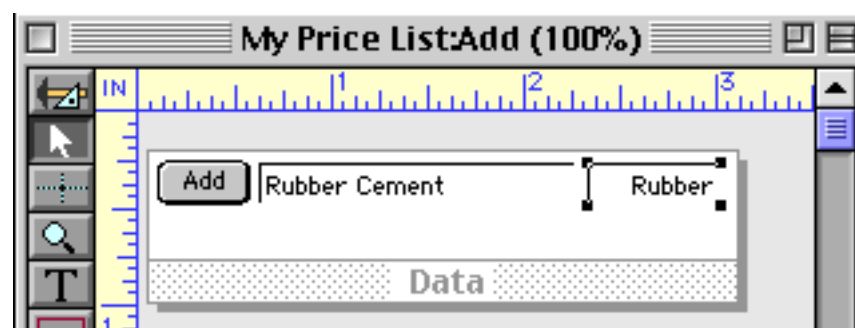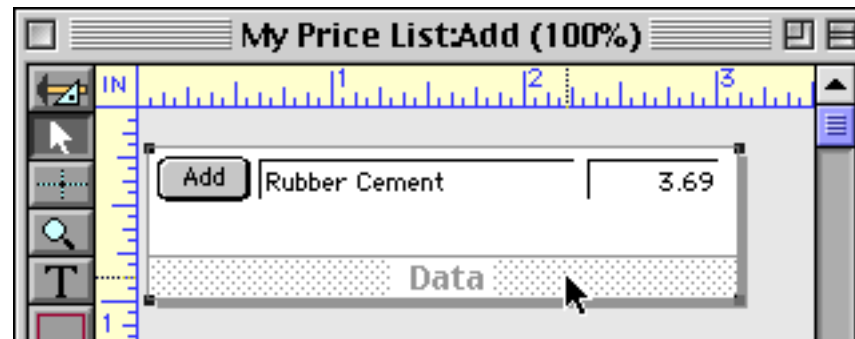

Double click on the new text editor object (see "The Object Properties Dialog" on page 662) and change the field to Price.
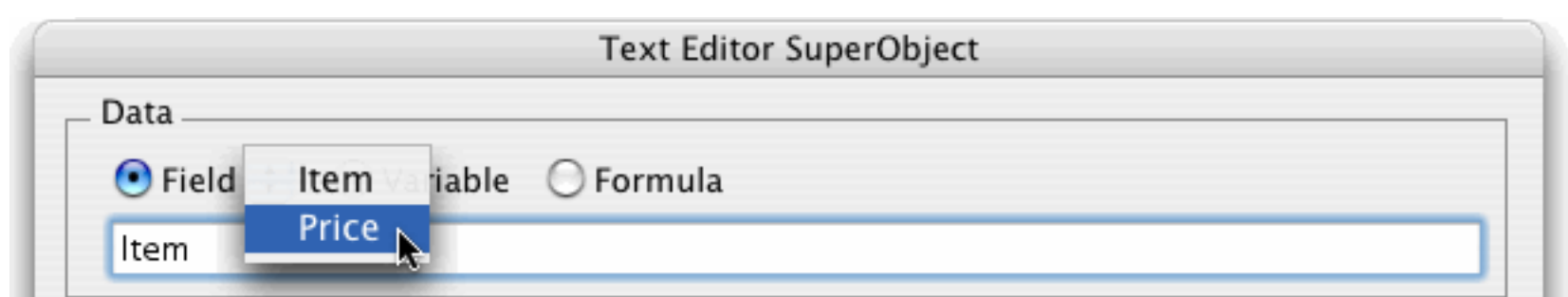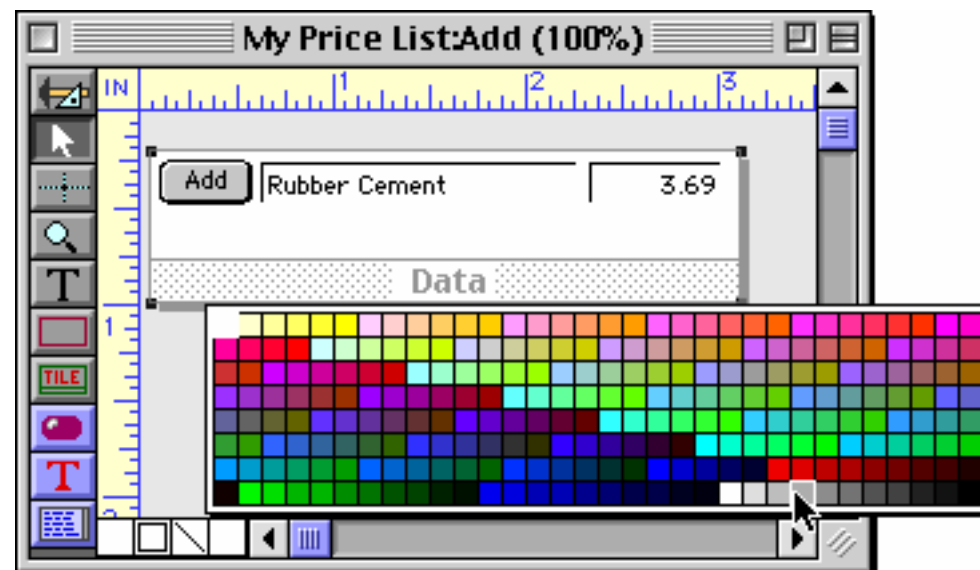
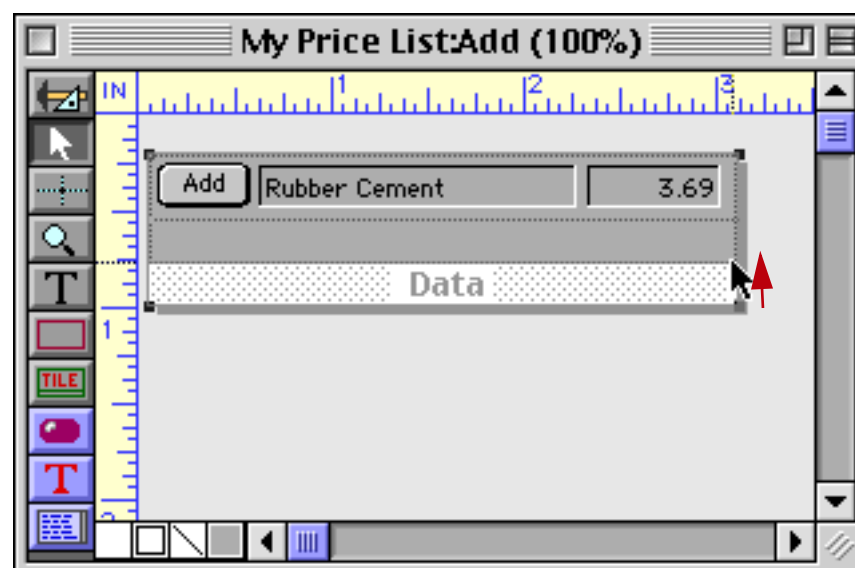Press **OK** to update the object.

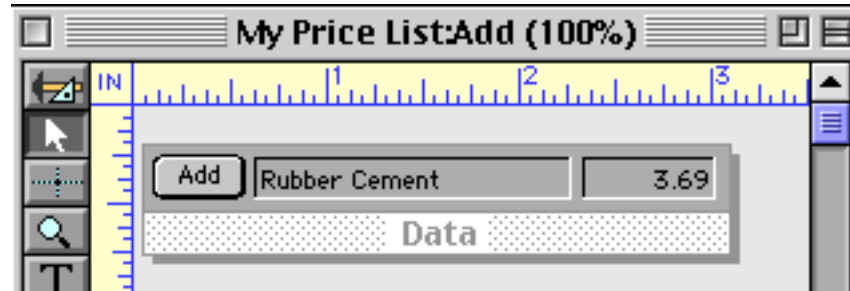Click in the tiles' drag bar to select it (see "Working with Tiles" on page 1026).

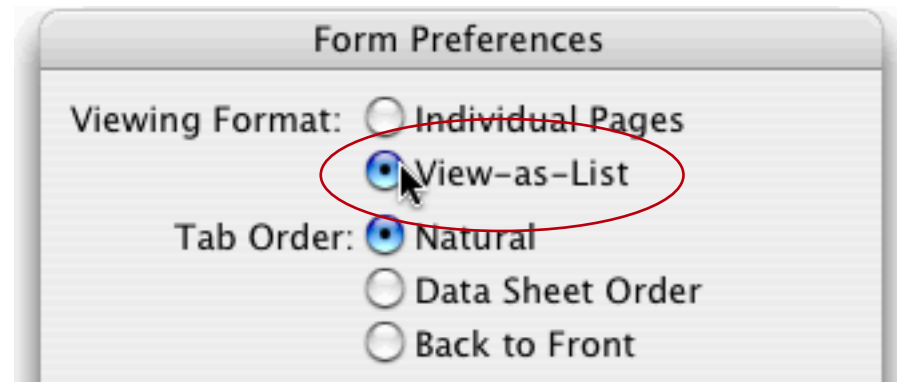Use the color menu to change the tile to light gray.

Drag the lower left hand handle of the tile up until there is an equal margin around the button and text editor objects.
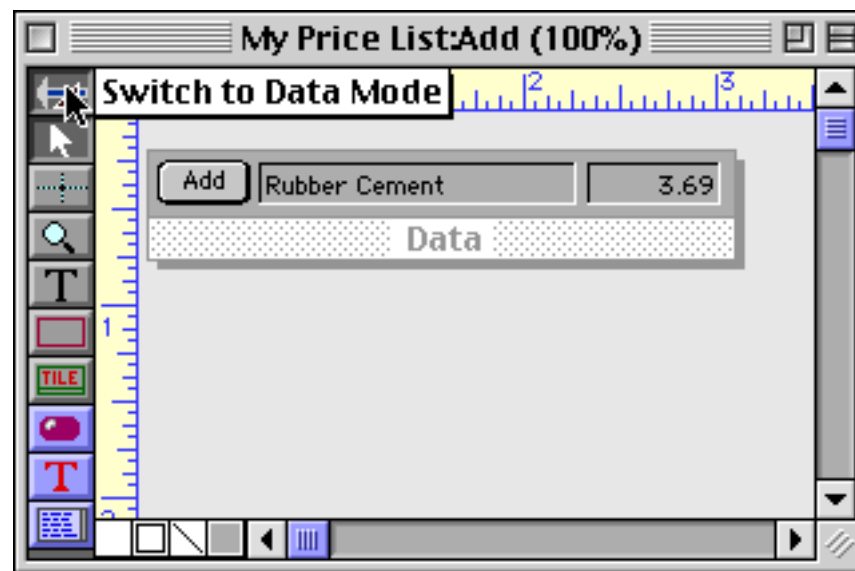
The finished form should look something like this.

Using the **Form Preferences** dialog in the Setup menu, change the viewing format for the form to View-As-List.

Press the **OK** button, then switch back to **Data Access Mode**.

Here's what the form should now look like in Data Access Mode. The graphics on the tile are repeated over and over again for each record in the database.

To add a particular item to the current invoice just click on the **Add** button for that item.

Clicking this button will trigger the procedure which adds the item to the invoice.

Now **Save** both databases and you are done.

Saving a File Set

Before continuing, make sure that the My Invoice and My Price List files are the only two databases open in Panorama. Then choose the **File Save** command from the File menu. Type in the name of the file set you want to create (in this case Order Entry) and click on the Set option.
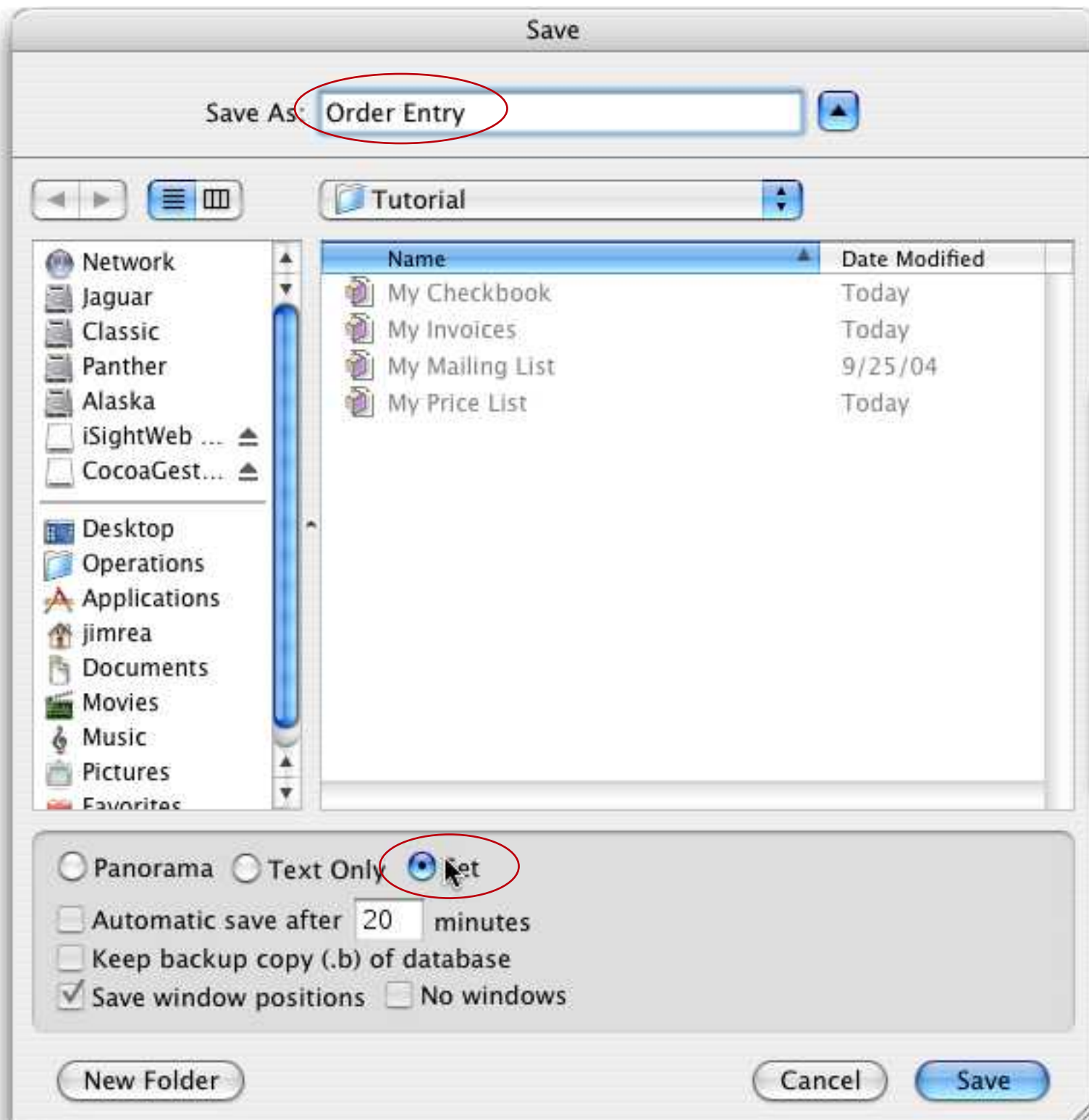
If you are using a Windows PC computer use the combo box to choose the Panorama File Set {*.pnz} option
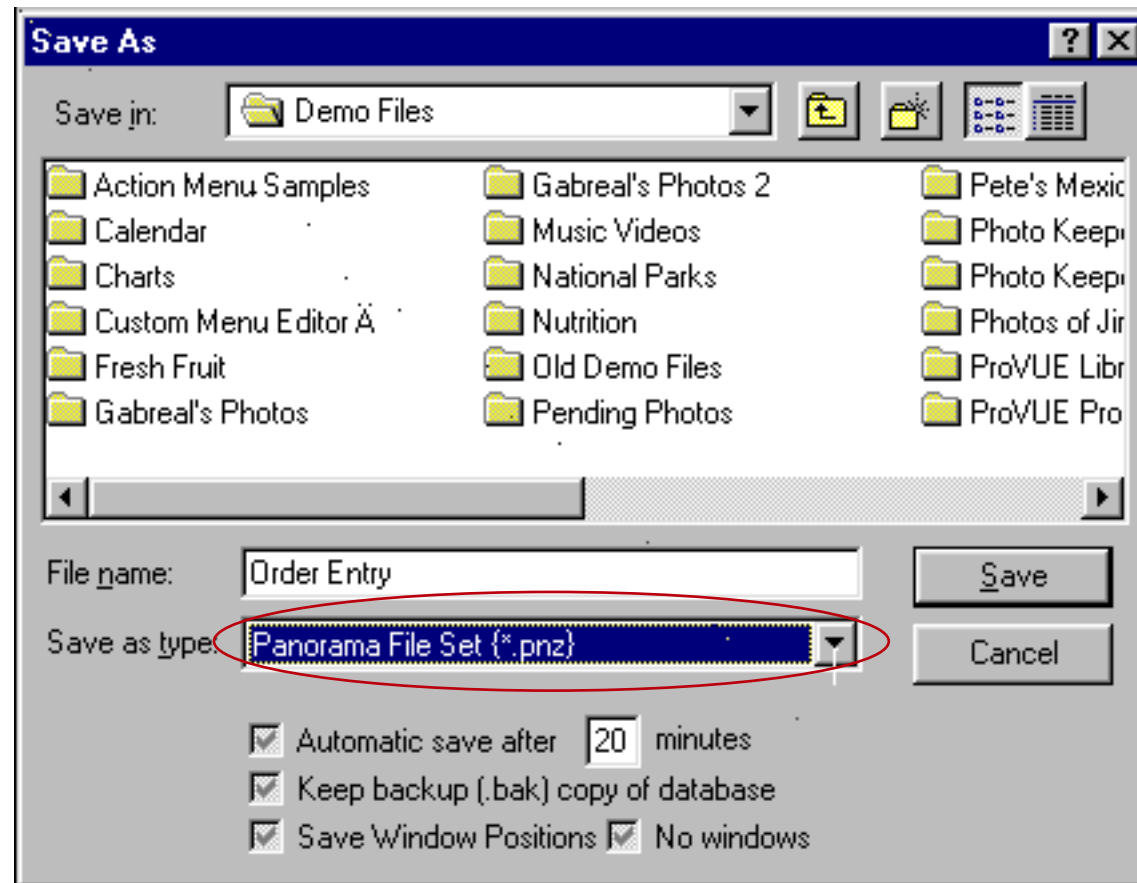
Press the **Save** button to create the file set document.
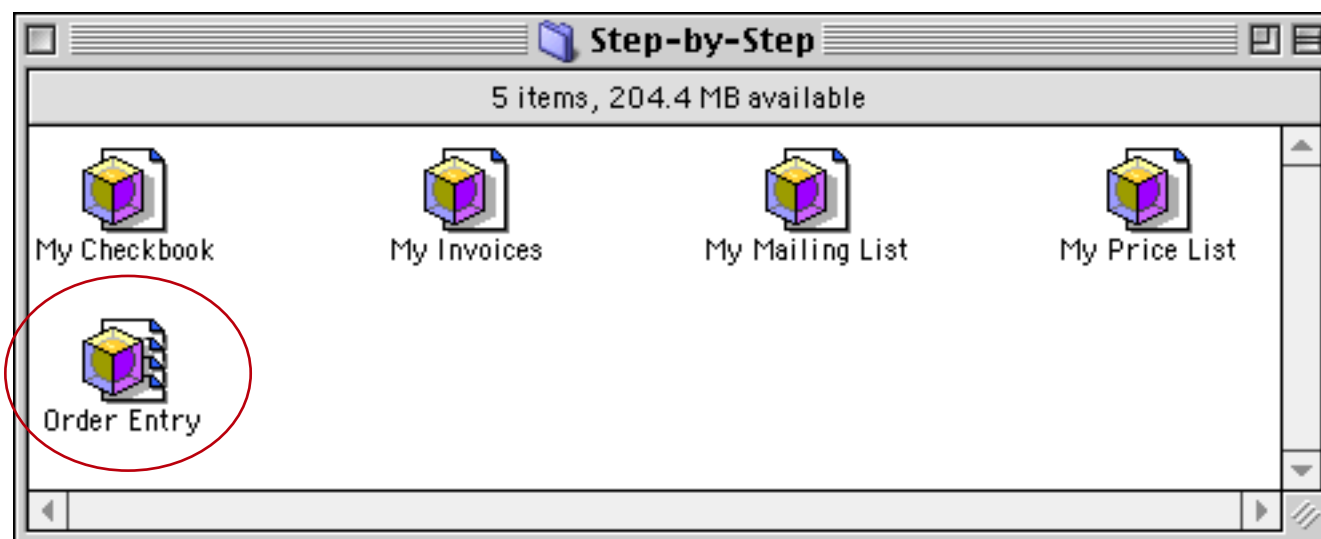
Later if you want to open both the My Invoices and My Price List files together you don't need to open them separately. Instead you can simply double click on the Order Entry icon, and Panorama will open both files automatically. See "File Sets" on page 266 to learn more.