SYBASE®

Getting Started

InfoMaker®

10.5

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Contents

About This Book

Audience

This book is for new InfoMaker® users.

How to use this book

This book introduces InfoMaker and provides a tutorial for learning to use InfoMaker. The lessons teach InfoMaker basics and how to create forms, reports, queries, and graphs. The last lesson puts everything into an InfoMaker application.

Related documents

When you have a question about using InfoMaker, you can access its online Help system or consult one of the following books:

Book	Description
Installation Guide	Provides instructions for installing InfoMaker
Getting Started	Introduces you to InfoMaker and provides a tutorial you can step through to learn the basics
User's Guide	Tells how to use InfoMaker to create reports, work with databases, transfer data between databases, create forms to update data, create queries to retrieve data automatically, and create applications to package reports and forms
Connecting to Your Database	Tells how to connect to a database from InfoMaker; describes how to set up, define, and manage database connections accessed through a standard database interface (such as ODBC or JDBC) or one of the InfoMaker native database interfaces

Other sources of information

Use the Sybase Getting Started CD, the SyBooks CD, and the Sybase Product Manuals Web site to learn more about your product:

- The Getting Started CD contains release bulletins and installation guides in PDF format, and may also contain other documents or updated information not included on the SyBooks CD. It is included with your software. To read or print documents on the Getting Started CD, you need Adobe Acrobat Reader, which you can download at no charge from the Adobe Web site using a link provided on the CD.

- The SyBooks CD contains product manuals and is included with your software. The Eclipse-based SyBooks browser allows you to access the manuals in an easy-to-use, HTML-based format.

  Some documentation may be provided in PDF format, which you can access through the PDF directory on the SyBooks CD. To read or print the PDF files, you need Adobe Acrobat Reader.

  Refer to the *SyBooks Installation Guide* on the Getting Started CD, or the *README.txt* file on the SyBooks CD for instructions on installing and starting SyBooks.

- The Sybase Product Manuals Web site is an online version of the SyBooks CD that you can access using a standard Web browser. In addition to product manuals, you will find links to EBFs/Maintenance, Technical Documents, Case Management, Solved Cases, newsgroups, and the Sybase Developer Network.

  To access the Sybase Product Manuals Web site, go to Product Manuals at http://www.sybase.com/support/manuals/.

Sybase certifications on the Web

Technical documentation at the Sybase Web site is updated frequently.

❖ **Finding the latest information on product certifications**

1. Point your Web browser to Technical Documents at http://www.sybase.com/support/techdocs/.
2. Click Certification Report.
3. In the Certification Report filter select a product, platform, and timeframe and then click Go.
4. Click a Certification Report title to display the report.

❖ **Finding the latest information on component certifications**

1. Point your Web browser to Availability and Certification Reports at http://certification.sybase.com/.
2. Either select the product family and product under Search by Base Product; or select the platform and product under Search by Platform.
3. Select Search to display the availability and certification report for the selection.

❖ **Creating a personalized view of the Sybase Web site (including support pages)**

Set up a MySybase profile. MySybase is a free service that allows you to create a personalized view of Sybase Web pages.

1 Point your Web browser to Technical Documents at http://www.sybase.com/support/techdocs/.

2 Click MySybase and create a MySybase profile.

Sybase EBFs and software maintenance

You can find information about EBFs and software maintenance on the Sybase Web site.

❖ **Finding the latest information on EBFs and software maintenance**

1 Point your Web browser to the Sybase Support Page at http://www.sybase.com/support.

2 Select EBFs/Maintenance. If prompted, enter your MySybase user name and password.

3 Select a product.

4 Specify a time frame and click Go. A list of EBF/Maintenance releases is displayed.

Padlock icons indicate that you do not have download authorization for certain EBF/Maintenance releases because you are not registered as a Technical Support Contact. If you have not registered, but have valid information provided by your Sybase representative or through your support contract, click Edit Roles to add the "Technical Support Contact" role to your MySybase profile.

5 Click the Info icon to display the EBF/Maintenance report, or click the product description to download the software.

If you need help

Each Sybase installation that has purchased a support contract has one or more designated people who are authorized to contact Sybase Technical Support. If you cannot resolve a problem using the manuals or online help, please have the designated person contact Sybase Technical Support or the Sybase subsidiary in your area.

CHAPTER 1

Welcome to InfoMaker

InfoMaker is a powerful yet easy-to-use reporting and data maintenance tool that lets you work with data in the Windows environment.

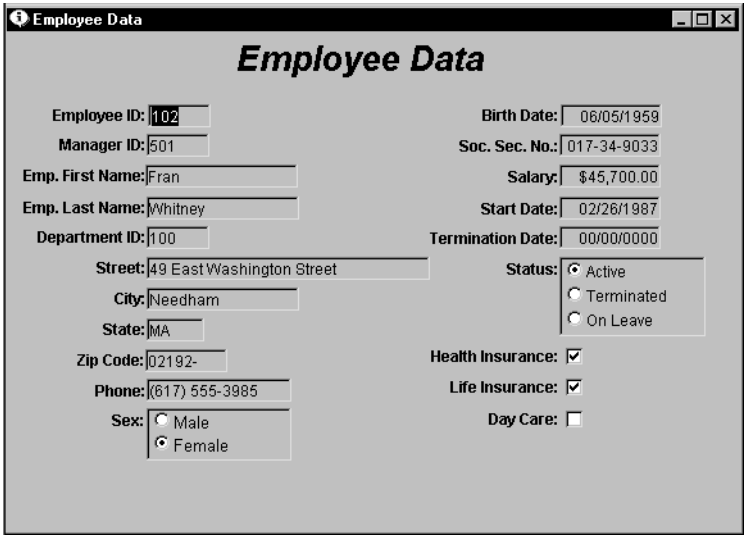
With InfoMaker you can create sophisticated forms, reports, graphs, crosstabs, and tables, as well as applications that use these as building blocks. You can also move data between databases using the InfoMaker data pipeline.

This chapter describes:

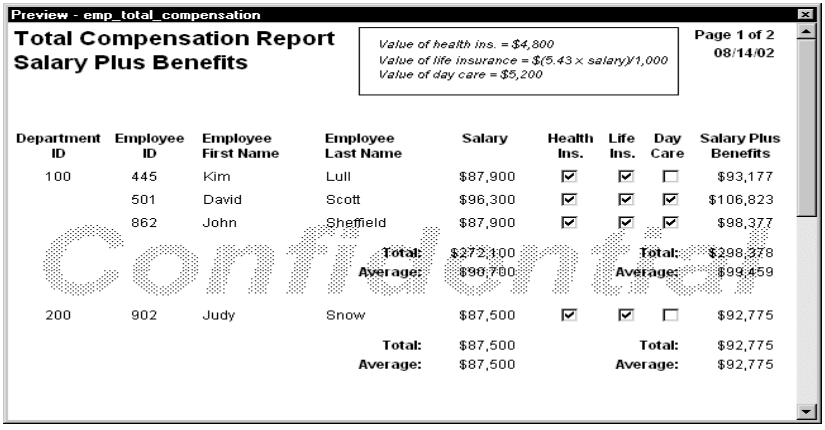
- What you make with InfoMaker
- Starting InfoMaker
- Using the tutorials
- InfoMaker samples

What you make with InfoMaker

Forms



Reports



Crosstabs

Number of employees by department and salary 30,000 includes up to 39,999	Dept Id					Total number of employees making the salary
Salary	100	200	300	400	500	
20000				2	5	7
30000	3	8	2	5	2	20
40000	6	5	2	5	1	19
50000	4	3	3	2	1	13
60000	4	1		2		7
70000	2	1	1			4
80000	2	1				3
90000	1					1
130000			1			1
Total number of employees in the department	22	19	9	16	9	

Reports with nested reports

2/21/2001

Customers and Orders

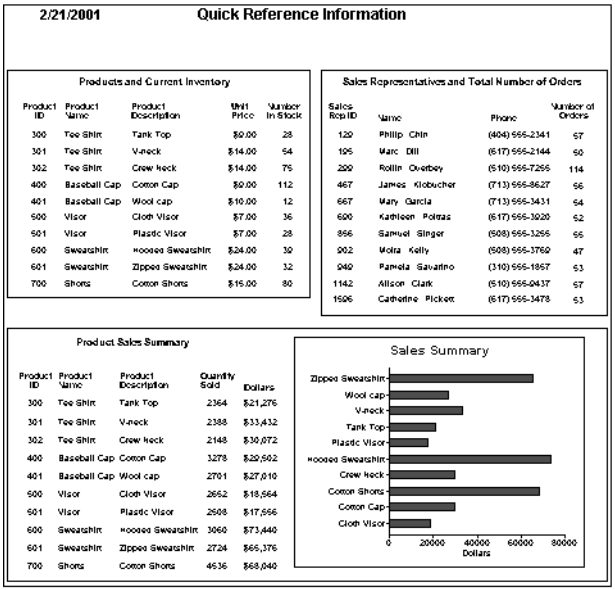
Customer Information

Customer ID: 105
First Name: Laura
Last Name: McCarthy
Address: 1210 Highway 36
City: Carmel
State: IN
Zip Code: 46032-
Phone Number: (317) 555-8437
Company Name: Amo & Sons

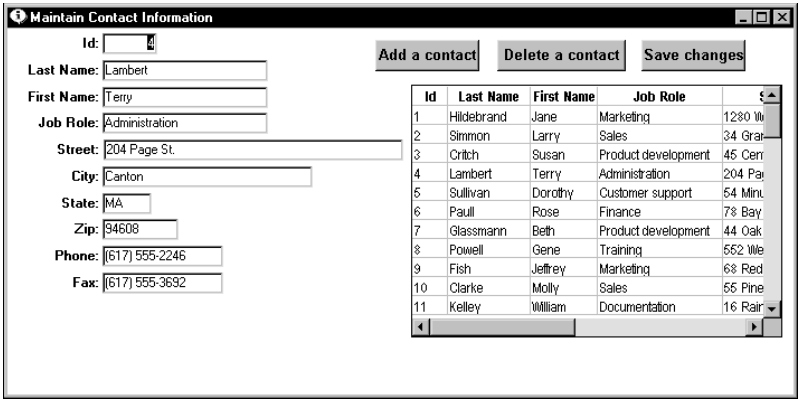
Order History

Sales Order ID	Order Date	Sales Rep ID	Line #	Product ID	Quantity	Date Shipped
2006	09/28/98	299	1	300	48	09/28/98
2344	03/30/98	195	1	501	36	03/31/98
2454	06/16/98	299	1	501	36	06/17/98
2568	09/21/98	856	1	600	36	09/22/98
			2	601	36	09/22/98

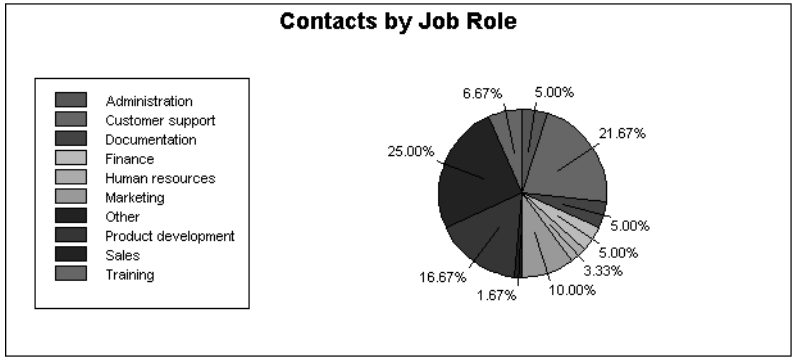
Composite reports



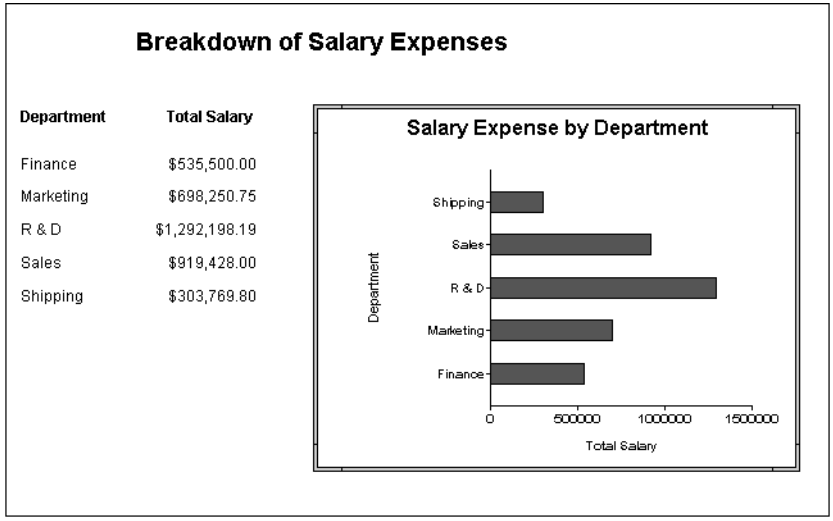
Forms with reports



Graphs

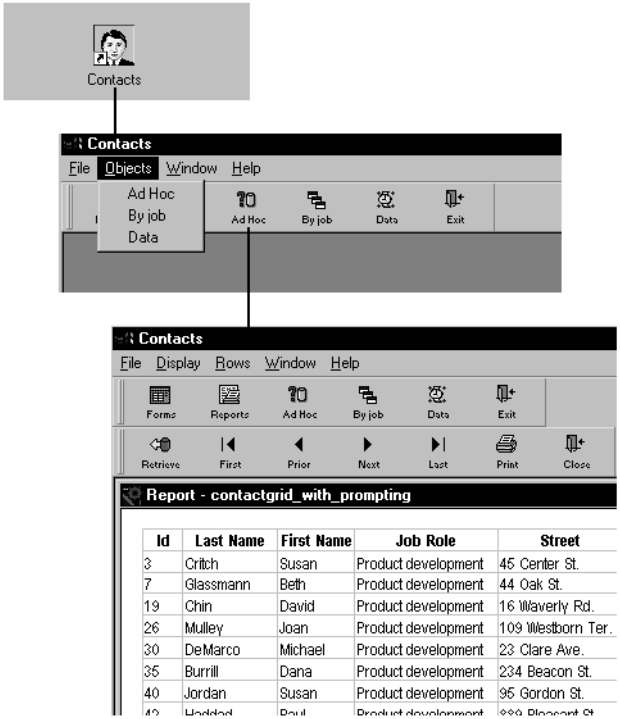


Reports with graphs



Labels

Applications



Starting InfoMaker

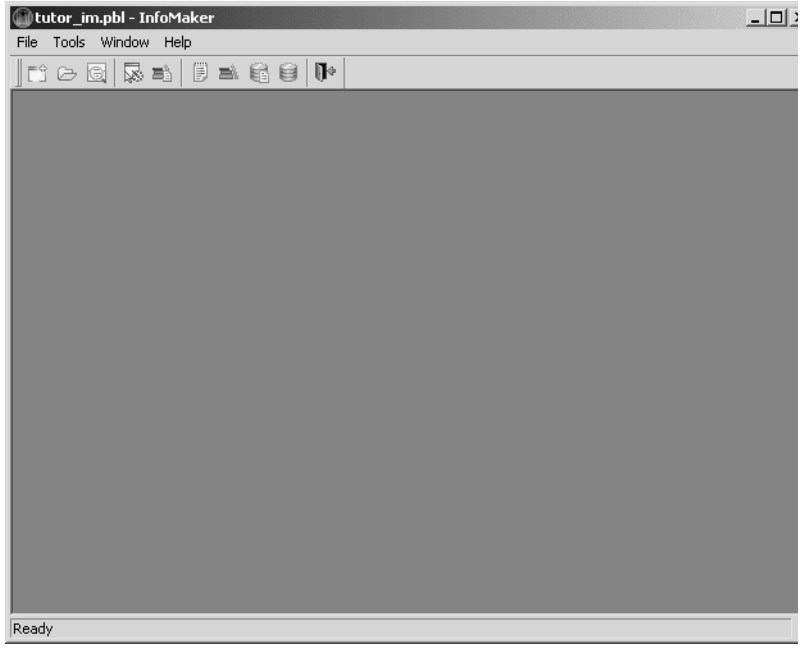
These instructions assume that you have already installed InfoMaker.

For information, see the *Installation Guide*.

❖ **To start InfoMaker using the Windows Start menu:**

- Display the Start menu and select Programs, then Sybase, then InfoMaker 10.5, and then InfoMaker. The initial InfoMaker screen displays.

  The initial screen includes the PowerBar, which has buttons for creating new objects and accessing existing objects.



Notice that the buttons on the PowerBar display icons with no associated text. You can display button text if you want to, and you will learn to do that in Lesson 1.

Using the tutorials

Requirements

To use the InfoMaker tutorials, you need to:

- Be connected to the EAS Demo DB
- Have the sample library named *tutor_im.pbl* open

If you do not have Adaptive Server Anywhere

This tutorial uses the EAS Demo DB database that installs with InfoMaker. This is an Adaptive Server Anywhere database and requires an Adaptive Server Anywhere engine.

- If you do not already have Adaptive Server Anywhere on your local machine or server, you must install it now. (You can install it from the product CD.) If you installed InfoMaker in a nondefault location, you must make sure that the *odbc.ini* registry entry defining the EAS Demo DB as a data source points to the correct location of the Adaptive Server Anywhere engine.

Approximate times

Tutorial	Lesson	Minutes
InfoMaker Basics	1	15
Form	2	45
Report	3	45
Table	4	45
Query	5	15
Graph	6	30
Environment	7	30
Application	8	30

InfoMaker samples

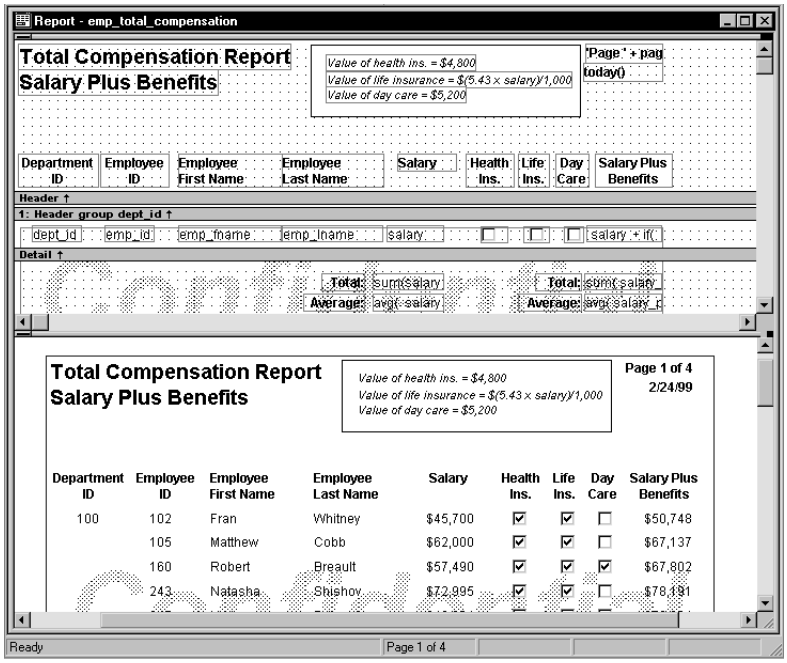
The InfoMaker sample library named *tutor_im.pbl* is the library you use in the tutorials. The *tutor_im.pbl* library includes sample reports, forms, a sample query, and a sample pipeline. After you have finished with the tutorials, you might want to look at these samples to learn more. Many of the samples are discussed in the *InfoMaker User's Guide*.

LESSON 1

InfoMaker Basics Tutorial

The InfoMaker world is a friendly and efficient environment in which to work. It provides features such as movable toolbars, pop-up menus, views, and more.

In this tutorial you learn the basic skills you need for working in InfoMaker.



How long does this tutorial take?
About 15 minutes.

Start InfoMaker

Where you are

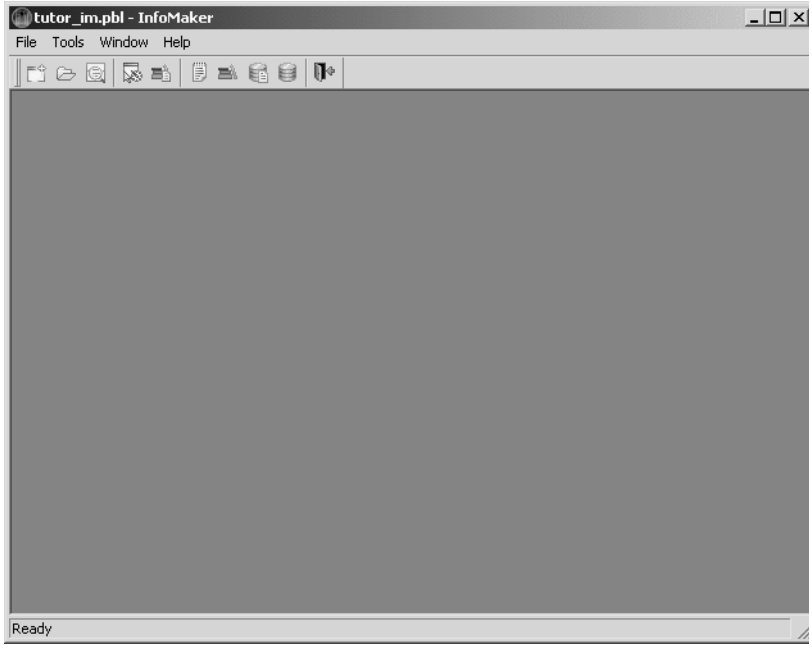
> Start InfoMaker
Access objects and painters
Use toolbars
Use views
Use pop-up menus
Use the mouse with controls

Now you start InfoMaker.

1 Display the Windows Start menu.

2 Select Programs, then Sybase, then InfoMaker 10.5, and then InfoMaker.

The InfoMaker initial screen displays. It includes the PowerBar, which has buttons for various InfoMaker activities.



Access objects and painters

Where you are
Start InfoMaker
> Access objects and painters
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Use views
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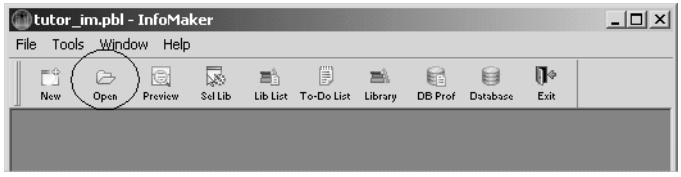
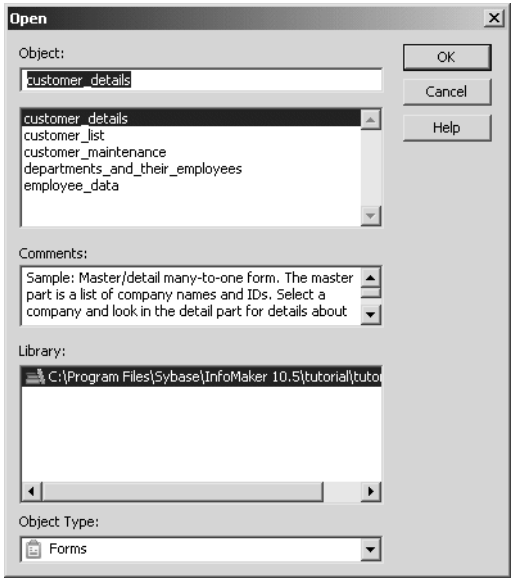
What click means
The word click is used throughout these tutorials to mean move the pointer somewhere and press the left (primary) mouse button. For example, click the Open button.

1 Click the *Open* button in the PowerBar.



Your toolbar might not be showing text on the buttons. You learn how to display text in a few minutes.

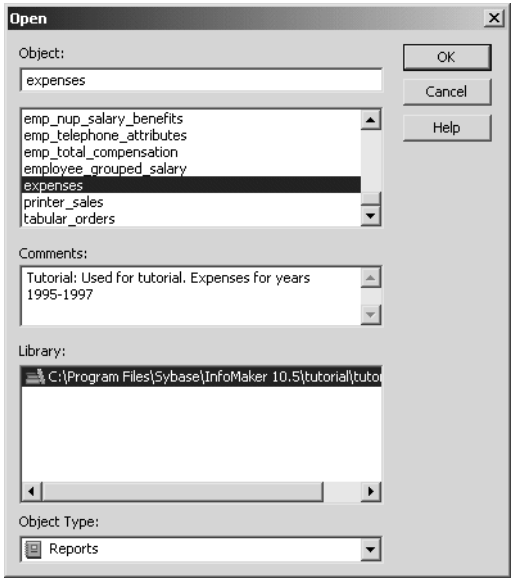
The Open dialog box displays. It lists the objects in the current library, which is the library named *tutor_im.pbl*. This library includes samples that come with InfoMaker; it is the library you use for the tutorials.



If the current library is not tutor_im.pbl

If the current library is not *tutor_im.pbl*, you need to change it. Select File>Select Library and use the Browse page to navigate to *tutor_im.pbl* in the *Tutorial* folder (in the folder structure where InfoMaker is installed). Then click the Open button in the PowerBar.

2 **Select** *Reports* **as the Object type at the bottom of the dialog box. Click** *expenses* **(scroll the list until you see the report named expenses) and then click** *OK*.



InfoMaker connects to the EAS Demo DB and the report displays in the Report painter. You learn about the Report painter in the Report tutorial. For now you learn basic skills.

First you are going to make a few settings in your working environment.

3 **If InfoMaker does not fill your screen, click the maximize box in the upper-right corner of the InfoMaker frame.**

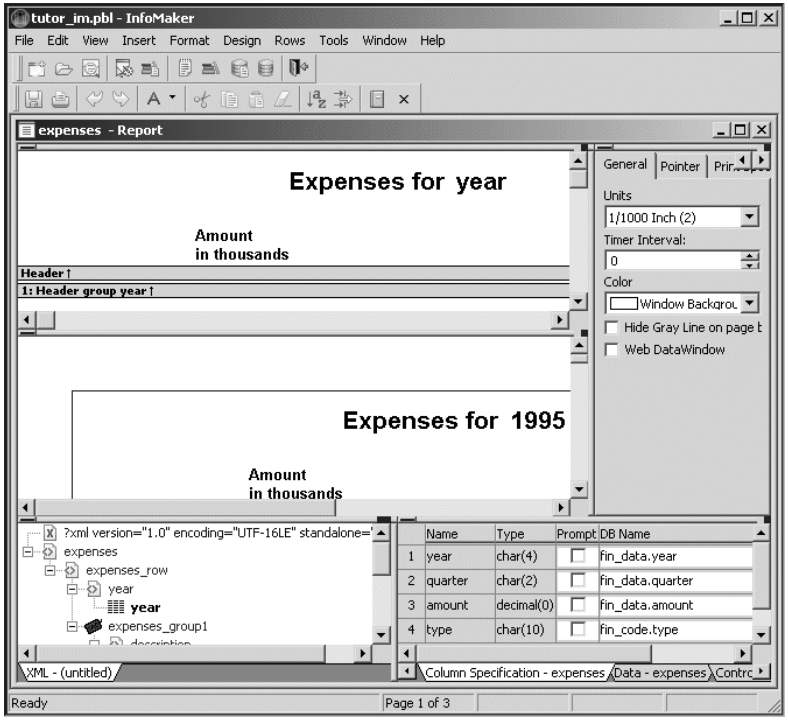
InfoMaker fills the screen.

4 **Select** *View>Layouts>(Default)* **from the menu bar.**

InfoMaker displays the Report painter default layout of views. (Your views may already have been set to the default. Now you know how to get back to the default anytime you want to.)

Now you close the tabbed view at the bottom right of the screen since you are not going to be using those views.

5 **Move the pointer to a position just above the up-arrow (at the lower right edge to the right of DB Name) until the title bar of the view drops (displays).**

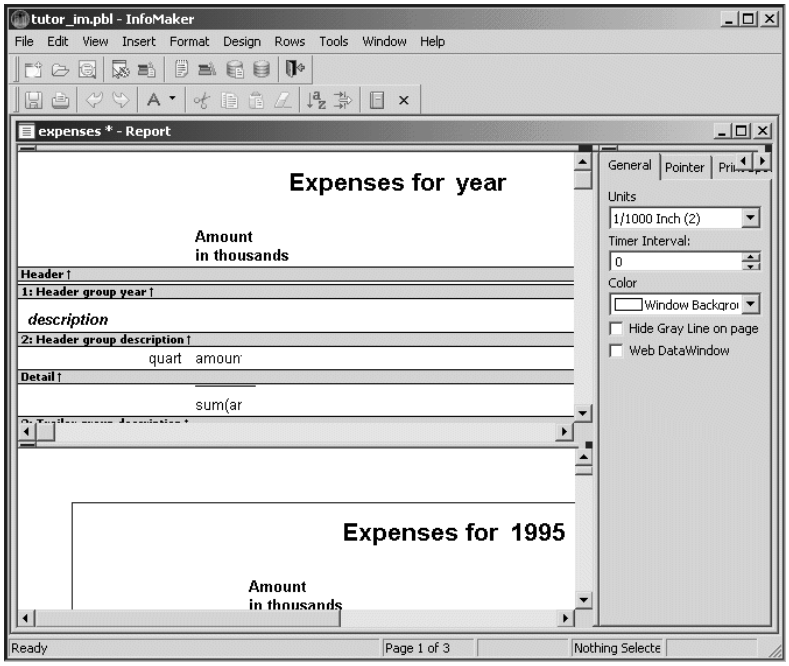


6 **Continue moving the pointer until it is over the *Close* button (the button with the *X* in it in the upper right) and click it.**

The tabbed view closes and the Export/Import XML Template view (originally positioned on the bottom left) displays in the full horizontal space.

7 **Now close the Export/Import XML Template view using the same process you used with the tabbed view.**

Your screen should look something like this now. Because InfoMaker offers so much flexibility in arranging your work area, your screens may not match many of the pictures in the remaining lessons. It does not matter as long as you are getting the correct results.



Use toolbars

Where you are
Start InfoMaker
Access objects and painters
> Use toolbars
Use views
Use pop-up menus
Use the mouse with controls

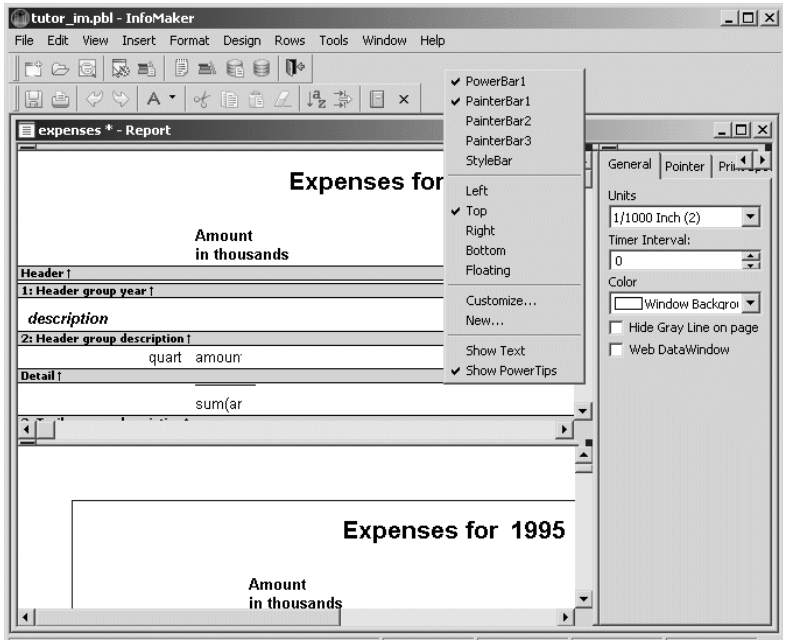
InfoMaker comes with several toolbars: the PowerBar, three PainterBars, and the StyleBar. You can control whether individual toolbars display and where they display. You can also choose whether to display text in the toolbars.

In this exercise you learn how to use toolbars.

(You can also create your own toolbars and customize toolbars, but this tutorial does not cover these advanced activities.)

1 Move the pointer to the toolbar area.
Click the right mouse button.

The pop-up menu for the toolbars displays.



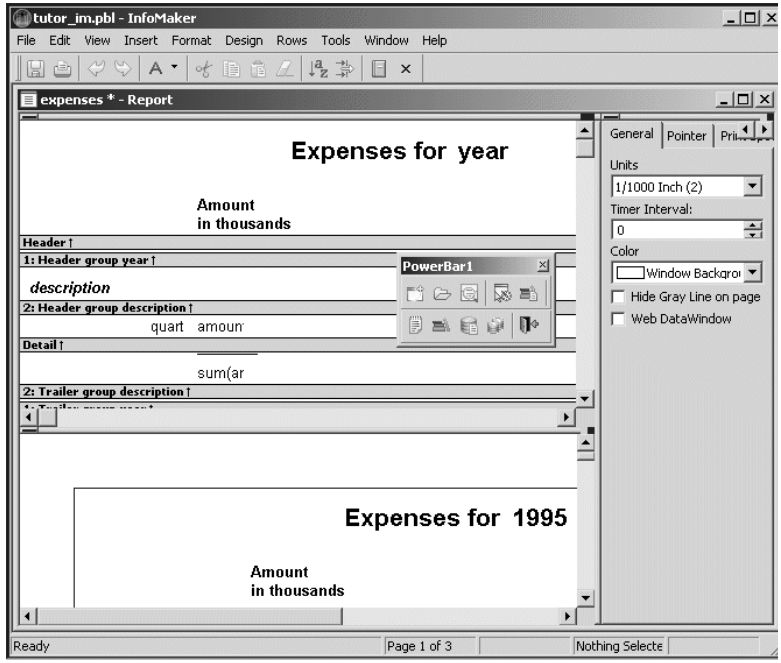
About the pop-up menu
Throughout InfoMaker, pop-up menus provide a fast way to do things. The right mouse button accesses the pop-up menu. The menu changes depending on the painter you are in and where you are when you click the right mouse button.

2 Select *Floating* from the pop-up menu.

The PainterBar changes to a floating toolbar.

3 Move the pointer to the title bar and drag the floating toolbar to another location.

How to drag the toolbar
Press and hold the left mouse button. While holding the button, move the mouse (an outline displays to show the current location of the toolbar). When the toolbar is where you want it, release the mouse button.

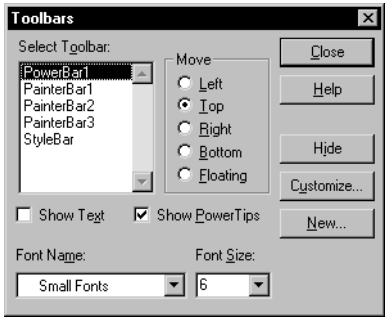


You can put toolbars in different locations: left, top, right, bottom, and floating.

4 Select *Tools>Toolbars* **from the menu bar.**

About the notation *Tools>Toolbars*
Throughout the tutorials, commands issued from the menu are shown as a sequence of choices separated by arrows. For example, to select *Tools>Toolbars* means to select *Tools* from the menu bar and then *Toolbars* from the menu items.

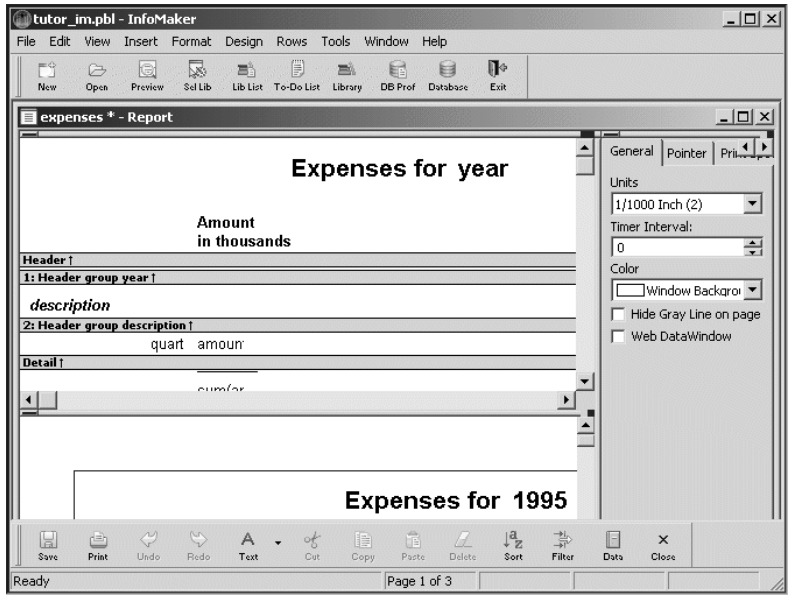
The Toolbars dialog box displays. Notice that the PowerBar is highlighted. If the PowerBar is currently displayed, the middle button says Hide.



5 Click *PainterBar1* **and then click the** *Bottom* **button.**

The PainterBar displays at the bottom of the InfoMaker screen.

6 Click *Show Text* to make text display on the buttons. Click the *Close* button to close the dialog box.



7 Move the pointer over one of the toolbar buttons.

After a couple of seconds, the PowerTip that tells what the button does displays.

8 Click the small black triangle next to the *Text* button in the PainterBar.

The Objects drop-down toolbar displays. It holds buttons for the controls you can add to reports. (A text control is one type of control you can add to a report.) Several buttons on other PainterBars have small black triangles. These buttons belong to other drop-down toolbars (such as the Border drop-down toolbar).

9 Click in the white space to the right of the toolbar to make the Objects drop-down toolbar close.

Now you know several ways to move the toolbars and you know how to turn text display on and off.

For the rest of these tutorials, you should move the toolbars where you like to have them. Your screen may not match the pictures in this book, depending on where and how you display toolbars.

Use views

Where you are
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Use the mouse with controls

InfoMaker provides a number of views in each painter to make it easier for you to work. The View menu in each painter lists the views available to you. You can use the View menu items to display and close the various views. In this exercise you learn how to manage views.

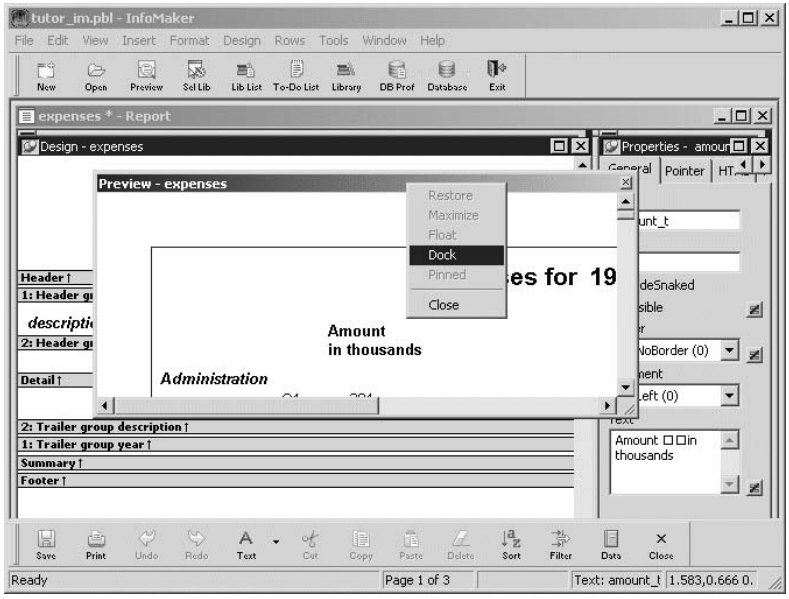
1 Move the pointer to the upper-left corner of one of the views. When the bar drops and the pushpin displays, click the pushpin. Repeat this for the other two views.

Now the three views have title bars that identify the Design view, the Preview view, and the Properties view.

2 **Move the pointer to the Preview view's title bar and press the right mouse button.**
Select *Float* **from the pop-up menu.**

Now the view is floating. You can drag it wherever you want it and resize it as needed.

3 **Display the pop-up menu on the Preview view's title bar and select** *Dock***.**



The view goes back to where it was. There are more options for moving views around, including dragging them and overlaying one view on top of another to make tabbed views. You can read about these in the InfoMaker *User's Guide*.

Use pop-up menus

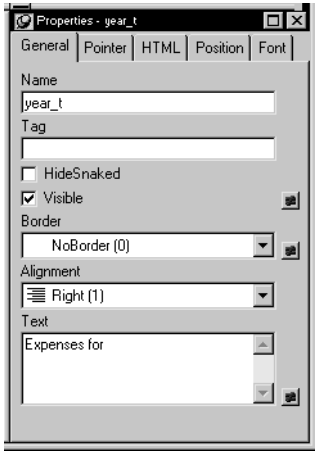
Now you take a look at pop-up menus and the Properties view.

1 Move the pointer to the words *Expenses for***.**
Click the right mouse button.

The pop-up menu for a piece of text (also called a text control) displays. Whenever you position the pointer on something that has a pop-up menu and click the right mouse button, the appropriate menu items display.

2 **If the Properties view is not currently displayed, select** *Properties* **from the pop-up menu.**
Look at the contents of the Properties view.

The Properties view displays the properties of the *Expenses for* text control because the text control is currently selected. For a text control, the Properties view has five tabs, which identify five pages of information. The General page is on top.

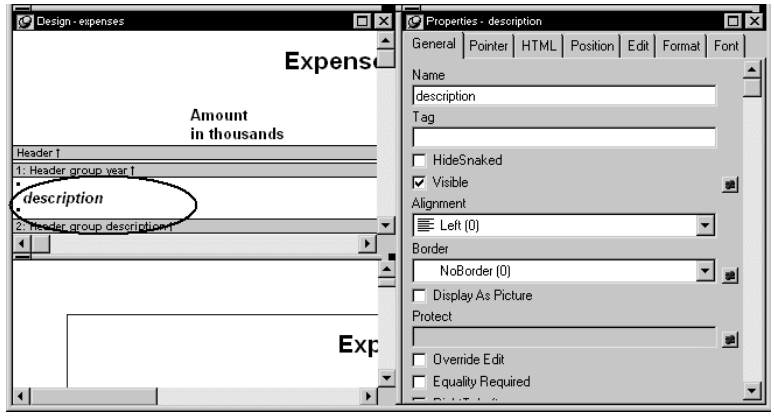


About the Properties view
The Properties view displays a collection of information about a control or the report object itself. You use the Properties view to find out and set properties.

For example, a text control has properties such as font, font size, location, border, and so on. You can see the current settings for these properties on the control's property sheet. You can also change them there.

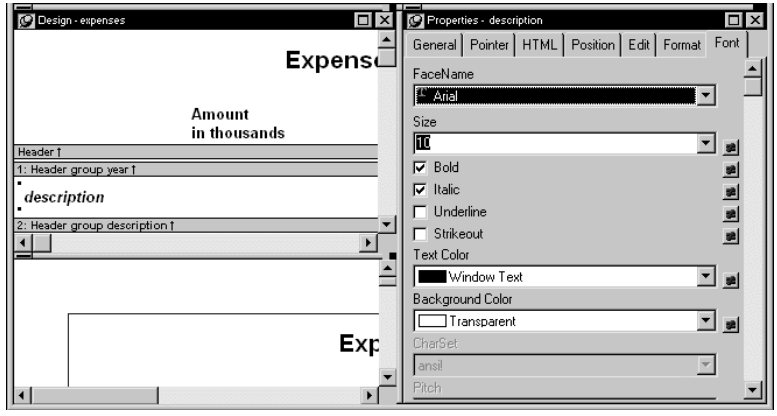
3 Position the pointer on the word *description* and click.

The Properties view now displays information for the data column (Column control) called *description*. The property pages and options are different from those for the text control.



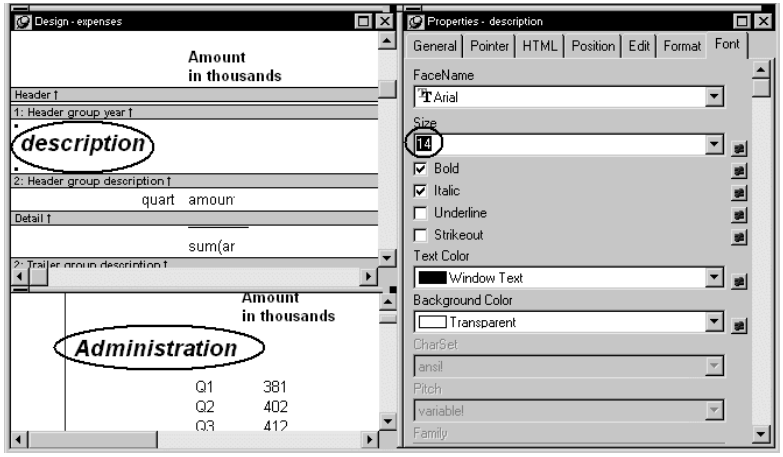
4 Click the word *Font* on the Font tab.

The Font page comes to the front of the Properties view.



5 Select the font size *14* from the drop-down list in the *Size* box.

The font size of the text control changes to 14 in the Properties view, the Design view, and the Preview view.



6 Select the font size *10* from the drop-down list in the *Size* box.

The font size of the text control changes back to 10.

Use the mouse with controls

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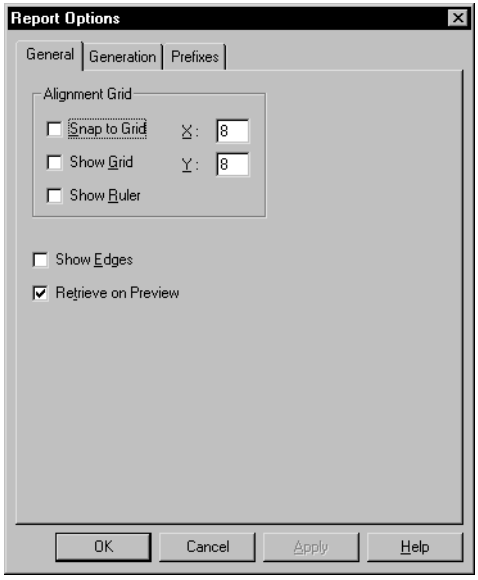
Now you move some of the controls in the report. Be sure not to save the changed report, because you will use the original report later. When you leave the Report painter, you are prompted to save changes. The instructions remind you to say no.

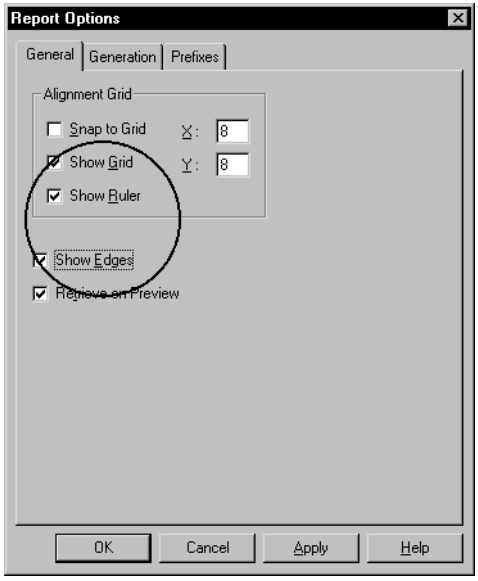
1 Select *Design>Options* from the menu bar.

The Report Options property sheet displays.



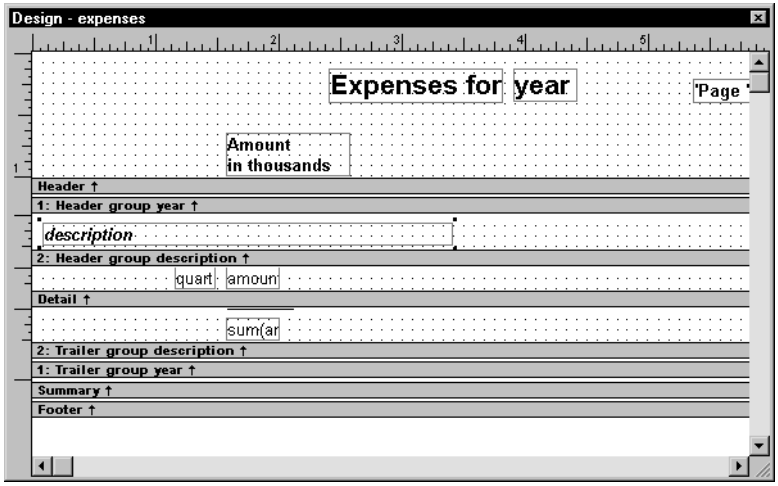
In this property sheet, you turn on some design options that make it easier to work with controls in reports.

2 **Select the** *Show Grid* **check box.**
Select the *Show Ruler* **check box.**
Select the *Show Edges* **check box.**



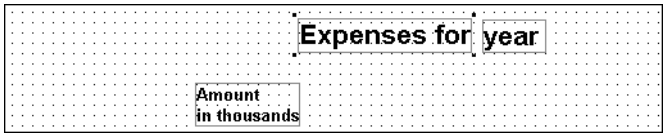
3 **Click** *OK*.

Now edges display around the controls, and a grid and ruler display in the Report painter Design view.



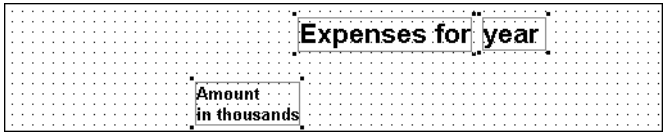
4 **Click the text control with the text** *Expenses for***.**

Black boxes in the corners mean the control is selected.

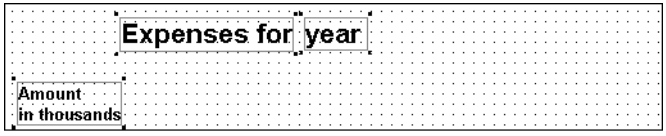


5 **Press and hold the Ctrl key.**
Click the *year* **box and the** *Amount in thousands* **box.**
Release the Ctrl key.

Now you have selected all three controls.

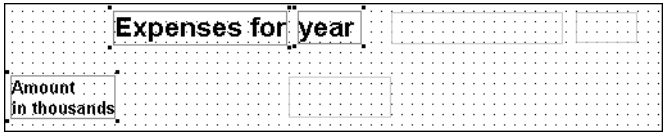


6 **Press and hold the Left Arrow key until the controls are on the far left of your screen.**
Release the key.

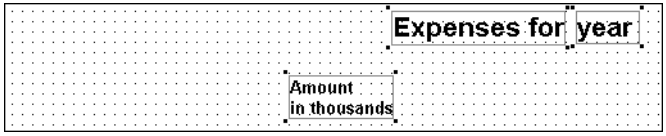


7 **Move the pointer to the word** *Expenses***.**
Make sure the controls are still selected.
Press and hold the left mouse button.
Drag all the controls to the right.
Release the mouse button.

While you are dragging, gray boxes show the current position of the controls.

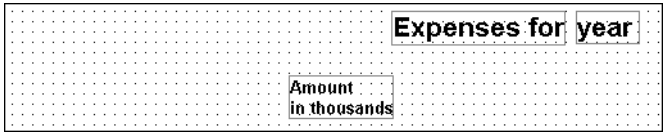


When you release the mouse button, you drop the controls where the pointer is currently positioned. Notice that the controls are still selected as indicated by the little black boxes.

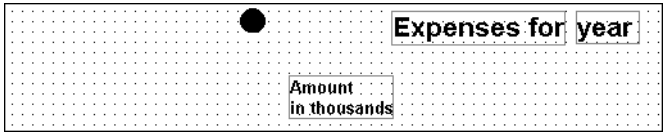


8 Click in an unused area to deselect the controls.

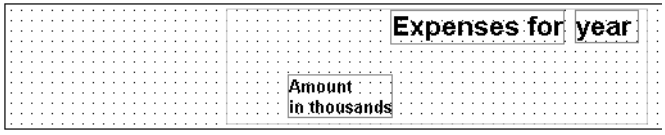
The controls are no longer selected (the black boxes are gone).



9 Move the pointer to the position shown here by the big black dot.

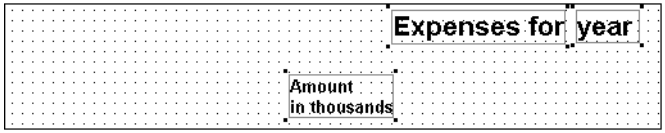


10 Press and hold the left mouse button.
Drag the mouse diagonally down and to the right until the box surrounds or touches all three controls.



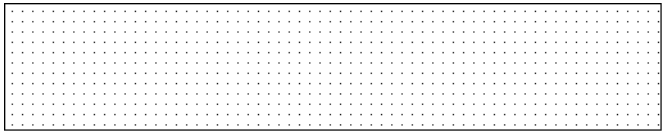
11 Release the mouse button.

All the controls are selected. This is called **lasso selection**. You can use this lasso technique to select many controls quickly. Then you can move them all together or change something about them all at once.



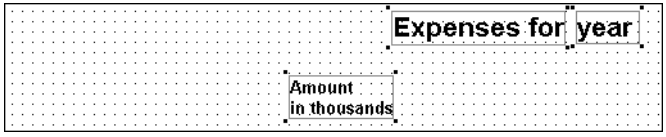
12 Press the Delete key.

The three selected controls are deleted, but you really did not mean to delete them.



13 Select *Edit>Undo Control Delete* **from the menu bar.**

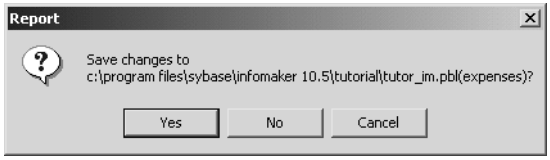
The deletion is reversed.



About Undo
You can undo as many operations as necessary.

14 Select *File>Close* **from the menu bar.**

InfoMaker displays a message box to see whether you want to save the changes you have made to the expenses report. You do not want to save changes. You use this report later in the Graph tutorial.



15 Click *No***.**

The Report painter closes. Now you are ready to learn how to create a form.

LESSON 2

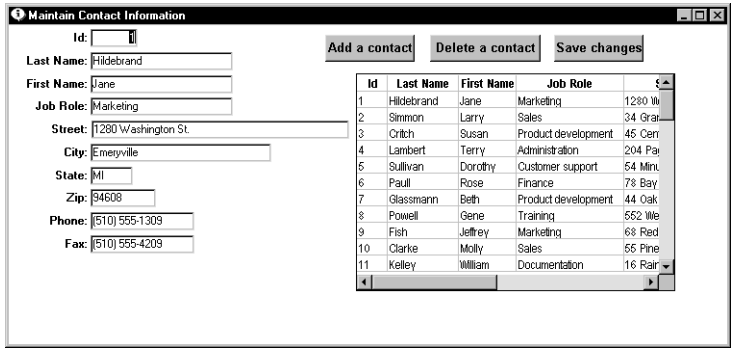
Form Tutorial

This tutorial requires the Form painter
The Form painter component of InfoMaker is optional; you must have installed it to do this tutorial.

Forms display data and provide a way to interact with the database. You can use forms to view information and change it.

In this tutorial you create a form that updates the contact table. The form includes:

- All columns in the contact table
- Buttons for maintaining contact information
- A report that provides access to all information in the contact table



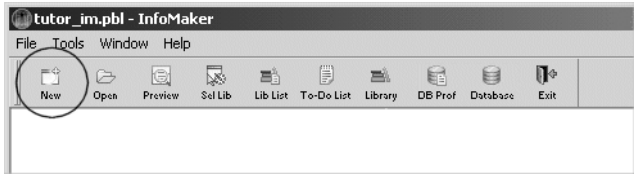
How long does this tutorial take?
About 45 minutes.

Create the basic form

Where you are
> Create the basic form
Preview (run) the form
Save the form
Add buttons to the form
Enhance the form
Use the form to update the database

Now you create the basic form. To do this you select a predefined InfoMaker form style and the data to be displayed in the form.

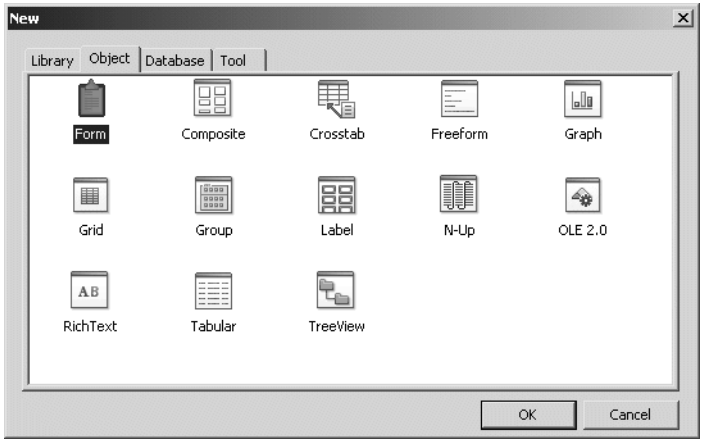
1 Click the *New* button in the PowerBar.



The New dialog box displays.

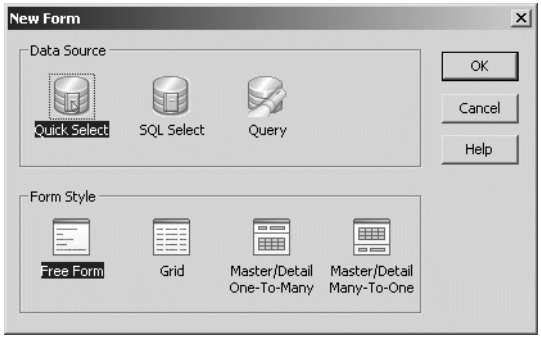
2 Select the *Object* tab if it is not already on top.

The Object tab page contains the icon for creating any type of new form and icons for the various report presentation styles.



3 Select the *Form* icon and click *OK*.

The New Form dialog box displays. It contains the data sources and form styles you can choose.



About data sources

Quick Select is simply for choosing columns and specifying selection criteria and sorting, which is what you want for this tutorial.

SQL Select is for using other SQL options not available with Quick Select.

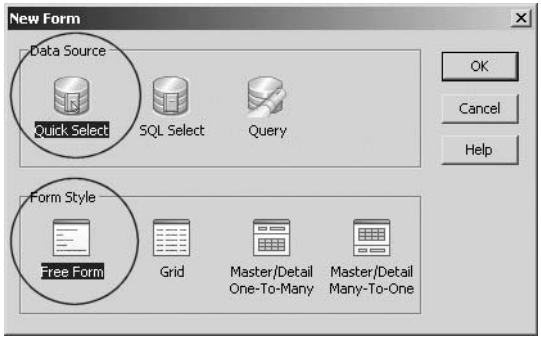
Query is for specifying the name of a query that describes the data source. You define queries in the Query painter.

About form styles

A form style is a predefined way of presenting and processing information on the form. Usually the style includes the common database functions (insert, delete, and update).

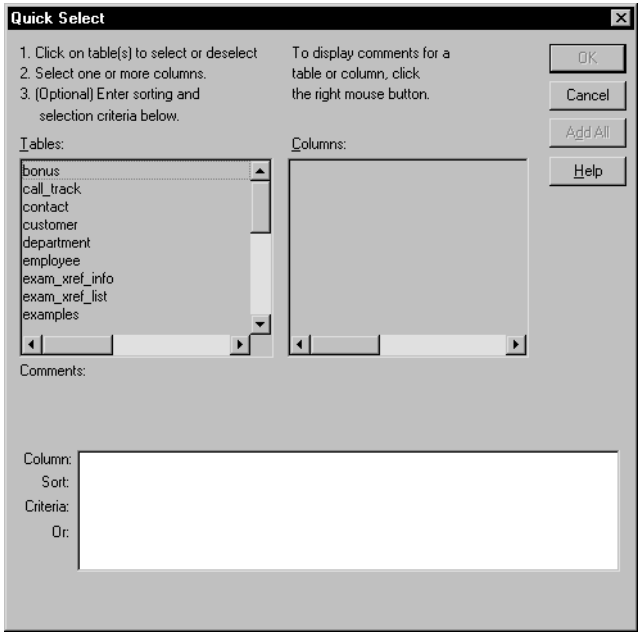
InfoMaker comes with a set of form styles. PowerBuilder users at your site can create additional styles, which also display in the New Form dialog box.

4 Click *Quick Select* **and** *Free Form* **to select them (the words are highlighted).**



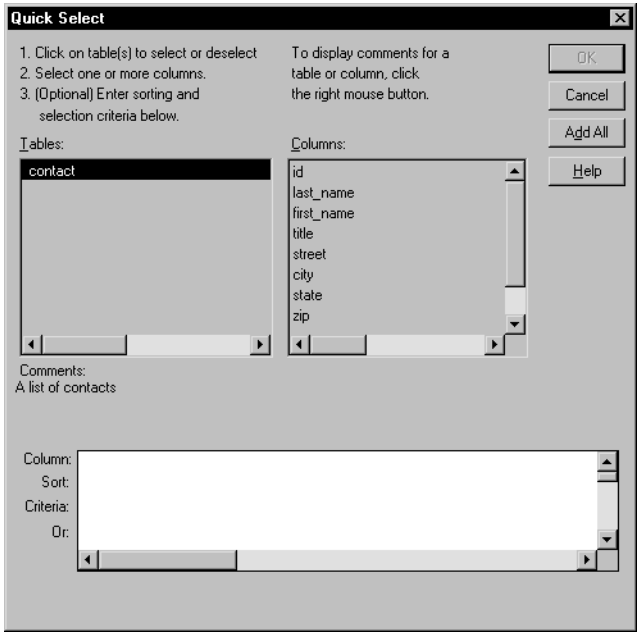
5 Click *OK*.

The Quick Select dialog box displays. In this dialog box you select the table to use and the columns you want to include in the form.



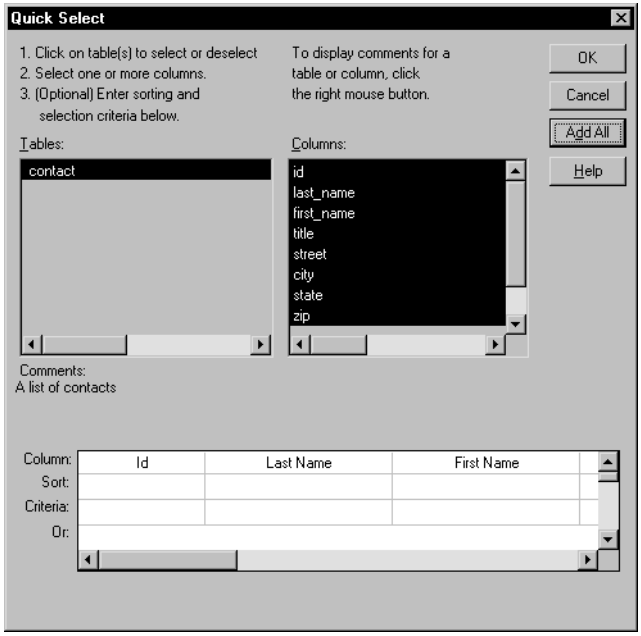
6 Click *contact* in the *Tables* box.

The columns for the contact table display. You include all columns in the form.



7 Click the *Add All* button.

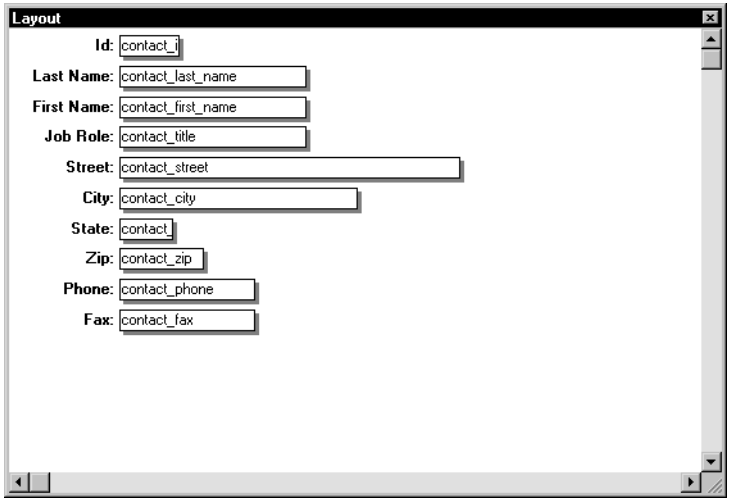
All columns are selected. They display in a grid at the bottom of the dialog box.



You could reorder columns and enter sorting and selection criteria in this grid. For your form you do not need to do any of these things.

8 Click *OK*.

Your form displays. It uses the columns and form style you selected. The text labels come from the extended attribute system tables. Instead of data, the names of the database columns appear where the data values will be displayed.



The extended attribute system tables

The extended attribute system tables store information about data such as labels and display formats. When you create forms and reports, InfoMaker uses extended attribute information to create the basic form or report.

You put information into the extended attribute system tables using the Database painter. For example, in the Table tutorial you define the label *Job Role:* for the title column. Then when you use the title column in a form or report, InfoMaker uses the label *Job Role:*.

Preview (run) the form

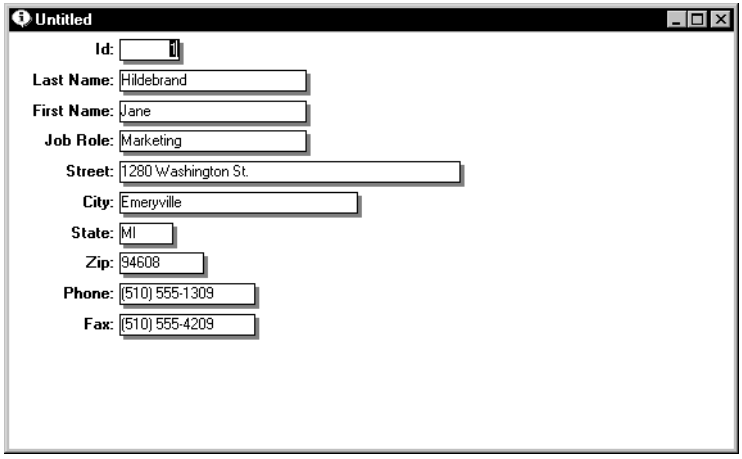
Where you are
Create the basic form
> Preview (run) the form
Save the form
Add buttons to the form
Enhance the form
Use the form to update the database

Now you preview the form. Running the form is the way you preview it while you are designing it and the way you use it when you have finished designing it.

1 Click the *Run* button in the PainterBar.

InfoMaker runs your form, which includes going to the database and retrieving data.

Notice that real values have replaced the column names in the form.



The PainterBar now has buttons that let you view and change data. Now you view the data using the form.

2 Click the *Next* button.
Click the *Last* button.
Click the *First* button.

This moves you among the rows. Later in this tutorial you insert a new row.

3 Click the *Close* button in the PainterBar.

You return to the Form painter Layout view.

Save the form

Where you are
Create the basic form
Preview (run) the form
> Save the form
Add buttons to the form
Enhance the form
Use the form to update the database

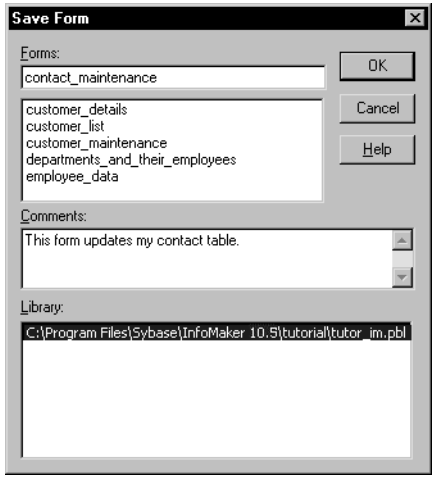
Now you save the form and give it a name.

1 Click the *Save* button in the PainterBar.

The Save Form dialog box displays with the pointer positioned for you to type a name for the form.

2 Type *contact_maintenance*.

3 Click in the *Comments* box and type *This form updates my contact table*.



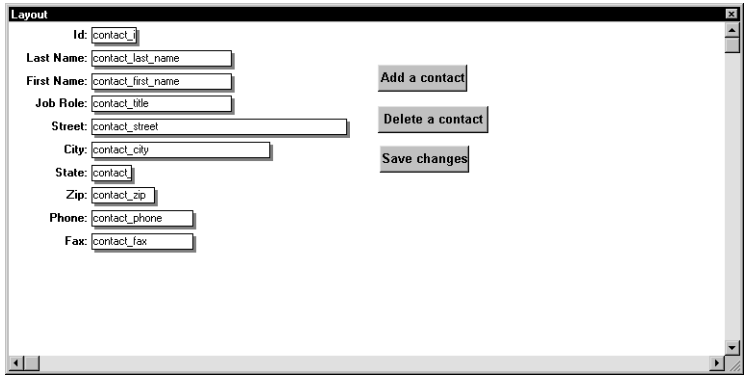
4 Click *OK*.

InfoMaker saves your form. Anytime you have completed a unit of work, you should save. To save, select File>Save from the menu bar or click the Save button.

Add buttons to the form

Where you are
Create the basic form
Preview (run) the form
Save the form
> Add buttons to the form
Enhance the form
Use the form to update the database

Now you add three buttons to the form. Later when you run the form, you can click the buttons to add and delete contacts.



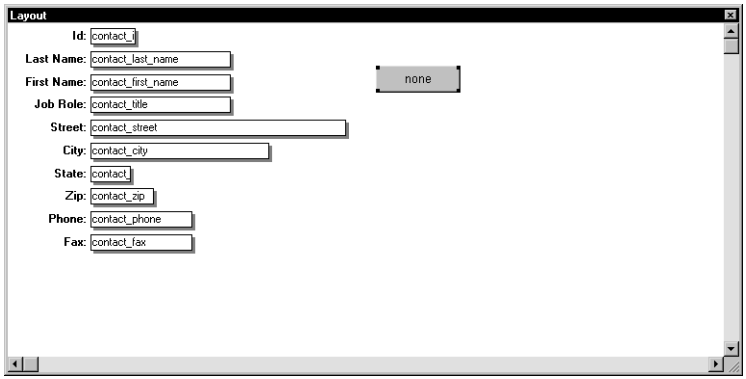
About controls
The items you see on a form are called controls. For example, a button is a type of control. The controls you can use on a form are listed in the Insert menu on the menu bar.

1 Select *Insert>CommandButton* **from the menu bar.**

2 Move the pointer to an empty area of the form and click. If you need to move the button, drag it.

How to drag
Position the pointer over an object, and press and hold the left mouse button. While pressing the button, move the mouse until the object is where you want it. Then release the mouse button.

A button with the text *none* displays. The text *none* also displays in a text box in the StyleBar.

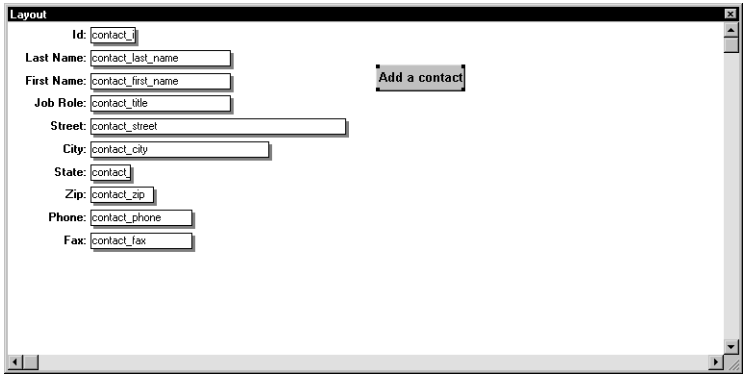


If the text box does not display
This means the button is not selected. To select the button, click it. Small black boxes in the corners mean it is selected.

3 Make sure the button is still selected.
Type *Add a contact***.**

The text displays on the button as you type and in the text box in the StyleBar.

4 Click *B* **(for bold) on the StyleBar.**

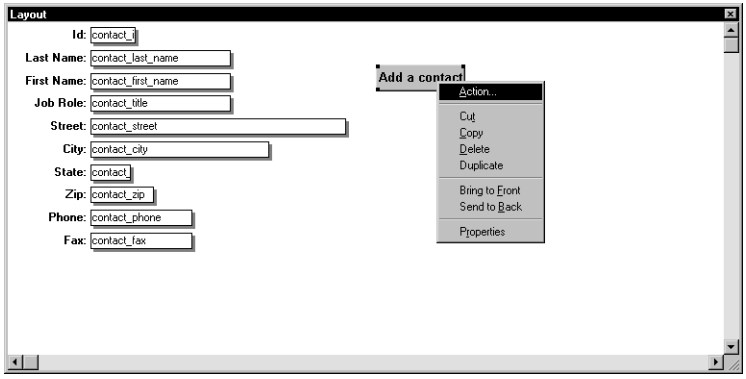


The text displays in bold. Next you make the button work. To do this you associate an InfoMaker action with the button.

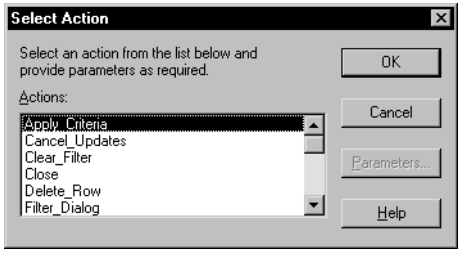
Using the StyleBar
You can use the StyleBar to change text fonts, font size, and font style (bold, italic, and underline). You can also use it to specify text alignment (left-aligned, centered, and right-aligned).

To use options on the StyleBar, you select a control with text and then click the appropriate button on the StyleBar.

5 Move the pointer to the *Add a contact* button.
Press the right mouse button to display the pop-up menu for the button.
Select *Action* from the pop-up menu.



The Select Action dialog box displays. It lists the actions you can assign to the button.

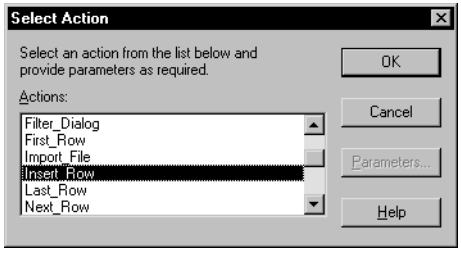


About InfoMaker actions
An action is what you want to have happen when the button is clicked.

Whenever you associate an InfoMaker action with a button, InfoMaker creates the code to enable the button to perform the action. You do not see the code. All you have to do is select the action for the button.

InfoMaker comes with predefined actions. PowerBuilder users at your site can create additional actions, which also display in the Select Action dialog box.

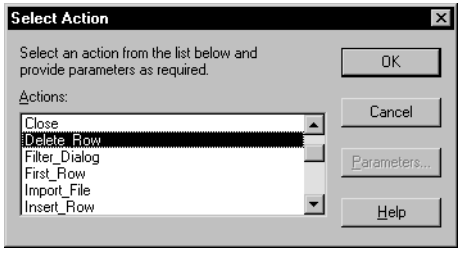
6 Scroll through the list of actions and double-click *Insert_Row***.**



InfoMaker creates the code that enables your *Add a contact* button to display a blank form so that you can add information for a new contact. You will see the button work later.

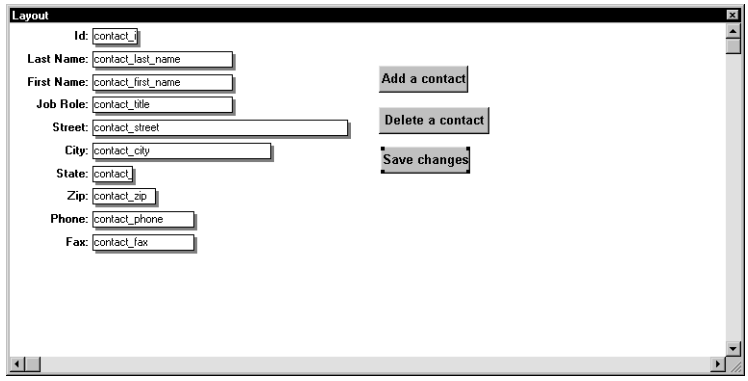
Now you add two more buttons.

7 Select *Insert>CommandButton* **from the menu bar.**
Move the pointer below the *Add a contact* **button and click.**
Type *Delete a contact***.**
Display the *Delete a contact* **button's pop-up menu and select** *Action***.**
Select the action *Delete_Row* **from the** *Select Action* **dialog box.**
Click *OK***.**



8 **Select** *Insert>CommandButton* **from the menu bar.**
Move the pointer below the *Delete a contact* **button and click.**
Type *Save changes***.**
Display the *Save changes* **button's pop-up menu and select** *Action***.**
Select the action *Update_Row* **from the** *Select Action* **dialog box.**
Click *OK***.**

Now you have three buttons. InfoMaker has created the code that enables the buttons to work.



Enhance the form

Where you are
Create the basic form
Preview (run) the form
Save the form
Add buttons to the form
> Enhance the form
Use the form to update the database

In this exercise you:

- Add a title
- Change the border for data
- Move the buttons
- Add a report

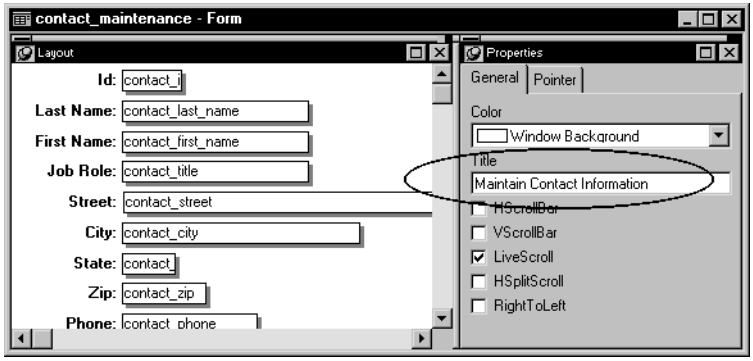
Add a title

1 Move the pointer to an unused area of the form and click.

This causes the Properties view to display the form's properties.

2 Type *Maintain Contact Information* **in the** *Title* **box.**

The title does not display now. When you run the form, the title displays.

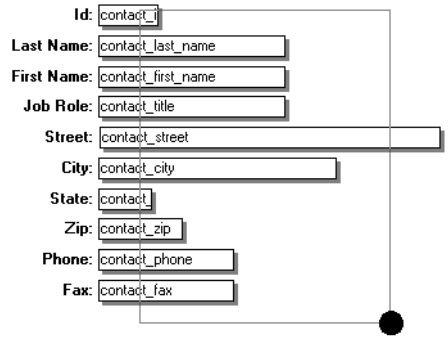


Change the border for data

Now you change the border for all data values. This improves the form's appearance. You use lasso select to select the data.

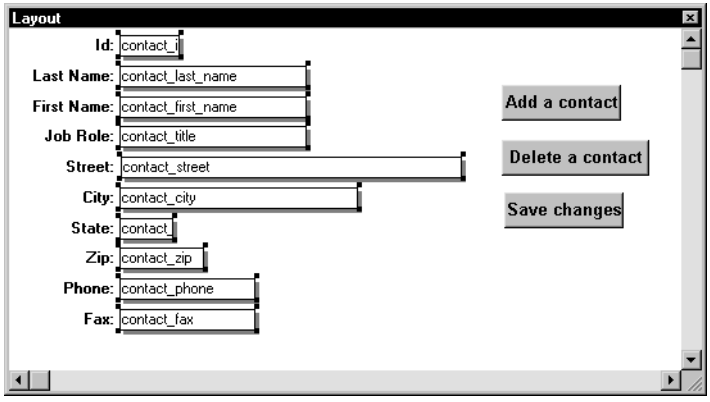
1 Move the pointer near the bottom of the data and on the right.

2 Press and hold the left mouse button and drag diagonally to the left and up until the box (the lasso) touches all the data.



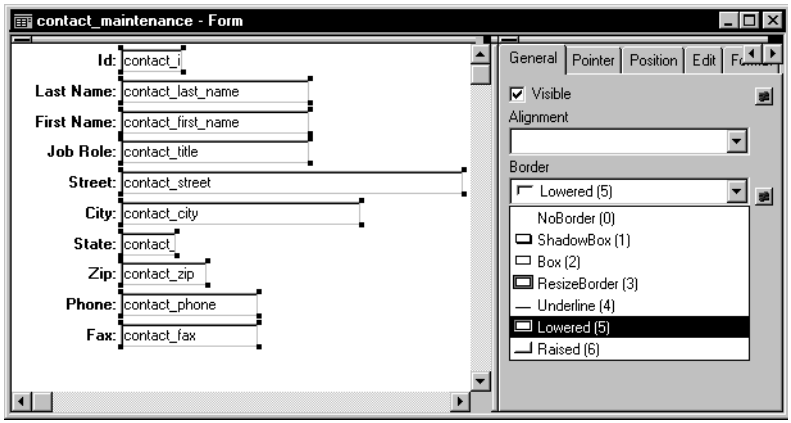
3 Release the mouse button.

All the objects inside the box are selected. Black boxes display in all the corners.



4 Select *Lowered* or whatever value you want from the Border drop-down list on the General page in the Properties view.

All the areas on the form used to display data values now have your selected border.



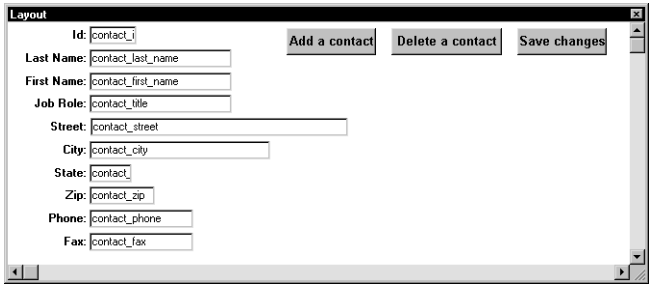
Move the buttons

Now you move the buttons to make room for the report you are about to add.

1 Select a button.

You can use lasso select or click one. Small black boxes in the corners mean it is selected.

2 Drag the button to the top of the form.
Select and drag the other two buttons until your form looks like this.



Now the buttons are near the top of the form. There is more room for the report you are about to add.

Add a report

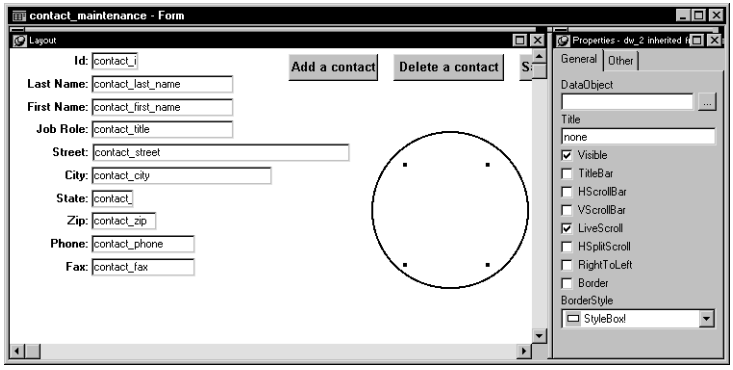
Now you add a report to provide information when you are working with the form. You can scroll in the report while you are filling out the form for a new contact. This means, for example, that you can look up an area code or zip code if it is already present for another contact.

1 Select *Insert>Report* from the menu bar.
Move the pointer into the workspace.

Your next click positions the report that you are adding to the form.

2 Move the pointer to the empty space on the right part of the form and click.

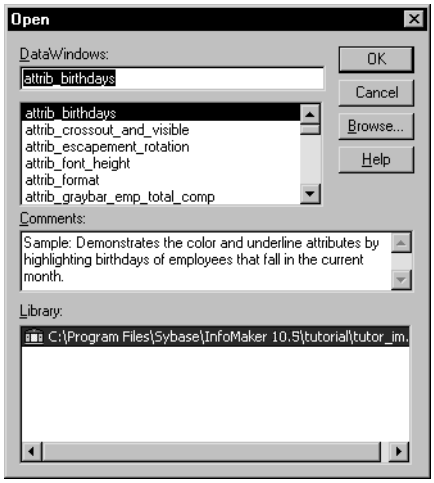
Four dots marking the corners of the box that will hold the report display on the form.



Now you use the Properties view to specify a few things about the report. First you are going to select the report whose contents display in the box.

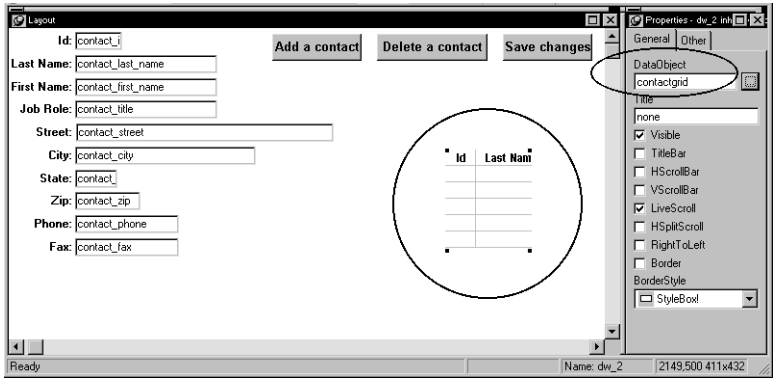
3 Click the Browse button (the button with three dots on it) next to the DataObject field on the General page in the Properties view.

The Open dialog box displays. It lists the reports (DataWindows) in *tutor_im.pbl*, the current library.



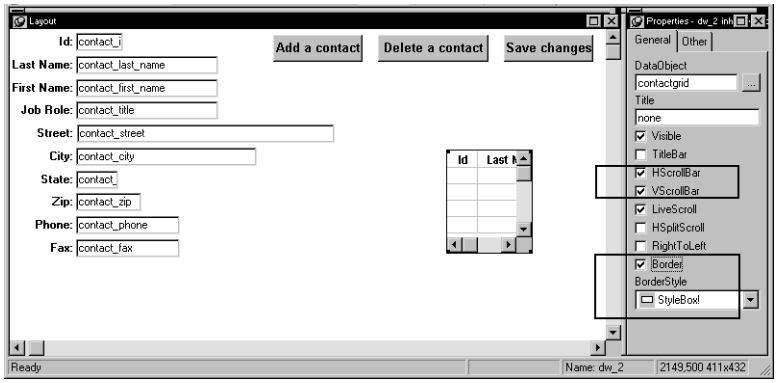
4 Scroll the list of reports, select *contactgrid*, and click *OK*.

The contactgrid report displays in the form, and its name displays in the DataObject field in the Properties view.



Next you specify that the report is to have the StyleBox border and scroll bars.

5 Make sure the BorderStyle selection is *StyleBox*.
Select the *HScroll Bar*, *VScroll Bar* and *Border* check boxes.

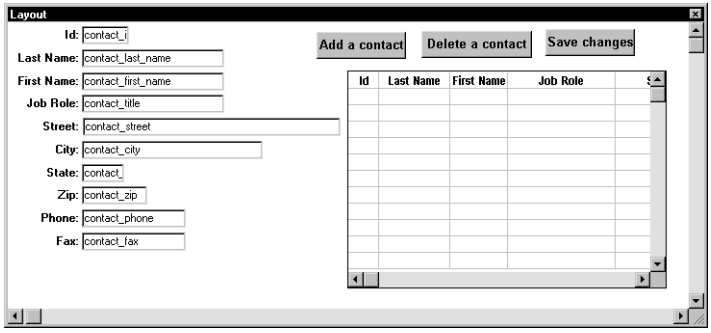


When you run the form, the report displays as a window with horizontal and vertical scroll bars. This gives you flexibility in looking at data while working on the form.

6 Resize the report to show more data.

To resize, move the pointer near an edge until the pointer becomes a double-pointed arrow. Then press the left mouse button, hold, and drag.

When you finish resizing, the report should look something like this.



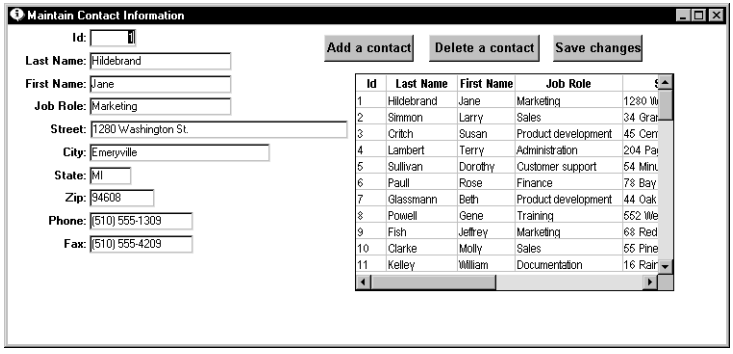
Use the form to update the database

Where you are
Create the basic form
Preview (run) the form
Save the form
Add buttons to the form
Enhance the form
> Use the form to update the database

Now you use the form to add a new contact to the database.

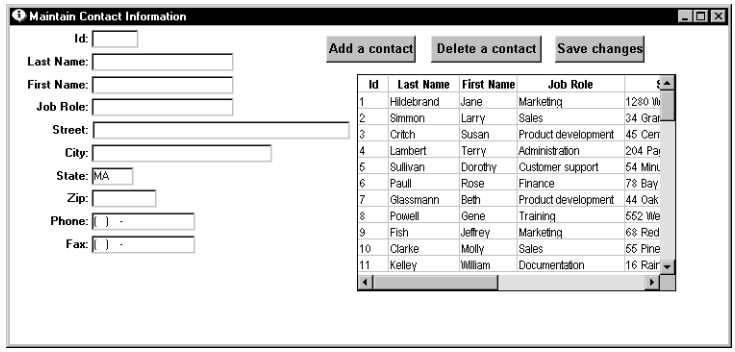
1 Click the *Run* button.

Your finished form displays with data in place. The report on the form gives you a way to see all your contact data.



2 Click the *Add a contact* button in the form.

An empty form displays. You use this form to enter a new contact.



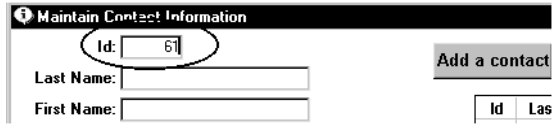
The cursor is in the Id box, but you do not know the next available number. You look in the report to see what number was used last.

3 In the report window, use the scroll bar to scroll down to the last row of the report and check the value in the *Id* column.

If the data has not been changed since installation, the value is 60, so the next available number is 61.

Id	Last Name	First Name	Job Role
50	Shishov	Irina	Marketing
51	Trayers	Ken	Sales
52	Long	Peter	Training
53	Tippet	Debbie	Customer support
54	Hodson	Jack	Customer support
55	Kosko	Kim	Product development
56	McEvoy	Jim	Sales
57	Goodall	Sandra	Sales
58	Elkins	John	Training
59	Masalsky	Kurt	Customer support
60	Collins	MaryBeth	Administration

4 Click the *Id* column and type *61*.

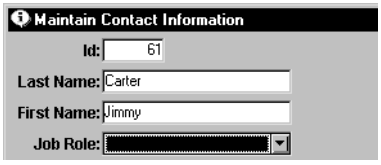


5 **Press Tab and type** *Carter* **for Last Name.**
Press Tab and type *Jimmy* **for First Name.**
Press Tab.

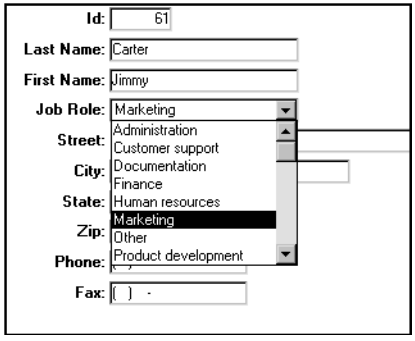
At this point you are on the Job Role box. In this box you cannot type. You must select a job role from a list of possible ones.

In the Database painter, the column was defined to be associated with a DropDownListBox edit style. The extended attribute system tables store this and other information about data.

6 **Click the down arrow on the drop-down list to display the choices.**



7 **Select** *Marketing***.**



8 **Press Tab and type** *Peanut Way* **for Street.**

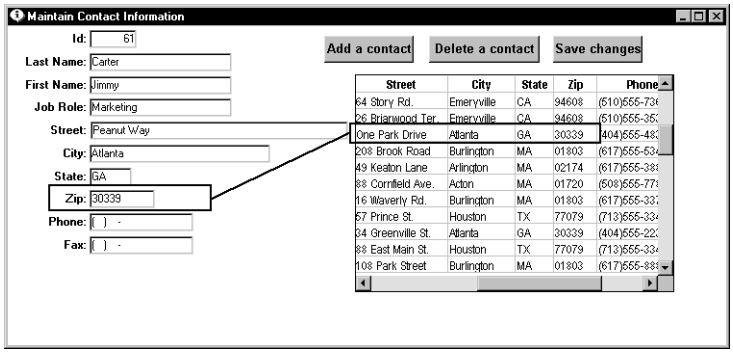
9 **Press Tab and type** *Atlanta* **for City.**

10 **Press Tab and type** *G* **to select** *GA* **for State (another drop-down list).**

11 Press Tab.

To determine what to enter for Zip, scroll the report until you find another *Atlanta* entry.

Then click the *Zip* box in the form and type the zip code you see in the report.

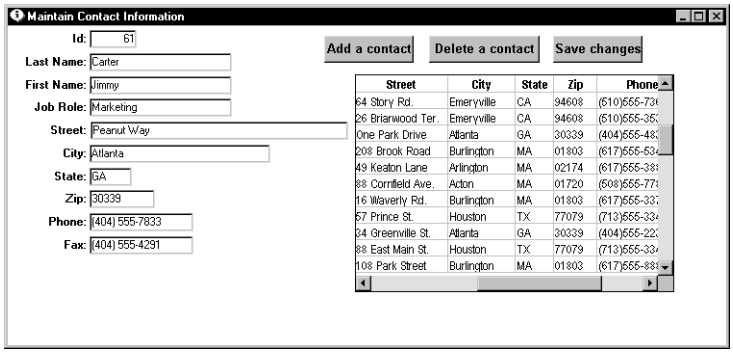


12 Press Tab and type *4045557833* for Phone.

Notice that you type only the digits. The form formats the phone number. An Edit Mask edit style was defined for this column to handle the formatting. This edit style is stored in the extended attribute system tables.

13 Press Tab and type *4045554291* for Fax.

This is what your screen should look like now.



14 Click the *Save changes* button in the form to update the database with the new contact.

The database is updated.

Note that the report always displays the information from the database when you start running the form. If you update the database, the report does not show the updates. To update the report, you return to the workspace and rerun the form.

15 Click the *Close* button in the PainterBar to return to the Form painter workspace.

16 Click the *Run* button again and scroll the report to the 61st row in the report.

Notice that your report has been updated.

17 Click the *Close* button in the PainterBar to return to the Form painter workspace.

18 Select *File>Close* from the menu bar.

If you have not already saved the current version of the form, you are prompted to save changes.

19 Click *Yes*.

The Form painter closes.

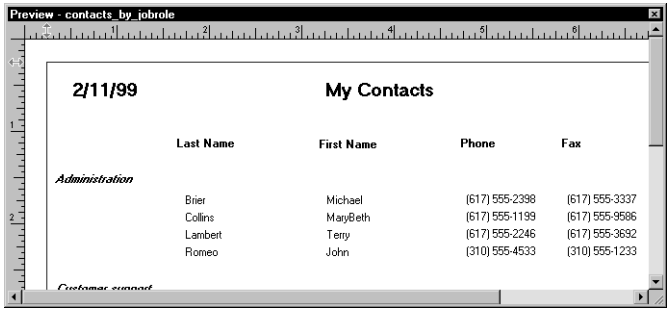
LESSON 3

Report Tutorial

Reports display and summarize data. You can view reports on the screen, save reports to a file, and print them on the printer.

In this tutorial you create a report using the data in the contact table. The report you create groups contacts by job role and lists phone and fax numbers for each contact.

This is what the report looks like when you have finished.



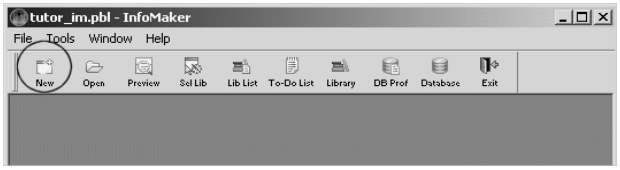
How long does this tutorial take?
About 45 minutes.

Create the basic report

Where you are
> Create the basic report
Preview the report
Save the report
Set up the design environment
Define sorting and grouping
Enhance the report
Save the report as an XML file
Print the report

Now you create the basic report. To do this you select a report style and the data to be used for the report.

1 Click the *New* button in the PowerBar.

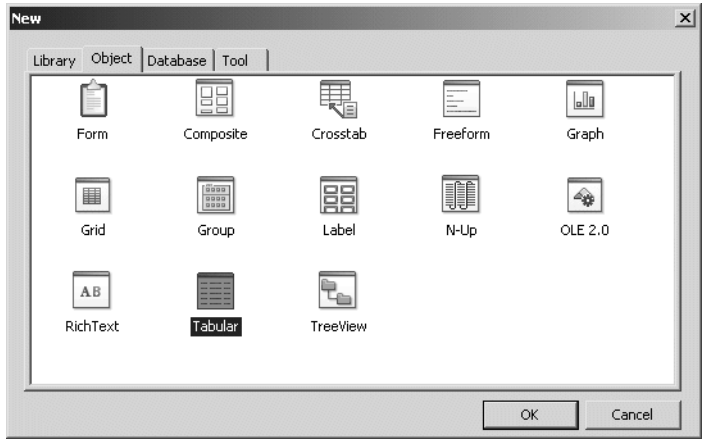


The New dialog box displays.

2 Select the *Object* tab if it is not already on top.

The Object tab page contains the icon for creating any type of new form and icons for the various report presentation styles.

3 Select the *Tabular* presentation style and click *OK*.



The wizard for creating tabular reports (also called DataWindows) starts up.

About report presentation styles
A report presentation style is a predefined way of presenting information in a report.

4 Select the *Quick Select* data source.
Make sure the *Retrieve on Preview* check box is selected and click *Next*.

About data sources

Quick Select is simply for choosing columns and specifying selection criteria and sorting, which is what you want for this tutorial.

SQL Select is for using other SQL options not available with Quick Select.

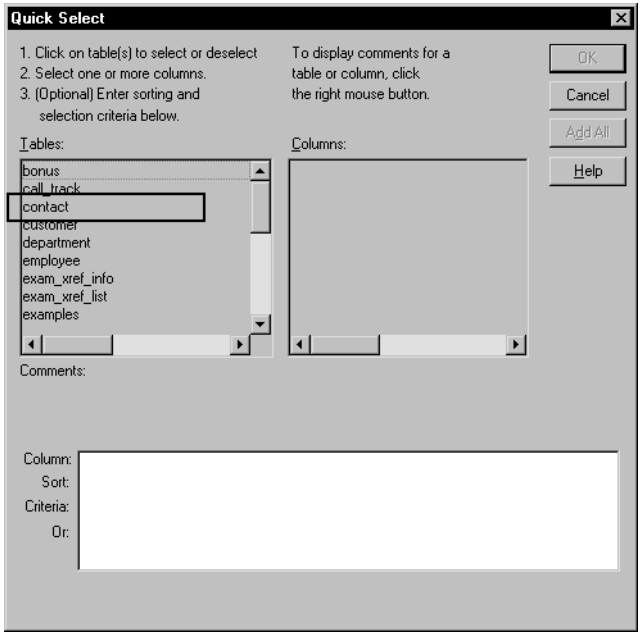
Query is for specifying the name of a query that describes the data source. You define a query in the Query painter.

External is for specifying data that comes from a source other than a database.

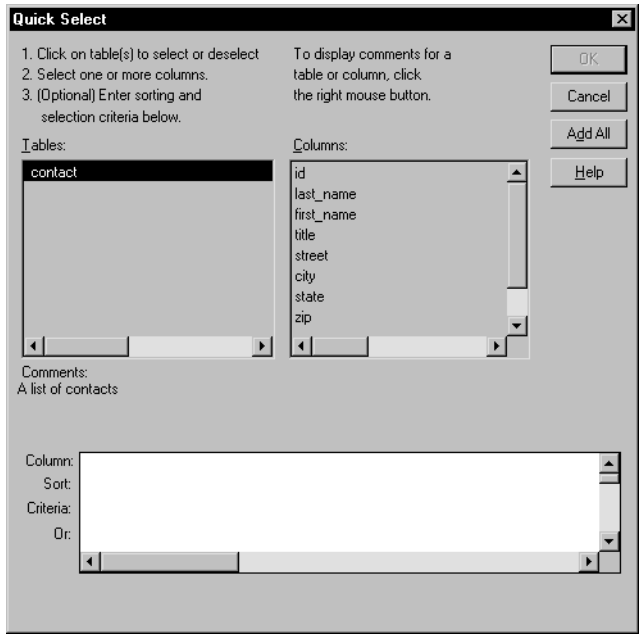
Stored Procedure is for specifying data using a stored procedure.

The Quick Select dialog box displays. In this dialog box you select the table to use and the columns you want to include in the report.

5 Click *contact***.**

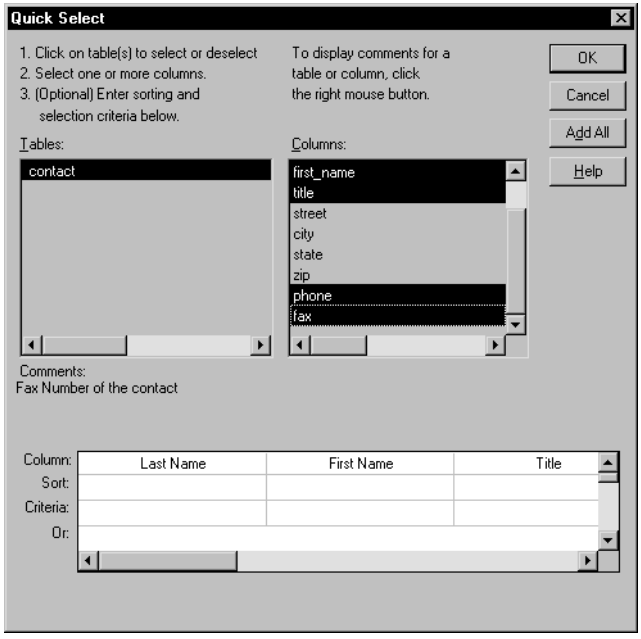


The columns for the contact table display. For this report you select five columns.



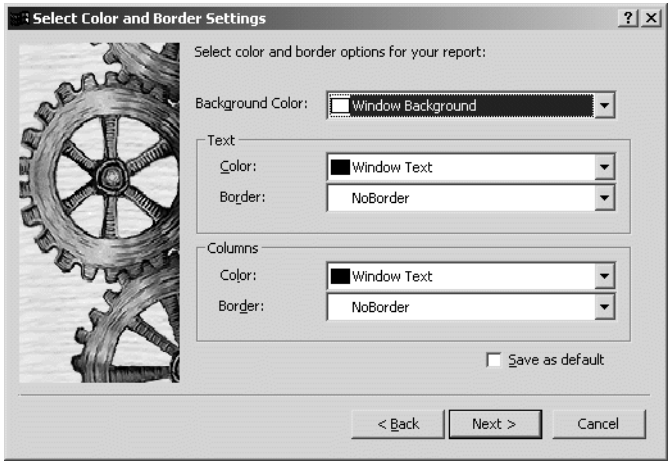
6 **Click** *last_name*, *first_name*, **and** *title*.
Use the scroll bar to scroll the list of columns.
Click *phone* **and** *fax*.

InfoMaker moves the selected columns to the grid at the bottom. You can use this grid for reordering columns and for providing sort and selection criteria. For this report you do not need selection criteria, and you specify sorting later.



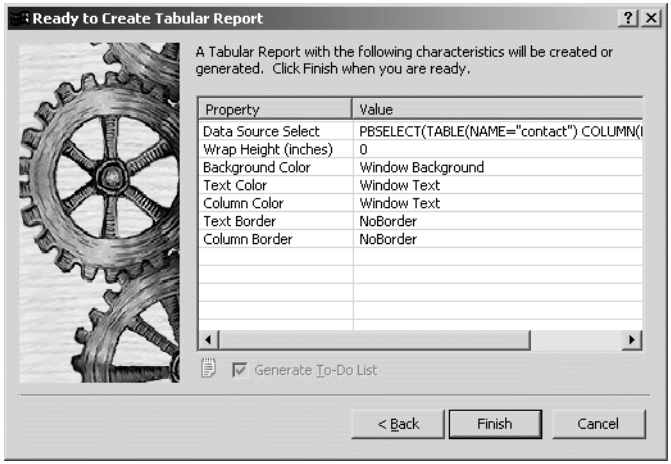
7 Click *OK*.

The Select Color and Border Settings dialog box displays. You are going to accept the defaults.



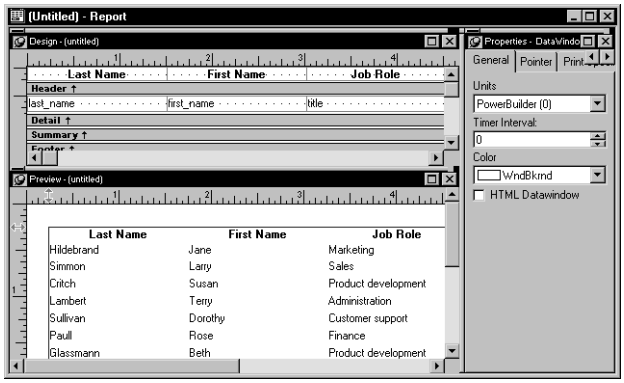
8 Click *Next*.

A dialog box summarizing all your specifications displays.

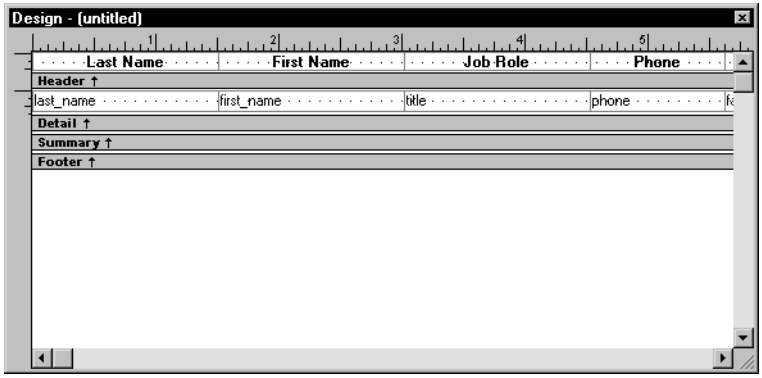


9 Look over your specifications and then click *Finish*.

Your report displays in several views in the Report painter. It uses the columns and report style you selected.



The Design view is where you do much of your work perfecting the report. The text for the column headers comes from the extended attribute system tables. The names of the columns appear where the data values will be displayed.



The extended attribute system tables

The extended attribute system tables store information about data such as labels and display formats. When you create forms and reports, InfoMaker uses extended attribute information to create the basic form or report.

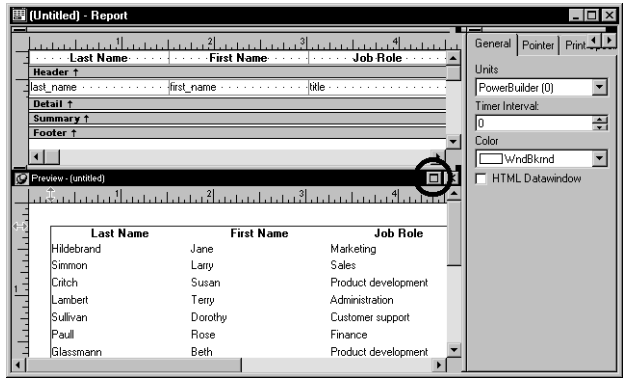
You put information into the extended attribute system tables using the Database painter. For example, in the Table tutorial you define the label *Job Role:* for the title column. Then when you use the title column in a form or report, InfoMaker uses the label *Job Role:*.

Preview the report

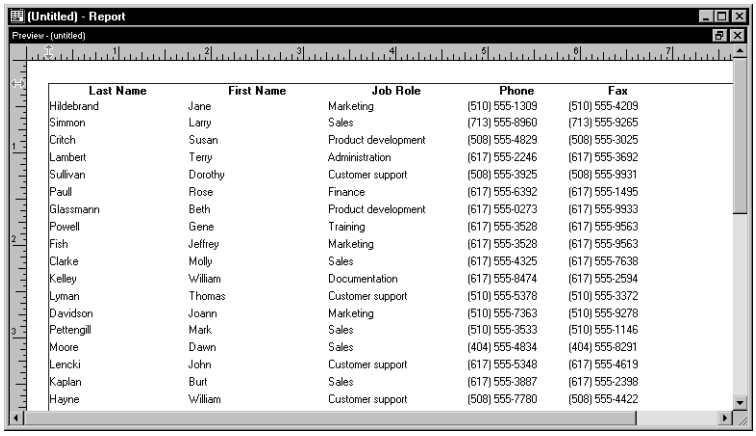
Where you are
Create the basic report
> Preview the report
Save the report
Set up the design environment
Define sorting and grouping
Enhance the report
Save the report as an XML file
Print the report

In this exercise you look at the Preview view of your report to see what it looks like when you print it.

1 Position the pointer in the upper-right corner of the Preview view (this drops the title bar) and click the *maximize* button.



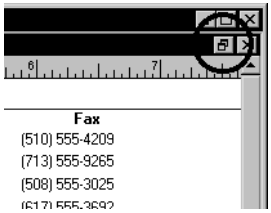
The Preview view becomes large and overlays all the other views. Notice that it includes the header information for the report and information from the database. InfoMaker retrieves information for all contacts and displays as many as fit in the Preview view.



Last Name	First Name	Job Role	Phone	Fax
Hildebrand	Jane	Marketing	(510) 555-1309	(510) 555-4209
Simmon	Larry	Sales	(713) 555-8960	(713) 555-9265
Critch	Susan	Product development	(508) 555-4829	(508) 555-3025
Lambert	Terry	Administration	(617) 555-2246	(617) 555-3692
Sullivan	Dorothy	Customer support	(508) 555-3925	(508) 555-9931
Paull	Rose	Finance	(617) 555-6392	(617) 555-1495
Glassmann	Beth	Product development	(617) 555-0273	(617) 555-9933
Powell	Gene	Training	(617) 555-3528	(617) 555-9563
Fish	Jeffrey	Marketing	(617) 555-3528	(617) 555-9563
Clarke	Molly	Sales	(617) 555-4325	(617) 555-7638
Kelley	William	Documentation	(617) 555-8474	(617) 555-2594
Lyman	Thomas	Customer support	(510) 555-5378	(510) 555-3372
Davidson	Joann	Marketing	(510) 555-7363	(510) 555-9278
Pettengill	Mark	Sales	(510) 555-3533	(510) 555-1146
Moore	Dawn	Sales	(404) 555-4834	(404) 555-8291
Lencki	John	Customer support	(617) 555-5348	(617) 555-4619
Kaplan	Burt	Sales	(617) 555-3887	(617) 555-2398
Hayne	William	Customer support	(508) 555-7780	(508) 555-4422

2 Use the scroll bar on the right side of the window to see more data. Use the command *File>Print Preview Rulers* to turn the display of rulers on and off.

3 Click here in the upper-right corner to return the Preview view to its original size and location.



Fax
(510) 555-4209
(713) 555-9265
(508) 555-3025
(617) 555-3692

Save the report

Where you are
Create the basic report
Preview the report
> Save the report
Set up the design environment
Define sorting and grouping
Enhance the report
Save the report as an XML file
Print the report

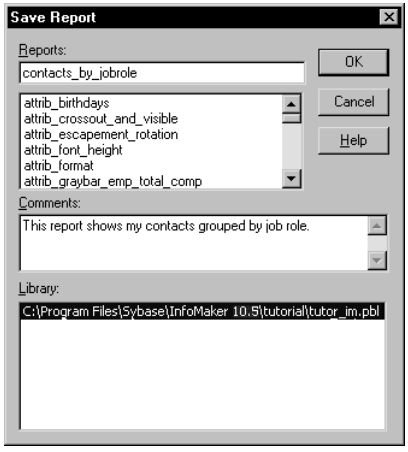
Now you save the report and give it a name.

1 Select *File>Save* **from the menu bar.**

The Save Report dialog box displays, with the pointer positioned for you to type a name for the report.

2 Type *contacts_by_jobrole.*

3 Click in the *Comments* **box and type** *This report shows my contacts grouped by job role.*



4 Press the Enter key.

InfoMaker saves your report. Anytime you have completed a unit of work and are satisfied, you should save your work.

Set up the design environment

Where you are
Create the basic report
Preview the report
Save the report
> Set up the design environment
Define sorting and grouping
Enhance the report
Save the report as an XML file
Print the report

In this exercise you set up the design environment to make it easier to work. To do this, you:

- Show the edges of controls
- Display the grid and ruler

Control edges show how big the controls are. By displaying control edges, you can easily check for overlapping and make sure the spacing around controls is what you want. Displayed edges are a design aid only; they do not appear in the report.

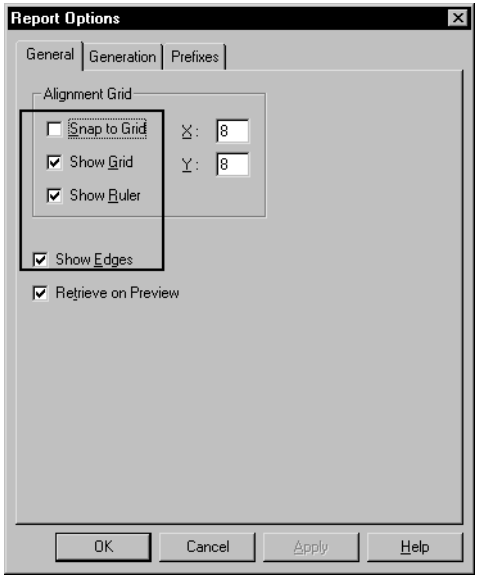
The InfoMaker grid and ruler help you align controls.

If you completed Lesson 2
The design options you set here may already be set correctly.

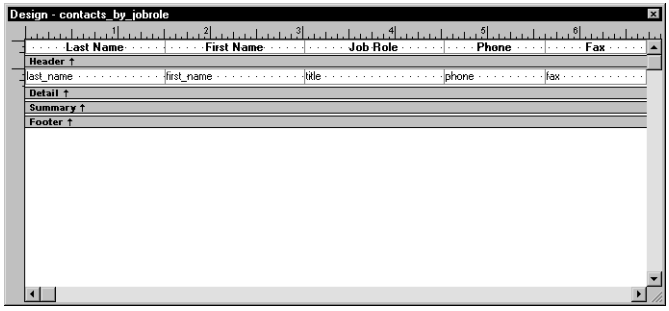
1 Select *Design>Options* **from the menu bar.**

The Report Options property sheet displays.

2 **Make sure the** *Show Grid* **option,** *Show Ruler* **option, and** *Show Edges* **option are selected.**
Make sure *Snap to Grid* **is not selected.**
Click *OK*.



The Design view shows a dotted grid and a ruler. Text and columns show edges.



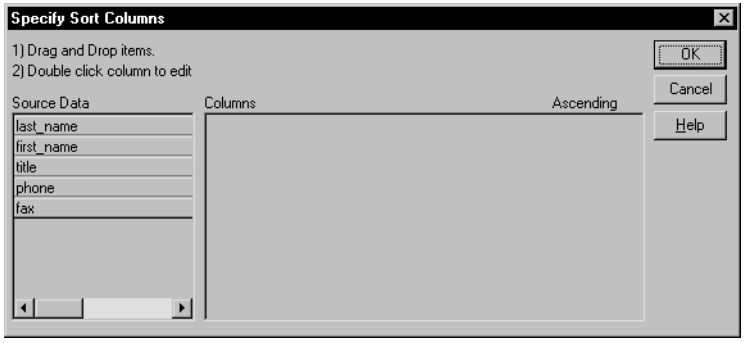
Define sorting and grouping

Where you are
Create the basic report
Preview the report
Save the report
Set up the design environment
> Define sorting and grouping
Enhance the report
Save the report as an XML file
Print the report

Now you specify sorting and grouping. You want the report to group contacts by title. This means you need to sort by title and then specify grouping by title.

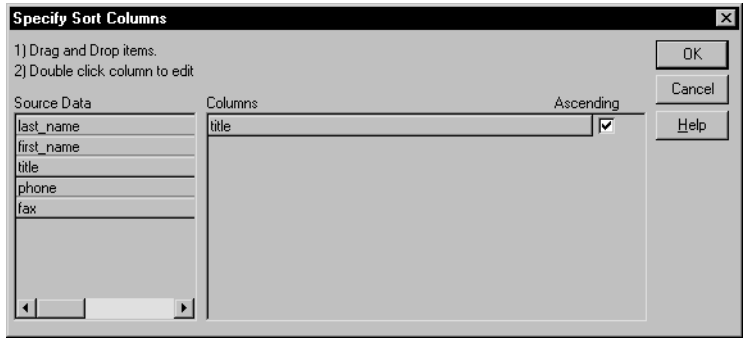
1 Select *Rows>Sort* from the menu bar.

The Specify Sort Columns dialog box displays.



2 Move the pointer to the word *title* in the Source Data box and drag it to the *Columns* box.

(To drag, press and hold the left mouse button, move the mouse, then release the mouse button.)

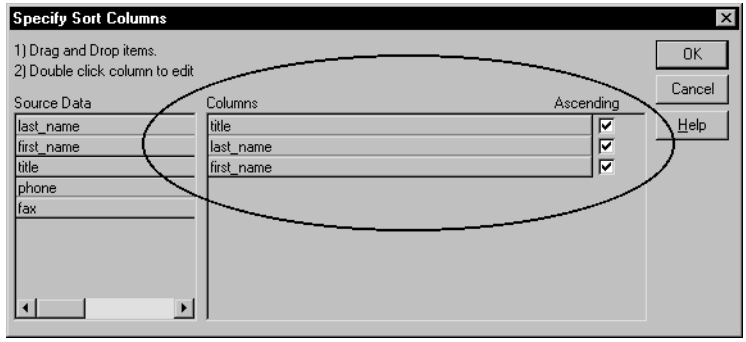


Ascending and descending
Ascending and descending are options for sorting. Since you are alphabetizing in this tutorial, you want to sort in ascending (from A to Z) order. Ascending is the default, so you do not have to do anything.

You have specified the sorting required to group by title.

Next you specify sorting by last name and then by first name. This alphabetizes your contacts within each group.

3 Drag *last_name* and *first_name* to the *Columns* box.



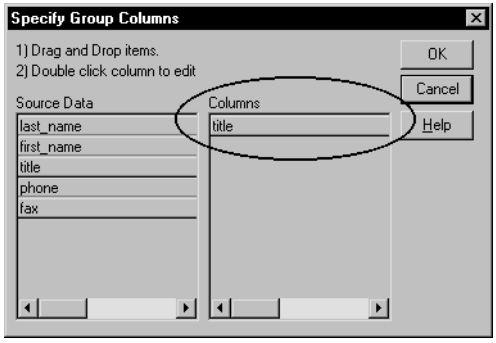
4 Click *OK***.**

The sorting definition is complete.

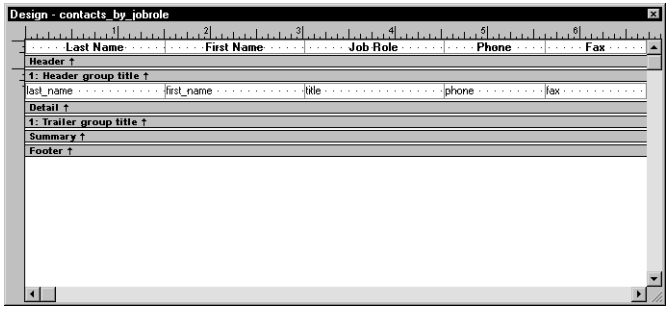
5 Select *Rows>Create Group* **from the menu bar.**

The Specify Group Columns dialog box displays. You are going to group on the title column. All contacts with the same title will be grouped together.

6 Drag *title* **to the** *Columns* **box and click** *OK***.**

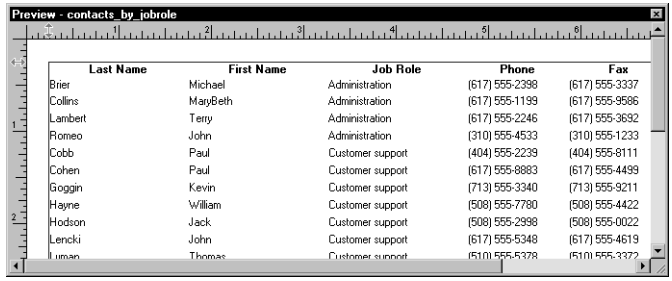


The grouping definition is completed. You have two new bands for the group in the report. You learn about bands in the next exercise.



7 Look at the Preview view.

You see the report and its data. Notice that the data is sorted. You do not see the groups yet. In a few minutes you will make some changes so the groups appear.



Last Name	First Name	Job Role	Phone	Fax
Brier	Michael	Administration	(617) 555-2398	(617) 555-3337
Collins	MaryBeth	Administration	(617) 555-1199	(617) 555-9586
Lambert	Terry	Administration	(617) 555-2246	(617) 555-3692
Romeo	John	Administration	(310) 555-4533	(310) 555-1233
Cobb	Paul	Customer support	(404) 555-2239	(404) 555-8111
Cohen	Paul	Customer support	(617) 555-8883	(617) 555-4499
Goggin	Kevin	Customer support	(713) 555-3340	(713) 555-9211
Hayne	William	Customer support	(508) 555-7780	(508) 555-4422
Hodson	Jack	Customer support	(508) 555-2998	(508) 555-0022
Lencki	John	Customer support	(617) 555-5348	(617) 555-4619
Luman	Thomas	Customer support	(510) 555-5378	(510) 555-3372

Enhance the report

Where you are
Create the basic report
Preview the report
Save the report
Set up the design environment
Define sorting and grouping
> Enhance the report
Save the report as an XML file
Print the report

You can enhance reports in many ways. In this exercise you:

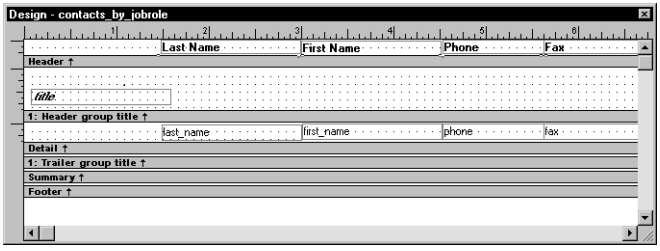
- Rearrange controls
- Add a title and date
- Add page numbers
- Add a count of the total number of contacts

Rearrange controls

To rearrange controls, you:

- Put the job role into the group header and change its display font
- Move the remaining columns to close the gap left by moving the column

This is what the Design view looks like when you have finished rearranging the controls.



About report bands

The design version of the report that you see in the Design view divides the report into bands of information.

The **header band** contains heading information and is located at the top of each page.

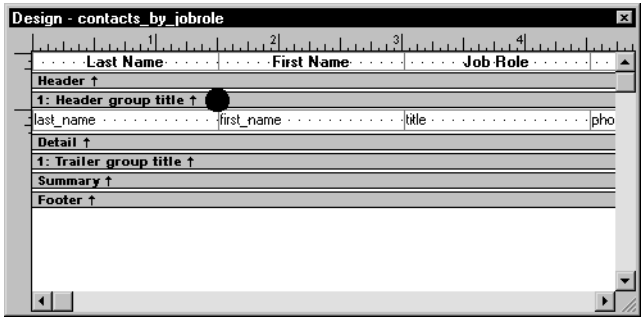
The **detail band** contains the retrieved data.

The **summary band** contains summary information that applies to the entire report and is located at the end of the report.

The **footer band** contains information to be located at the bottom of every page, such as a page number.

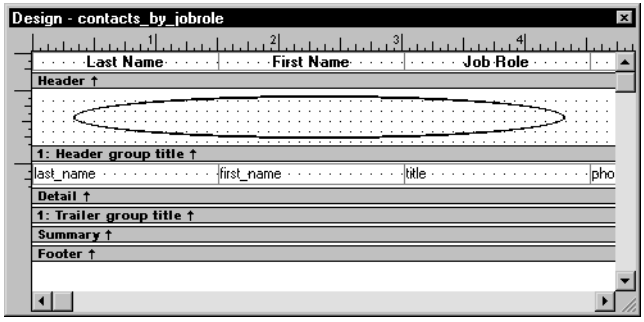
For groups, the **group header band** and **group trailer band** contain information for the group.

1 Move the pointer to the gray bar entitled *1: Header group title* **(where the black dot is) until you see a double-pointed arrow**

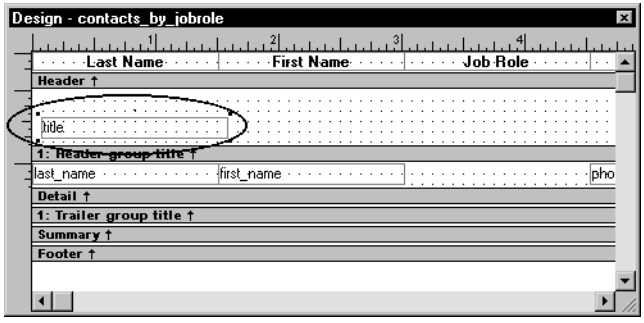


2 Drag the band down about 4 to 6 grid dots.

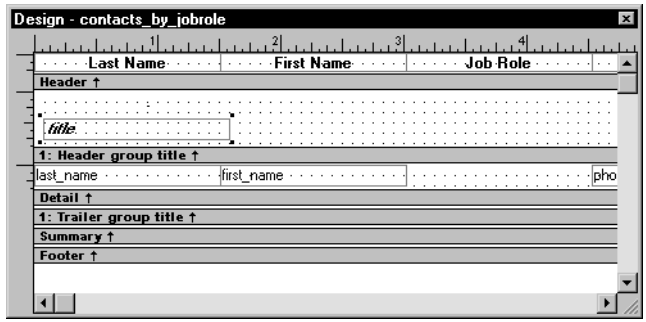
(To drag, press and hold the left mouse button, move the mouse, then release the mouse button.)



3 Move the pointer to the *title* column and drag it into the band for the group header.
Put it near the bottom of the band as shown.



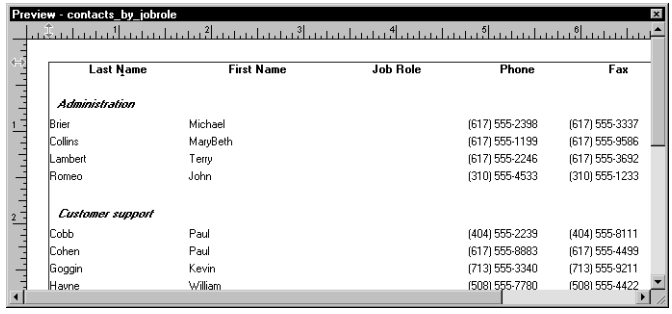
4 With the *title* column still selected, click *B* for bold and *I* for italic on the StyleBar.



This makes the job role (title) stand out in the report.

5 Look at the Preview view.

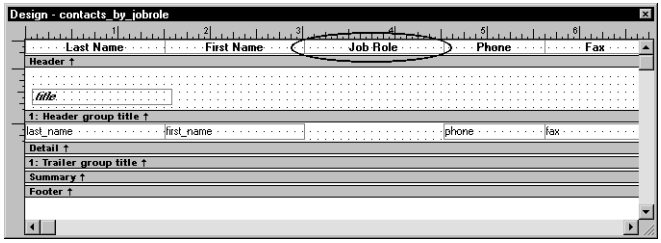
You see the report and its data.



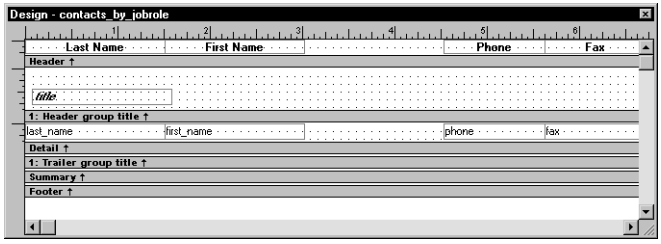
Notice that the value of the title column appears only once for each group. This is because the title column is now located in the group header band.

The Preview view is helpful for identifying problems. Notice that the header Job Role is still present even though there is no longer a column in the detail band. Next you delete the header.

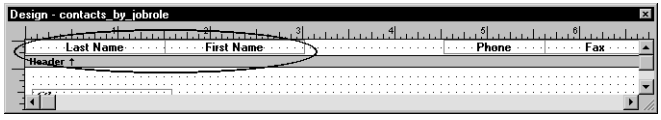
6 **Click the text** *Job Role* **in the header band.**

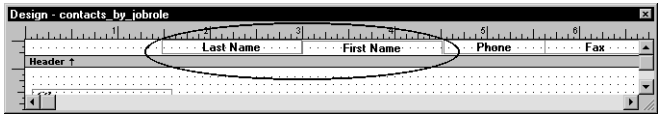


7 **Press the Delete key.**

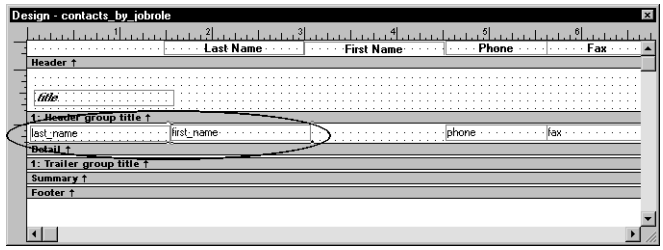


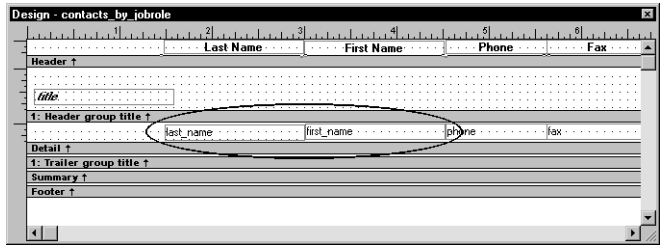
8 **Drag the** *First Name* **and** *Last Name* **text boxes in the header band to the right to fill the empty space.**





9 Drag the *first_name* and *last_name* columns in the detail band to the right to fill the empty space.





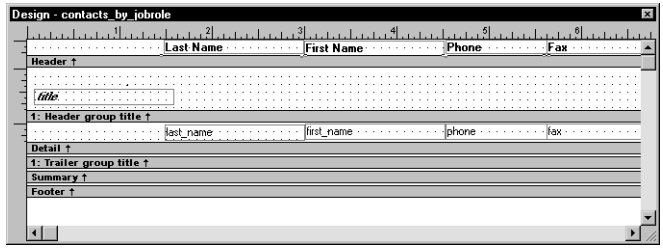
You make one final visual improvement now by left-aligning the text in the column headers.

10 Choose *Edit>Select>Select Text* from the menu bar.

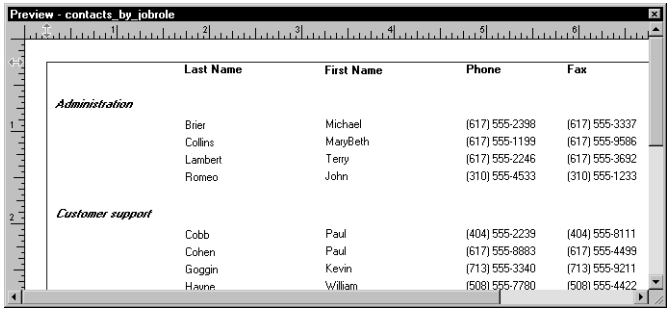
This selects all the headers. It might be difficult to see that they are selected because the band is so narrow.

11 Click the *left justification* button on the StyleBar.
If your headers are not already bold, click the *Bold* button.

All the headers become left justified (and bold).



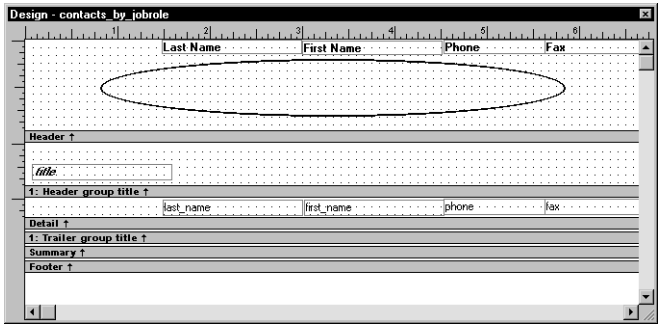
12 Look at the Preview view.



Add a title and date

Now you add a title and date to the header band. They will be at the top of each page.

1 Move the pointer to the gray bar marked *Header* and drag it down about 10 grid dots.

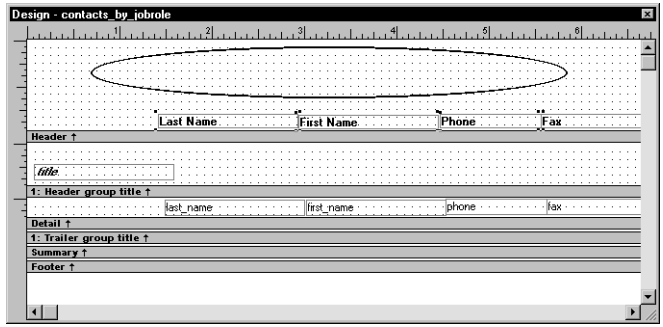


2 Choose *Edit>Select>Select Text* from the menu bar (or use lasso selection).

This selects all the headers.

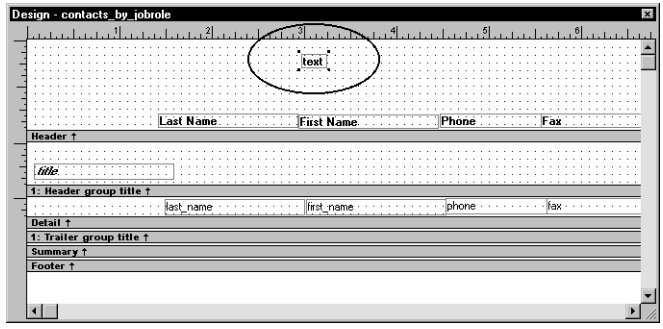
3 Drag all the headers down close to the gray band.

This leaves room for the title.

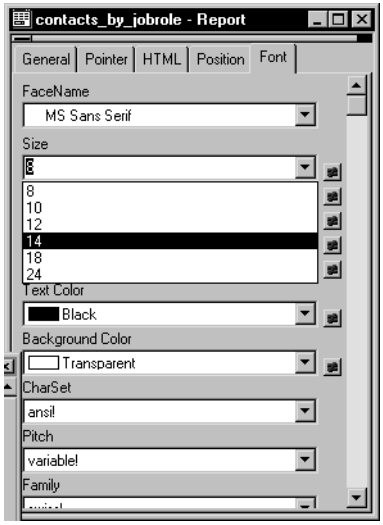


4 Click the *Text* button in the Objects drop-down toolbar in the PainterBar (or select *Insert>Control>Text* from the menu bar).
Move the point of the pointer above the *First Name* box and down one grid dot from the top of the page.
Click the left mouse button.

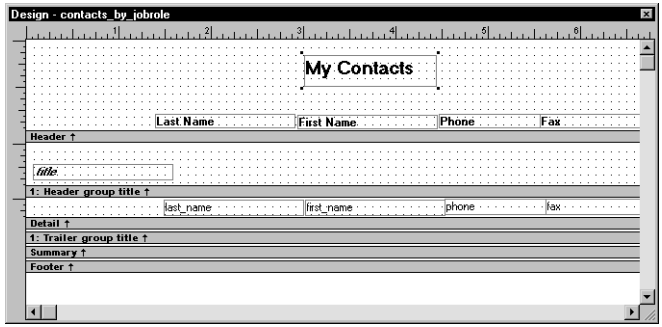
This positions the text box for the title.



5 **Type** *My Contacts*.
Select *14* **from the Size drop-down list on the** *Font* **tab in the Properties view to make the title bigger (enlarge the text box if necessary).**

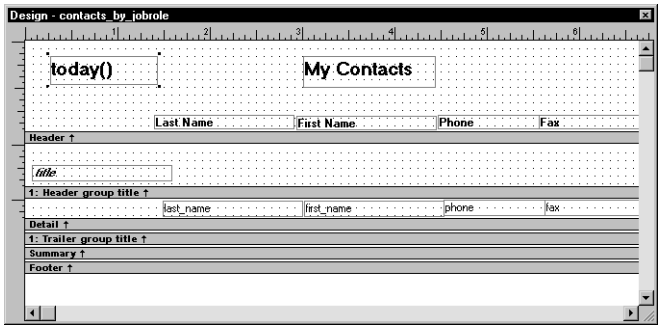


The title is now enlarged.



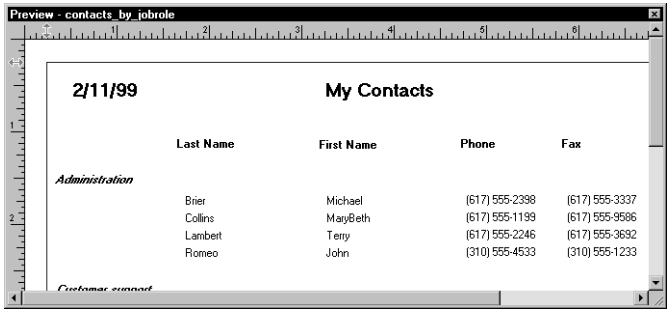
6 Select *Insert>Control>Today( )* from the menu bar. Move the point of the pointer to the upper-left corner. Click.

This places a computed field in the report. The computed field is for today's date.



7 Look at the Preview view.

Your report now has a title and today's date.



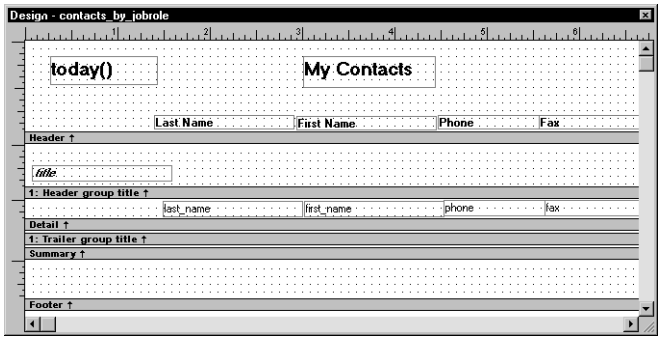
Add page numbers

Now you put page numbers in the footer band.

1 **Move the pointer to the gray bar marked *Footer* and drag it down about 4 grid dots.**

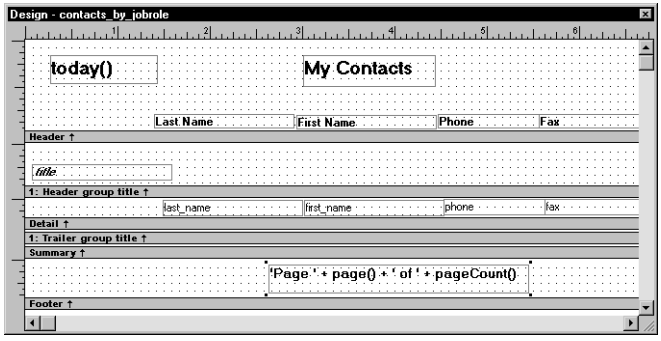
If necessary, use the scroll bar to make room at the bottom of the Design view.

Dragging down the footer bar makes space for the page number in the footer band. The page number is another computed field.



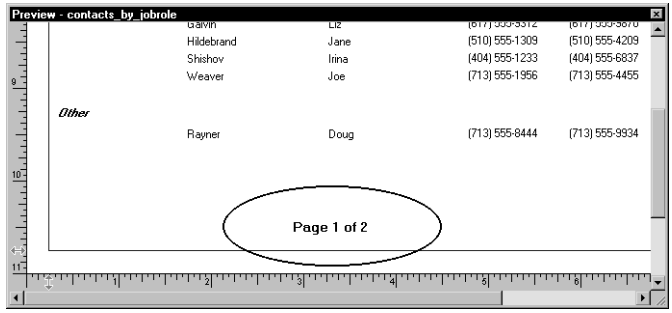
2 **Select *Insert>Control>Page n of n* from the menu bar.**
In the footer band, move the pointer to the center and down 2 grid dots.
Click.
Select a different font size (*10*) in the Properties view, Font page.

This places a computed field for page numbers.



3 Look at the Preview view.
Click the scroll bar until you move to the bottom of the page.

You now have a page number on your report.



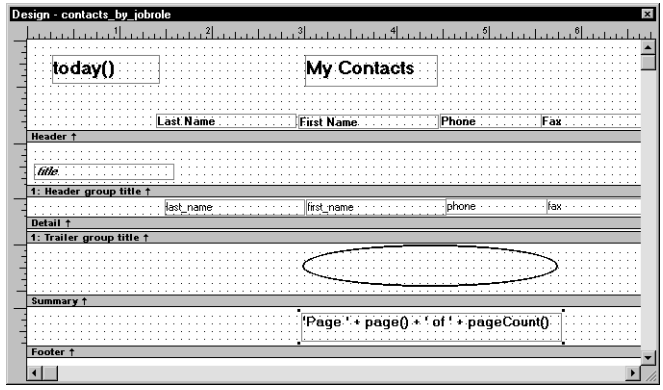
Add a count of the total number of contacts

Now you add a count of the total number of contacts you have to the end of the report. You put the information in the Summary band, which means it prints at the end of the report.

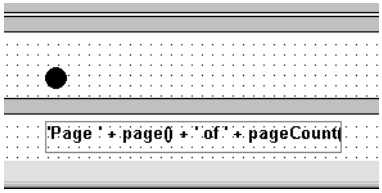
Like the date and page number, the count is a computed field, only this time, you create it yourself.

1 Move the pointer to the gray strip marked *Summary* for the summary band and drag it down about 6 grid dots.

This makes space for the total number of contacts, which is a computed field.



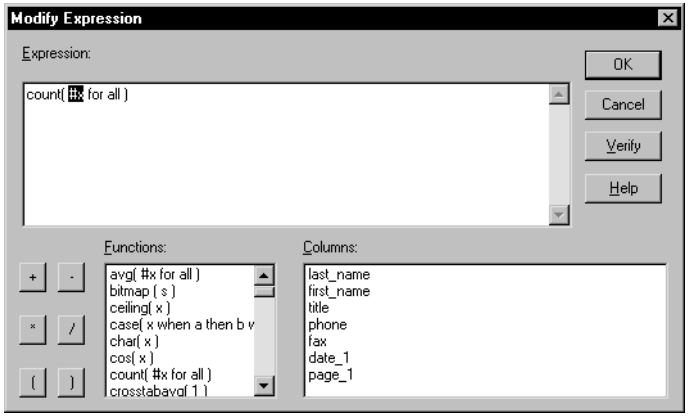
2 **Select** *Insert>Control>Computed Field* **from the menu bar.**
In the summary band, move the point of the pointer to the center and down 4 grid dots.
Click.



This sets the position for a computed field that you use for the total number of contacts. The Modify Expression dialog box displays.

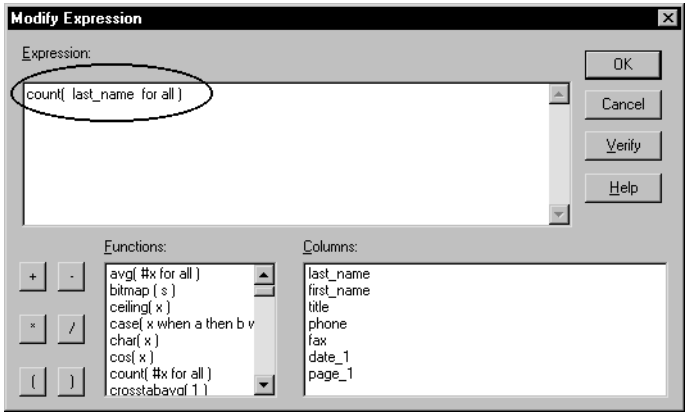
3 **In the** *Functions* **box, click** *count(#x for all)***.**

Your dialog box should look like this. The placeholder for what to count is highlighted.



4 In the *Columns* box, click *last_name*.

This selects the last_name column to apply the count function to. You are going to count all the last names to find out how many contacts you have in the report.

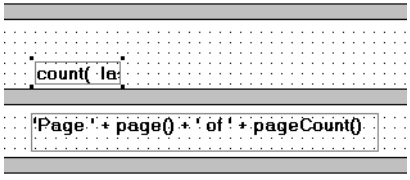


5 Click *Verify*.

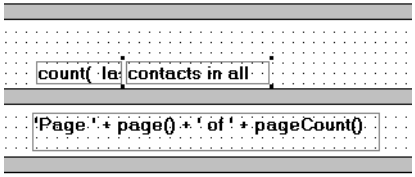
You should get the message box stating that your expression is valid.

6 Click *OK* to close the message box.
Click *OK* to complete the definition of the expression for the computed field.

The computed field is in place.

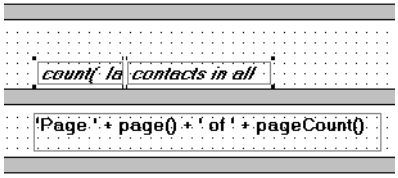


7 **Select** *Insert>Control>Text* **from the menu bar.**
Position the pointer to the right of the computed field and click.
Type *contacts in all***.**
Drag the text box to line it up with the computed field.



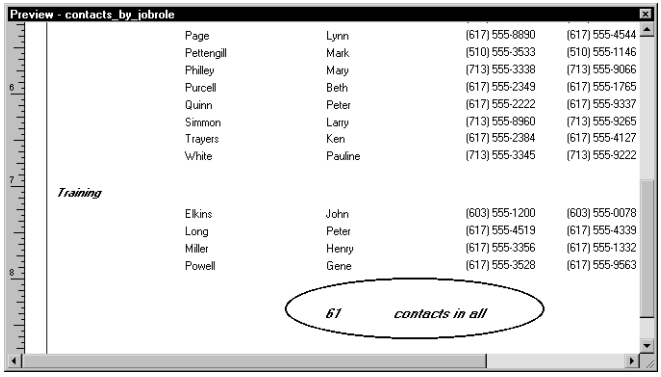
8 **Select the computed field and the text using lasso selection.**
On the Font page of the Properties view (or on the StyleBar), select *10* **for a font size and click** *I* **for italic and** *B* **for bold.**

How to use lasso selection
Position the pointer, press and hold the left mouse button, and drag the lasso around everything you want to select. Then release the mouse button.



9 Look at the Preview view.
Use the scroll bar until you see the end of your report.

The summary band of your report now shows the total number of contacts in the report. The number you see may not be 61. The number depends on the contacts currently in *your* database.



Save the report as an XML file

Where you are
Create the basic report
Preview the report
Save the report
Set up the design environment
Define sorting and grouping
Enhance the report
> Save the report as an XML file
Print the report

You can save the data in a report in many different formats, including XML, HTML, Microsoft Excel, and PDF.

Saving as PDF
Before you can save the data in a report object to a PDF file, you must install GNU Ghostscript on your computer. For information about using the GNU Ghostscript distiller, see the *User's Guide*.

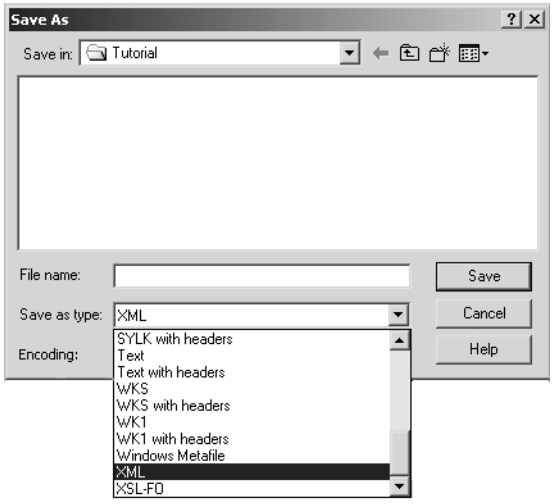
Now you save the report as an XML file.

1 **Select the Preview view by clicking it.**

   This ensures that the Preview view is the current view.

2 **Select** *File>Save Rows As* **from the menu bar.**

Select *XML* from the Save as Type drop-down list.



3 Type a name for the file and click *Save*.

Print the report

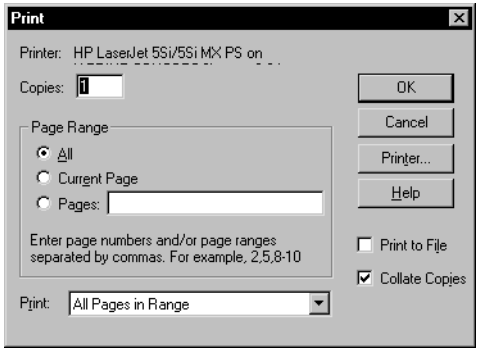
Where you are
Create the basic report
Preview the report
Save the report
Set up the design environment
Define sorting and grouping
Enhance the report
Save the report as an XML file
> Print the report

1 Select the Preview view by clicking it.

This ensures that the Preview view is the current view.

2 Select *File>Print Report* from the menu bar.

The Windows Print dialog box displays.



3 Click *OK*.

4 Select *File>Close* from the menu bar.
If you are prompted to save changes, click *Yes*.

The Report painter closes.

LESSON 4

Table Tutorial

This tutorial requires the Database painter
The Database painter component of InfoMaker is optional; you must have installed it to do this tutorial.

Tables are the way relational databases organize information. To take full advantage of InfoMaker's ability to create forms and reports, you should learn how to create and work with database tables.

InfoMaker is installed with an Adaptive Server Anywhere database. You can create and work with tables in the Adaptive Server Anywhere database and in any other database you have access to.

After you create a table, you can display its columns on a form and use the form to add information into the database. For a final printed copy of the data in your tables, you can create and print reports.

In this tutorial you:

- Create a database table
- Define extended attribute information
- Add data to the table

When you are finished, you can create forms to view and update information, and you can create and print reports using information in the table.

How long does this tutorial take?
About 45 minutes.

Create the database table

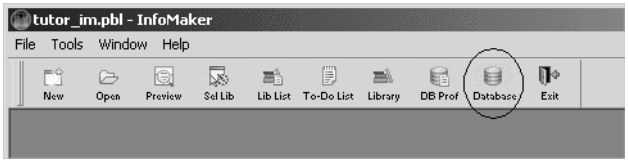
Where you are
> Create the database table
Define extended attribute information
Add data to the table

To create the database table, you:

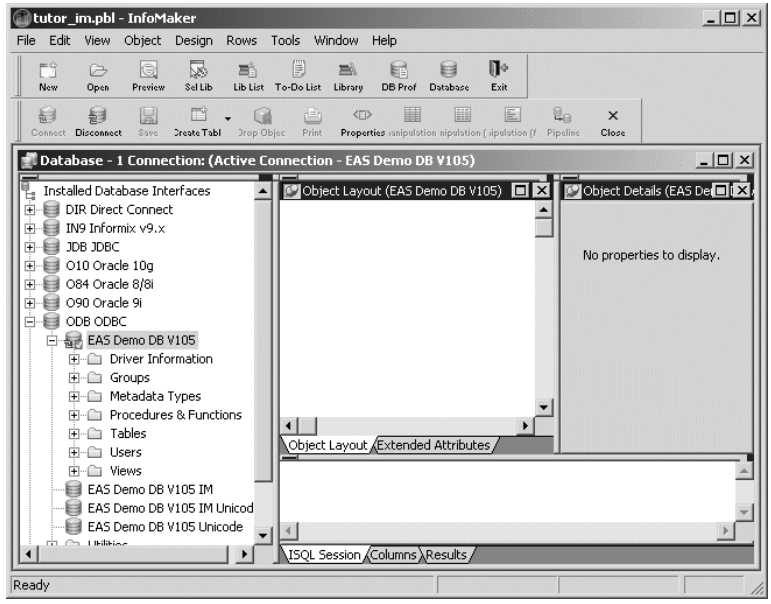
- Define the columns in the table
- Define a primary key
- Enter comments to document the table
- Save the table

Define the columns in the table

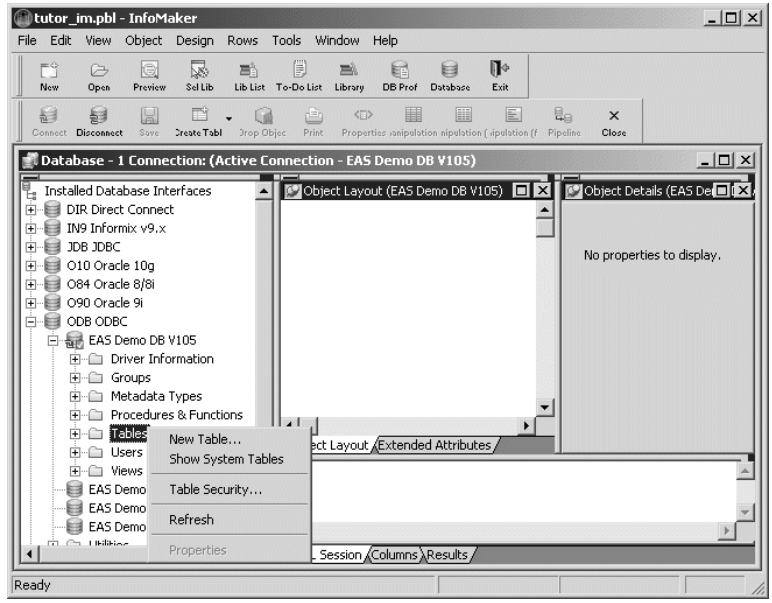
1 Click the *Database* button in the PowerBar.



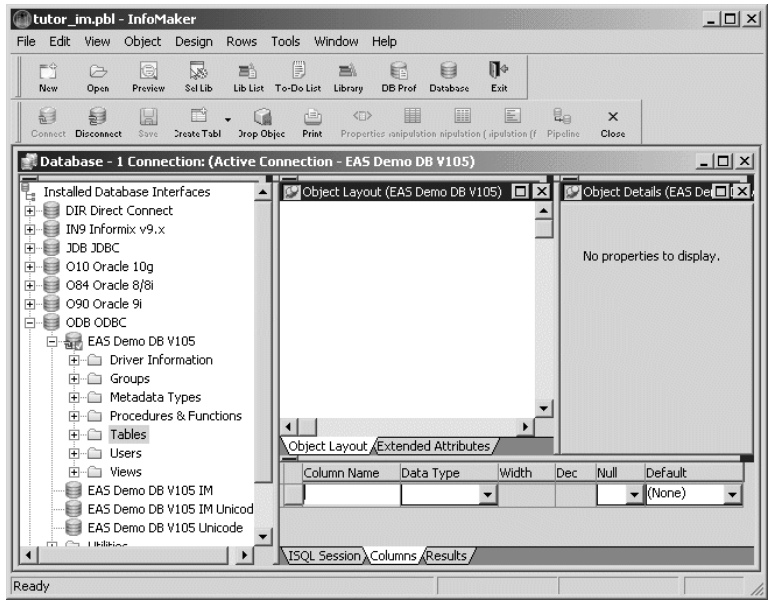
The Database painter workspace displays. It contains many views for working with database information. If your workspace does not look like this, you may want to select View>Layouts>(Default).



2 Position the pointer on the *Tables* folder in the EAS Demo DB V105 IM database and select *New Table* from the pop-up menu.



The view in which you define the columns in the table displays. The cursor is in the Column Name box for the first column.



3 Type *id* and press Tab.

The cursor moves to the Data Type box. The default datatype is highlighted. The datatype for the id column needs to be integer.

4 Click the arrow in the Data Type box and select *integer* from the drop-down list of available datatypes.

This changes the datatype.

5 Press Tab three times.

This moves you past the setting of No for the column labeled Null. No means you do not want to allow the column you are defining to be empty (to have a null value). Since you always want a value for id, you leave the value No. You also move past the column labeled Default. You are not going to specify a default.

6 Type *last_name* and press Tab.

The cursor moves to the Type column. The most recently used datatype (integer) is highlighted. The last_name column should be type char, so you change the datatype.

7 Type *c* and press Tab.

Typing c is a shortcut for choosing char quickly. The cursor moves to the Width column.

8 Type *15.*

This allows 15 characters for the last name instead of 10.

9 Press Tab three times.

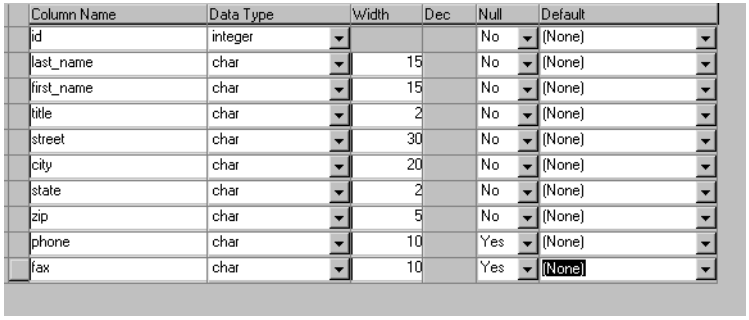
This moves you past the setting of No for the column labeled Null to the Column Name box for the next column. No is what you want (name cannot be empty). You move past the column labeled Default again.

10 Finish entering information about the table columns.

The following table shows all the values needed to define the columns in the contact table. You have already entered values for the first two columns (id and last_name).

Name	Type	Width	Dec	Null	Default
id	integer			No	(None)
last_name	char	15		No	(None)
first_name	char	15		No	(None)
title	char	2		No	(None)
street	char	30		No	(None)
city	char	20		No	(None)
state	char	2		No	(None)
zip	char	5		No	(None)
phone	char	10		Yes	(None)
fax	char	10		Yes	(None)

When you have finished, the Columns view should look like this.



Save the table

You have now entered all of the column information needed. Now you finish creating the table.

1 Select *File>Save* **from the menu bar.**

The Create New Table dialog box displays.

You leave the owner as dba (database administrator) and enter a name for the table.

2 Type *contact1* **in the** *Table Name* **box.**
Click *OK*.

InfoMaker passes the SQL needed to create the table to the Adaptive Server Anywhere DBMS, which creates the table.

InfoMaker displays a representation of the table in the Database painter Object Layout view.

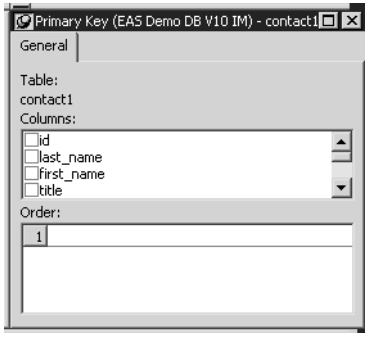
The list of columns displays. The scroll bar on the right side means that there are more columns than can be displayed at once. To see the other columns, you can click the down arrow at the bottom of the scroll bar.

Define a primary key

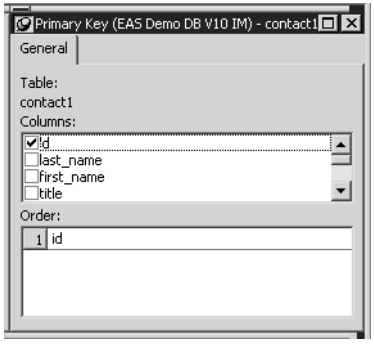
A primary key uniquely identifies each row. In your contact table, id is the unique identifier of each row of data.

1 Select *Object>Insert>Primary Key* **from the menu bar. (If the menu item is grayed out, click the Object Layout view to make it current and then select the menu item from the menu bar.)**

The Primary Key property sheet displays in the Object Details view. Here you can pick one or more columns as the primary key.

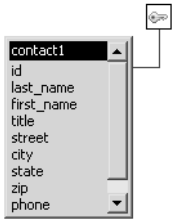


2 Click *id* **in the list of columns.**



3 Select *File>Save* **from the menu bar.**

This defines id as the primary key for your table. Notice that the representation of the table now includes a symbol for the primary key of the table.



Next you define a comment for the table.

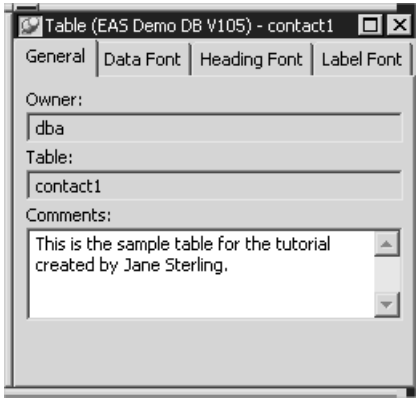
Enter comments to document the table

Although not required, comments can be helpful in identifying tables.

1 **Position the pointer on the title bar of the representation of the contact1 table, display the pop-up menu, and select** *Properties*.

The Table Properties property sheet displays in the Object Details view.

2 **Click in the** *Comments* **box and type** *This is the sample table for the tutorial created by [your name].*



This associates the comments with the table you are creating.

3 **Select** *File>Save* **from the menu bar.**

Define extended attribute information

Where you are
Create the database table
> Define extended attribute information
Add data to the table

Now you extend the basic definitions of the columns in the table.

The following table summarizes how you extend the column definitions of the contact1 table columns.

Column name	What you do to extend its definition
id last_name first_name	Nothing.
title	Define a DropDownListBox edit style of job roles, change the column header and label to Job Role, and enlarge the display width of the column to 1.5 inches.
street city	Nothing.
state	Assign the DropDownDataWindow edit style for state to the state column. Set the default value of state to MA.
zip	Nothing.
phone fax	Define an Edit Mask edit style for a phone number and apply it to phone and fax.

About extended attribute information
InfoMaker stores extended attribute information in the extended attribute system tables and uses it to display and validate data in forms and reports. In the Report painter or Form painter, you can override whatever you specified in the Database painter, which is where you are now.

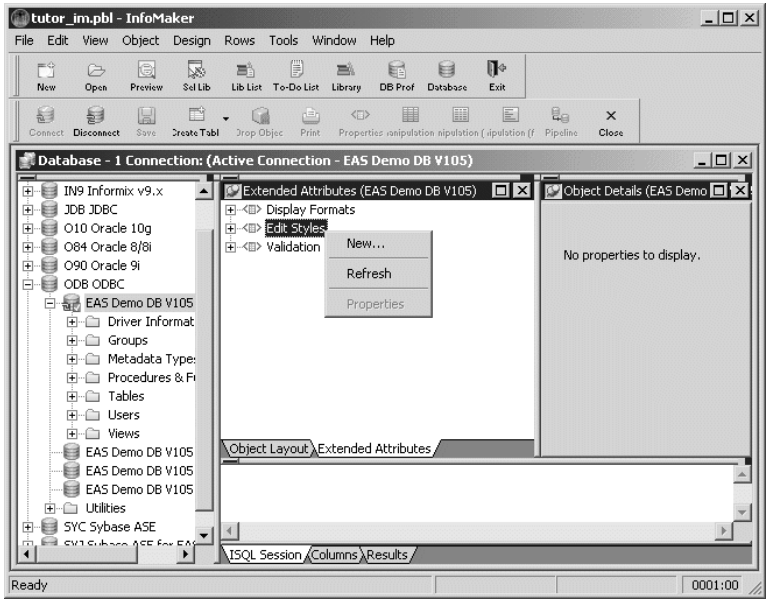
Define a DropDownListBox edit style for the title column

Now you define a DropDownListBox edit style that has the valid job roles for the title column. When you have finished, this is what it looks like in a form.

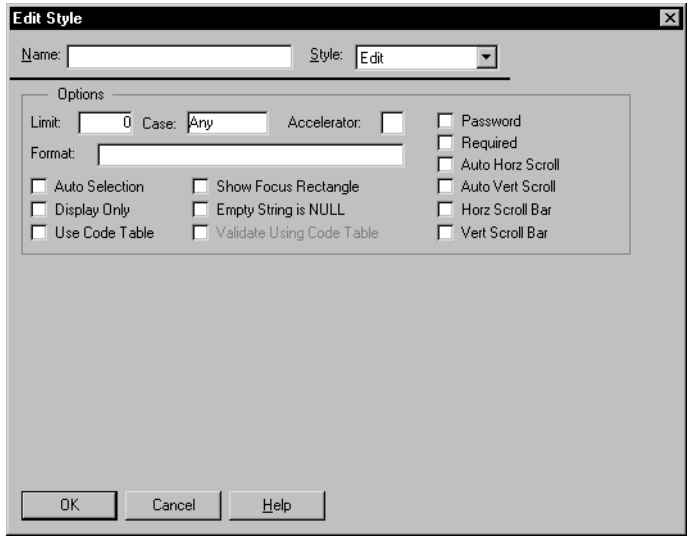
1 **Select** *View>Layouts>(Default)* **from the menu bar.**

2 **Click the** *Extended Attributes* **tab to bring the view to the front.**

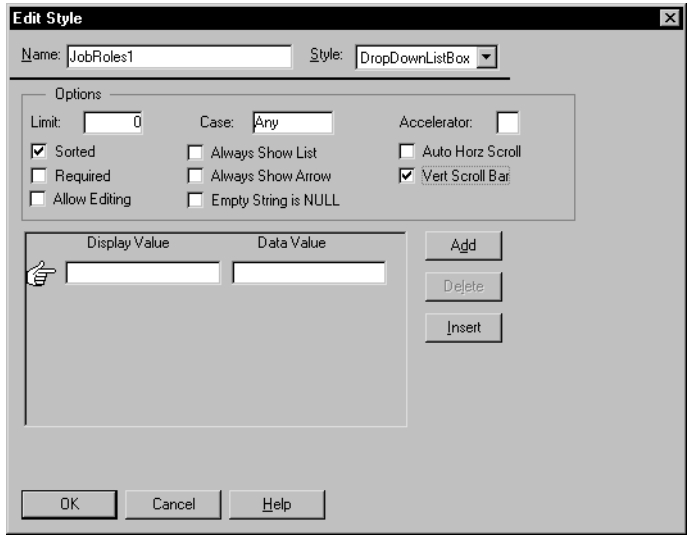
3 **In the Extended Attributes view, display the pop-up menu for** *Edit Styles* **and select** *New***.**



The Edit Style dialog box displays.



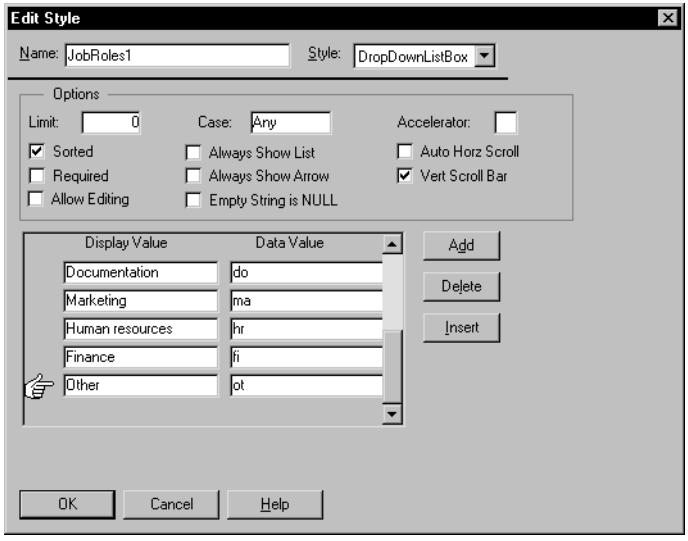
4 Enter the name *JobRoles1***.**
Select *DropDownListBox* **in the** *Style* **box next to** *Name***.**
Check *Sorted* **to alphabetize your entries.**
Check *Vert Scroll Bar* **to display a vertical scroll bar on your list.**



5 **Enter the *Display Values* and *Data Values* shown in the table below. Be sure to use lowercase for the data values. To enter each pair of values, type the values and click the *Add* button. For the last pair of values, do not click *Add*.**

Display Value	Data Value
Sales	sa
Customer support	cs
Product development	pd
Administration	ad
Training	tr
Documentation	do
Marketing	ma
Human resources	hr
Finance	fi
Other	ot

When you finish entering values, the Edit Style dialog box looks like this.



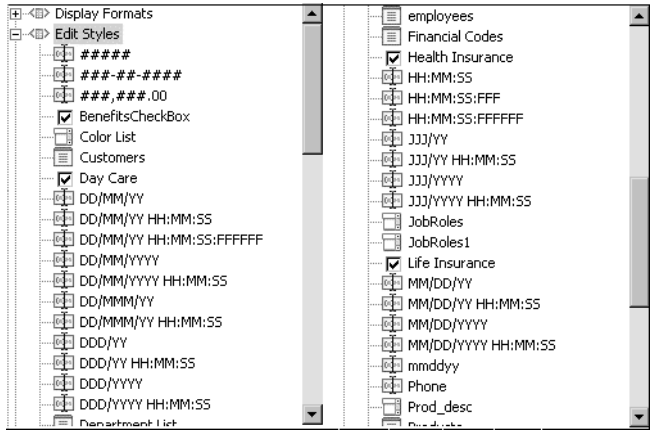
About display values and data values

Display values show in forms and reports. Data values are stored in the database. Display values should be meaningful—such as *Human Resources*. In contrast, data values are often codes that are short—such as *hr*. Short codes conserve space in the database.

6 Click *OK* to accept the definition of the DropDownListBox Edit Style named *JobRoles1*.

InfoMaker adds the JobRoles1 edit style to the extended attribute system tables in the database and lists it as one of the available edit styles in the Extended Attributes view.

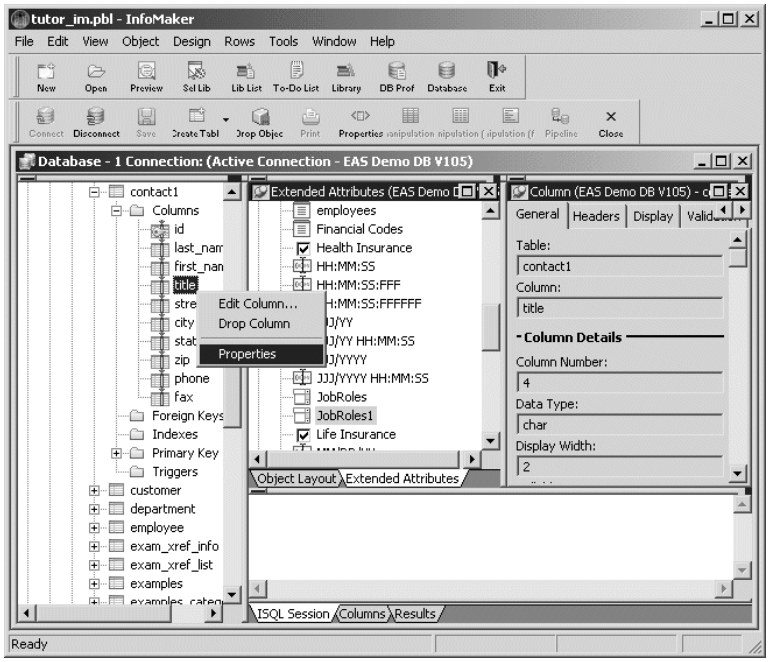
7 Expand the tree view of Edit Styles by clicking the plus (+) sign. Use the scroll bar to scroll down to the JobRoles1 Edit Style.



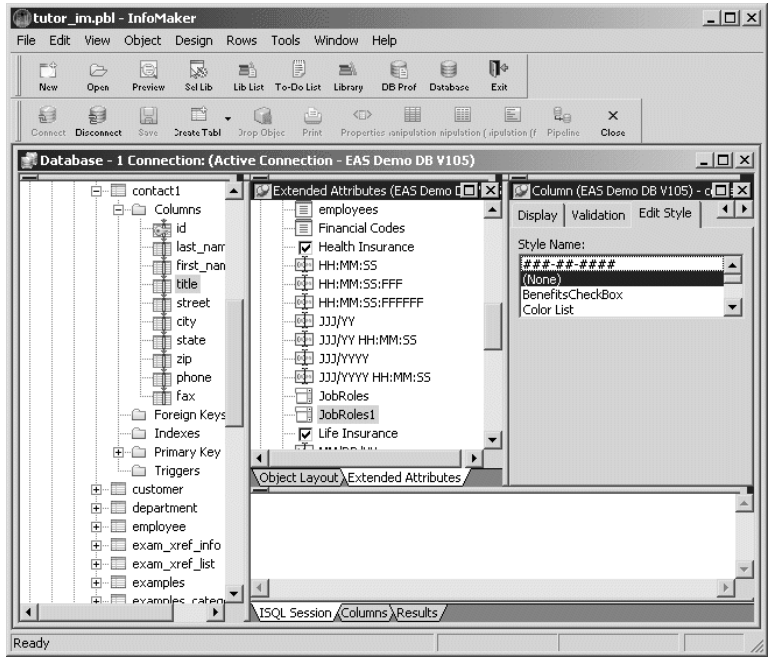
Now that JobRoles1 is defined in the extended attribute system tables, you can use it for any appropriate column in any table in the database. You are going to assign it to the title column in the contact1 table.

8 Expand *EAS Demo DB V105 IM* **in the Objects view to display** *Tables* **and then the Columns in the** *contact1* **table.**
Display the pop-up menu for the *title* **column and select** *Properties***.**

The Object Details view now includes the property sheets for the title column.



9 If the Edit Style tab is not visible, use the arrows in the upper-right corner of the Object Details view to display the Edit Style tab.
Click the *Edit Style* tab to bring it to the front.



10 Scroll the list of edit styles until *JobRoles1* displays.
Click it to apply the edit style *JobRoles1* to the *title* column.
Select *File>Save* from the menu bar.

Change the column header, label, and display width of title

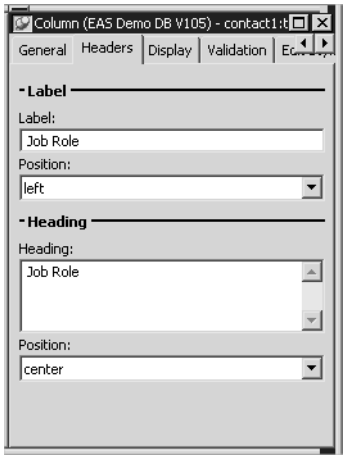
Now you change the label and header text for the title column. The text you supply appears on forms and reports you create.

The column name is title, but the text you want to display is *Job role*. Also, you change the display width to 1.5 inches. The internally stored data value is only two characters, but the values you intend to display are longer.

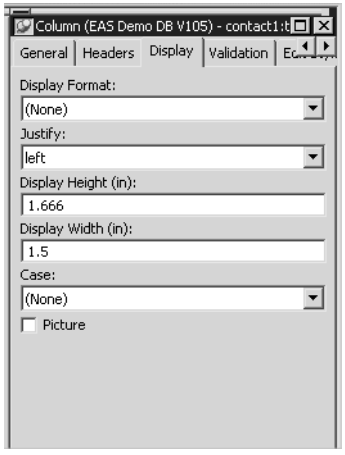
1 The *title* column should still be current (if not, display its pop-up menu and select *Properties*).
Click the *Headers* tab to bring the Headers property page for the title column to the front in the Object Details view.

All the extended attribute information for a column is definable using the various pages in the Object Details view.

2 **Type** *Job Role* **in the** *Label* **box.**
Type *Job Role* **in the** *Heading* **box.**



3 **Click the** *Display* **tab to bring the Display page to the front.**
Type *1.5* **in the** *Display Width* **box.**



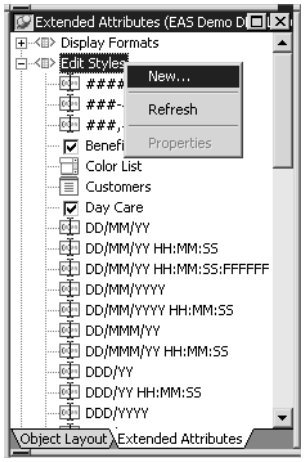
4 **Select** *File>Save* **from the menu bar.**

InfoMaker adds the extended attribute information for the column to the extended attribute system tables.

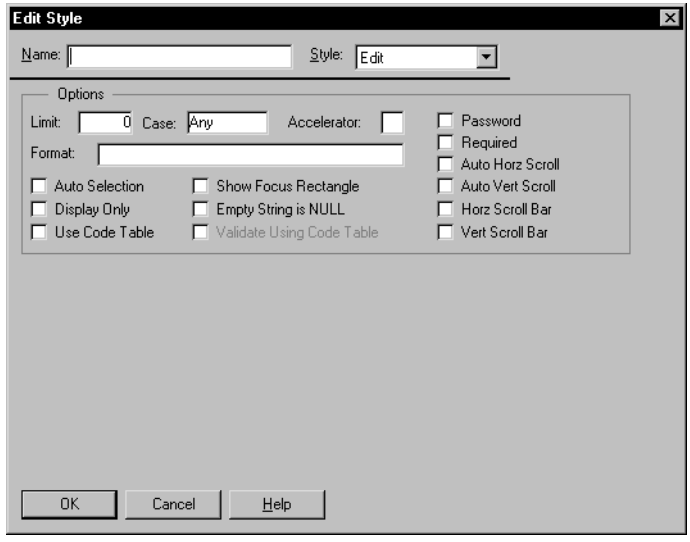
Assign a DropDownDataWindow edit style and initial value to state

For the state column, you assign an edit style that includes all the state names (as well as the provinces of Canada). Then when you enter information into this field, you pick from a list of states. You also set the initial value to MA, since many of your contacts are in Massachusetts.

1 In the Extended Attributes view, display the pop-up menu for *Edit Styles* **and select** *New***.**

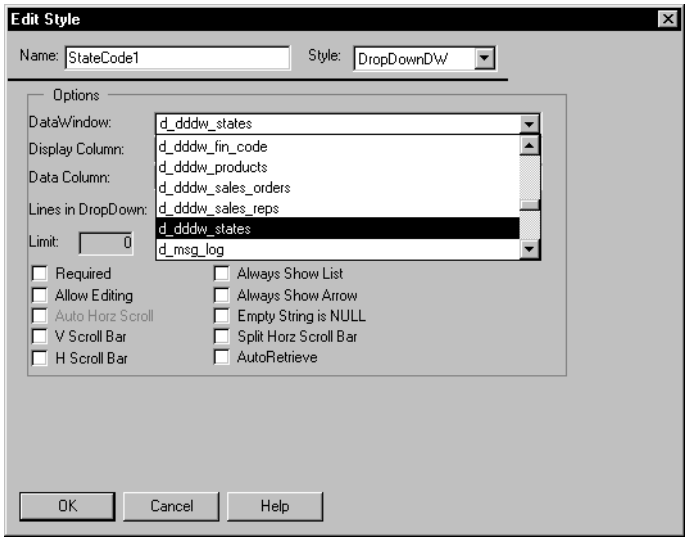


The Edit Style dialog box displays.



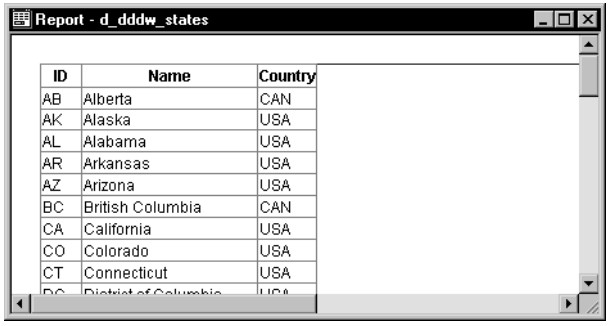
2 **Type** *StateCode1* **in the** *Name* **box.**
Select *DropDownDW* **from the** *Style* **drop-down list.**
Select *d_dddw_states* **from the** *DataWindow* **drop-down list.**

The StateCode1 edit style uses a report (DataWindow) named d_dddw_states. The report gets its values from the state table.



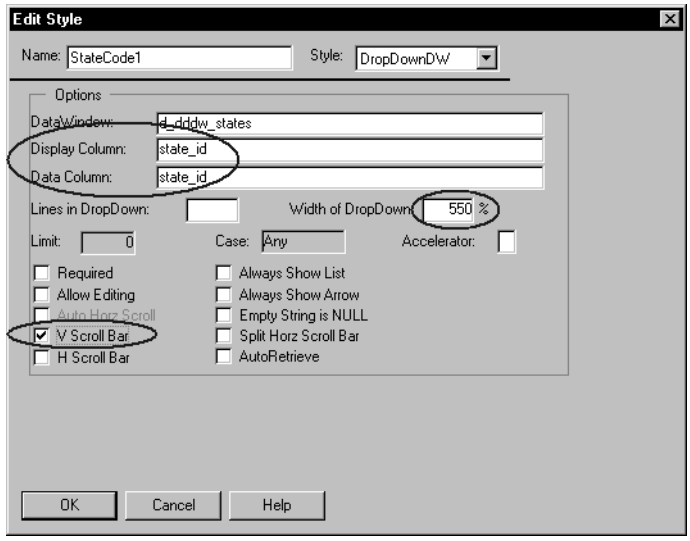
About DropDownDataWindow edit styles
A DropDownDataWindow edit style gets its values from a report that it references. The report gets its values from the database.

This is what the d_dddw_states report looks like.



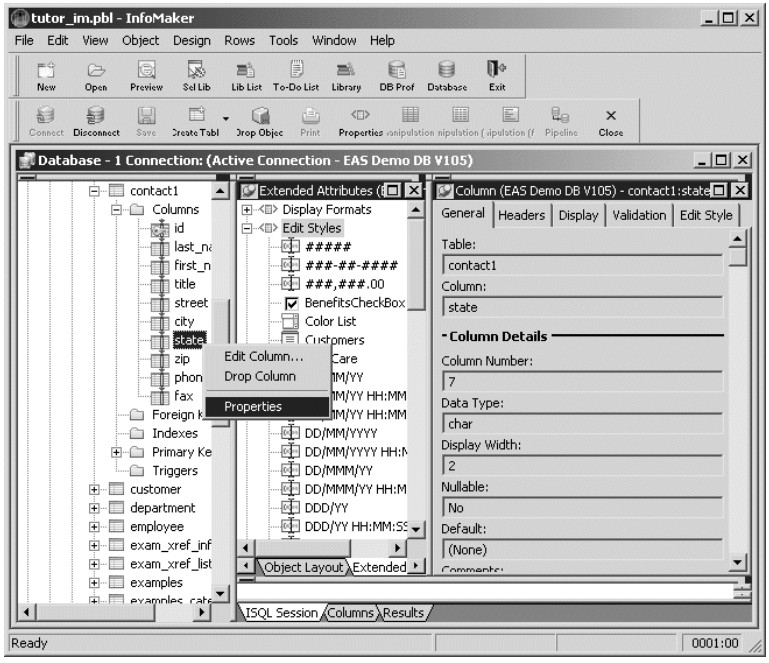
ID	Name	Country
AB	Alberta	CAN
AK	Alaska	USA
AL	Alabama	USA
AR	Arkansas	USA
AZ	Arizona	USA
BC	British Columbia	CAN
CA	California	USA
CO	Colorado	USA
CT	Connecticut	USA

3 **Select** *state_id* **from the list for** *Display Column* **and for** *Data Column*.
Type *550* **for the** *Width of DropDown*.
Select *V Scroll Bar*.
Click *OK* **to accept the definition of the StateCode1 edit style.**

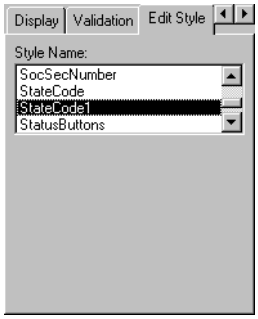


InfoMaker adds the StateCode1 edit style to the extended attribute system tables, where it is available to be assigned to any appropriate column in the database. Now you assign it to the state column in the contact1 table.

4 **Display the pop-up menu for the** *state* **column in the contact1 table and select** *Properties***.**



5 **In the Column Properties view, select the** *Edit Style* **tab. Select** *StateCode1* **for the edit style to assign to the state column. (If the StateCode1 edit style is not listed, select** *View>Reset View***. This refreshes the list of edit styles.)**

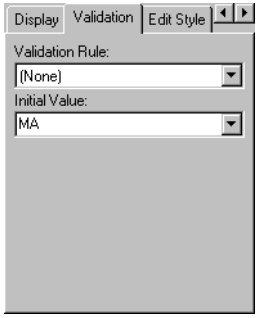


This assigns the StateCode1 edit style (which includes 63 entries—states, territories, and possessions of the United States and provinces of Canada) to the state column in the contact table. The values that this edit style displays and the values that it stores are state postal abbreviations (such as MA for the state of Massachusetts).

6 Select *File>Save* from the menu bar.

7 Click the *Validation* tab.
Make sure the Validation Rule setting is *(None)*.
Type *MA* in the *Initial Value* box.

This assigns an initial value of MA to the state column.



The Validation page lets you create and assign a validation rule to a column and enter an initial value for the column.

You are not going to assign a validation rule. You have handled validation by forcing the user to select from exactly 63 valid values presented in the States drop-down DataWindow.

About column validation rules
You can use column validation rules to express requirements for entries in a column. For example, you could define a rule for a salary column that requires salaries to be greater than $15,000 and less than $100,000.

When you assign a column validation rule to a column, no one can enter a value that breaks the rule.

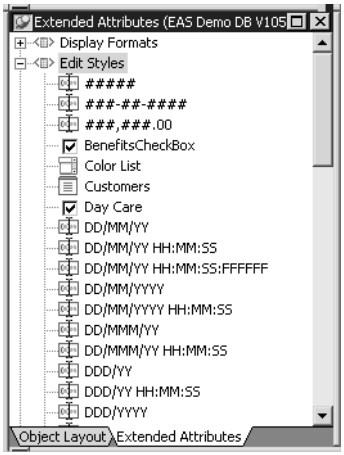
8 Select *File>Save* from the menu bar.

InfoMaker saves the extended attributes you just defined for the state column in the extended attribute system tables.

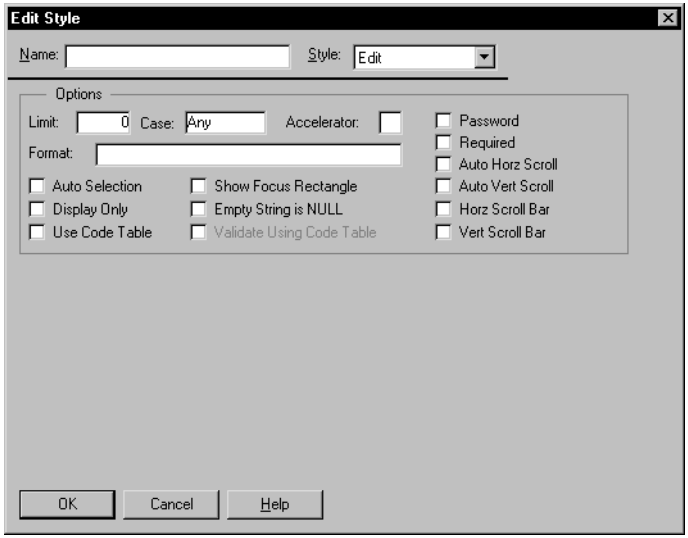
Define an Edit Mask edit style for phone and fax

Now you define an Edit Mask edit style to display phone and fax numbers for both viewing and editing.

1 **In the Extended Attributes view, display the pop-up menu for** *Edit Styles* **and select** *New***.**

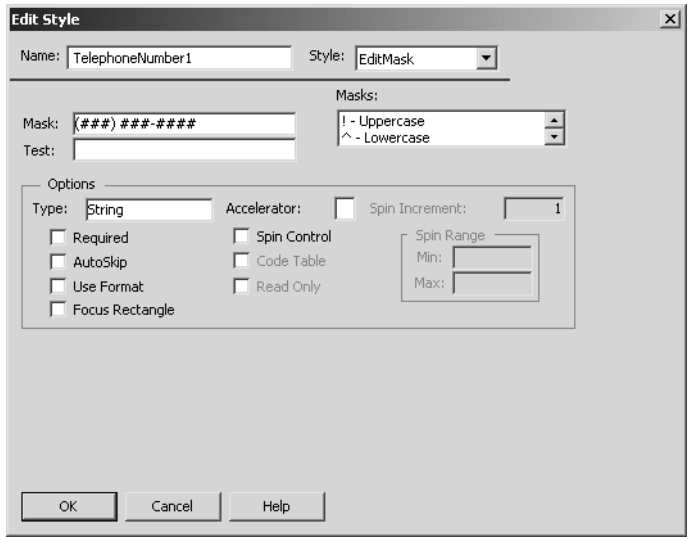


The Edit Style dialog box displays.

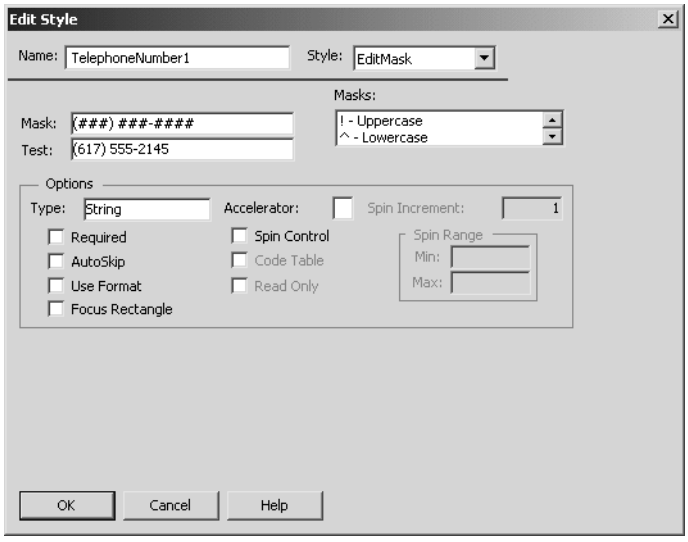


2 **Type** *TelephoneNumber1* **in the** *Name* **box.**
Select *EditMask* **in the** *Style* **drop-down list.**
Delete xxx and type *(###) ###-####* **in the** *Mask* **box.**

This specifies the edit mask. Now you can test it to make sure it is what you want.



3 Press Tab.
Type *6175552145* **in the** *Test* **box.**



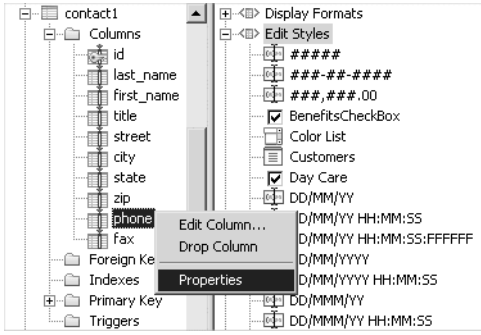
The pound signs (#) in the Mask box are placeholders for numbers. Only numbers 0 through 9 can be entered in each of these positions. Parentheses, the hyphen, and the space are where you want them to display. When you type a telephone number in the Test box, you can see the effects of the edit mask.

4 Click *OK* **to accept the definition of the Edit Mask edit style named** *TelephoneNumber1***.**

InfoMaker adds the TelephoneNumber1 edit style to the extended attribute system tables in the database and lists it as one of the available edit styles in the Extended Attributes view.

5 Select *File>Save* **from the menubar.**

6 Display the pop-up menu for the *phone* column and select *Properties*.



7 In the Object Details view, click the *Edit Style* tab, then scroll the list and select the *TelephoneNumber1* edit style.

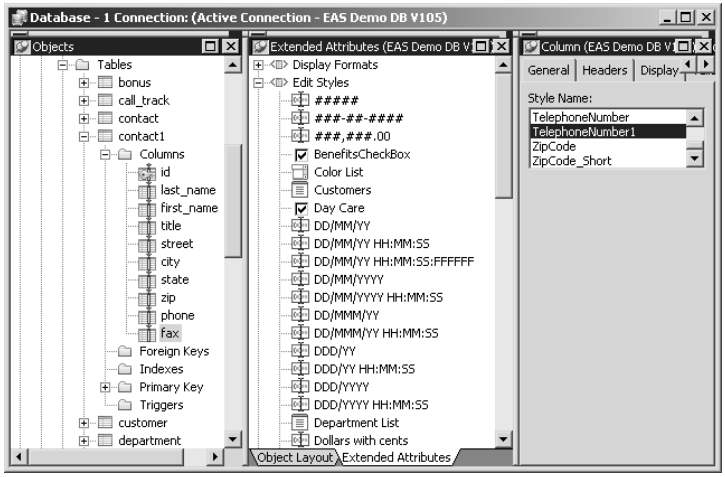
This assigns the TelephoneNumber1 edit style to the phone column. Now you use the same edit style with the fax column. Once you have created an edit style, it is available for any column.

8 Display the pop-up menu for the *fax* column and select *Properties*.

InfoMaker prompts you to save the changes you just made in assigning the TelephoneNumber1 edit style to the phone column.

9 Select *Yes*.

10 **In the Object Details view for the fax column, select the** *Edit Style* **tab and the** *TelephoneNumber1* **edit style.**
Select *File>Save* **from the menu bar.**



Now you have finished extending the definitions of your columns. Next you add data to the table.

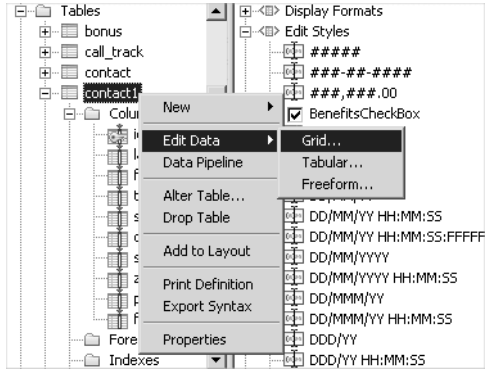
Add data to the table

Where you are
Create the database table
Define extended attribute information
> Add data to the table

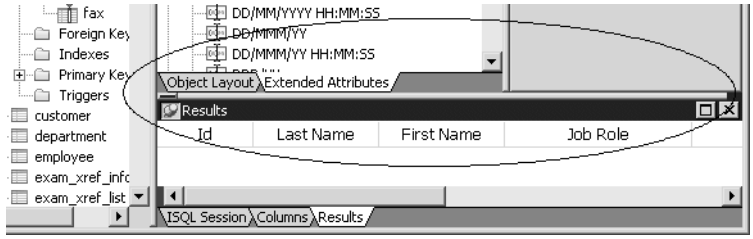
To add data to your table, you import a text file of tab-separated values. Importing the file quickly adds 60 rows of data.

Typically you create a form to add data to the database. In the form tutorial you saw how to add data using a form.

1 Display the pop-up menu for *contact1* **and select** *Edit Data>Grid*.



The Results view shows column headers but no data. This view lets you view, add, modify, and delete data.

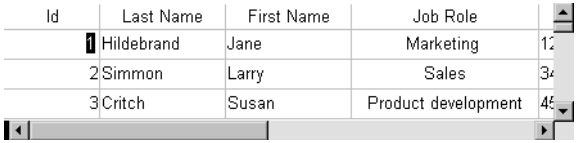


2 Select *Rows>Import* **from the menu bar.**

The Select Import File dialog box displays. You might need to change to the Tutorial folder, which contains the file you use.

3 If necessary, change to the *Tutorial* folder.
Double-click the *contact.txt* file.

InfoMaker imports the data into the Results view (the data is not yet in the database).



Id	Last Name	First Name	Job Role	
1	Hildebrand	Jane	Marketing	12
2	Simmon	Larry	Sales	34
3	Critch	Susan	Product development	45

4 Select *Rows>Update* from the menu bar.

This adds 60 rows of data to the database. To be sure that the data is in the database, you retrieve it from the database.

5 Select *Rows>Retrieve* from the menu bar.

InfoMaker retrieves all the contact data from the database and displays the data in the Results view.

6 Select *File>Close* from the menu bar.

This closes the Database painter.

You have created a new database table, complete with extended attribute information and data.

LESSON 5

Query Tutorial

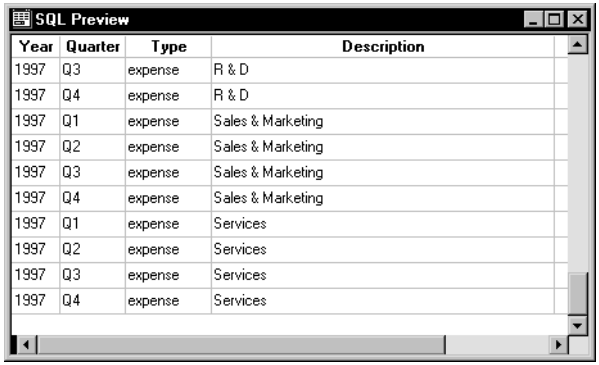
A query is a SQL SELECT statement created with the Query painter and saved with a name so that it can be used repeatedly to define data requirements. A SQL SELECT statement is the way you tell the DBMS exactly which rows and columns to retrieve.

Queries save time because you can use them to define all your data retrieval needs. For example, you can specify the columns and rows to select, as well as the sorting requirements. Then you specify the query as the data source whenever you create forms and reports that use the data the query is intended to retrieve.

How long does this tutorial take?
About 15 minutes.

About the query

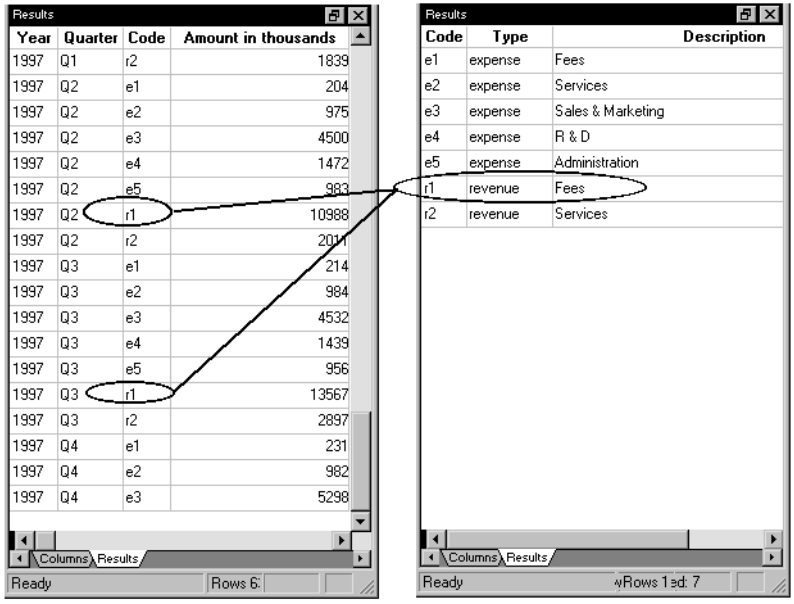
The query you create retrieves financial data. When you have finished, the query returns data from the database that is similar to this.



Year	Quarter	Type	Description
1997	Q3	expense	R & D
1997	Q4	expense	R & D
1997	Q1	expense	Sales & Marketing
1997	Q2	expense	Sales & Marketing
1997	Q3	expense	Sales & Marketing
1997	Q4	expense	Sales & Marketing
1997	Q1	expense	Services
1997	Q2	expense	Services
1997	Q3	expense	Services
1997	Q4	expense	Services

The financial data is stored in two tables: the fin_data and fin_code tables.

The following illustration shows the two tables with some data. The code value in the fin_data table gets its meaning from the fin_code table.

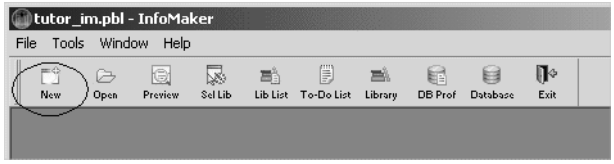


For example, the *r1* circled in the fin_data table means the row reports a revenue amount for fees.

Select columns

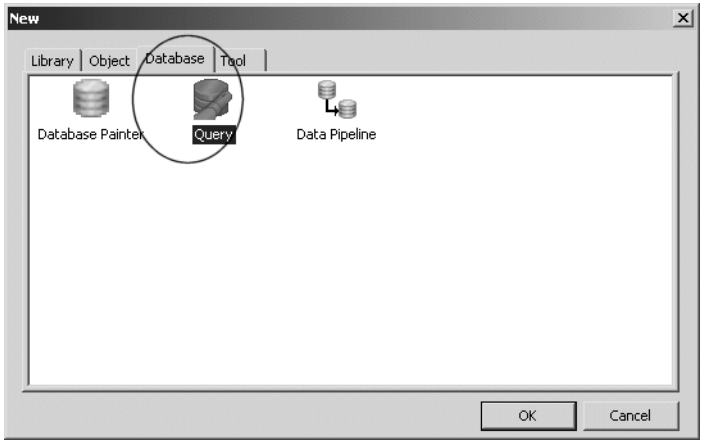
Where you are
> Select columns
Save the query
Specify row selection criteria
Specify sorting for the rows
Create a report using the query

1 Click the *New* button in the PowerBar.

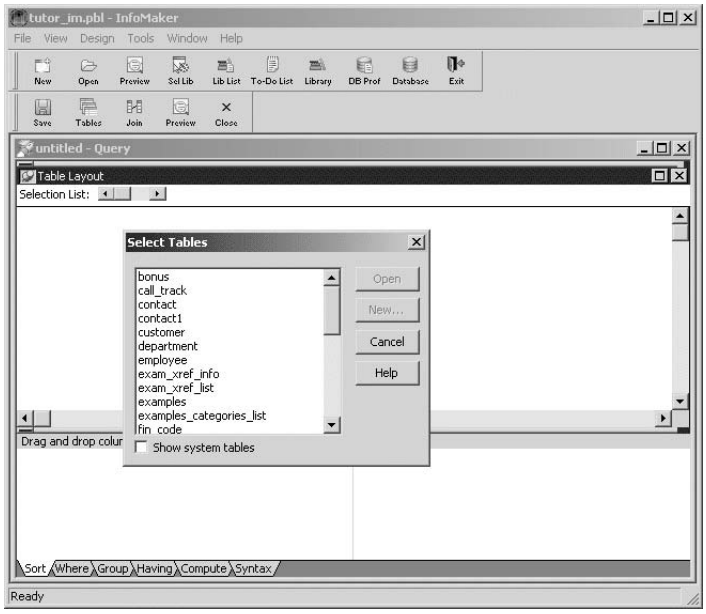


The New dialog box displays.

2 Select the *Database tab* and the *Query* icon.
Click *OK*.

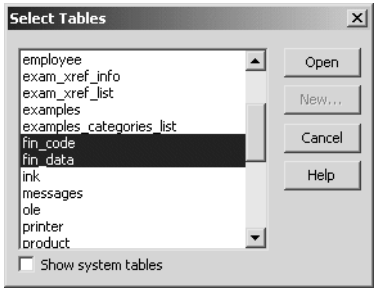


InfoMaker connects to the database, and the Select Tables dialog box displays. In this dialog box you can select one or more tables to use.



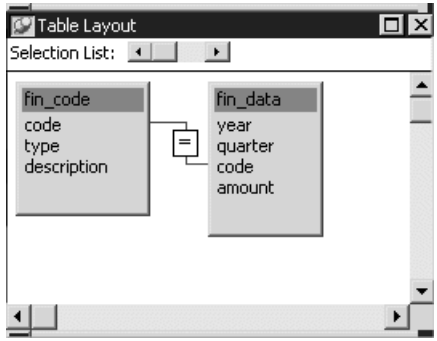
You are going to use two of the tables.

3 Click the tables named *fin_code* and *fin_data*.



4 Click *Open***.**

The fin_code and fin_data tables display. Both tables have a code column. The tables are joined on the code column.



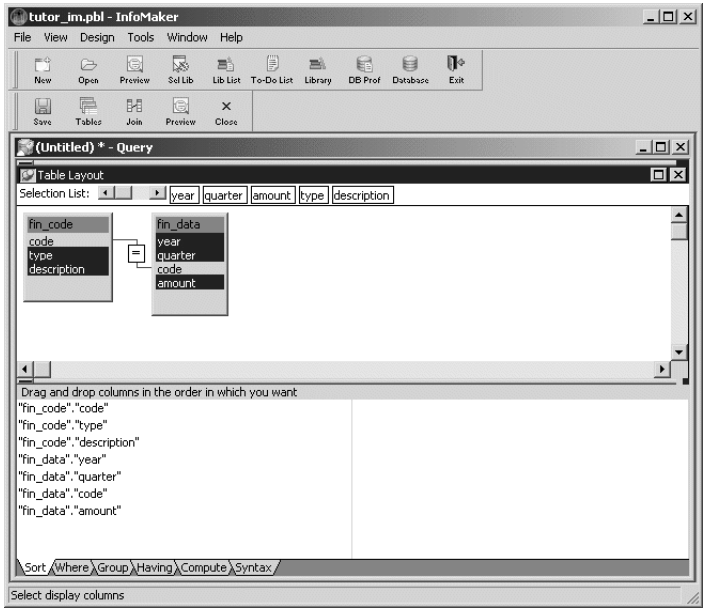
The fin_data table has a code value in each row to indicate what the row of data applies to (for example, *r1* means revenue from fees).

The fin_code table stores information about codes, including the actual values (such as *r1* and *e4*), the type of each code (revenue or expense), and a description of each code.

Next you select columns from the tables.

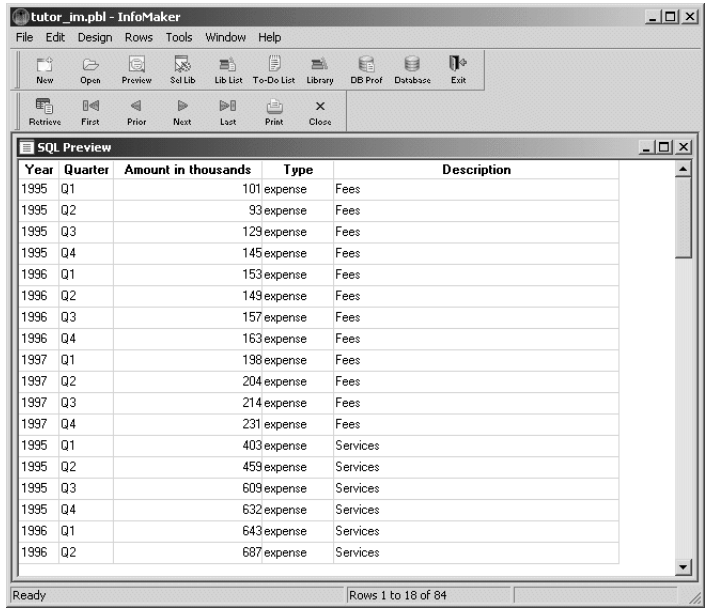
5 **Click** *year* **in the** *fin_data* **table.**
Click *quarter* **in the** *fin_data* **table.**
Click *amount* **in the** *fin_data* **table.**
Click *type* **in the** *fin_code* **table.**
Click *description* **in the** *fin_code* **table.**

When you click each column, it is highlighted in the table and added to the selection list above the tables.



6 Select *Design>Preview* from the menu bar.

You can see the results of your query. InfoMaker uses your query as it is currently defined to access the database and retrieve data.



7 Use the scroll bar to view the data.

Each row has either the word *expense* or the word *revenue* in the Type column. First you save the query and then you use the value in the Type column to select rows for the query.

8 Select *File>Close* from the menu bar.

You return to the workspace.

Save the query

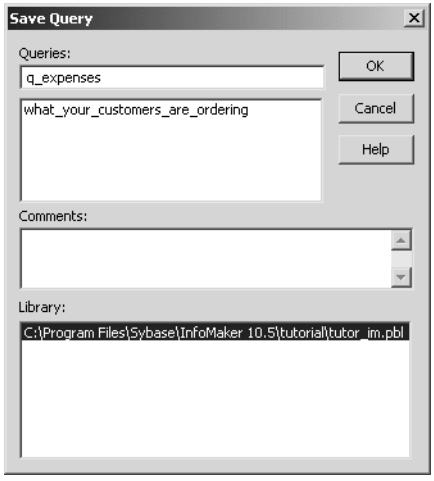
Where you are
Select columns
> Save the query
Specify row selection criteria
Specify sorting for the rows
Create a report using the query

Now you save the query and give it a name.

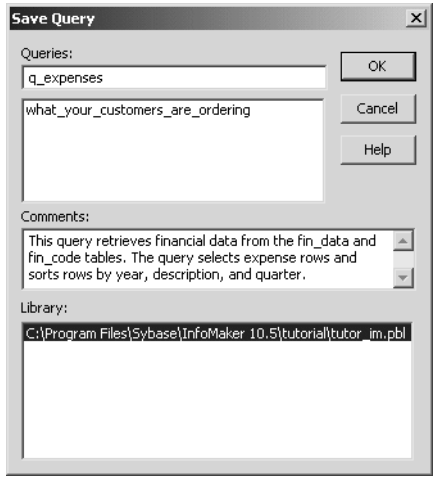
1 Make sure you are back in the workspace.
Select *File>Save* **from the menu bar.**

The Save Query dialog box displays with the pointer positioned for you to type a name for the query.

2 Type *q_expenses*.



3 **Click in the** *Comments* **box and type** *This query retrieves financial data from the fin_data and fin_code tables. The query selects expense rows and sorts rows by year, description, and quarter.*



4 **Press OK.**

InfoMaker saves your query.

Specify row selection criteria

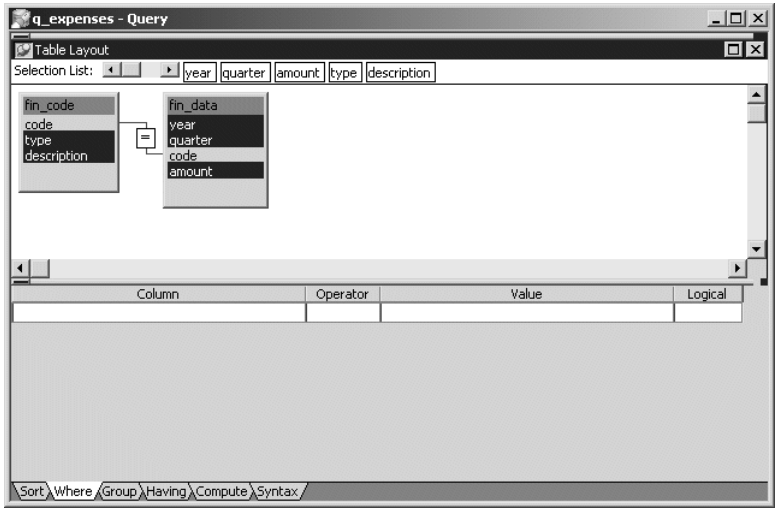
Where you are
Select columns
Save the query
> Specify row selection criteria
Specify sorting for the rows
Create a report using the query

Now you select the rows to include in the query. To do this you specify selection criteria.

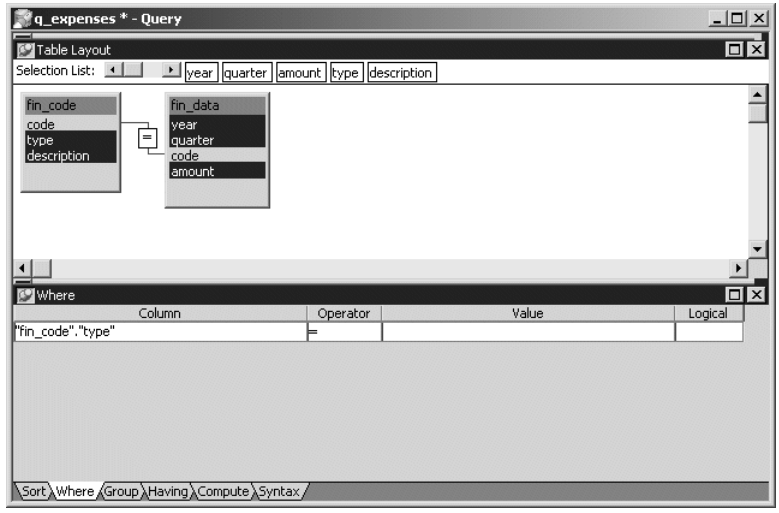
The query you are creating is for expenses, so the rows you need are those whose type is expense. You do not need the rows whose type is revenue.

1 Click the *Where* tab at the bottom of the workspace if it is not in front.

The Where tab comes to the front. In the Where tab you specify selection criteria for retrieving rows.

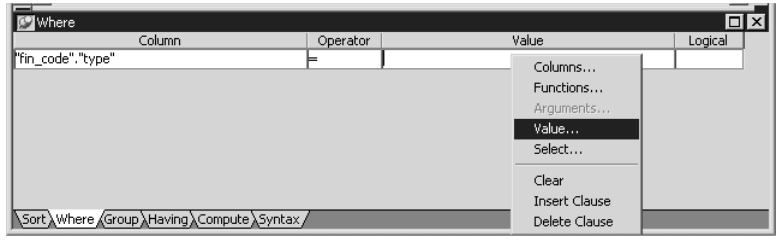


2 **Click the first space under** *Column* **and then click the arrow to display a list of columns.**
Click the column named *"fin_code"."type"* **in the list of columns.**



The equal sign (=) displays by default in the Operator box. This is what you want.

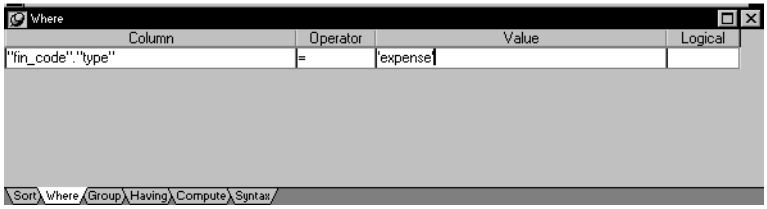
3 **Move the pointer over the** *Value* **box.**
Press the right mouse button to display the pop-up menu.
Select *Value*.



When you select Value, InfoMaker lists the values in the "fin_code"."type" column, which are *expense* and *revenue*.

4 Select *expense* and click the *Paste* button.

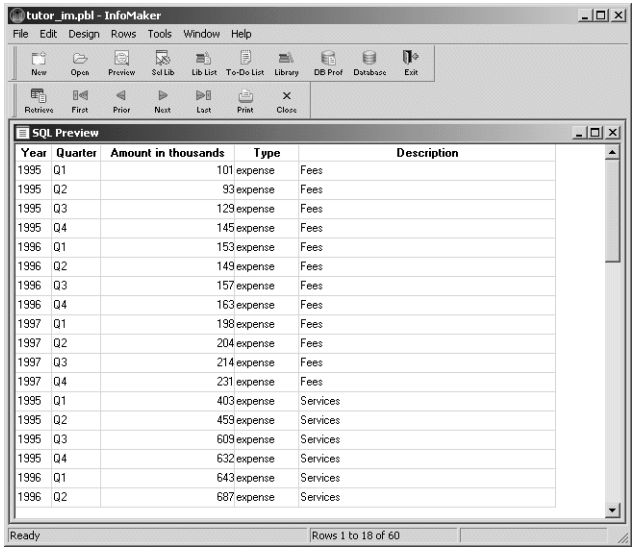
The selection criteria are complete. Notice that the value *expense* is surrounded with single quotes. These are required. If you type the value here rather than choosing it, you need to type the single quotes.



Notice that the Logical box displays at the end of the line. This box is for choosing a logical connector such as AND so you can specify more than one selection requirement. You do not need to use this box for this query.

5 Select *Design>Preview* from the menu bar.
Use the scroll bar to view the data.

Now all rows have expense in the Type column. Rows with revenue in the Type column are not retrieved.



6 Select *File>Close* from the menu bar.

You return to the workspace.

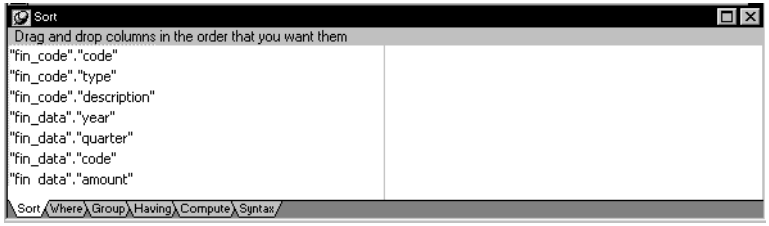
Specify sorting for the rows

Where you are
Select columns
Save the query
Specify row selection criteria
> Specify sorting for the rows
Create a report using the query

Now you specify sorting for the rows. When you specify sorting, you also enable grouping. Before you can define a group, the rows have to be sorted so that the data can be grouped.

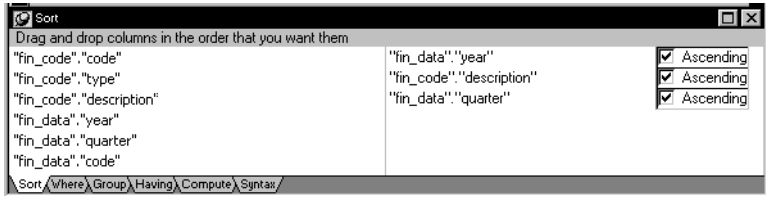
1 Click the *Sort* tab at the bottom of the workspace.

The Sort tab comes to the front. In the Sort tab, you specify one or more columns to use for sorting the rows.



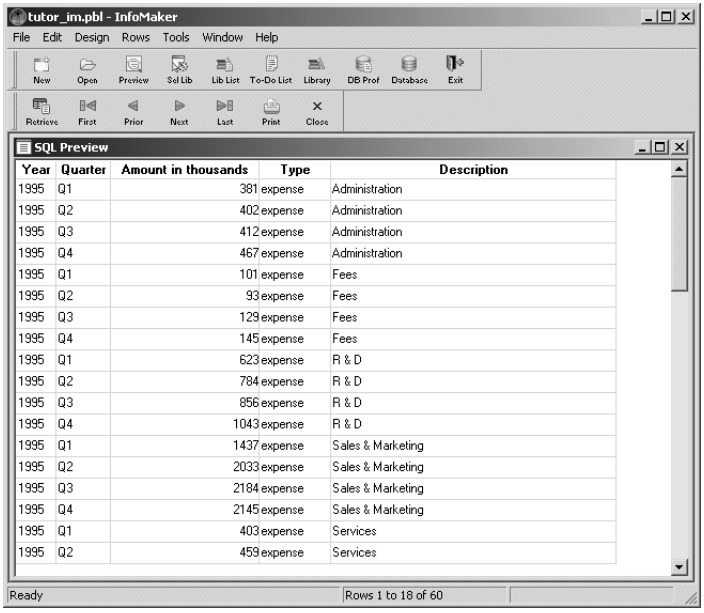
2 Scroll the list as needed to drag and drop column names.
Drag and drop *"fin_data"."year"* from the left box to the right box.
Drag and drop *"fin_code"."description"* from the left box to the right box.
Drag and drop *"fin_data"."quarter"* from the left box to the right box.

In all cases Ascending is what you want. Ascending means years and quarters are ordered by increasing values and descriptions are alphabetized from A to Z.



3 Select *Design>Preview* **from the menu bar.**
Use the scroll bar to view the data.

First the rows are sorted by year. All the 1995 information is first. Then they are sorted by description so that expenses of the same category are together. Finally the rows are sorted by quarter so that the data is always time-sequenced.



4 Select *File>Close* **from the menu bar.**

You return to the workspace.

5 Select *File>Close* **from the menu bar.**
If prompted to save changes, click *Yes***.**

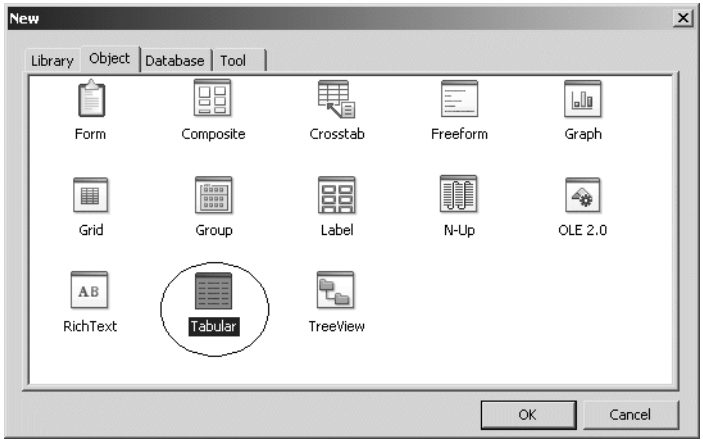
The Query painter closes.

Create a report using the query

Where you are
Select columns
Save the query
Specify row selection criteria
Specify sorting for the rows
> Create a report using the query

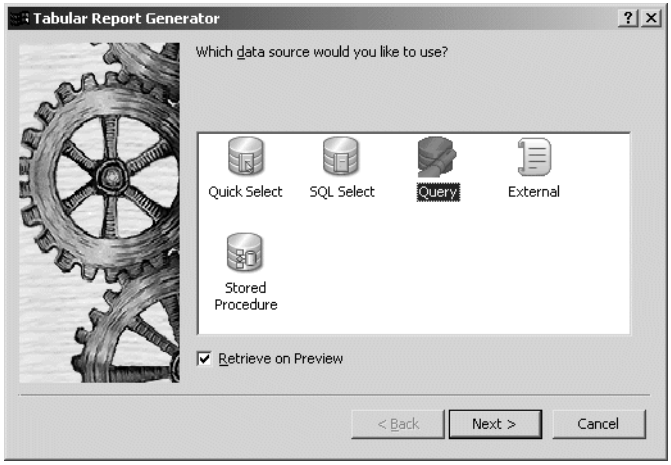
Now you use the query to create a new report.

1 Click the *New* button in the PowerBar.
Select the *Object* tab.
Select the *Tabular* presentation style.
Click *OK*.



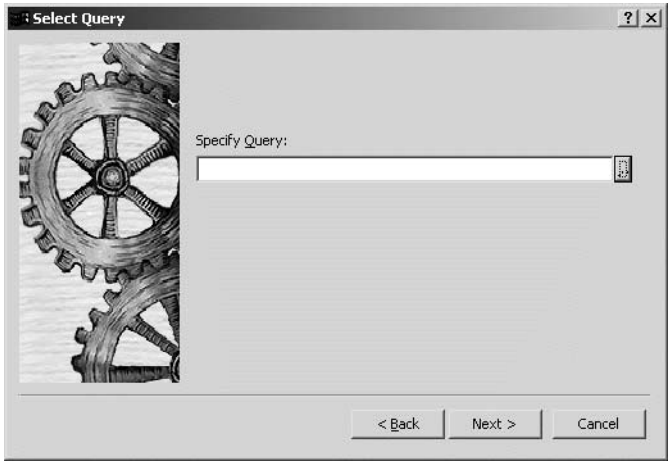
The wizard for creating tabular reports displays.

2 **Select the *Query* data source.**
Make sure the *Retrieve on Preview* check box is selected and click *Next*.

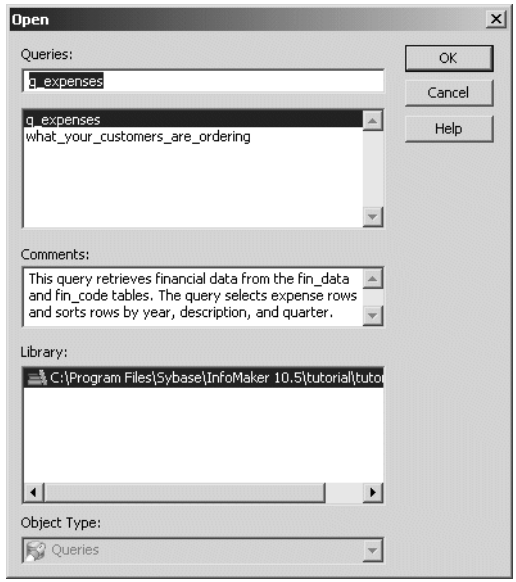


The Select Query dialog box displays. In this dialog box you specify the query to use. You are going to use the query you just created as the data source.

3 **Click the button to the right of the Specify Query box.**

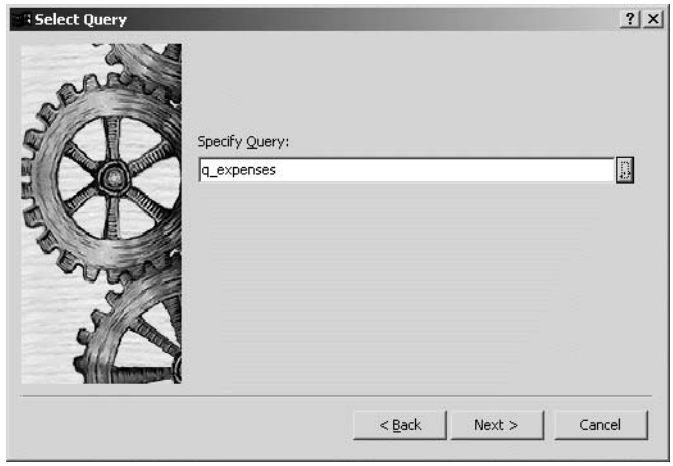


The Open dialog box displays.



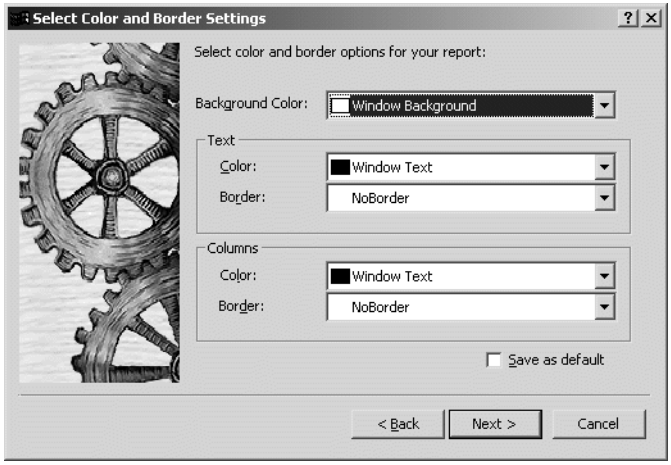
4 Click *q_expenses* and click *OK*.

The query q_expenses displays in the Specify Query box.



5 Click *Next***.**

The Select Color and Border Setting dialog box displays. You are going to accept the defaults.

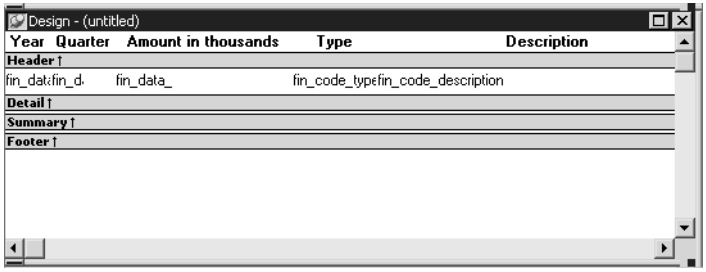


6 Click *Next***.**

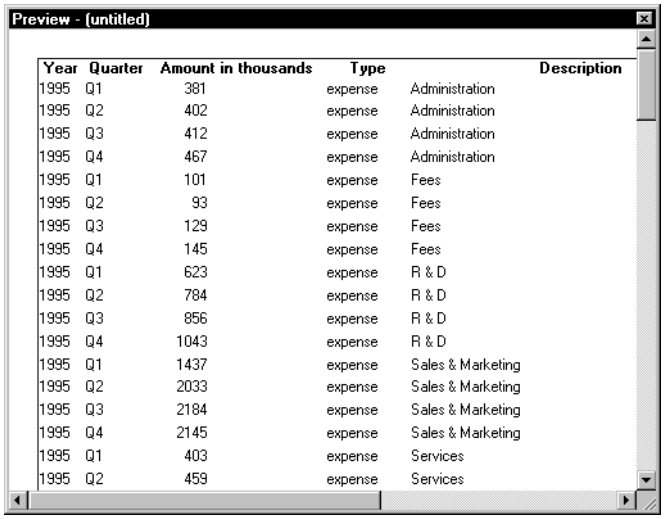
A dialog box summarizing all your specifications displays.

7 Look over your specifications and then click *Finish***.**

Your report displays in the Report painter. This is the Design view.



InfoMaker uses the query you created to retrieve data from the database. Because the query includes selection criteria and sorting requirements, the database returns only the data you selected, in the sort order you specified. Here is the report in the Preview view.

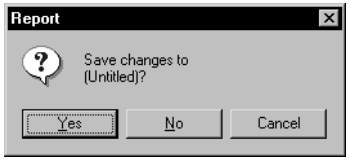


Year	Quarter	Amount in thousands	Type		Description
1995	Q1	381	expense	Administration	
1995	Q2	402	expense	Administration	
1995	Q3	412	expense	Administration	
1995	Q4	467	expense	Administration	
1995	Q1	101	expense	Fees	
1995	Q2	93	expense	Fees	
1995	Q3	129	expense	Fees	
1995	Q4	145	expense	Fees	
1995	Q1	623	expense	R & D	
1995	Q2	784	expense	R & D	
1995	Q3	856	expense	R & D	
1995	Q4	1043	expense	R & D	
1995	Q1	1437	expense	Sales & Marketing	
1995	Q2	2033	expense	Sales & Marketing	
1995	Q3	2184	expense	Sales & Marketing	
1995	Q4	2145	expense	Sales & Marketing	
1995	Q1	403	expense	Services	
1995	Q2	459	expense	Services	

At this point you could continue designing and improving your report, but for this tutorial, you leave the Report painter now. You do not save the report.

8 Select *File>Close* from the menu bar.

This Message Box displays to see if you want to save your report.



9 Click *No*.

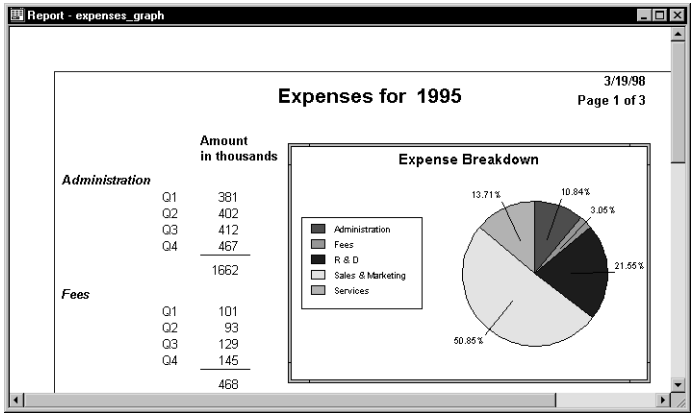
The Report painter closes.

LESSON 6

Graph Tutorial

Graphs present data in a visual way so that you can interpret it more easily. You can use graphs to supplement the numbers in a report or you can replace numbers with a graph. InfoMaker provides a variety of graph styles and options.

The graph you create in this tutorial uses financial data (the same data as the Query tutorial). You start with a report that is already created and add a graph to the report. When you have finished, the report and the graph look like this:



How long does this tutorial take?
About 30 minutes.

Open the report to contain the graph

Where you are
> Open the report to contain the graph
Create the basic graph
Save the graph (report)
Enhance the graph
Print the graph (report)

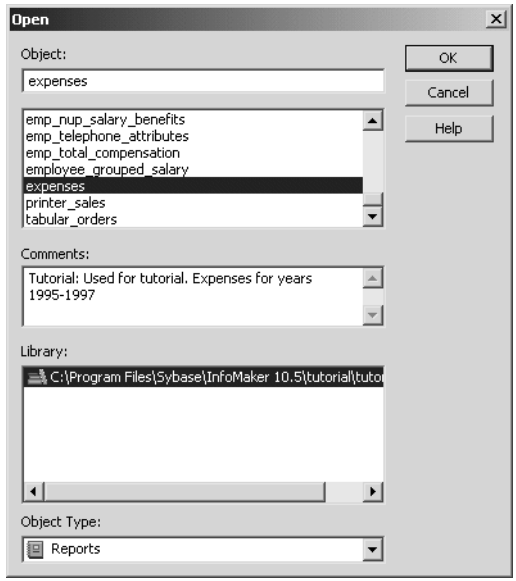
First you open a report that has been created for you. This report provides the data for your graph.

1 Click the *Open* button in the PowerBar.

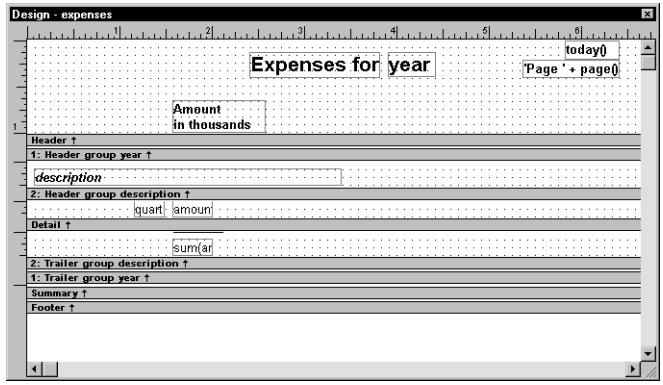
The Open dialog box displays. It lists objects in the current library (*tutor_im*). You will be using the report named expenses.

2 Select the *Reports* object type at the bottom of the dialog box. Click *expenses* (scroll the list).

Click *OK*.

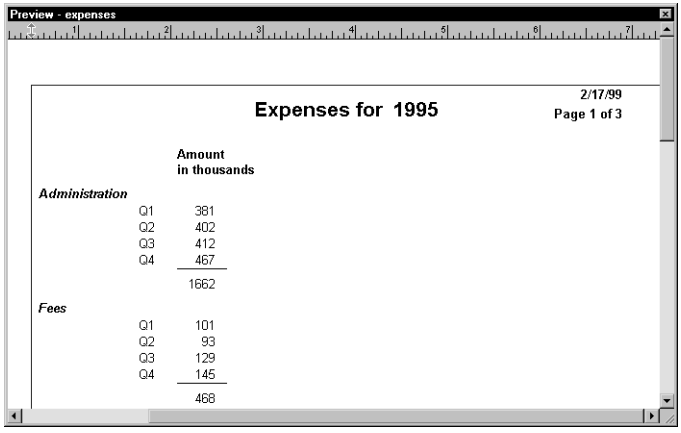


The report displays in the Report painter. Here is the Design view.



3 Look at the Preview view.

InfoMaker retrieves information from the database and displays as much as fits on the screen.



4 Use the scroll bar on the right edge of the report to see more data.

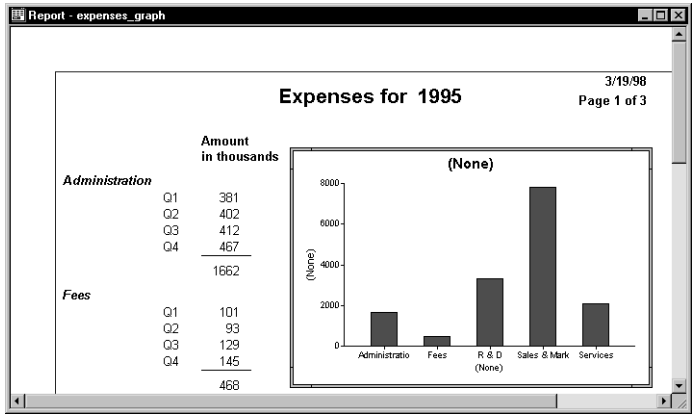
The entire report consists of three pages: one for 1995, one for 1996, and one for 1997.

Create the basic graph

Where you are
Open the report to contain the graph
> Create the basic graph
Save the graph (report)
Enhance the graph
Print the graph (report)

The report you are working with has three pages, one for each of three years. The graph you create will be on all three pages. Its format will look the same from page to page, but the data will be for the correct year for each page.

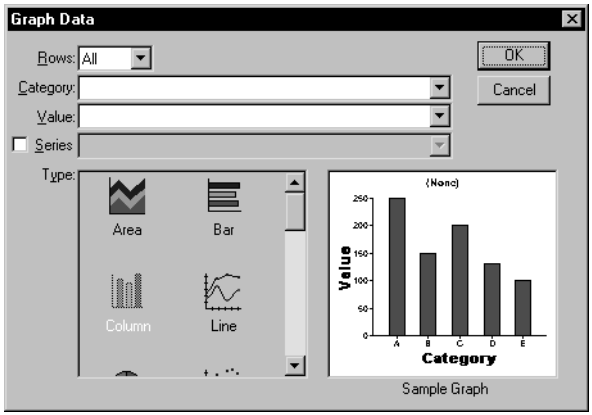
This is what a graph for 1995 looks like. It shows the year's expenses in five categories.



1 Select *Insert>Control>Graph* **from the menu bar.**

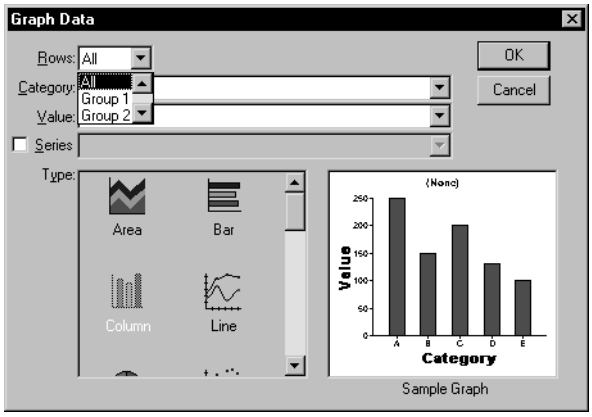
Click in the middle of the Design view.

The Graph Data dialog box displays.



2 Click the down arrow on the *Rows* box.

The drop-down list shows choices for rows.



The All option includes all rows in the graph. Since you want to have the appropriate graph for each of three years, you do not want to include all rows in the graph at the same time.

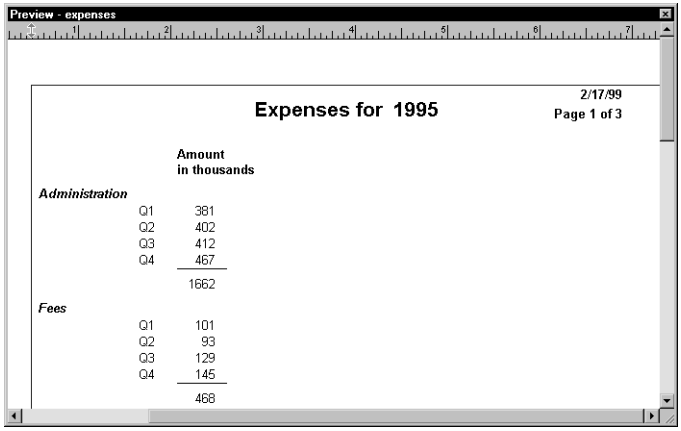
The Group 1 option includes the rows for the current Group 1. Group 1 for this report is grouping by year, so Group 1 is what you want. When you specify Group 1, you ensure that the graph includes only rows from the current year.

3 Select *Group 1***.**

Next you fill in the Category and Value boxes. The graph will show expenses for the year by type of expense. (For this graph you do not need to fill in the Series box.)

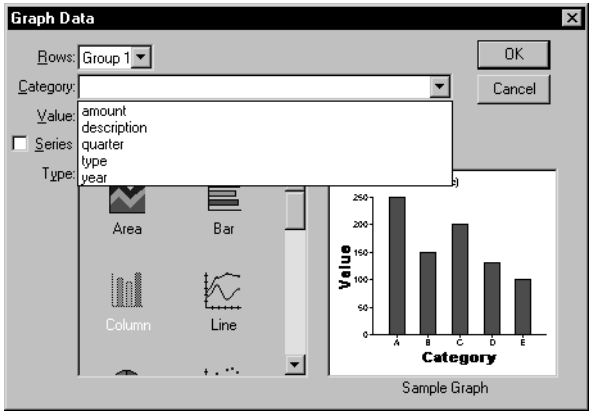
The description column provides the categories (Administration, Fees, R&D, Sales & Marketing, Services).

The sum of the amounts for the four quarters for each category provides the values.



4 Click the down arrow next to the *Category* **box.**

A drop-down list displays the columns you can choose to supply the categories to use in the graph. (You can think of categories as X values.)

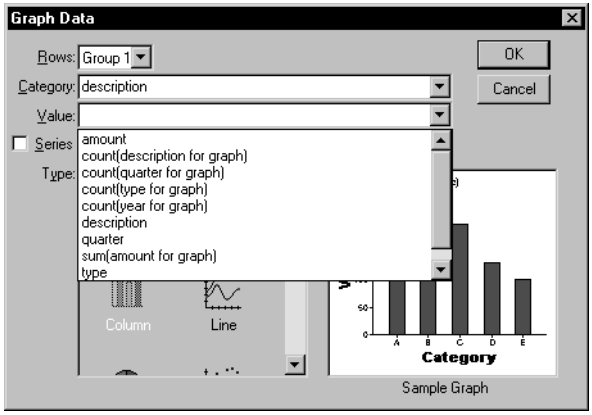


5 Select *description***.**

This specifies that the values in the description column are the categories.

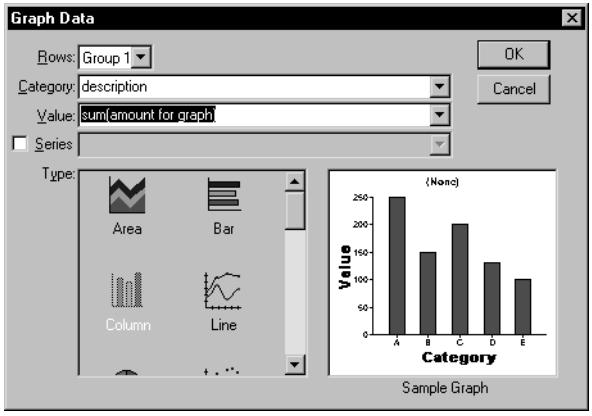
6 Click the down arrow next to the *Value* **box.**

A drop-down list displays all the choices for the column to supply the values to use in the graph. Notice that the choices include expressions such as counts and sums.



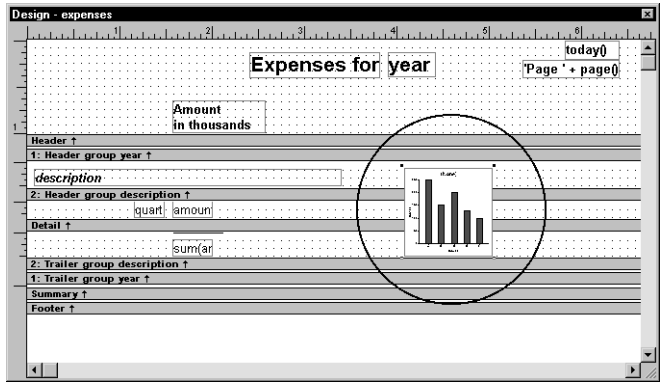
7 Select *sum(amount for graph)***.**

This specifies that the sum of the amount column is the value. A separate value is calculated for each category within each year.



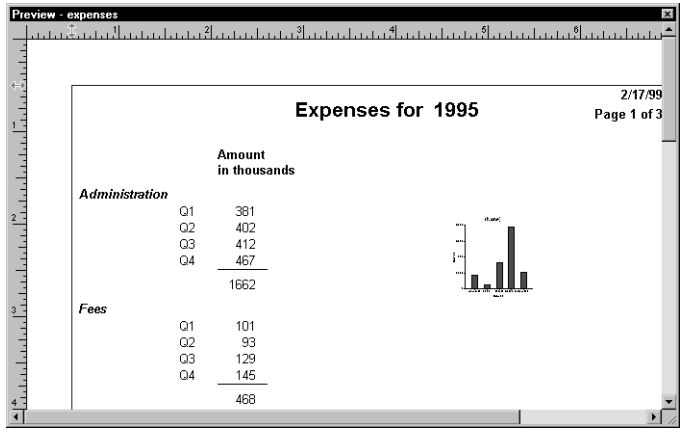
8 Click *OK***.**

The graph displays in the report. What you see in the Design view is a representation of the graph. To see what it looks like in the report, you need to look at it in the Preview view.



9 Look at the graph in the Preview view.

In the Preview view, InfoMaker displays the data retrieved from the database both in the report and in the graph. The graph is small right now. In a few minutes, you will resize it.



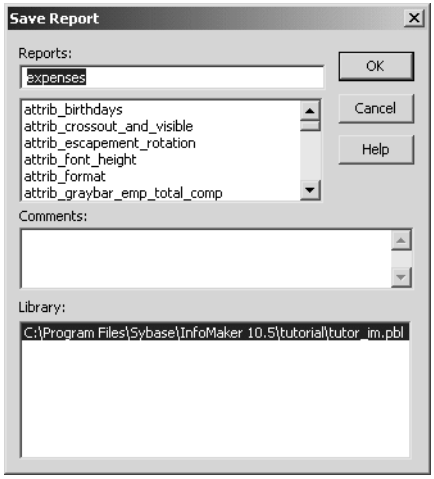
Save the graph (report)

Where you are
Open the report to contain the graph
Create the basic graph
> Save the graph (report)
Enhance the graph
Print the graph (report)

Now you save the graph. The graph is part of the report, so to save the graph, you save the report that contains it. To leave the original report unchanged, you will use the Save As command. Save As saves a new report with the name you supply.

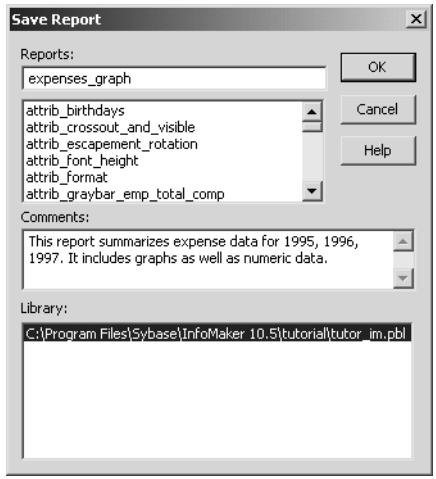
1 Select *File>Save As* **from the menu bar.**

The Save Report dialog box displays; the name of the report you opened earlier is highlighted.



2 Type *expenses_graph*.

3 **Click in the** *Comments* **box and type** *This report summarizes expense data for 1995, 1996, 1997. It includes graphs as well as numeric data.*



4 **Press Enter.**

InfoMaker saves your report, including the graph.

Enhance the graph

Where you are
Open the report to contain the graph
Create the basic graph
Save the graph (report)
> Enhance the graph
Print the graph (report)

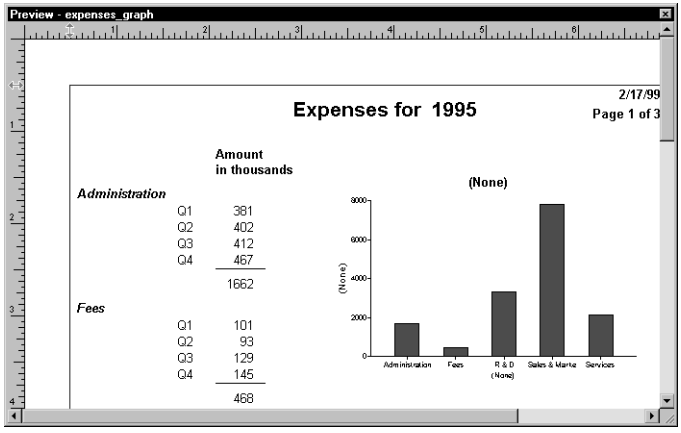
To enhance the graph, you:

- Resize and reposition it
- Add a title
- Change graph types

Resize and reposition the graph

Usually you work in the Design view when enhancing a report or graph, but to resize and reposition a graph, you may find it easier to work on it in the Preview view. You can get a much better idea of what the page looks like. The sizing and positioning changes you make are retained and reflected in the Design view.

1 Resize and reposition the graph so that it looks like the one shown here.



To make the graph bigger, put the pointer near a corner or a side until the pointer changes shape. Then press the left mouse button and drag the corner or the side. To move the graph, put the pointer in the middle of the graph. Then press the left mouse button and drag the graph.

2 Use the scroll bar to display the graphs for 1996 and 1997.

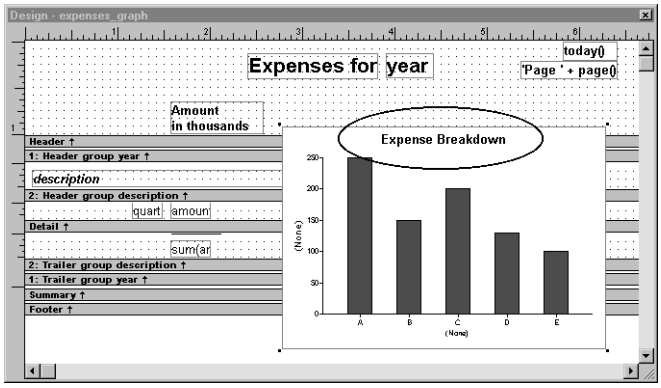
Add a title

1 Move the pointer to the middle of the graph in the Design view (not the Preview view) and click.

This selects the graph. The current title, (None), displays on the graph, in the text box in the StyleBar, and in the Properties view.

2 Type *Expense Breakdown***.**

The title displays in the graph and in the text box.



Change the graph type

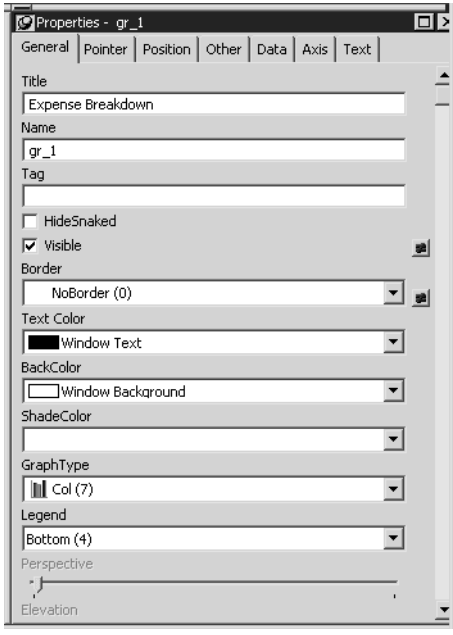
You can use many different types of graphs to present the same data. Sometimes it is useful to try different types until you find the one that works best for the data you are presenting.

Now you try several graph types with the expense data.

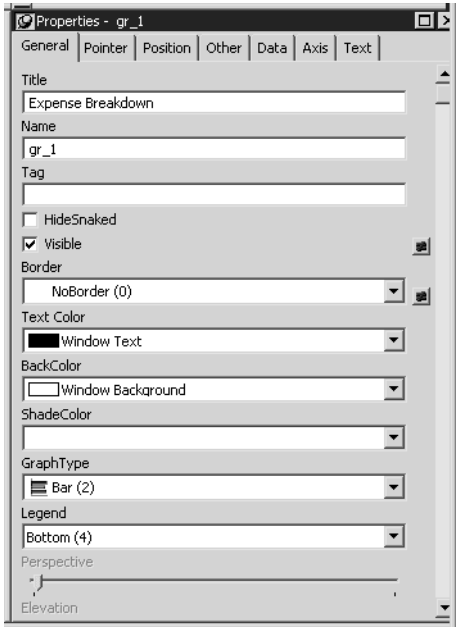
1 If you need to, use the scroll bar to display the entire graph in the Design view.

2 Move the pointer to the graph in Design view and click it.

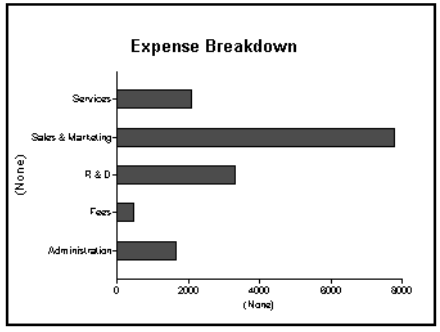
The graph is selected. The properties for the graph display in the Properties view, with the General page on top. On this page you can choose a graph type. The current graph type is Column (Col (7)).



3 Select the *Bar (2)* graph type from the *Graph Type* drop-down list.

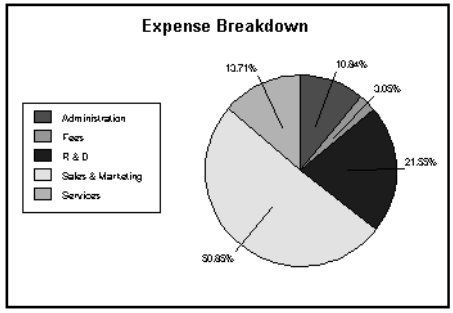


The graph looks like this in the Preview view.



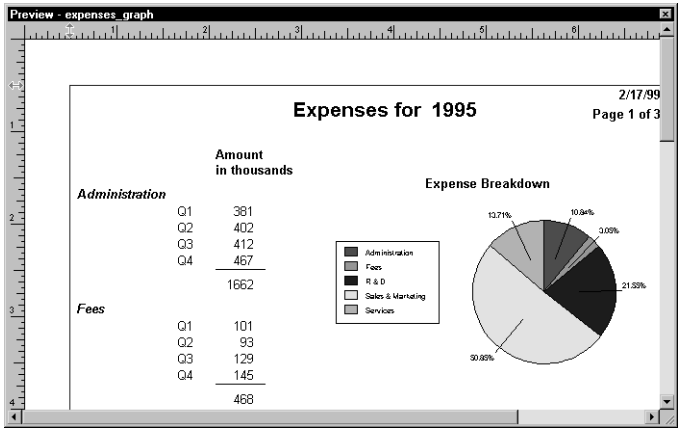
4 Select the *Pie (13)* graph type from the *Graph Type* drop-down list.

InfoMaker redisplays the graph using the Pie style.



Pie seems to be a good style for showing the data, so you do not change the graph style again.

This is what the report with the graph looks like now.

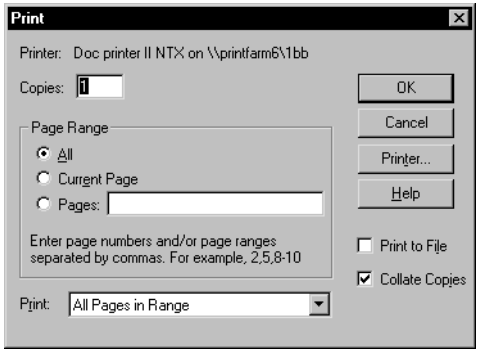


Print the graph (report)

Where you are
Open the report to contain the graph
Create the basic graph
Save the graph (report)
Enhance the graph
> Print the graph (report)

1 Click the *Preview* view to make sure that it is current. Select *File>Print Report* from the menu bar.

The Print dialog box displays.



2 Click *OK* to accept the defaults and print the report.

Your report goes to the printer or the print queue.

3 Select *File>Close* from the menu bar.

If you have not saved all your changes, a message box displays to see if you want to save changes.

4 Click *Yes* (if the message box displays).

The Report painter closes.

LESSON 7

Environment Tutorial

You use the Library painter to manage forms, reports, queries, pipelines, and the InfoMaker environment. In the Library painter you can:

- Open a form, report, query, or pipeline, and go automatically to the appropriate painter
- Set the current library
- Copy, move, and delete forms, reports, queries, and pipelines

In this tutorial you learn how to do these tasks.

How long does this tutorial take?
About 30 minutes.

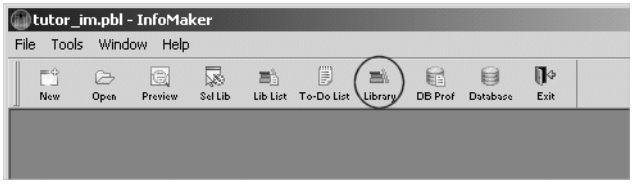
Open forms, reports, and queries

Where you are
> Open forms, reports, and queries
Create a new library
Copy forms, reports, and queries
Create a new report from an existing one

First you learn about using the Library painter to open forms, reports, and queries. When you open one of these, you automatically go to the appropriate painter. (This is also true for pipelines, but you do not work with pipelines in this tutorial.)

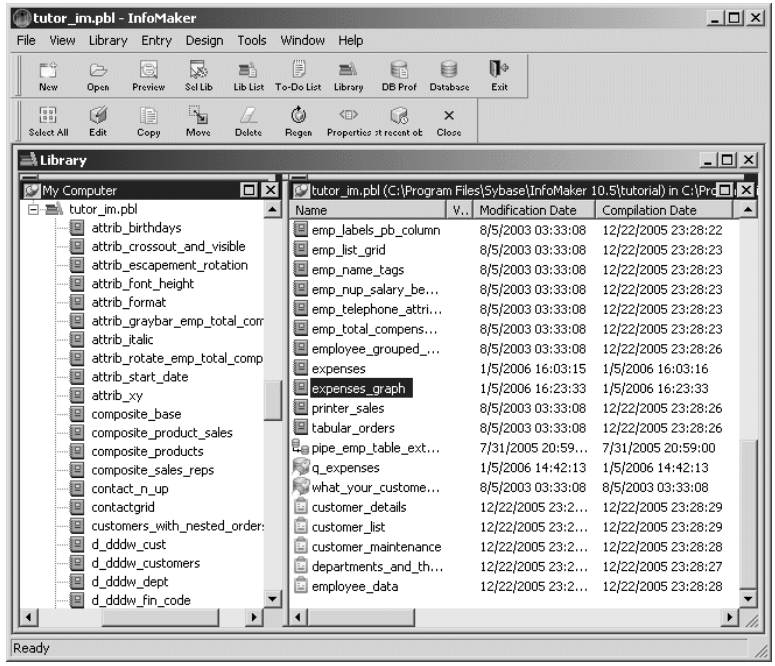
If you have not installed the Form painter
A few of the steps in this tutorial and the next one refer to forms. Just skip those steps. You can do the tutorials without the forms.

1 Click the *Library* button in the PowerBar.



The Library painter workspace displays.

2 Select *View>Most Recent Object* **from the menu bar.**

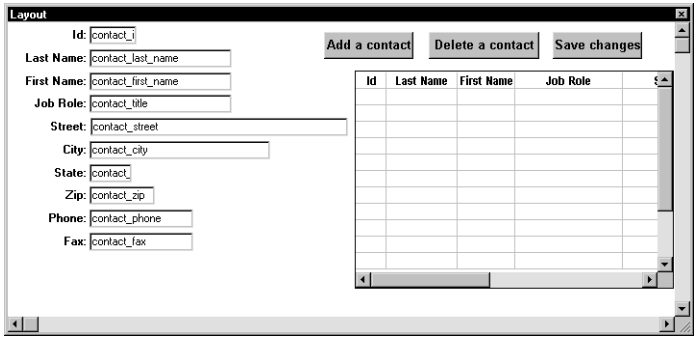


The painter lists the forms, queries, reports, and pipelines in the current library and selects the object you worked on most recently. When you install InfoMaker, the current library is the InfoMaker sample library (*tutor_im.pbl*).

The list includes many samples as well as the form, query, and reports you created earlier.

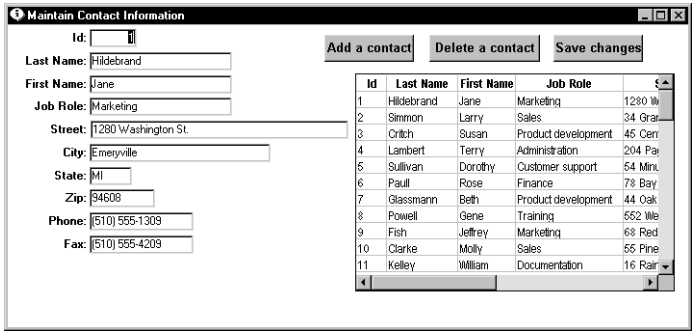
3 Scroll the list to the bottom until you see the form *contact_maintenance***, which is the form you created earlier. Double-click the form.**

The form displays in the Form painter. Accessing your form by double-clicking its name in the Library painter is the same as opening the form in the Form painter.



4 Click the *Run* button in the PainterBar.

Your form runs.



5 Click the *Close* button in the PainterBar.

The running form closes.

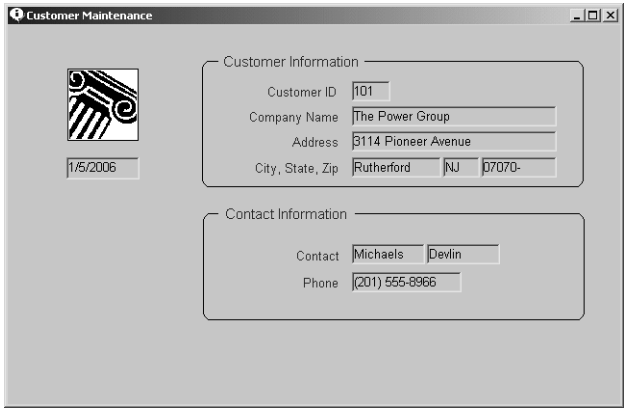
6 Select *File>Close* from the menu bar.

You return to the Library painter. Now you look at some other forms.

7 Double-click the form *customer_maintenance.*

8 Click the *Run* button in the PainterBar.

This form is for maintaining customer information.



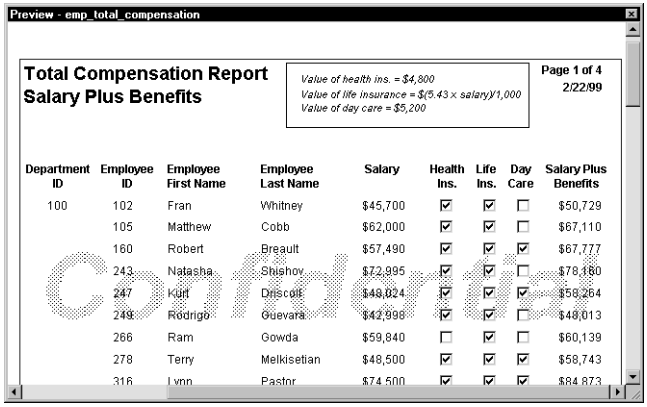
9 Click the *Close* button to return to the Form painter workspace. Select *File>Close* from the menu bar to return to the Library painter.

Now you open a report.

10 Double-click the report *emp_total_compensation*.

The report displays in the Report painter.

11 Scroll the report in the Preview view.



12 Select *File>Close* from the menu bar.

The Report painter closes and the Library painter displays.

Create a new library

Where you are
Open forms, reports, and queries
> Create a new library
Copy forms, reports, and queries
Create a new report from an existing one

Now you create a new library on a shared drive so that you can copy some items into the library.

Shared drive
These instructions assume that H:\shared is the shared drive, but you can use any shared drive on your computer.

InfoMaker uses special libraries to hold forms, reports, queries, and pipelines. These libraries have the file extension pbl. When you save (or copy or move) a form, report, query, or pipeline, it goes into a pbl file (pronounced *pibble*).

1 **Select** *File>New* **from the menu bar.**

The New dialog box displays.

2 **Select the** *Library* **tab and click** *OK***.**

The Library wizard displays.

3 **Type** *h:\shared\mylib.pbl* **and click** *Finish***.**

InfoMaker creates the new library on the H drive. This library is now the current library; its name displays in InfoMaker's title bar. The previous current library still displays in the Library painter.

Copy forms, reports, and queries

Where you are
Open forms, reports, and queries
Create a new library
> Copy forms, reports, and queries
Create a new report from an existing one

Now you copy a form, a query, and two reports into the library on the shared drive. Then you can make them available to another InfoMaker users who can use them as is or modify them as needed.

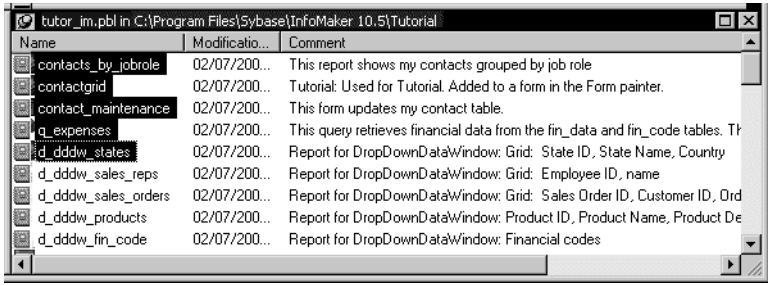
Remember that the other users must also be able to access the database. All InfoMaker users have Adaptive Server Anywhere and the contact table. That means other InfoMaker users can run the form, query, and reports you have created in this tutorial.

1 Drag tutor_im.pbl from the Tree view in the left pane to the List view in the right pane.

2 In the List view of the Library painter, click *contactgrid* **(scroll the list in the Library painter as necessary).**
Press Ctrl and click *contacts_by_jobrole*.
Press Ctrl and click *d_dddw_states*.
Press Ctrl and click *q_expenses.*
Press Ctrl and click *contact_maintenance.*

The five objects you selected are highlighted. You can copy, move, or delete them. You are going to copy them to the shared drive.

Tip
You can sort the view by modification date to make it easier to locate objects you have just created or changed.



Why you include the report named d_dddw_states
The contact_maintenance form uses a DropDownDataWindow edit style for the state column. That edit style uses the report named d_dddw_states, which must be present in the library when you run the form.

If you create a new library for objects you create using the EAS Demo DB, you need to copy the eight reports that begin with d_dddw from the *tutor_im.pbl* to the new library. These reports go with the DropDownDataWindow edit styles that the tables in the EAS Demo DB use.

There is a way to make the reports centrally available. See the *InfoMaker User's Guide*.

3 Click the *Copy* button in the PainterBar.

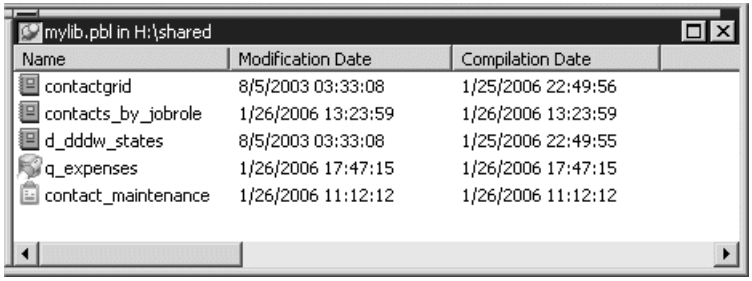
The Select Library dialog box displays.

4 Change drives to the shared drive.
Select *mylib.pbl*.
Click *Open*.

InfoMaker copies the selected objects to the shared drive. It takes a minute or so. You can see messages about the copying at the bottom of your screen.

5 Navigate to the shared drive.

The Library painter lists the contents of *mylib.pbl*, the current library.



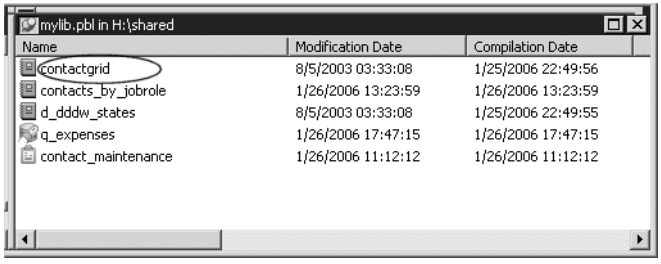
Create a new report from an existing one

Where you are
Open forms, reports, and queries
Create a new library
Copy forms, reports, and queries
> Create a new report from an existing one

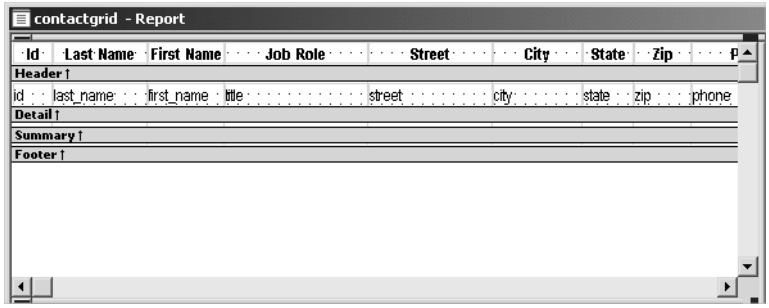
Now you create a new report from one of the reports on the shared drive. You then make a slight modification to the report.

The modification adds powerful options to the report that you can see when you run the report.

1 On the H drive, double-click the *contactgrid* report.

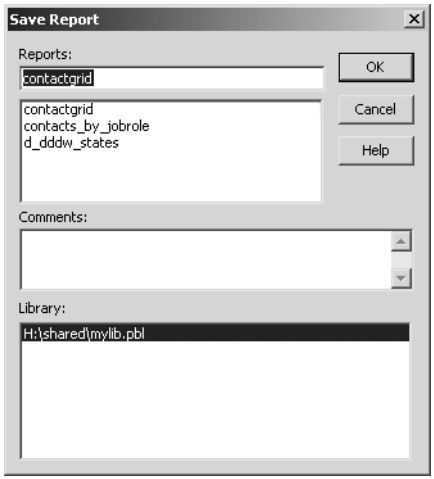


You go to the Report painter with the contactgrid report open.



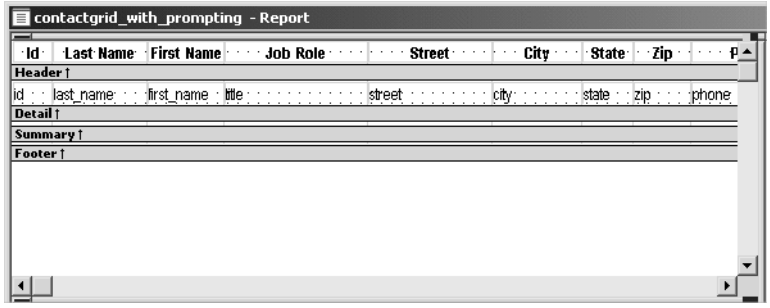
2 Select *File>Save As* **from the menu bar.**

The Save Report dialog box displays. You are going to change the name of the report so that you can keep the old one and create a new one with some changes.



3 Type the name *contactgrid_with_prompting* **and click** *OK*.

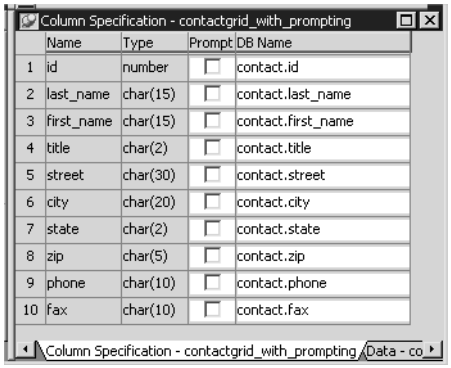
The report name changes. You are now working on a report called contactgrid_with_prompting.



4 If the *View>Column Specifications* view is not already in the lower right corner of the Report painter, select View > Column Specifications from the menu bar.

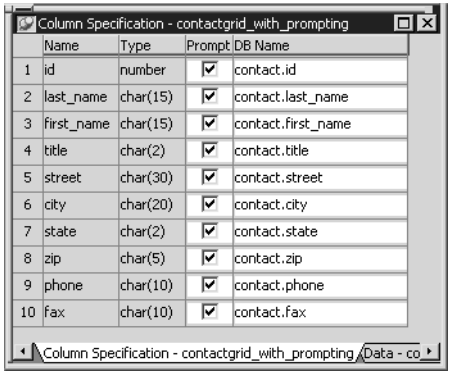
The Column Specifications view displays, listing all the columns in the report. You can choose one, many, or all columns for prompting. The columns you choose here let you control what rows are selected when you run the report.

For example, if you choose the city column here, you can specify a city when you run the report. Then only rows that include that city are retrieved.



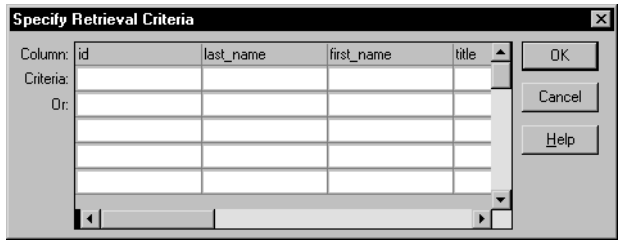
5 Select all the check boxes.

You are choosing all columns so that you can enter criteria for any column you want when you run the report.



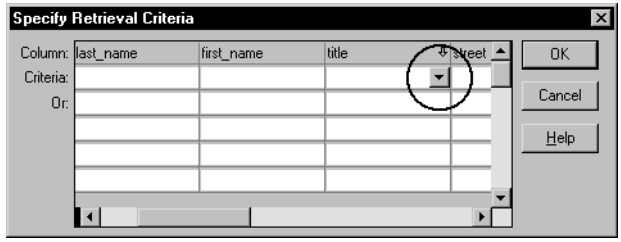
6 Select *Rows>Retrieve* from the menu bar.

The Specify Retrieval Criteria dialog box displays. Since you said that you wanted to be prompted for all the columns, the dialog box includes all the columns.



7 Click in the first cell in the *title* column.
Use the horizontal scroll bar to move the *title* column into full view.

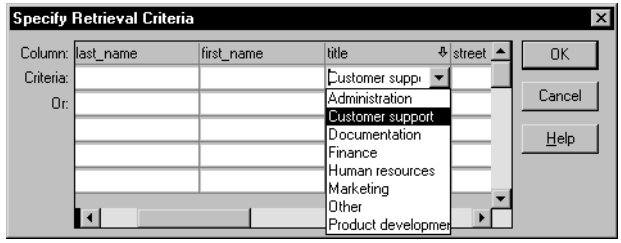
A box with an arrow displays to show there is a drop-down list for that column.



8 Click the *arrow* to open the list.

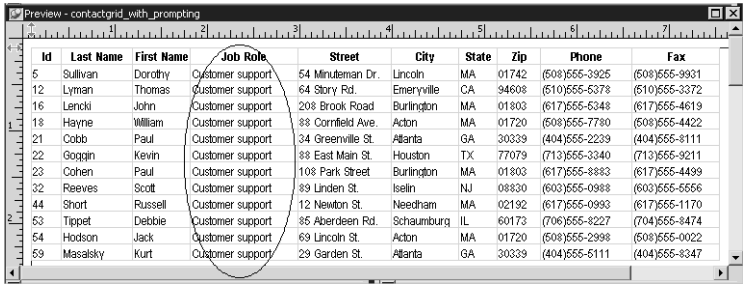
9 Select *Customer support*.

This puts Customer support in the title column. This means that the report is limited to contacts in Customer support.



10 Click *OK*.

The report displays. It includes only contacts in Customer support.



Id	Last Name	First Name	Job Role	Street	City	State	Zip	Phone	Fax
5	Sullivan	Dorothy	Customer support	54 Minuteman Dr.	Lincoln	MA	01742	(508)555-3925	(508)555-9931
12	Lyman	Thomas	Customer support	64 Story Rd.	Emeryville	CA	94608	(510)555-5378	(510)555-3372
16	Lencki	John	Customer support	208 Brook Road	Burlington	MA	01803	(617)555-5348	(617)555-4619
18	Hayne	William	Customer support	88 Cornfield Ave.	Acton	MA	01720	(508)555-7780	(508)555-4422
21	Cobb	Paul	Customer support	34 Greenville St.	Atlanta	GA	30339	(404)555-2239	(404)555-8111
22	Goggin	Kevin	Customer support	88 East Main St.	Houston	TX	77079	(713)555-3340	(713)555-9211
23	Cohen	Paul	Customer support	108 Park Street	Burlington	MA	01803	(617)555-8883	(617)555-4499
32	Reeves	Scott	Customer support	89 Linden St.	Iselin	NJ	08830	(603)555-0988	(603)555-5556
44	Short	Russell	Customer support	12 Newton St.	Needham	MA	02192	(617)555-0993	(617)555-1170
53	Tippet	Debbie	Customer support	85 Aberdeen Rd.	Schaumburg	IL	60173	(706)555-8227	(704)555-8474
54	Hodson	Jack	Customer support	69 Lincoln St.	Acton	MA	01720	(508)555-2998	(508)555-0022
59	Masalsky	Kurt	Customer support	29 Garden St.	Atlanta	GA	30339	(404)555-5111	(404)555-8347

By setting up a report to prompt for criteria, you give yourself a lot of power and flexibility when you run the report. You learn more about this when you create an application in the next tutorial.

11 Select *File>Close* **from the menu bar.**
When prompted to save changes, click *Yes***.**

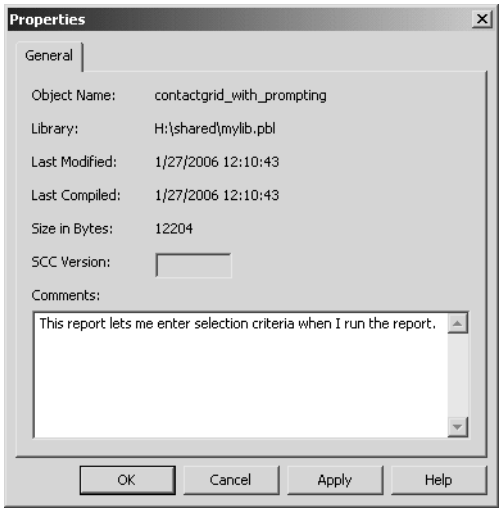
The Report painter closes and you return to the Library painter.

Now your new report is listed. It is a good idea to add comments to document the report. You can do that now.

12 Position the pointer on *contactgrid_with_prompting***.**
Press the right mouse button to display the pop-up menu.
Select *Properties***.**

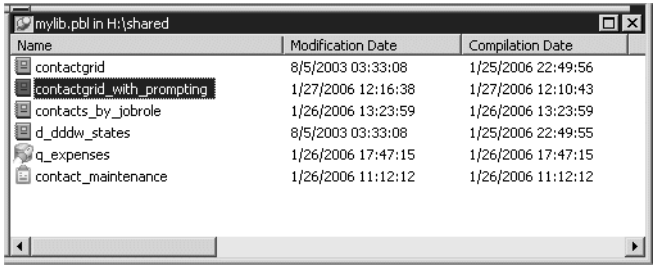
The Properties dialog box displays.

13 Type *This report lets me enter selection criteria when I run the report.*



The newly added comment displays.

14 Click *OK*.



Now you have become familiar with many of the tasks you can do in the Library painter.

15 Continue directly to the next tutorial, the Application tutorial.

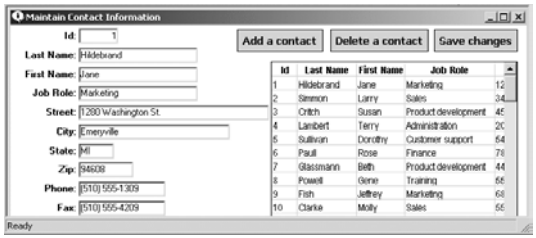
(Leave the Library painter open.)

LESSON 8

Application Tutorial

An InfoMaker application is a collection of related reports, forms, and pipelines. For example, the Contacts application that you create in this tutorial has:

- A form to maintain data in the contact table
- A report to list all contacts
- A report to list only contacts that meet your criteria



How long does this tutorial take?
About 30 minutes.

Create the application

Where you are

> Create the application
Create a shortcut to the application
Start the application
Use the Data button
Use the By Job button
Use the Ad Hoc button

Now you will create an application, complete with toolbars and menus, and you will create a shortcut for the application. Then you can run it from your desktop, just the way you run InfoMaker or any other application.

The application you create consists of an executable file and an initialization file. The initialization file provides information about the database to the executable file.

For example, InfoMaker itself is an application that has an executable file called *im105.exe*. This is the file you start running when you start InfoMaker. InfoMaker also has an initialization file called *im.ini*.

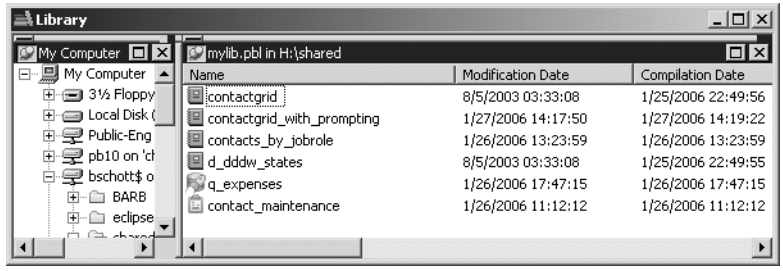
Terms

The executable file is also called an exe file (pronounced *exxy*). The initialization file is also called an ini file (pronounced *inny*).

1 If you are continuing from Lesson 7, go to step 2.

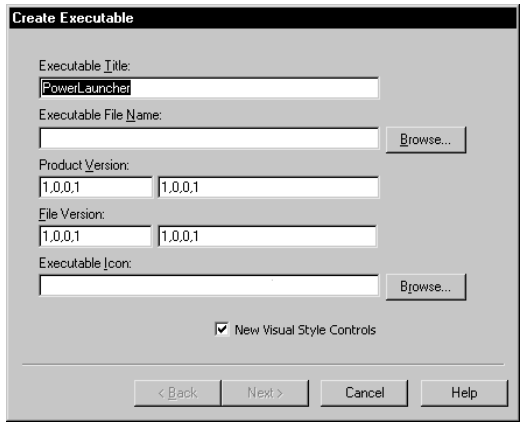
Otherwise, go to the Library painter in the H:\shared drive with the library named *mylib.pbl* set to be the current library (File>Select Library).

The Library painter shows the contents of *mylib.pbl*.



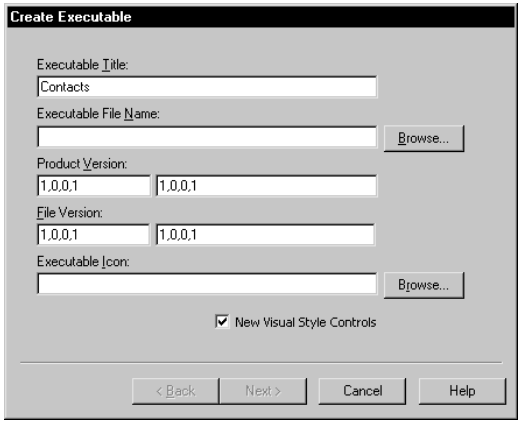
2 Select *Design>Create Executable* **from the menu bar.**

The Create Executable dialog box displays. In this dialog box you specify a title for the application window, a file name for the executable file, the folder for storing the executable file, and an icon for the application.



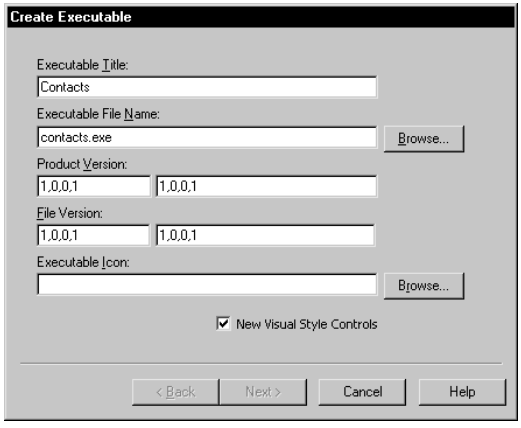
3 **Type** *Contacts* **in the** *Executable Title* **box.**

Later, when you run your application, the title bar displays the word *Contacts*.



4 **Type** *contacts.exe* **in the** *Executable File Name* **box.**

This assigns a name to your executable file.

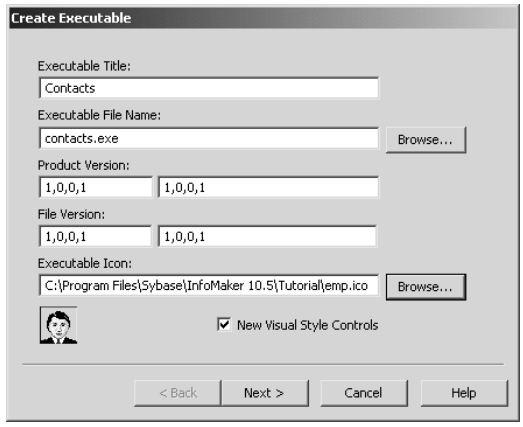


5 **Click the** *Browse* **button next to the Executable Icon box to select an icon for your application.**

The icon will display in the Windows shortcut. You create a shortcut shortly.

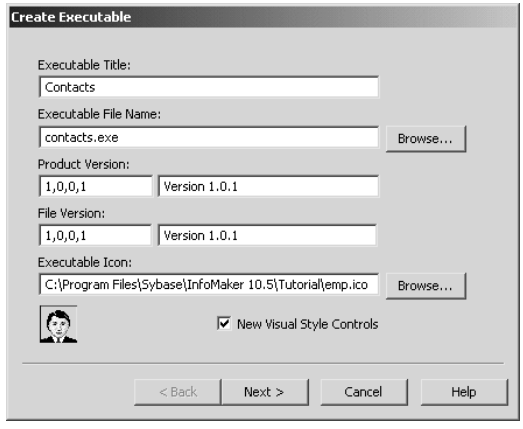
6 Change to the *Tutorial* folder (the icon is there).
Click *emp.ico*.
Click *Open* to accept the *emp.ico* file as the icon for your application.

You return to the Create Executable dialog box. The icon and its full name display.



7 Type Version 1.0.1 in the Product Version and File Version boxes on the right.
Leave 1,0,0,1 in the boxes on the left.

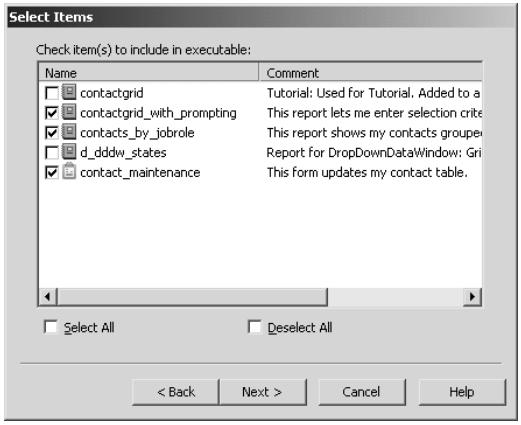
The text you type in the boxes on the right displays on the Version tab page of the Properties dialog box when you look at the properties of the executable file in Windows Explorer. The four numbers separated by commas on the left can be used by installation programs.



8 Click *Next* to select items for the application.

The Select Items dialog box displays. Now you select the form and reports for your application.

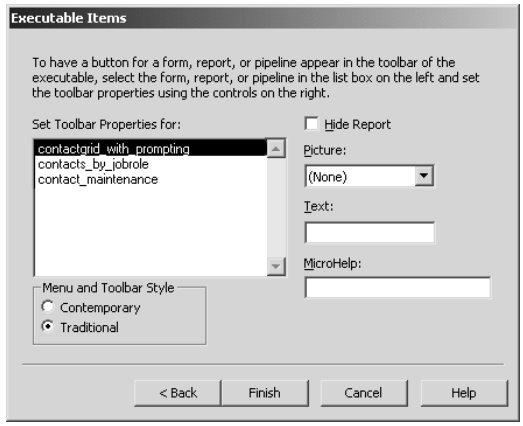
9 Click the check box for *contactgrid_with_prompting*.
Click the check box for *contacts_by_jobrole*.
Click the check box for *contact_maintenance*.



10 Click *Next* to define the toolbar items.

The Executable Items dialog box displays. It lists the form and reports to be included in your application. The information you enter in the boxes to the right of the list of items is for the currently selected item.

Traditional and Comtemporary menu styles
In this tutorial, you use the default Traditional menu style. For information about the Contemporary menu style, see the InfoMaker User's Guide.



Finish defining all information before you click Finish
Do not click the Finish button or press enter until you have finished defining information for *all* the items you want to include in the application's toolbar. Once you click Finish or press enter, InfoMaker generates the executable file.

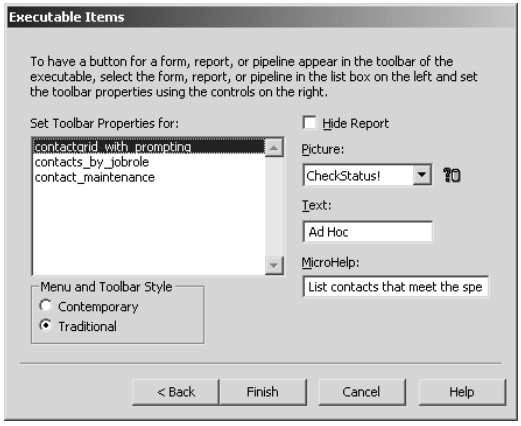
If you create the executable file before you mean to, select Design>Create Executable again. InfoMaker remembers what you have specified. You can continue where you left off and re-create the executable file.

11 **Make sure** *contactgrid_with_prompting* **is selected.**
In the Picture box, display the list and select *CheckStatus!.*
Click the Text box and type *Ad Hoc***.**
Press Tab to go to the MicroHelp box.
Type *List contacts that meet the specified criteria***.**

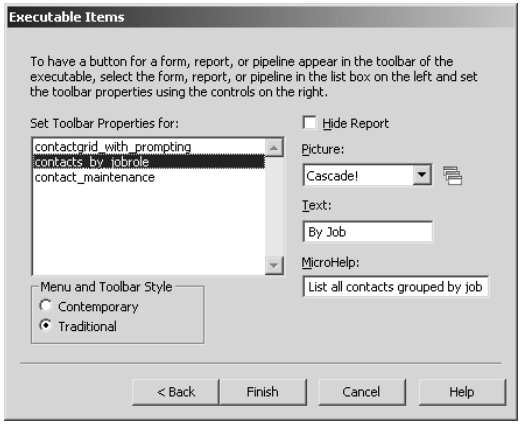
The Picture box specifies the picture for the button, which will be in the application's toolbar.

The Text box provides text for the button and for the menu item that will run contact_maintenance in your application.

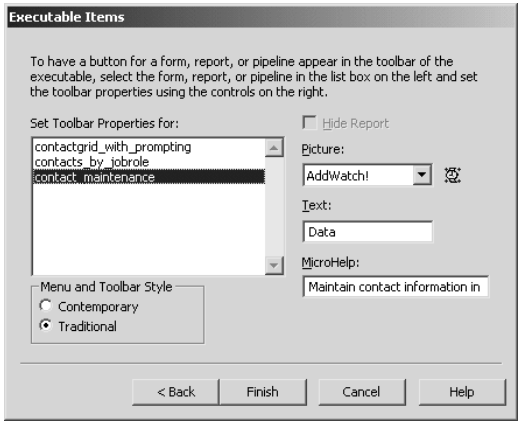
The MicroHelp box provides MicroHelp for the button and menu item.



12 Click *contacts_by_jobrole*.
In the Picture box, display the list and select *Cascade!.*
Click the Text box and type *By Job*.
Press Tab to go to the MicroHelp box.
Type *List all contacts grouped by job role*.



13 Click *contact_maintenance*.
In the Picture box, select the entry *AddWatch!*
Click the Text box and type *Data*.
Press Tab to move to the MicroHelp box.
Type *Maintain contact information in the database*.



Now you have finished providing information for the form and the two reports that are in your application.

14 Click *Finish*.

InfoMaker creates the application, which consists of an executable file and an initialization file. These files are in the Tutorial folder.

Now that InfoMaker has finished creating the application, you return to the Library painter.

Before leaving the Library painter, you select *tutor_im.pbl* as the current library. This is where the samples and the tutorial work are kept.

15 Select *File>Select Library* from the menu bar.

16 Select *tutor_im.pbl* from the Recent page in the Select File dialog box and click *OK*.

The current library is *tutor_im.pbl* again.

17 Select *File>Exit* from the menu bar.

InfoMaker closes.

Create a shortcut to the application

Where you are
Create the application
> Create a shortcut to the application
Start the application
Use the Data button
Use the By Job button
Use the Ad Hoc button

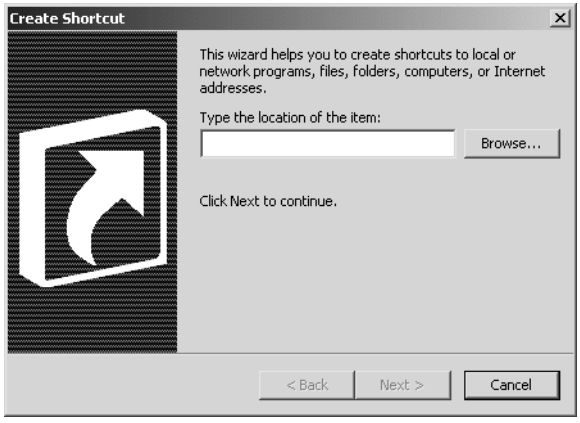
Now you make the application easy to access. To do this you create a shortcut on the Windows desktop.

1 Move the pointer to an empty area of the desktop and press the right mouse button.

The pop-up menu for the desktop displays.

2 Select *New* and then *Shortcut*.

The Create Shortcut dialog box displays.



3 To locate *contacts.exe*, click the *Browse* button.
In the Browse dialog box, change folders to the *Tutorial* folder.
Select *contacts.exe* and click *Open*.

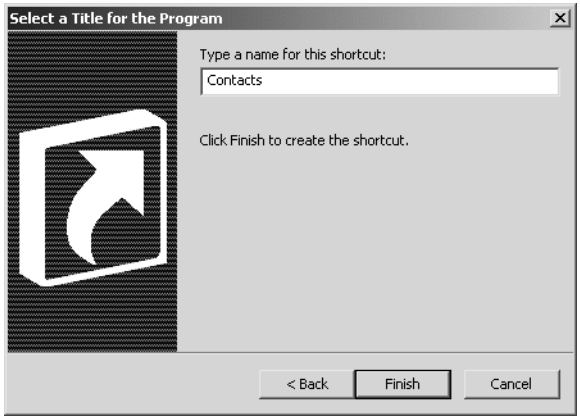
You return to the Create Shortcut dialog box with the full path of the *contacts.exe* file in place.

4 **Click** *Next***.**

The Select A Title For The Program dialog box displays.

5 **In the text box, type** *Contacts* **over the name offered as a default (***contacts.exe***).**

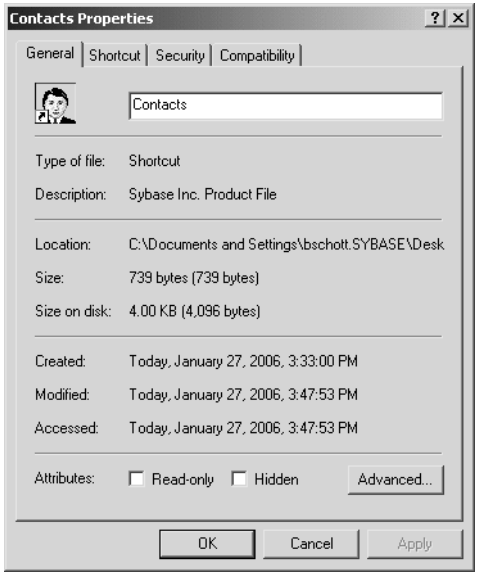
This provides a better title to display under the icon on the desktop.



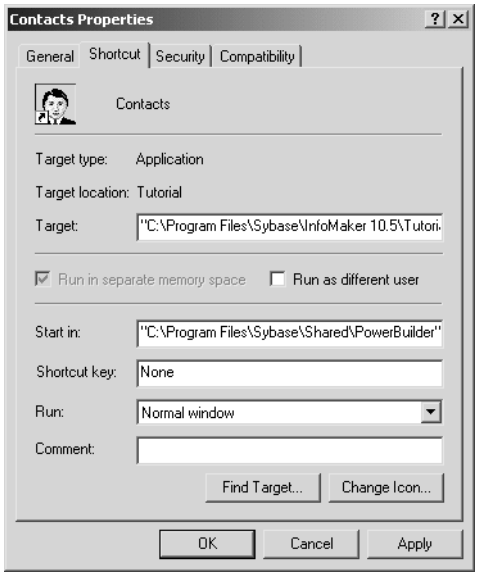
6 **Click** *Finish***.**

Windows creates the shortcut to your application and displays it on the desktop. Now you must modify a property of the shortcut so that you can run your application.

7 Move the pointer to the icon and press the right mouse button to display the pop-up menu.
Select *Properties* **to display the shortcut's property sheet.**



8 **Select the *Shortcut* tab and type the location (path) of the Sybase system files in the *Start in* box:**



About the location of Sybase system files

When you install InfoMaker, the installation process automatically puts the DLLs in a system folder. If you have changed the names of the folders used for installing, you need to use your names in this step.

The folder path is *C:\Program Files\Sybase\Shared\PowerBuilder*.

You must specify the name of the drive. If you use backslashes to specify a relative path name, the application will be unable to locate the system files.

9 **Click *OK*.**

Windows modifies the shortcut to your application. This modification enables Windows to find some InfoMaker modules (DLLs) required for running your application.

Start the application

Where you are
Create the application
Create a shortcut to the application
> Start the application
Use the Data button
Use the By Job button
Use the Ad Hoc button

In this exercise you start the application you created and take a look at its toolbar, MicroHelp, and menus.

1 Double-click the *Contacts* shortcut on your desktop.

Your application runs. Do not be surprised if it takes a minute to get everything running. The database itself has to start up so that you can access data.

The main window of the Contacts application displays.

2 Notice the toolbar.

The Forms, Reports, and Exit buttons are automatically included. The Ad Hoc, By Job, and Data buttons are in the toolbar because you defined them when you created the application.

3 Move the pointer to one of the buttons.

Notice the MicroHelp at the bottom of the screen.

4 Click the *Objects* menu item.

Notice that Ad Hoc, By Job, and Data are included in the Objects menu. Your application has a toolbar and a menu. You can run forms and reports from either place.

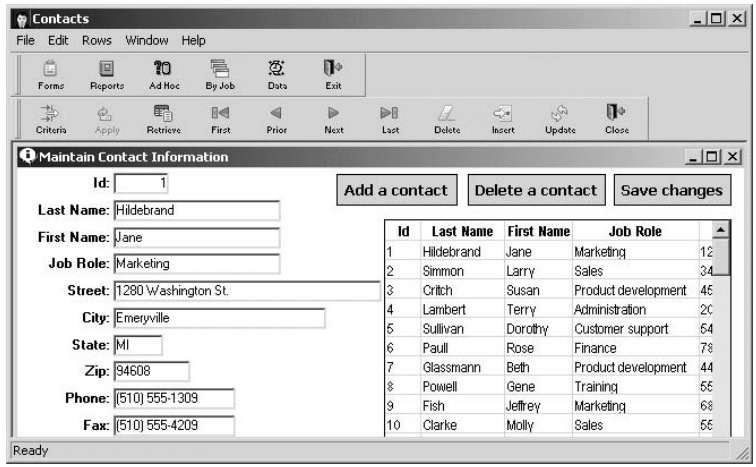
Use the Data button

Where you are
Create the application
Create a shortcut to the application
Start the application
> Use the Data button
Use the By Job button
Use the Ad Hoc button

Now you use the Data button to run your form. You add a new contact and change information about an existing one.

1 Click the *Data* button.

Your form displays. Notice that title bars identify your application and the particular part you are using. You also have the usual form toolbar that lets you view, add, and update information in the database.

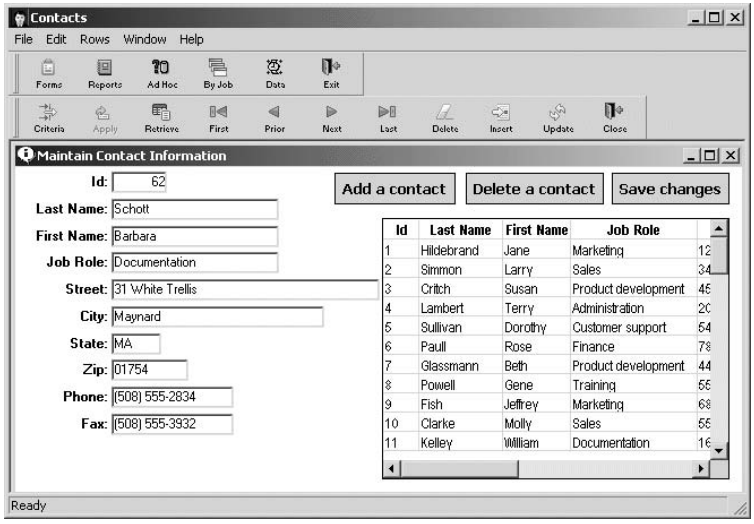


2 Click the *Add a contact* button in the form.

A blank form displays.

3 Enter information for a new contact.
Use *62* for the Id entry and make up the rest.

Be sure to fill in all blanks. (The only columns you can skip are phone and fax; the other columns are defined as required in the database.) Use the Tab key to move from box to box.



4 Click the *Save changes* button in the form.

Your new contact goes into the database. You will see it shortly.

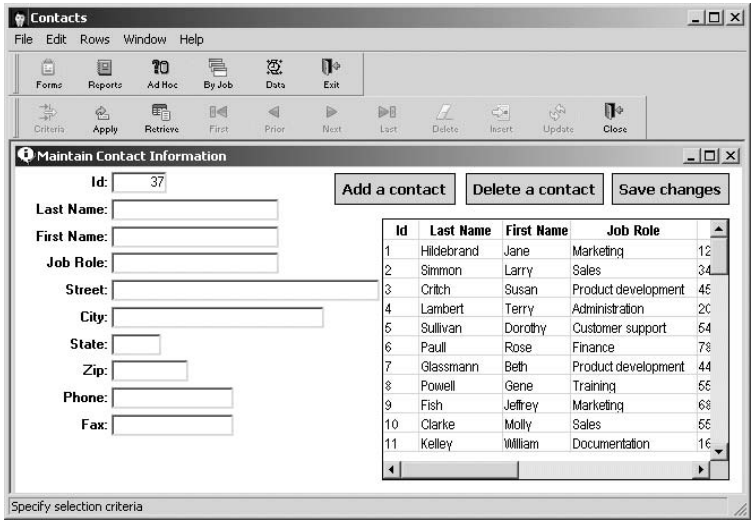
Next you want to display information on the contact with Id 37 so that you can make a correction.

About updating the database and canceling changes
You can click the Update button to update the database immediately; or you can wait until you close the form, and InfoMaker prompts you then to see if you want to update the database.

The Cancel Changes menu item on the Rows menu cancels any changes you have made since the last time you clicked Update.

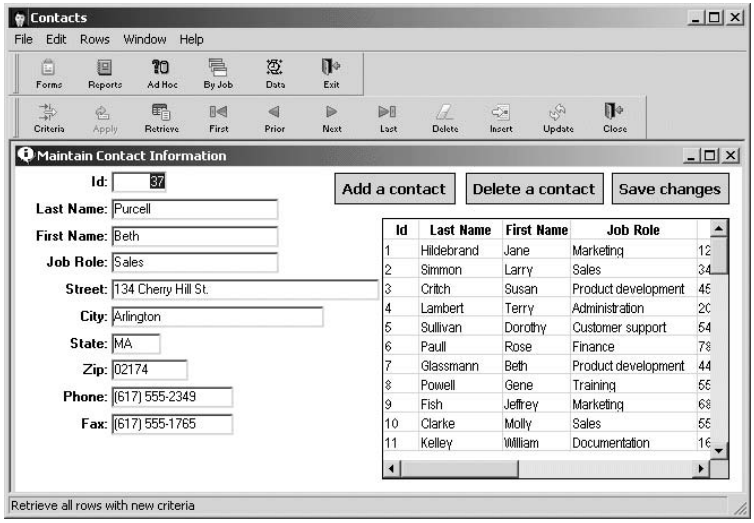
5 Click the *Criteria* button to display a blank form for setting retrieval criteria.
Type *37* in the *Id* box.

This sets the retrieval criteria.



6 Click the *Apply* button.

This applies the retrieval criteria. InfoMaker retrieves the row with the Id 37.



7 **Change the Street to** *134 Cherry St***.**
Click the *Save changes* **button in the form.**

Your changes are added immediately to the database.

8 **Click the** *Next* **button.**

A message box displays because you have set criteria that allow only row 37 to be retrieved. You need to remove the criteria or specify other criteria.

9 **Click** *OK* **to close the message box.**
Click the *Criteria* **button.**
Select *37* **and press the delete key to delete 37 from the** *Id* **box.**
Click the *Apply* **button.**

Now you have no criteria, so InfoMaker retrieves all rows.

10 **Select** *File>Close* **from the menu bar.**

Your form closes.

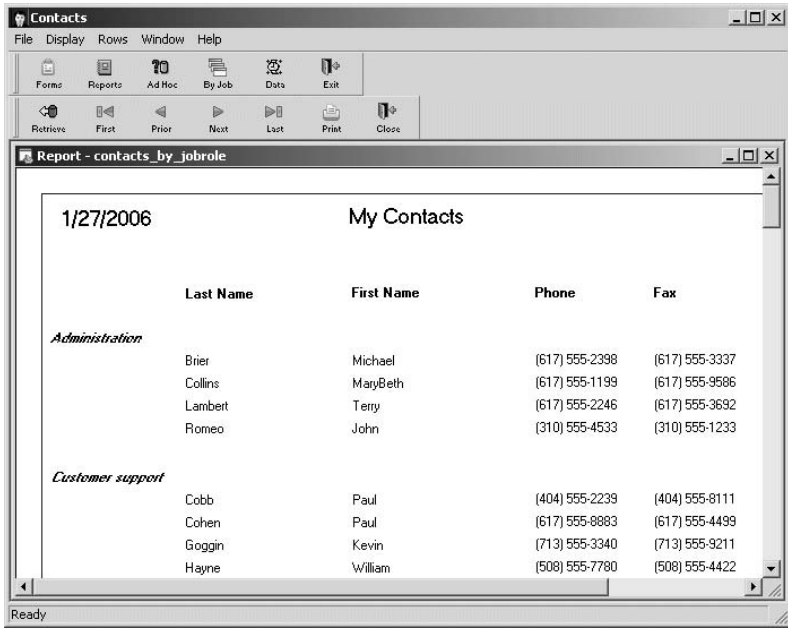
Use the By Job button

Where you are
Create the application
Create a shortcut to the application
Start the application
Use the Data button
> Use the By Job button
Use the Ad Hoc button

Now you run a report of all contacts grouped by job role.

1 Click the *By Job* button.

The report that lists all contacts grouped by job role displays.



2 Scroll the report to see your new contact.
When you have finished, select *File>Close* from the menu bar.

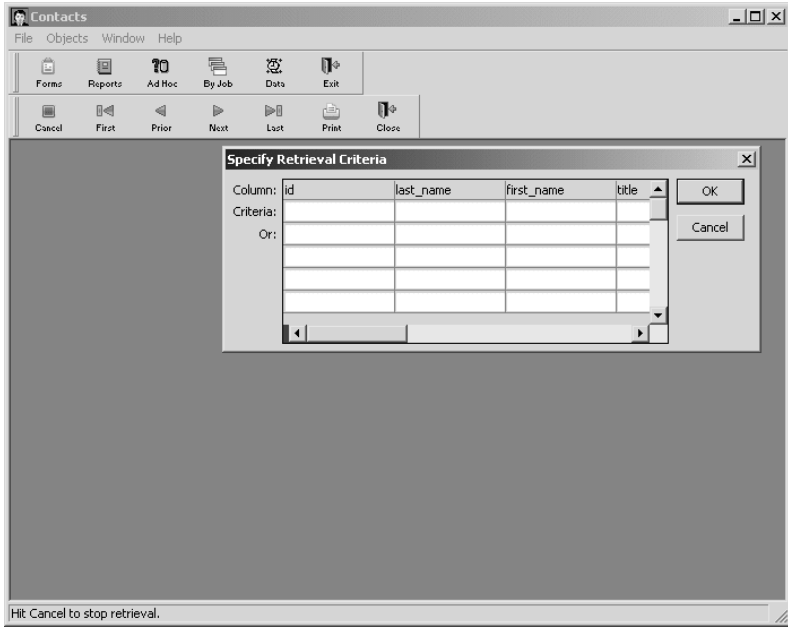
Once again you return to the main application window.

Use the Ad Hoc button

Now you use the Ad Hoc button to run several different reports based on the criteria you specify.

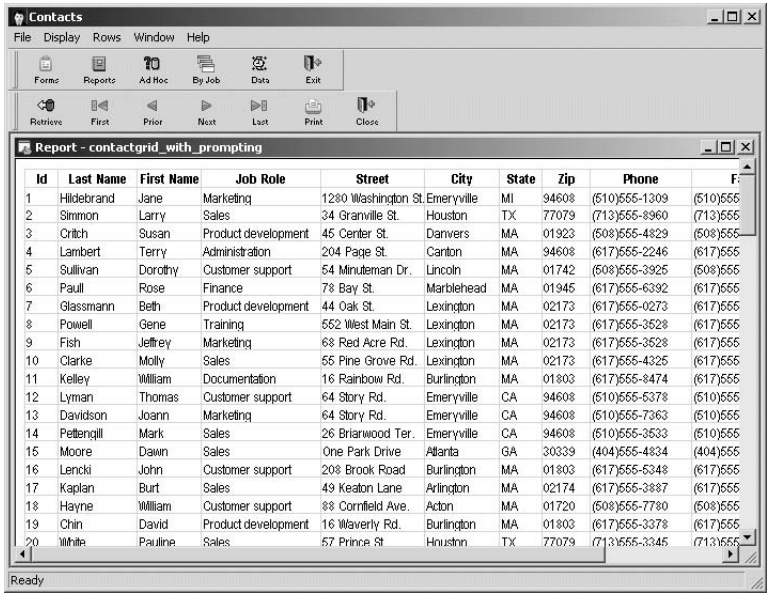
1 Click the *Ad Hoc* button.

The Specify Retrieval Criteria dialog box displays. This dialog box displays because you selected Prompt For Criteria for this report. Whenever you run this report, you are first prompted for criteria.



2 Click *OK*.

Because you did not specify any criteria, the report retrieves all your contacts.

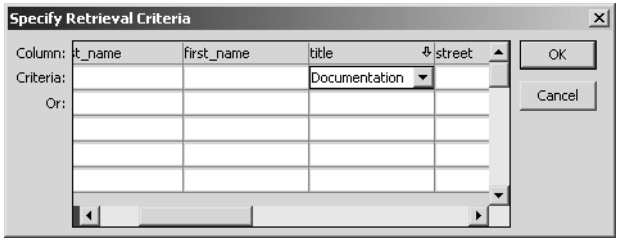


Id	Last Name	First Name	Job Role	Street	City	State	Zip	Phone	F
1	Hildebrand	Jane	Marketing	1280 Washington St.	Emeryville	MI	94608	(510)555-1309	(510)555
2	Simmon	Larry	Sales	34 Granville St.	Houston	TX	77079	(713)555-8960	(713)555
3	Critch	Susan	Product development	45 Center St.	Danvers	MA	01923	(508)555-4829	(508)555
4	Lambert	Terry	Administration	204 Page St.	Canton	MA	94608	(617)555-2246	(617)555
5	Sullivan	Dorothy	Customer support	54 Minuteman Dr.	Lincoln	MA	01742	(508)555-3925	(508)555
6	Paull	Rose	Finance	78 Bay St.	Marblehead	MA	01945	(617)555-6392	(617)555
7	Glassmann	Beth	Product development	44 Oak St.	Lexington	MA	02173	(617)555-0273	(617)555
8	Powell	Gene	Training	552 West Main St.	Lexington	MA	02173	(617)555-3528	(617)555
9	Fish	Jeffrey	Marketing	68 Red Acre Rd.	Lexington	MA	02173	(617)555-3528	(617)555
10	Clarke	Molly	Sales	55 Pine Grove Rd.	Lexington	MA	02173	(617)555-4325	(617)555
11	Kelley	William	Documentation	16 Rainbow Rd.	Burlington	MA	01803	(617)555-8474	(617)555
12	Lyman	Thomas	Customer support	64 Story Rd.	Emeryville	CA	94608	(510)555-5378	(510)555
13	Davidson	Joann	Marketing	64 Story Rd.	Emeryville	CA	94608	(510)555-7363	(510)555
14	Pettengill	Mark	Sales	26 Briarwood Ter.	Emeryville	CA	94608	(510)555-3533	(510)555
15	Moore	Dawn	Sales	One Park Drive	Atlanta	GA	30339	(404)555-4834	(404)555
16	Lencki	John	Customer support	208 Brook Road	Burlington	MA	01803	(617)555-5348	(617)555
17	Kaplan	Burt	Sales	49 Keaton Lane	Arlington	MA	02174	(617)555-3887	(617)555
18	Hayne	William	Customer support	88 Cornfield Ave.	Acton	MA	01720	(508)555-7780	(508)555
19	Chin	David	Product development	16 Waverly Rd.	Burlington	MA	01803	(617)555-3378	(617)555
20	White	Pauline	Sales	57 Prince St.	Houston	TX	77079	(713)555-3345	(713)555

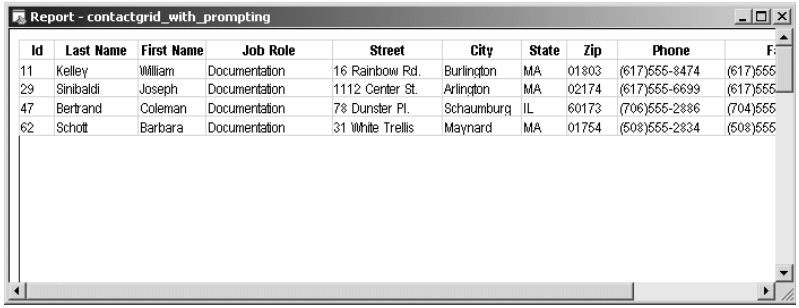
3 Select *Rows>Retrieve* from the menu bar.

The Specify Retrieval Criteria dialog box displays again. This time you enter criteria.

4 Go to the *title* column.
Select *Documentation* from the drop-down list.
Click *OK*.

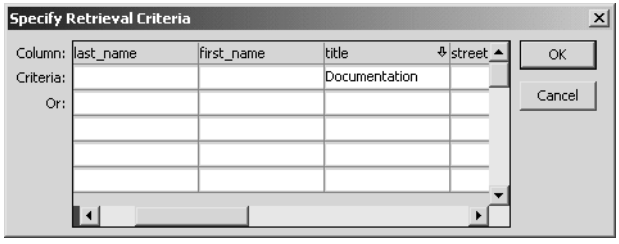


You have specified that the report is to list only contacts who have jobs in documentation.



5 Click the *Retrieve* button.

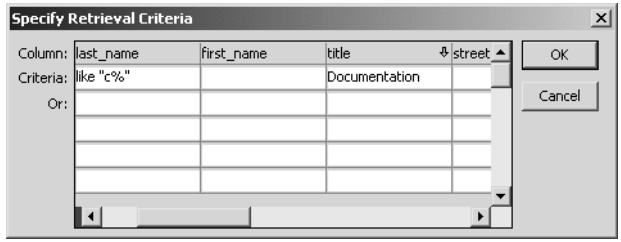
The Specify Retrieval Criteria dialog box displays again. Notice that the criterion in the title column is still in effect. To specify different criteria, you are now going to delete *Documentation*. Then you enter new criteria.



6 Select the *Documentation* entry in the *title* column. Press delete.

This deletes criteria from the title column. Now you are going to enter new criteria.

7 Click in the first box underneath *last_name***.**
Type *like "c%"***.**
Click *OK***.**



This entry (*like "c%"*) helps you find a name you cannot remember. All you can remember is that it starts with C.

The **like** operator specifies that only rows that match what follows should be retrieved. The quotes are required. The **c** means that the first character must be C. The **%** sign means any characters can follow the C.

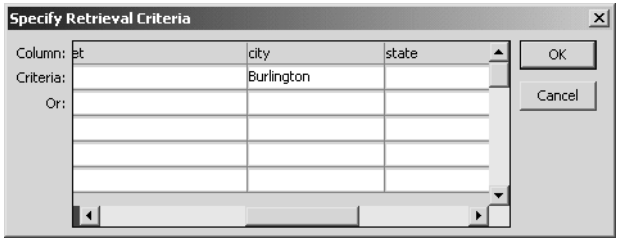
This is the report.

Id	Last Name	First Name	Job Role	Street	City	State	Zip	Phone	F
3	Critch	Susan	Product development	45 Center St.	Danvers	MA	01923	(508)555-4829	(508)555
10	Clarke	Molly	Sales	55 Pine Grove Rd.	Lexington	MA	02173	(617)555-4325	(617)555
19	Chin	David	Product development	16 Waverly Rd.	Burlington	MA	01803	(617)555-3378	(617)555
21	Cobb	Paul	Customer support	34 Greenville St.	Atlanta	GA	30339	(404)555-2239	(404)555
23	Cohen	Paul	Customer support	108 Park Street	Burlington	MA	01803	(617)555-8883	(617)555
34	Crowley	Charles	Human resources	69 Edson St.	Burlington	MA	01803	(617)555-1344	(617)555
36	Caruso	William	Finance	99 Edison St.	Bedford	MA	01730	(617)555-2144	(617)555
46	Crossland	Ellen	Product development	27 Rush Rd.	Burlington	MA	01803	(617)555-0004	(617)555
60	Collins	Mary Beth	Administration	56 Lincoln Street	Burlington	MA	01803	(617)555-1199	(617)555
61	Carter	Jimmy	Marketing	Peanut Way	Atlanta	GA	30339	(404)555-7833	(404)555

8 Click the *Retrieve* **button.**

The Specify Retrieval Criteria dialog box displays again. The requirement that the last name begin with C is still in effect. Now you add an additional requirement. The report is to list contacts whose last names begin with C *and* who are from Burlington.

9 Use the scroll bar to display the *city* column.
Click in the first box underneath *city* and type *Burlington*.



10 Click *OK*.

Now the report has only contacts whose last names begin with C *and* who are from Burlington.

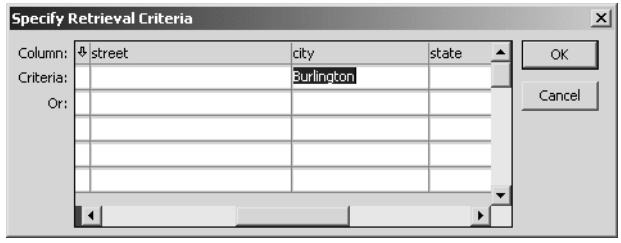
Id	Last Name	First Name	Job Role	Street	City	State	Zip	Phone	F
19	Chin	David	Product development	16 Waverly Rd.	Burlington	MA	01803	(617)555-3378	(617)555
23	Cohen	Paul	Customer support	108 Park Street	Burlington	MA	01803	(617)555-8883	(617)555
34	Crowley	Charles	Human resources	69 Edson St.	Burlington	MA	01803	(617)555-1344	(617)555
46	Crossland	Ellen	Product development	27 Rush Rd.	Burlington	MA	01803	(617)555-0004	(617)555
60	Collins	MaryBeth	Administration	56 Lincoln Street	Burlington	MA	01803	(617)555-1199	(617)555

11 Click the *Retrieve* button.

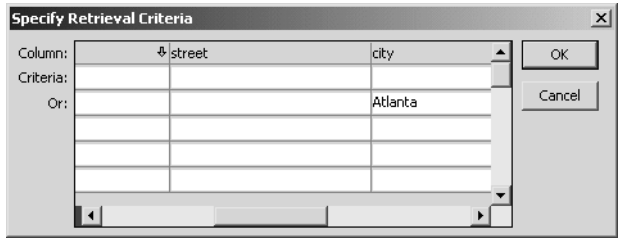
The Specify Retrieval Criteria dialog box displays again. The requirements that the last name begin with C and that the city be Burlington are still in effect.

Now you change the city requirement slightly. The report is to list contacts whose last names begin with C *or* who are from Atlanta. To be listed, contacts have to meet *either* requirement; they do not have to meet both.

12 Use the scroll bar to display the *city* column.
Select *Burlington* and press delete to delete Burlington.



13 Press the down arrow key to move down one row.
Type *Atlanta*.



14 Click *OK*.

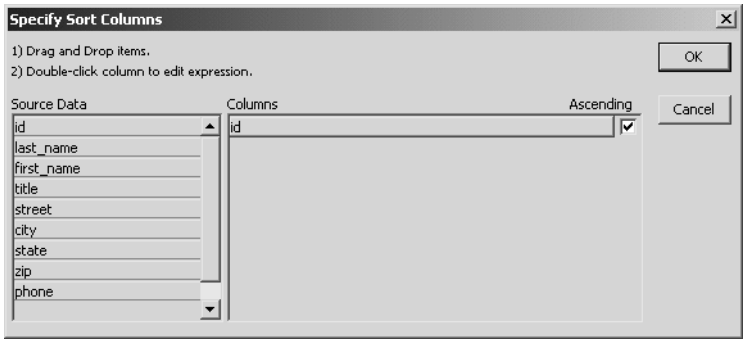
By specifying criteria in two different rows in the dialog box, you are specifying that the report should retrieve rows from the database that meet the first row of criteria or the second row of criteria.

Your report retrieves all contacts whose names begin with C. It also retrieves all contacts who are from Atlanta. It is hard to look at the two sets of rows, so now you sort by city. Then all the Atlanta rows will be together.

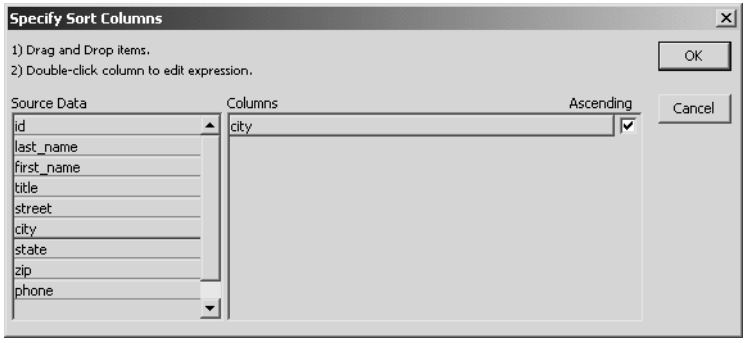
Id	Last Name	First Name	Job Role	Street	City	State	Zip	Phone	Fax
3	Critch	Susan	Product development	45 Center St.	Danvers	MA	01923	(508)555-4829	(508)555-3025
10	Clarke	Molly	Sales	55 Pine Grove Rd.	Lexington	MA	02173	(617)555-4325	(617)555-7638
15	Moore	Dawn	Sales	One Park Drive	Atlanta	GA	30339	(404)555-4834	(404)555-8291
19	Chin	David	Product development	16 Waverly Rd.	Burlington	MA	01803	(617)555-3378	(617)555-4453
21	Cobb	Paul	Customer support	34 Greenville St.	Atlanta	GA	30339	(404)555-2239	(404)555-8111
23	Cohen	Paul	Customer support	108 Park Street	Burlington	MA	01803	(617)555-8883	(617)555-4499
27	Evans	Carrie	Sales	89 Washington St.	Atlanta	GA	30339	(404)555-1169	(404)555-8244
34	Crowley	Charles	Human resources	69 Edson St.	Burlington	MA	01803	(617)555-1344	(617)555-9877
36	Caruso	William	Finance	99 Edison St.	Bedford	MA	01730	(617)555-2144	(617)555-1656
46	Crossland	Ellen	Product development	27 Rush Rd.	Burlington	MA	01803	(617)555-0004	(617)555-8005
50	Shishov	Irina	Marketing	567 Park Drive	Atlanta	GA	30339	(404)555-1233	(404)555-6837
59	Masalsky	Kurt	Customer support	29 Garden St.	Atlanta	GA	30339	(404)555-5111	(404)555-3347
60	Collins	MaryBeth	Administration	56 Lincoln Street	Burlington	MA	01803	(617)555-1199	(617)555-9586
61	Carter	Jimmy	Marketing	Peanut Way	Atlanta	GA	30339	(404)555-7833	(404)555-4291

15 Select *Rows>Sort* **from the menu bar.**

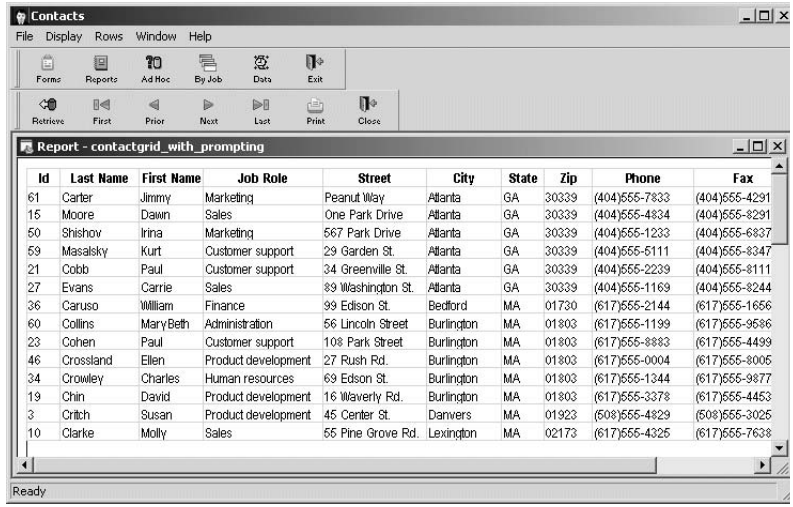
The Specify Sort Columns dialog box displays.



16 Drag the *Id* **column out of the Columns box and the** *city* **column into the Columns box.**
Click *OK*.



InfoMaker sorts the rows by city. Now you can see the Atlanta contacts first. These are followed by contacts whose names begin with C.



Id	Last Name	First Name	Job Role	Street	City	State	Zip	Phone	Fax
61	Carter	Jimmy	Marketing	Peanut Way	Atlanta	GA	30339	(404)555-7833	(404)555-4291
15	Moore	Dawn	Sales	One Park Drive	Atlanta	GA	30339	(404)555-4834	(404)555-8291
50	Shishov	Irina	Marketing	567 Park Drive	Atlanta	GA	30339	(404)555-1233	(404)555-6837
59	Masalsky	Kurt	Customer support	29 Garden St.	Atlanta	GA	30339	(404)555-5111	(404)555-8347
21	Cobb	Paul	Customer support	34 Greenville St.	Atlanta	GA	30339	(404)555-2239	(404)555-8111
27	Evans	Carrie	Sales	89 Washington St.	Atlanta	GA	30339	(404)555-1169	(404)555-8244
36	Caruso	William	Finance	99 Edison St.	Bedford	MA	01730	(617)555-2144	(617)555-1656
60	Collins	MaryBeth	Administration	56 Lincoln Street	Burlington	MA	01803	(617)555-1199	(617)555-9586
23	Cohen	Paul	Customer support	108 Park Street	Burlington	MA	01803	(617)555-8883	(617)555-4499
46	Crossland	Ellen	Product development	27 Rush Rd.	Burlington	MA	01803	(617)555-0004	(617)555-8005
34	Crowley	Charles	Human resources	69 Edson St.	Burlington	MA	01803	(617)555-1344	(617)555-9877
19	Chin	David	Product development	16 Waverly Rd.	Burlington	MA	01803	(617)555-3378	(617)555-4453
3	Critch	Susan	Product development	45 Center St.	Danvers	MA	01923	(508)555-4829	(508)555-3025
10	Clarke	Molly	Sales	55 Pine Grove Rd.	Lexington	MA	02173	(617)555-4325	(617)555-7638

Now you are finished using this report and using the application.

17 Click the *Exit* button.

This closes the report and the application.

Congratulations. Now you have done it all. You have created data, maintained it, and reported on it. And you have put all your work together into your own application. See the next page for some suggestions on what to do next.

What to do next

You might be ready to make your own InfoMaker application or you might be interested in learning more by using the sample library, *tutor_im.pbl*. Here are some ideas.

Personalize the contact data Delete all the data in the contact table and add your own. You can run your Contacts application to do this. Use the form to delete and add data.

Look at other sample forms and reports In the Environment tutorial, you accessed a few of the sample forms and reports delivered with InfoMaker. Now you can go back and look at more. The samples are located in *tutor_im.pbl*. When you look, notice both the design version and the results you get when you run a form or report.

Use the sample pipeline The sample library includes a sample pipeline. Pipelines let you move data structures and data within and between databases. Open the library and double-click the pipeline. This takes you to the Data Pipeline painter. The sample pipeline creates a copy of the employee table in the EAS Demo DB. To create the copy, you execute the pipeline.

Change sample forms and reports If you want to try some changes with samples, open the form or report and use Save As on the File menu. With Save As, you create a copy of the form or report and save it with a new name. Then you can make changes without affecting the original.

Create other forms and reports using the EAS Demo DB Once you have looked at the sample forms and reports, try creating some on your own. The EAS Demo DB has several tables that you can use. You might want to start with the contact table since you are familiar with it. Use the other InfoMaker documentation and online Help as you work.

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