CHAPTER 4

# Creating New Reports

You've loaded Impromptu, opened a previously built report, and navigated around "the report." This chapter explains how you build a report from scratch. Here, you will learn the steps necessary to build a basic report and learn about other important features available to you when you create a report.

Do not be discouraged by the number of questions you will have at the end of this chapter, just look forward to learning the answers in the upcoming chapters.

This chapter will teach you how to

- Review the different reporting templates.
- Use Impromptu templates to create a report.
- View the report you created in different on-screen layouts.
- Save the report for later viewing.

## Creating a New Report

As in most Windows applications, there are multiple ways to do something in Impromptu. Even though each method ends with the same result, each one has its own advantages.

Impromptu offers three different ways to create a new report:

1. Select File.New from the menu bar.
2. Click the New Report button on the toolbar.
3. Use the keystroke combination of Ctrl+N.

When you create a new report using options 1 or 3, the system displays the New Report dialog box. From here, you can choose one of the seven types of report templates that

Impromptu provides. The default template is the Simple List. These two methods are used when the report user does not want to build a report using the standard template. Options 1 and 3 provide the user with the flexibility to choose different types of reporting styles.

If you create a new report using option 2, the system launches the Report Wizard, which walks you step by step through the process of creating a basic report. We do not cover the Report Wizard because it is so simple to use; compared with building a report manually, the Report Wizard provides no real advantages. Most people who use the Report Wizard are completely new to Impromptu and have not seen how easy it is to build a report without it. Feel free to give option 2, the Report Wizard, a try and then return to this chapter when you are finished.

| *Question* | *Answer* |
|---|---|
| Does the toolbar button always have to launch the Create Report Wizard? | No. The system default is to launch the wizard, but you can change this so that Impromptu uses the default template instead by following these steps:<br>1. Select Tools from the menu bar.<br>2. Select Options.<br>3. Go to the General tab.<br>4. At the bottom, de-select the Use the Report Wizard checkbox.<br>Now Impromptu will launch the default template as the report format. |

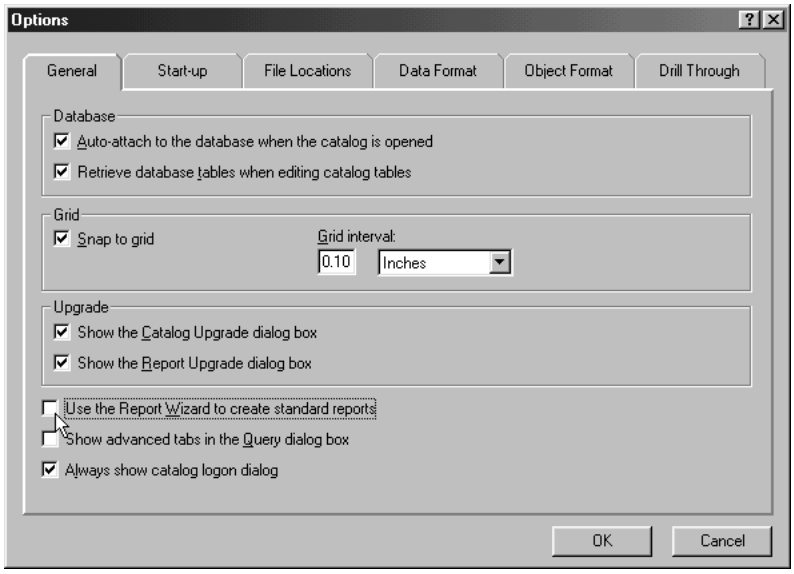



**Figure 4.1** The Report Wizard checkbox.

### A Word About Templates

Impromptu comes with seven predefined report templates that can help you create reports quickly and efficiently. The templates are installed regardless of how little you choose to install when you load Impromptu. Even if you choose to load just the application, these templates load and are stored on the drive where you installed Impromptu. If you chose to do this, you will not be able to follow some of the examples the book uses.

To find these templates, look in:

```
<(drive you installed Impromptu on)...\Cognos\cer1\samples\
impromptu\templates\standard
```

Several templates contain placeholders to assist you in determining what data columns are to be used. Later, when you become comfortable with building reports, you can create templates and either include placeholders or not—it is optional.

The following section describes the templates provided by Impromptu and provides a view of the QDB for each:

**Available Templates**

| *Template Name* | *Description* |
|---|---|
| Simple List | The Simple List, shown in Figure 4.2, is the default report template. This template provides a report shell in the format of a simple row-by-row list. You will use this template the most. |

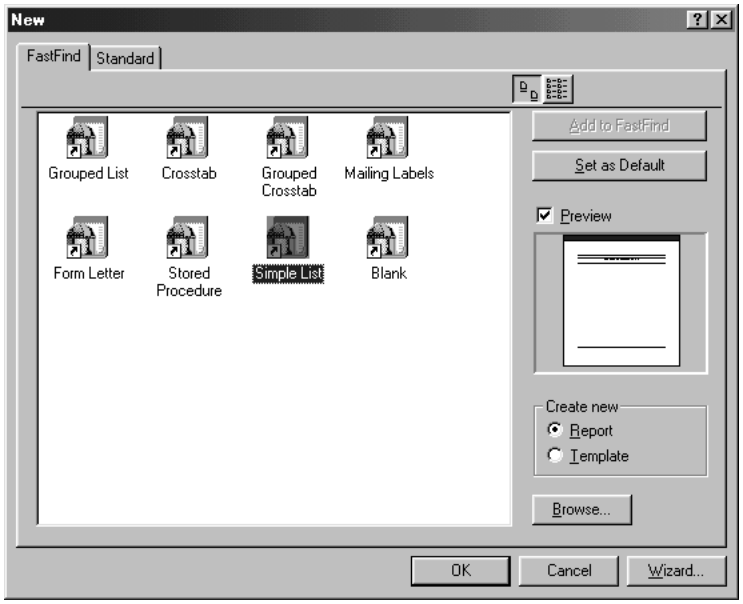



**Figure 4.2**
The Simple List report template.

| *Template Name* | *Description* |
|---|---|
| Grouped List | This template, shown in Figure 4.3, is an extension of the default report. When you open this template, the Query Data box already contains a column. This one column is a placeholder that forces you to provide at least a data column from the Catalog and use that column for grouping within the report. To use a placeholder, just click, hold, and drag a column from the Catalog to the placeholder. Certain placeholders are type specific. For example, a numeric placeholder will not accept a string such as a customer name; it accepts only numbers. |

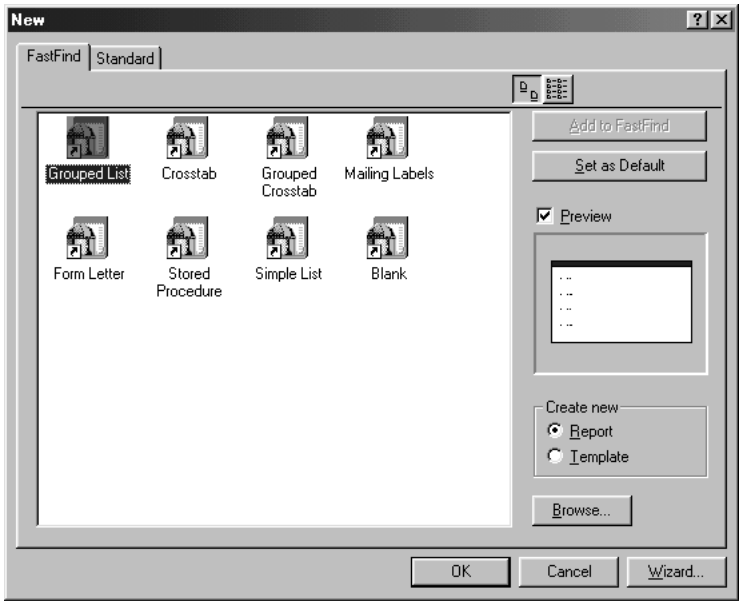



**Figure 4.3**
The Grouped List template.

| | |
|---|---|
| Form Letter | This template, shown in Figure 4.4, showcases the flexibility of the reporting environment in concert with database retrieval. The template provides placeholders to select the address information from the Catalog and create a full-page letter, one page for each address you want to print and mail. |
| Mailing Labels | A report can achieve many different objectives. Think of mailing labels as a uniquely formatted report. When you want a mailing list, you use this template, shown in Figure 4.5, for an initial mailing label report format. The selection requirements are the name and address, and the output is a 2 × 5 list of mailing labels. You just select columns from your Catalog and place them in the corresponding placeholder. |

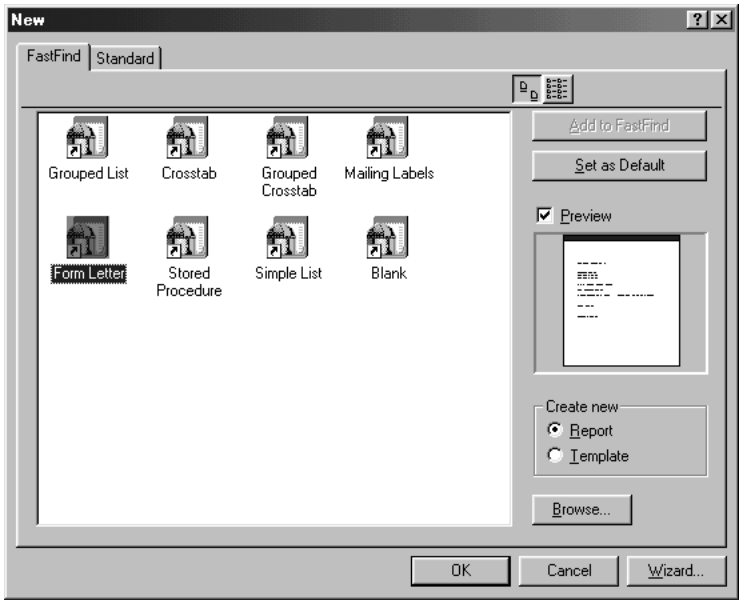



**Figure 4.4**
The Form Letter template.

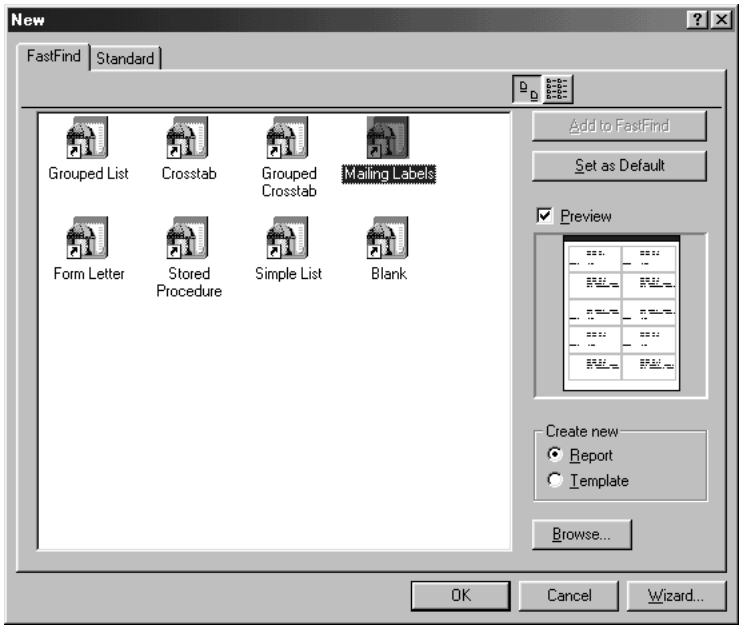



**Figure 4.5**
The Mailing Label template.

| *Template Name* | *Description* |
|---|---|
| Blank | This template, shown in Figure 4.6, is a "clean sheet of paper." You can retrieve data, but the layout of the report is a blank page. You have to build the report from scratch. You can create any combination of objects to generate this completely customized report. Use this template primarily for advanced, viewable reports using combinations of charts and scrollable lists. Chapter 11 describes how to build reports using this template. |
| Crosstab | The Crosstab template, shown in Figure 4.7, lets you create complex reports. You populate row and column data "items" and identify a measure for intersection. The row items appear as row headers on the report, and the column items appear as Column Headers. The intersections will be the calculation of the sum of that row and column. For example, say you wanted to see all your sales reps' quantity totals by Product Line. You could have Sales Rep Names as rows and Product Lines as columns, and the cell detail would be quantity sold. This will be covered extensively in Chapter 13. |
| Grouped Crosstab | An extension to Crosstabs, this report template, shown in Figure 4.8, takes the row-and-column concept of a crosstab report and provides you with the ability to have an additional row. This same functionality is permitted in the basic Crosstab Report, but this template provides a placeholder for a grouped column. |

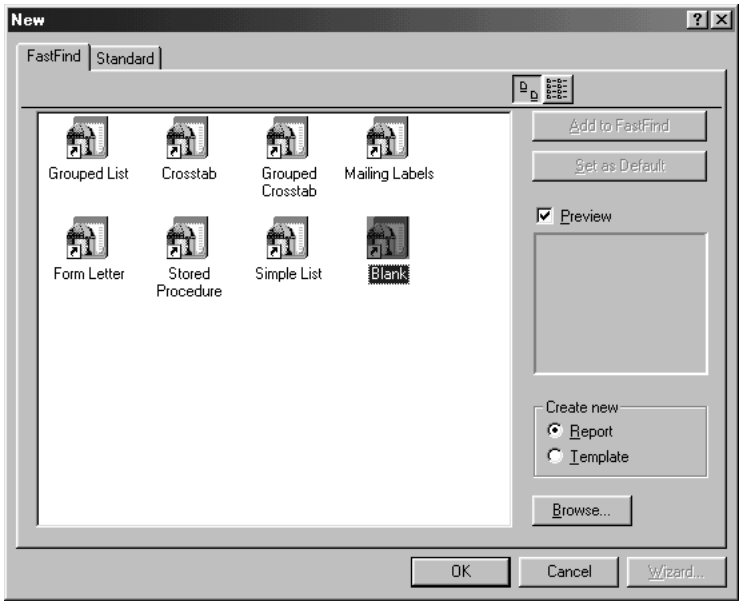



**Figure 4.6**
The Blank report template.

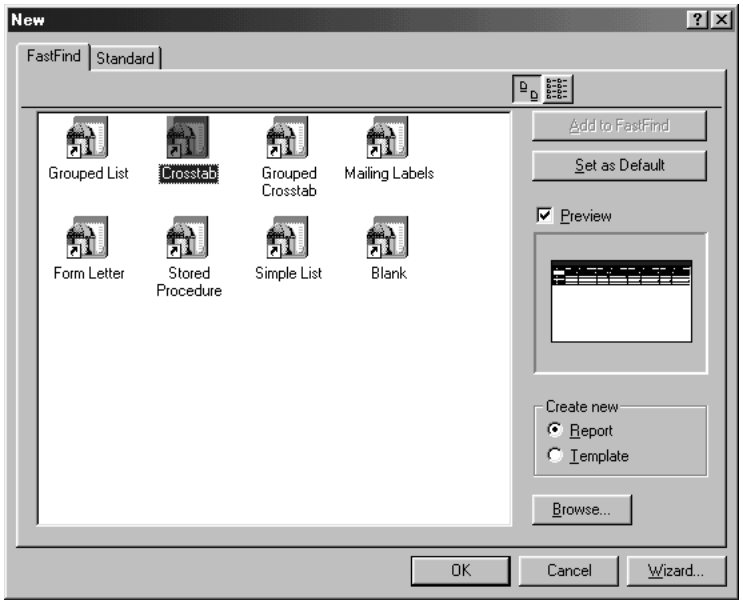



**Figure 4.7**
The Crosstab report template.

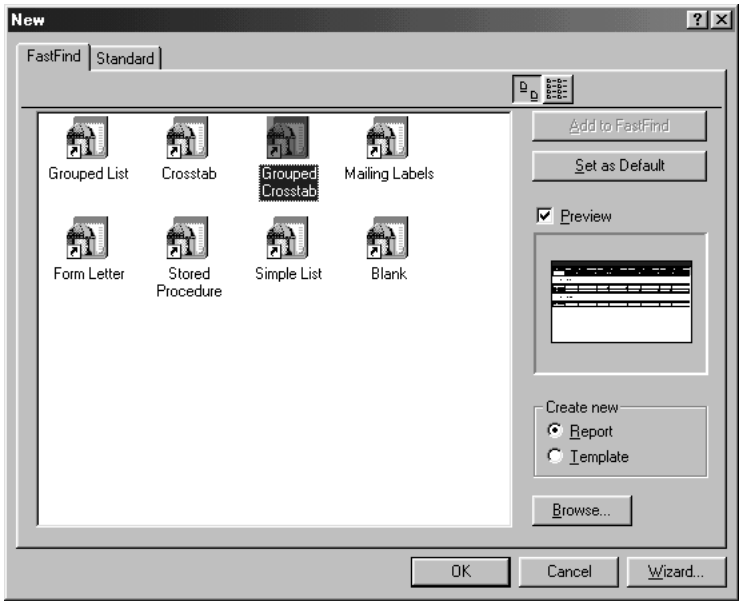



**Figure 4.8**
The Grouped Crosstab report template.

| *Template Name* | *Description* |
|---|---|
| Stored Procedure | A stored procedure is an SQL statement designed to extract data from certain tables within a database. This template is not discussed here. This is an advanced topic reserved for database professionals with experience in both database administration and Impromptu administration. |

## Let's Create a Report

The following exercise takes you, from start to finish, through building a very basic and raw report. The goal of the exercise is not to impress you with flashy content or colorful graphics. Its purpose is to take you through the essentials of building a report.

To build a report, a report developer generally needs a goal, a set of instructions, some directions, and some sort of report requirements. Throughout this book, as you build exercise-oriented reports, you will be provided with a sense of what to look for when obtaining or gathering report requirements. In some instances, you will start with what a typical user would want, and you will be provided with some insight or analysis to enable you to translate those requirements to make sense within Impromptu.

In some cases to further illustrate a concept, you will be provided "changes" to the original report requirements. Changing report requirements is inevitable. People will always change their minds, especially once they see what they get when they open their first Impromptu report.

### *Report Requirement*

Your Boss: *Can you give me a simple list report that just shows the following columns from the database:*

- *Order No.*
- *Customer Name*
- *Order Date*
- *Sale Amount*

### *Analysis*

This seems pretty straightforward. Your boss wants a basic report that contains the columns listed above.

### *Steps to Create a New Report*

First select a template.

1. Select File.New from the menu bar.
2. Choose the template you will be using most: "Simple List," as shown in Figure 4.9.
3. Click OK.

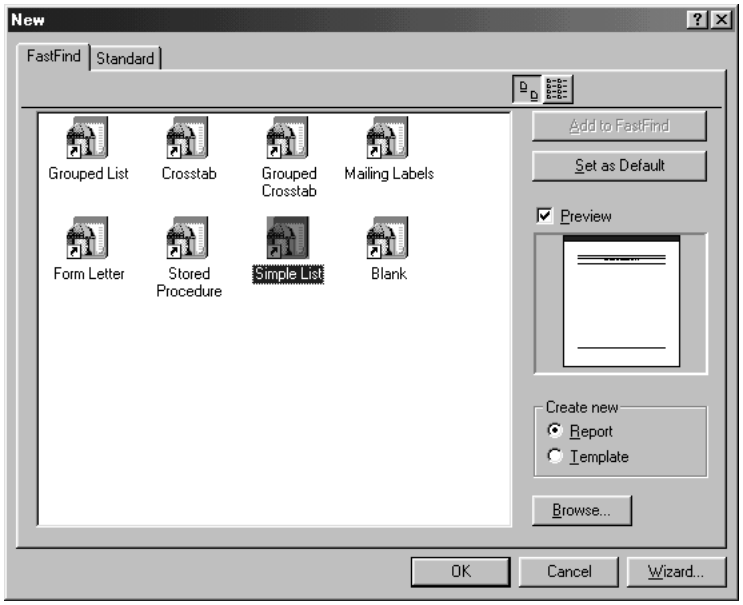



**Figure 4.9**
The Simple List report template highlighted.

4. On the left side, in the Catalog box, expand the Order folder.
5. Select (double click) the Order No. column.
6. Select the Customer Name column.
7. Select the Order Date column.

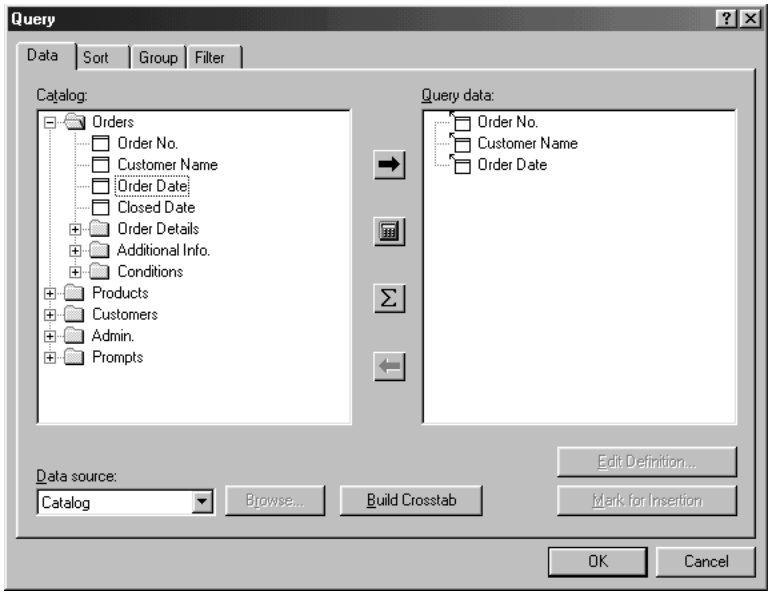



**Figure 4.10**
QDB with expanded Order folders with several columns moved to the Query Data Box.

8. From the Catalog box, expand the Order Details folder.
9. Select the Sale Amount column.

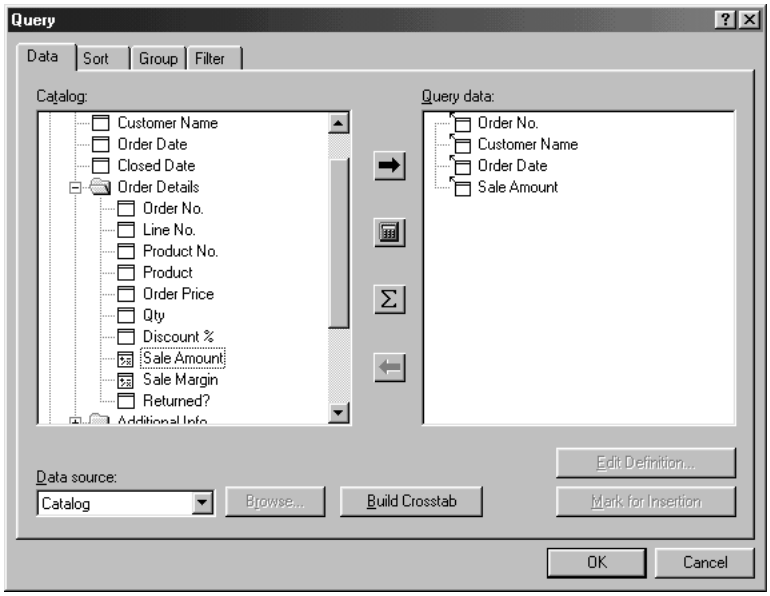



**Figure 4.11**
QDB with Order Details expanded and the columns moved to Query Data box.

## Before We Run the Report…

There are just a few more things to cover before you click the OK button to launch the report. The Query Data box is loaded with functionality that frequently goes unnoticed. Taking the time now to explain the details will give you a clear understanding and a foundation for knowing what's going on when you build your own reports in the future.

There are two things to discuss: the order of the columns you add to a report and the concept of marking the column for insertion into the report. These two topics are the most unassuming features in Impromptu, but they are two key ingredients to the success of the product.

### *The Order of Columns*

When you select a Catalog column in the report, its destination is the Query Data box. This box depicts everything that comes from the database and is applied to the query portion of the report, whether it is a column or a calculation. Remember from the last chapter, where you learned about the two parts to every report. Here you are building the first part. You are creating the extracted list to be retrieved from the database.

The important point here is the order in which you retrieve columns. The order the columns appear will be the order, from left to right, that they appear on the simple list. Easy enough? Almost. This holds true for the initial query request, when you create the query for the first time. Afterward, the order of columns in the Query Data box does not affect the order of the viewable report at all.

Is this a big deal? No, not really. In Chapter 2, we talked about how you can think of Impromptu as a two-part report generator. The first part is considered the request of columns from the database. The second part is the WYSIWYG, the visual part of the report, the part that everyone sees and cares about.

**Tip**

*WYSIWYG stands for "What You See Is What You Get," pronounced wizzy-wig.*

So, when you build a new report for the first time, the report requests the columns in a certain order, the order of the Query Data box. Then, Impromptu displays them in that order. After that first request, you can move columns around on the screen, as we did in Chapter 2. This does not affect the order of the Query Data box.

### *Marking Items for Insertion*

When you first add columns to the Query Data box, you will notice that there is a little arrow pointing up and to the left, as shown in Figure 4.11. This indicates that this column is "Marked for Insertion," meaning you are flagging this column to be included in the second part of the report, the WYSISYG part of the report.

Also, take a look at the lower right portion of the QDB's Data tab. There is a button that is grayed-out or disabled when no Query Data items are selected. This button is the Mark for Insertion button, as shown in Figure 4.12. When you select, for example, the Order No. column, the button becomes enabled, as shown in Figure 4.13.

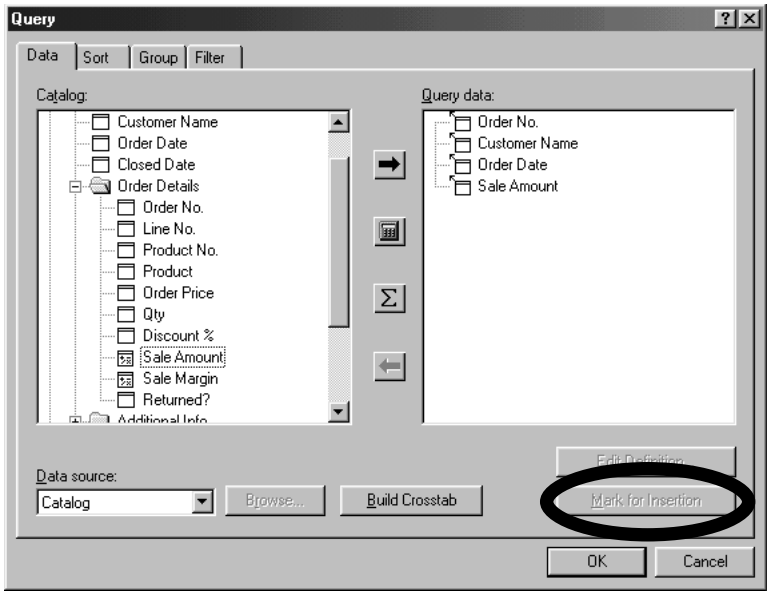



**Figure 4.12**
The Mark for Insertion button.

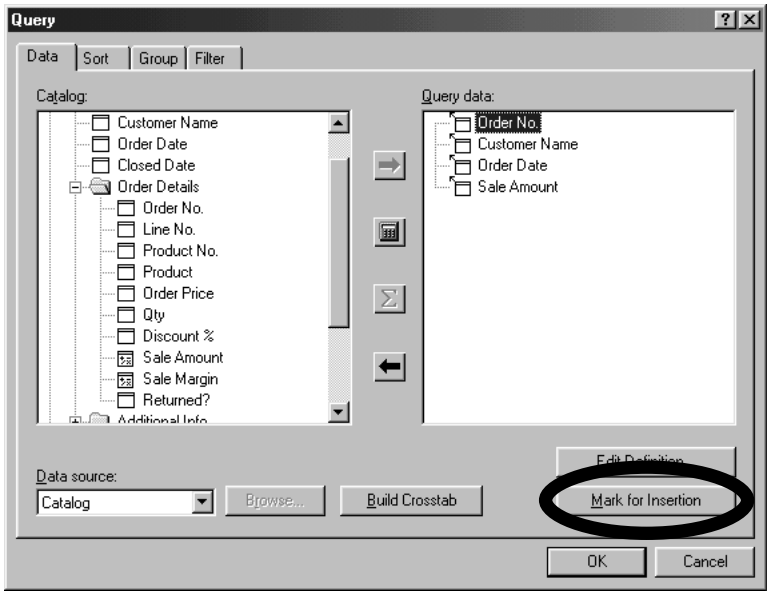



**Figure 4.13**
The enabled Mark for Insertion button.

Go ahead and select a column in your report, then click the Mark for Insertion button. Notice that the arrow disappears for the Order No. column, as shown in Figure 4.14. What does that mean? Since the column is still in the QDB, it is still being retrieved from the database, but the column will not be displayed. Go ahead and press the button again; notice that the arrow comes back.

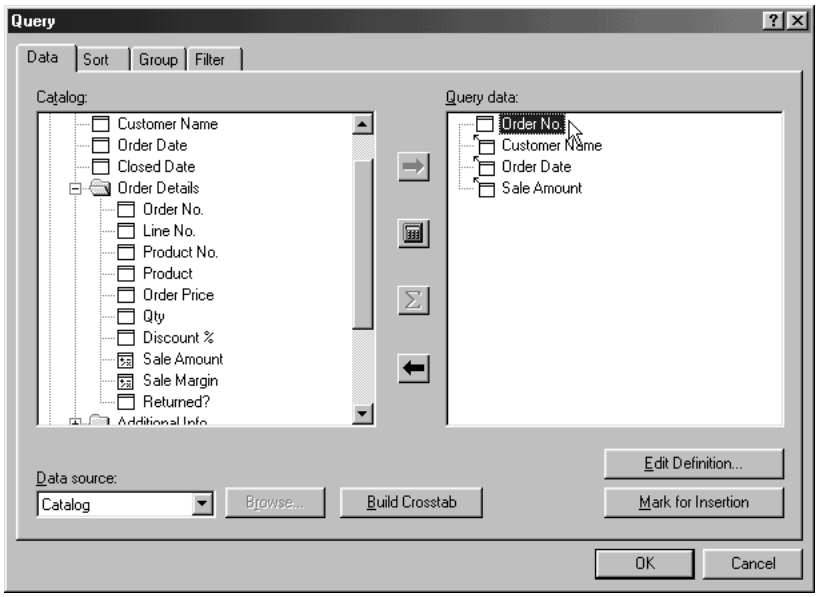



**Figure 4.14** A column un-Marked for Insertion.

### Running the Report

OK, OK, I know you have been wanting to press the OK button, but let's double-check to make sure we will be seeing the same results. The Query Data column I will be using to "run" my report is shown in Figure 4.15.

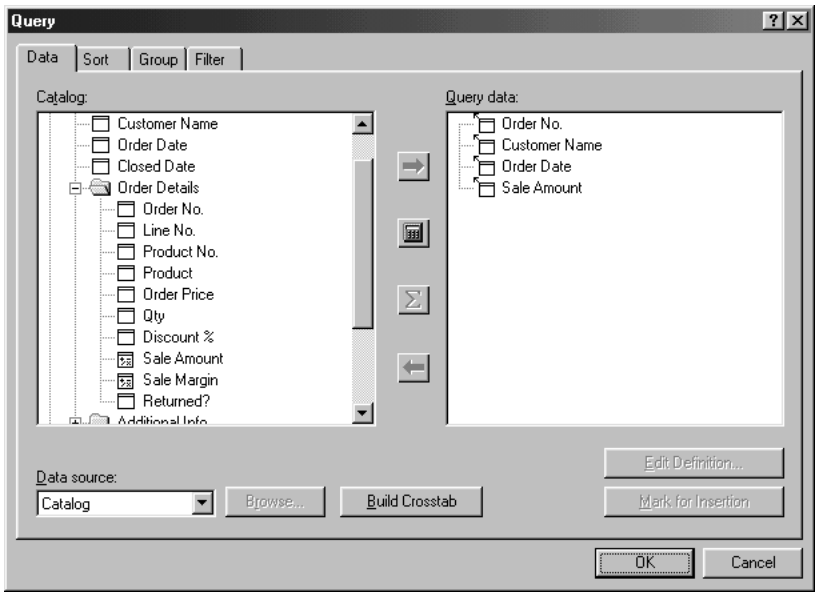
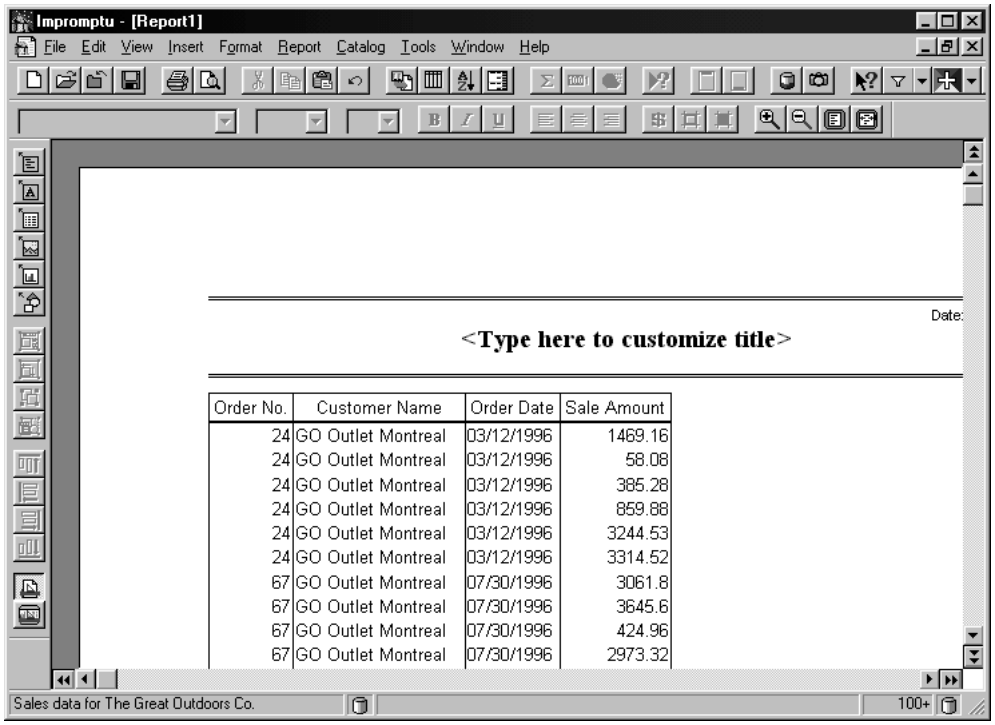



**Figure 4.15** Full picture of the QDB Data tab.

10. Now, click OK to run the report.

### *And the Results Are…*




| Order No. | Customer Name | Order Date | Sale Amount |
|---|---|---|---|
| 24 | GO Outlet Montreal | 03/12/1996 | 1469.16 |
| 24 | GO Outlet Montreal | 03/12/1996 | 58.08 |
| 24 | GO Outlet Montreal | 03/12/1996 | 385.28 |
| 24 | GO Outlet Montreal | 03/12/1996 | 859.88 |
| 24 | GO Outlet Montreal | 03/12/1996 | 3244.53 |
| 24 | GO Outlet Montreal | 03/12/1996 | 3314.52 |
| 67 | GO Outlet Montreal | 07/30/1996 | 3061.8 |
| 67 | GO Outlet Montreal | 07/30/1996 | 3645.6 |
| 67 | GO Outlet Montreal | 07/30/1996 | 424.96 |
| 67 | GO Outlet Montreal | 07/30/1996 | 2973.32 |

**Figure 4.16** The new report results, shown in a simple list style.

| *Question* | *Answer* |
|---|---|
| Wait a minute! Did I just see a fish swimming back and forth at the bottom of the screen? | Yes, when the report runs and queries for data, a little fish named Gil, swims back and forth in the right side of the Status bar, as shown in Figure 4.17. He's the little indicator that Impromptu is building your report. |

**Figure 4.17** Picture of Gil.

### *Remember the Status Bar?*

Remember that the Status bar contains many tidbits of valuable information. Now that a new report has run, it is a great time to review just what the Status bar has.

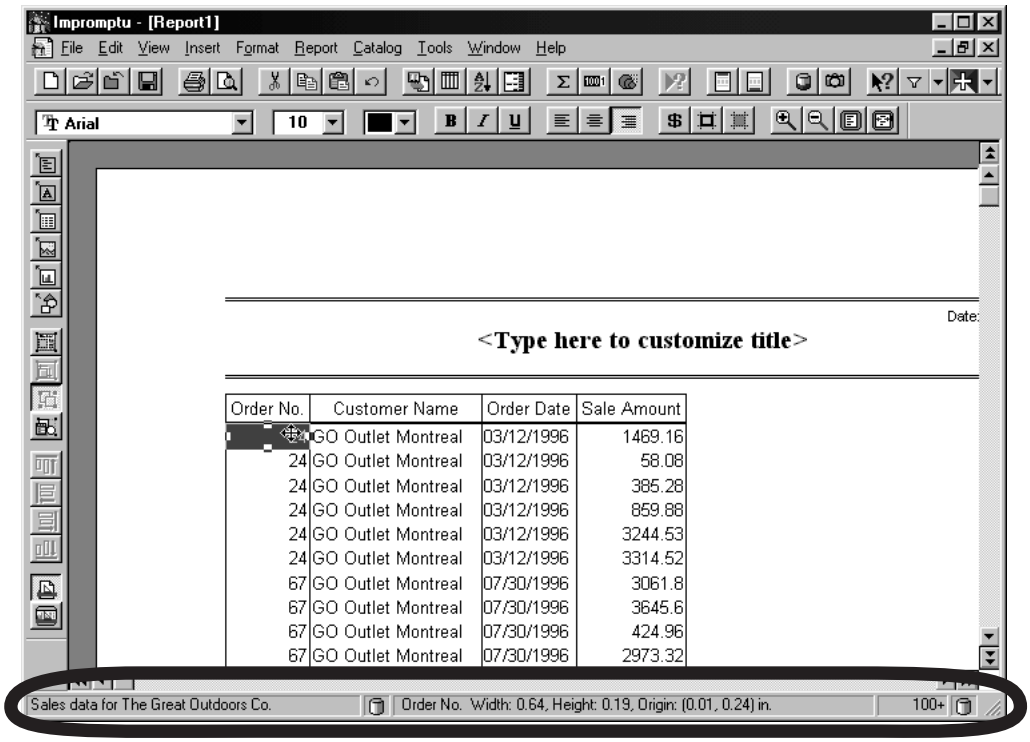



**Figure 4.18** The Status bar.

| *Status Bar Portion* | *Description* |
|---|---|
| The Catalog Description | At the far left is a short text description of the Catalog. The Catalog administer entered this. |
| Middle Drum | The middle drum determines whether there is a connection to the database. If there is a connection, you will see the drum. If Impromptu is not connected to the database, there will be a red x over the drum. |
| Field Identification Zone | This area describes the item or object you have selected in the report. Included in this description are the dimensions and the location of the objects. These objects include such reporting items as columns, rows, headers, and footers. |

| *Status Bar Portion* | *Description* |
|---|---|
| Report Retrieval Count | The total number of rows retrieved from the database. Remember, do not rely on this number as a counting figure. The Impromptu reporting tool sometimes has to split functionality between the database and the desktop. |
| Drum on the Right | This drum indicates the source of the data. It can be a drum, which is the database; a camera for a snapshot of data; or a drum ½ blue indicating a thumbnail or small sample of data that is stored locally on a desktop computer. |

## Viewing the Report

Once the report has run and data is returned and displayed, you will most likely be looking at the report in a Page layout format like the one in Figure 4.19. This is identical to the Page layout view as seen in other Windows applications such as Microsoft Word. The gray space around the white background provides an estimate of size and scale of the report and gives the impression that you are looking at the report as though it is on a sheet of paper.

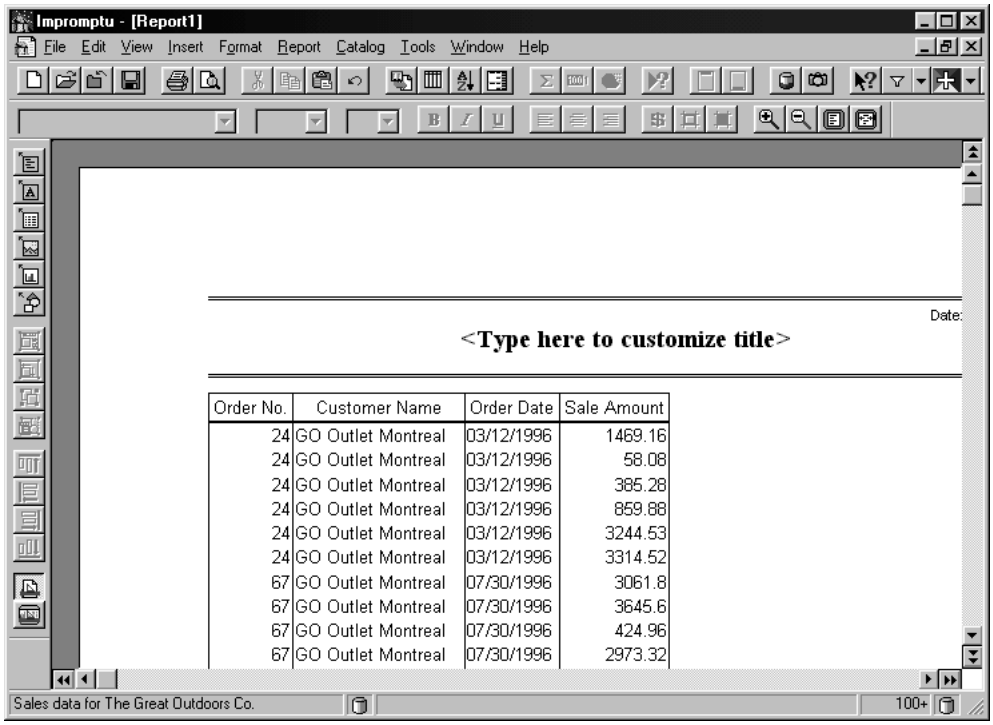



**Figure 4.19** A picture of the Page layout of a report.

Alternatively, you can view a report just to examine the data (Figure 4.20). This view is called Screen Layout, and the report displays only the data, hiding the header area and the gray space around the edges.

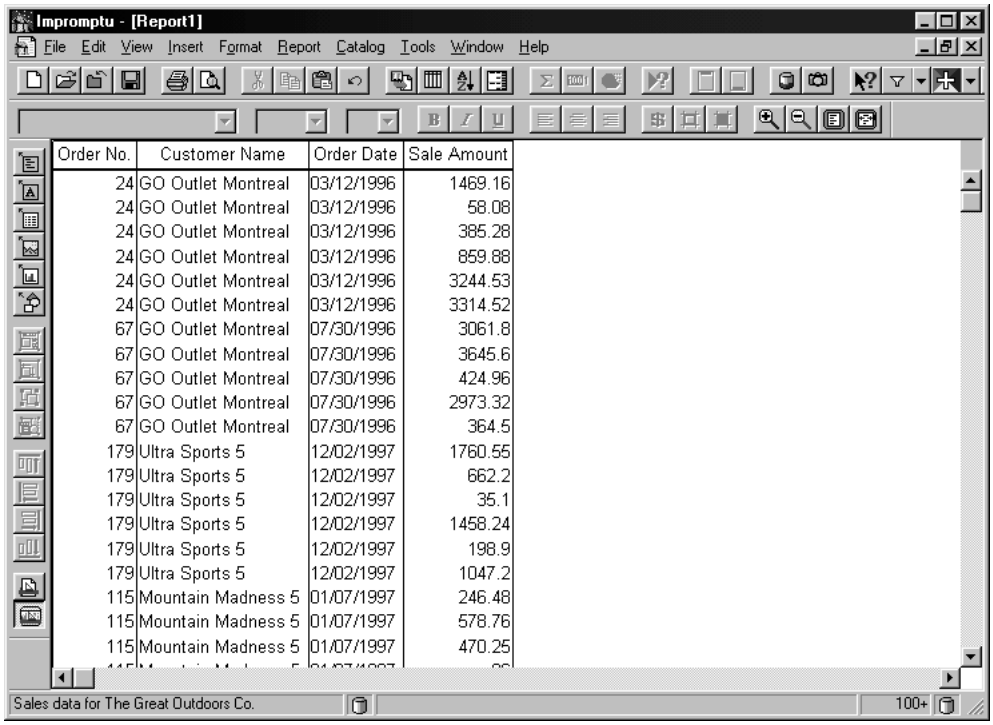



**Figure 4.20** A picture of the Screen layout of a report.

There are two ways to toggle between these two views:

1. Select the Screen layout button on the toolbar.
2. Select the appropriate option from under the View menu.

The advantages of using a Page layout are that you get a clear view of how the report is going to look when it is printed. You also get the ability to view how much information you can put on one page width, as well as the formatting of the headings and footings. The disadvantages are just the opposite. The Page layout view may not show all of the columns selected because they may not all fit the width of one page. This leads to pages of mistakes when printing.

## Saving the Report

Saving the report is just as vital as building the report. You can save an Impromptu report at any time during the building process. Saving a report that is still in the development stages is done the same way a report is saved a final time for report consumers to view it. All Impromptu reports are saved using the same file extension: IMR, standing for IMpromptu Report.

As a default, Impromptu essentially saves three main pieces of information in each IMR:

1. Catalog information—which Catalog and where it is.
2. The query needed to access the data from the database.
3. The layout of the report, the WYSIWYG design.

These three components are needed to run the report at a later date. As a default, Impromptu does not save any data from the report. If you want to save the report, follow these steps:

1. Select File.Save As, as shown in Figure 4.21.
2. Navigate to the directory where you would like to save the report.
3. For now, keep the name as "Report 1" and the "Save as Type" as an IMR.
4. Click Save.

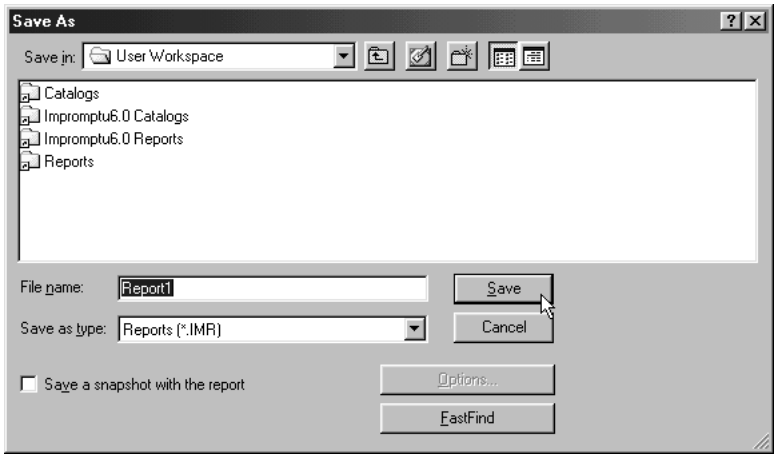



**Figure 4.21** The Save dialog box.

## What Was Just Saved?

Remember, Impromptu reports do not store the data; they only store the query and the layout. More specifically, Impromptu saves the report layout, which Catalog the report needs, and what columns need to be retrieved from the database, as well as other functionality such as how the report developed and used. This is covered in later chapters.

### *Different "Save As" Formats*

The default "Save As" type in Impromptu is the IMR, but if you want to save the information in some other format, Impromptu gives you several options. With each one of these options, you get the raw data from the query. None of the fancy formatting that you can do in Impromptu flows through to the extracts.

The following table lists some of the potential extract formats.

| *Format* | *Description* |
|---|---|
| IMT | This is called an Impromptu Template. It saves the visual layout only. The query portion does not get saved. |
| IMS | This is called a HotFile. Impromptu uses HotFiles to transfer a result of a query to be used in other queries. For example, say you have a database that contains sales information, and you had details of customers in another database. Impromptu lets you save the information you want from the customer database, store it as a HotFile, and use it with a query in the sales database. This is an advanced topic beyond the scope of the book. For further instruction contact Cognos for an advanced training class. |
| DAT | Saves in a format that allows PowerPlay, another Cognos product, the ability to read the data. |
| DBF | Stores the results from the Impromptu query as a single dBase file. The dBase file is a simple version of a local database structure easily read by other applications such as Excel and Lotus. |
| CSV | CSV stands for Comma Separated Value file. Selecting this format will give the user the ability to open this report in a number of other applications. Under the Options button, Impromptu provides all the CSV format options to choose from in setting up the output format. |
| XLS | There are now two ways to save data to Excel, one being a strict datadump to Excel. The other way is saving a formatted version. |
| WK1 | The preferred format of Lotus 1-2-3. |
| PDF | This is another new feature for Impromptu 6.0. This option allows you to create an Adobe Acrobat file, known as a PDF. This format is an excellent way to display reports and keep the rendering—how it looks from one computer to another—intact. |
| TXT | This is another popular format, similar to CSV. This stands for "Text file," and that is all it is, a text extract of the reports column content. |

| *Format* | *Description* |
|---|---|
| SQL | SQL is a common language used by databases. In a technical installation of Impromptu, there may be Database Administrators who want to see the basic commands Impromptu is sending to the database. They would save a report as an SQL file to be able to view what Impromptu is sending to the database. |
| IQD | This file format is specifically used by other Cognos Products called PowerPlay and Cognos Query (Web reporting). |

You can change the report directory to the one that suits your needs. As a precautionary measure, always store your IMR files on a network directory. Most companies have a scheduled process that backs up those directories. Contact your network administration group for details on what is backed up.

**Tip**

***Changing the Template Layout***

*The templates that come with Impromptu are designed to display data simply and efficiently in Page layout. Sometimes, however, you may want to view a report differently from the beginning. You will find that Impromptu templates are easy to change.*

One way to look at reports while in the development process is to look at the report in Screen layout. Since you may find yourself changing the simple list report you use to create reports to the Screen layout, you may create your own template of a simple list report that shows the report as a Screen layout instead of a Page layout. Let's try an exercise that demonstrates the flexibility of the templates.

The following steps change the default Simple List template from a Page layout to a Screen layout:

1. Select File.New from the menu.
2. Select the Simple List template. (This is the link to the actual report.)
3. Click OK. (This opens a new report. You'll be saving it as a new template in a few steps.)
4. You do not want any columns in your new template. So, do not select any while the QDB is open. Click OK to "run" the empty report (Figure 4.22).

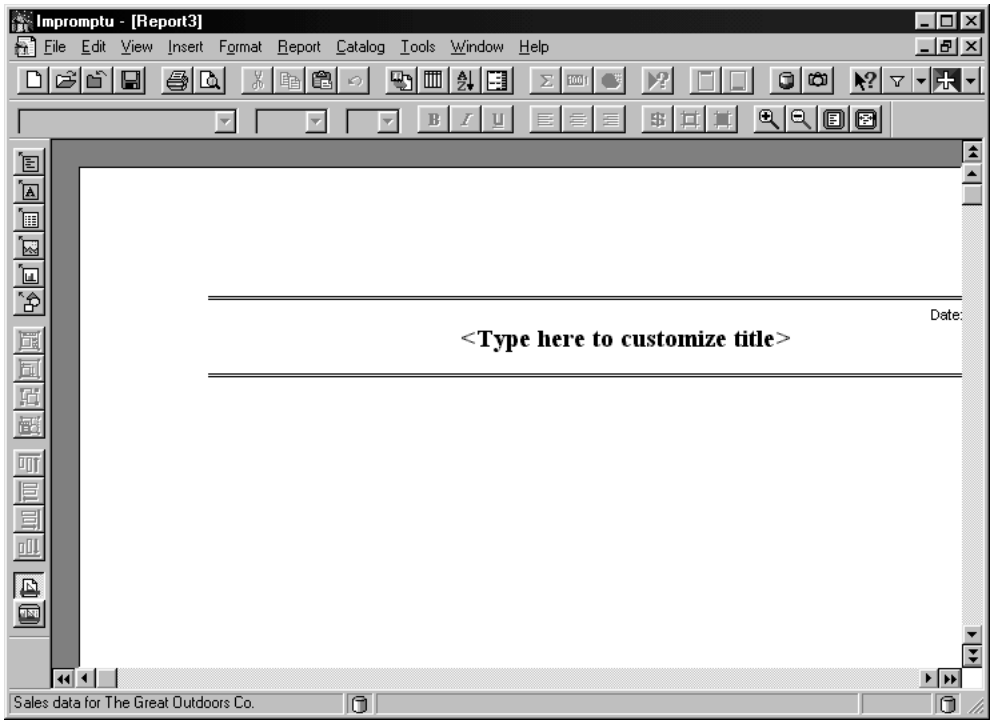



**Figure 4.22** The empty report result.

Now you have a report without any columns. You can modify the report as much as you like. For example, you could set up standard headers and footers using your company's logo. For this exercise, just change the layout from Page view to Screen view:

5. Select View.Screen Layout from the menu (Figure 4.23).

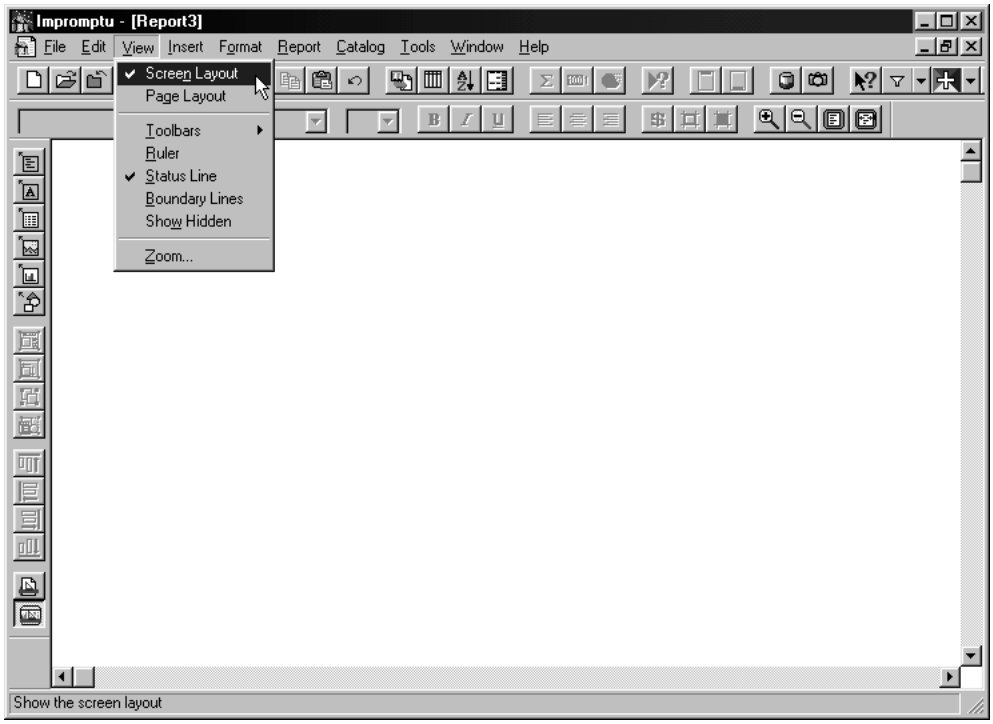



**Figure 4.23** A view of the report in Screen layout.

The following are the steps to save the new Screen layout template:

6. Select "File.Save As."
7. Type a unique name. For this book, you could choose to name it "Chapter 4—template."
8. Choose "Save as Type": IMT from the dropdown (Figure 4.24).
9. Close the new template.

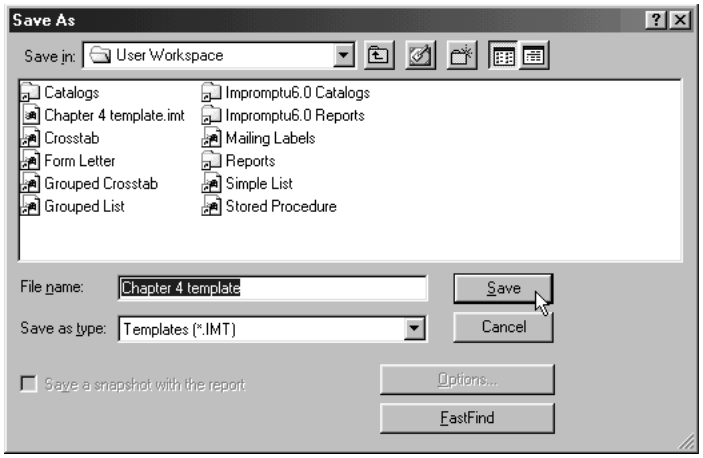



**Figure 4.24**
I always give the new template a unique name.

Now that you have created this new template, if you want to make it the default template, you have to select it as your new default. Here's how:

1. Select File.New.
2. Single click on the new shortcut, as shown in Figure 4.25.
3. Click the "Set as Default" button, and you have your new template as the default report template.

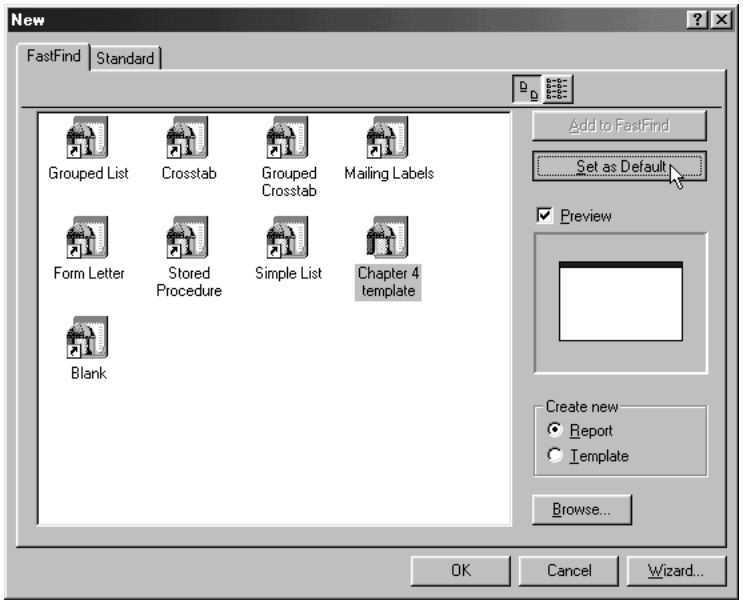



**Figure 4.25**
The new template is now my default template.

### Saving Exercises

Each chapter covers features of Impromptu using a report developed in that chapter. You may save those reports when you complete the exercise or at any time during the exercise. It is not required to save any report. Each report is self-contained within its chapter.

## Summary

At this point, you should be able to

- Create a new report from scratch, using the templates provided with Impromptu.
- View a report in at least two ways.
- Run a report.
- Save a report in a different format.
- Create a template of a report to use repeatedly.

This thorough explanation will pay big dividends when you start building reports against your own data. Use this and the following chapters wisely. Their sole intent is to teach you how to do certain things in Impromptu, not how to build report *x* against a sample database.