Dynamics AX

A Guide to Microsoft Axapta

Luis X. B. Mourão
and David Weiner

Apress®

Dynamics AX: A Guide to Microsoft Axapta

Copyright © 2006 by Luis X. B. Mourão and David Weiner

Printed and bound in the United States of America 9 8 7 6 5 4 3 2 1

Distributed to the book trade worldwide by Springer-Verlag New York, Inc., 233 Spring Street, 6th Floor, New York, NY 10013. Phone 1-800-SPRINGER, fax 201-348-4505, e-mail orders-ny@springer-sbm.com, or visit http://www.springeronline.com.

For information on translations, please contact Apress directly at 2560 Ninth Street, Suite 219, Berkeley, CA 94710. Phone 510-549-5930, fax 510-549-5939, e-mail info@apress.com, or visit http://www.apress.com.

The source code for this book is available to readers at http://www.apress.com in the Source Code section.

Navigation and User Options

In this chapter, we'll be walking through the Axapta integrated environment, grouping navigation into the following areas:

- *Axapta Desktop*: The main workspace/window for the development and run-time environments, and its navigation elements. Perhaps the most important element of the desktop is the main menu, from which you access the majority of the application's runtime functionality.

- *Forms, Dialogs, and Reports*: Objects in Axapta with specific navigation elements.

- *Searching and Filtering*: Functionality in Axapta with specific navigation elements.

Before you can really begin using Axapta, you need to know how to get around, and as in any Microsoft Windows–based software system, there are often several ways to do the same thing. However, because most of the applications that make up the Axapta system are Windows-compliant and support all the navigational bells and whistles you're used to, navigating Axapta should be no harder than learning how to invoke the functionality of any other Windows application. Try out the techniques in this chapter and experiment with the different ways of navigating specific areas of Axapta to figure out what works best for you. For instance, one of the authors tends to use the mouse heavily, but many people find keyboard shortcuts more effective.

■**Note** This chapter assumes that you have a basic data set in your company. Without a data set it will be difficult to follow along.

The Axapta Desktop

Figure 4-1 shows the Axapta desktop. This is the main window of Axapta's client component and contains virtually all the tools and windows that you work with in Axapta. The exceptions are the configuration utilities, the server manager, the HTML editor, and the debugger, which are described in Chapters 3 and 18, respectively. The figure indicates the areas of the Axapta desktop as they are usually designated in Microsoft documentation.
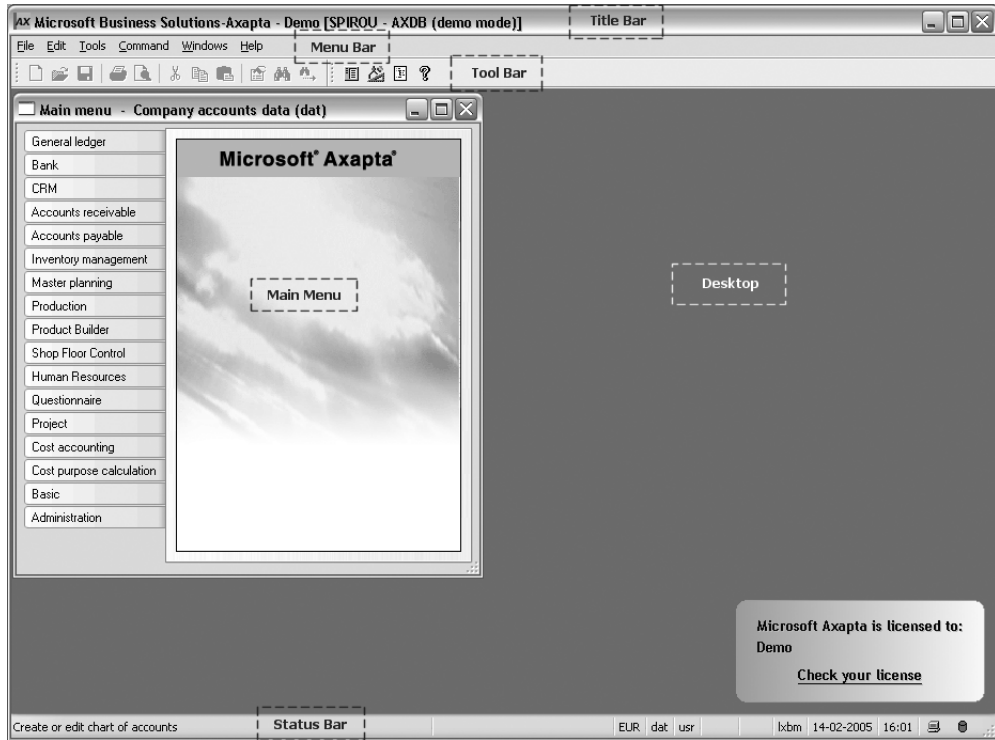
Figure 4-1. *The Axapta desktop*

Let's look at each of the areas individually.

The Title Bar

This is a standard Windows element and has a purely informative function. It is a concatenation of the following information:

- *The name*: Microsoft Business Solutions—Axapta.

- *The owner of the loaded license file*: This is Demo in Figure 4-1, which indicates that I'm running on a demo license.

- *Opening square bracket ([).*

- *The name of the server that the client is connected to*: This is the local machine name when running in 2-tier mode, or the AOS name when running in 3-tier mode (in Figure 4-1, it's SPIROU).

- *The name of the database that's in us*e: AXDB in my case.

- *The mode in which the client is running:* This applies only if it's in demo mode, enclosed in parentheses ( ).

- *The closing square bracket (]).*

The Menu Bar

This too is a standard Windows element. It provides a series of context-sensitive menus, which are enabled or disabled depending on the active child window of the desktop; i.e., the main menu, a specific form, etc.

The File Menu

The File menu contains the following menu and submenu options:

- *New ➤ New*: Creates a new application object. The object type is determined by the active window. So, for example, in a form it creates a new record (in the Projects form it creates a new project), and in the job's root node of the AOT it creates a job. It is used constantly, but everybody seems to use the shortcut key rather then the menu option (Ctrl-N).

- *New ➤ Wizard*: Creates a new Axapta wizard to automate a specific task, and is usually left to developers or technically minded consultants.

- *New ➤ User Menu*: Creates a new user menu. This is a great feature for end users. If in your work you use only a subset of the main menu, you can create a personalized version in which you define your own tabs, menu folders, and items by simply dragging them from the standard main menu. Figure 4-2 shows an example.

Figure 4-2. *A sample user menu*

- *Open* ➤ *Open*: Opens the last form or dialog you opened if you have since closed it; if it is open, it will do nothing. You can also use the shortcut key combination of Ctrl-O.

- *Open* ➤ *Main Menu*: Opens the main menu. This is useful if, for example, you closed the main menu because you generally use your own personalized menu, but now you need to access some functionality that your custom menu does not include.

- *Open* ➤ *Menu*: Opens a predefined application menu. These include all the installed submenus on the main menu, and many more. The resulting pull-down is divided into two parts with a standard Windows menu separator. The top portion lists the menus defined by the currently logged-on user, and the lower portion shows system-defined menus.

- *Open* ➤ *Company*: Displays a dialog from which you can select a company other than the current one to work with.

■**Note** Axapta allows you to manage separate companies within the same system. You can then move between them easily, and even consolidate them (though you normally can see data only for the active company).

- *Open* ➤ *Application Object Tree*: A developer tool that provides access to the application objects in the active application in a tree control.

- *Open* ➤ *Project*: Another developer tool that allows grouping of application objects. Typically used to keep track of which objects are touched in a project or unit of work.

- *Open* ➤ *AOT Recycle Bin*: The equivalent of the Windows recycle bin, but for AOT objects. This recycle bin is automatically emptied when the instance is exited.

- *Close*: Closes the active window.

The preceding menu options are followed by a group of options that save the contents of the active window—for example, application objects and data.

The following group is a standard Windows printing group, with the twist that the printouts are Axapta reports and consequently the dialogs they invoke are Axapta dialogs and forms.

- *Send*: Equivalent to the Print menu option, but the output device is e-mail.

- *Properties*: Displays the Application Object Properties window for the currently selected object in the AOT. The window is by default anchored to the right side of the workspace. This menu option is used primarily by developers to set values in application objects, system administrators and others can use it to see information about the active application object. Chapter 18 provides further details.

- *Exit*: The standard Windows menu option that closes the main window (the Axapta client desktop).

The Edit Menu

Next on the menu bar is Edit. For the most part the options on this menu perform standard functions, but they're applied to data or application objects. We will mention only the two that lack a keyboard shortcut. For the others please refer to Appendix D.

- *Duplicate*: Creates a copy of the selected application object.

- *Word Wrap*: Creates a word wrap when the active window is an internal text editor, like the X++ editor.

The Tools Menu

The third menu on the menu bar is the Tools menu, which is specific to Axapta and has the following menu options:

- *Telephone List*: Displays local and mobile phone numbers of the employees created in the employee table of the HR module for the active company account.

- *System Date*: Axapta keeps track of two dates—the computer clock date and the Axapta system date. The first is simply whatever your computer clock is set to, but you can set the system date yourself. This can be quite useful if your need to perform an operation back or ahead in time relative to the actual current date.

■**Note** If you change the date on your computer clock, the change is carried over to Axapta automatically, but the system date is not adjusted accordingly. However, the system data is reset to the computer date when you shut down and restart Axapta.

- *Calculator*: Fires up the Windows calculator.

- *Calculator for Units*: Converts between Axapta unit types based on the data setup using the forms at the main menu path *Basic* ➤ *Setup* ➤ *Units*.

- *Print Archive*: Displays a list of print jobs executed from Axapta for the user currently logged on.

- *Select Company Accounts*: This is a very important menu option and it's how you move between the different companies that you have created in the currently active application.

- *Development Tools*: Applies only to developers and technically minded consultants; please refer to Chapter 18.

- *Customize*: Brings up the form shown in Figure 4-3, which allows you to specify which groups of menu buttons to display on the desktop toolbar for the user currently logged on. It's buggy and we generally turn them all on with small buttons because the large ones do not display correctly.
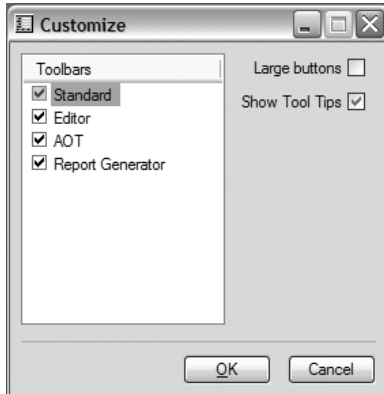
Figure 4-3. *The Customize form of the Tools menu*

- *Options*: This is where you set up your general preferences for the Axapta environment.

- *Compiler*: Allows you to specify additional personal settings for the X++ compiler.

The Command Menu

The Command menu varies significantly based on the active application object and is quite extensive, so instead of covering it in depth here, we will refer to it throughout this book as appropriate. Some of the things you can do from this menu are filter records, sort, import and export object definitions. Investigate the menu by opening different types of application objects, such as forms, reports, the AOT, etc, to see what commands are available.

The last two menus on the menu bar, Windows and Help, are standard Windows menus that you can work out easily.

The Toolbar

This is a standard Windows element that provides a series of menu buttons for the most commonly used commands and activities, as shown in Figure 4-4. You will recognize the majority of the buttons from other Windows applications; for those you don't, just place the cursor on the menu button for a hint.

■**Note** The menu buttons available on the toolbar change based on the active window. For example, forms add data navigation to it, and the AOT and Project organizer add developer-related buttons. Buttons beyond the base set shown in Figure 4-4 do not have equivalent options in the menu bar. You must use either the toolbar or keyboard shortcuts.

Figure 4-4. *The basic toolbar*

The Main Menu

The main menu is a hierarchical structure consisting of tabs. These are the top levels of each module. The submenu pane appears to the right of a selected module. The pane is labeled with the name of the expanded tab, as demonstrated in Figure 4-5.

■**Note** Unfortunately, the structure of the main menu and the concept of the module in Axapta are not always consistent. Therefore, we call tabs modules rather than application modules. Some application modules span several tabs, and some have functionality that is accessible from tabs of other modules.
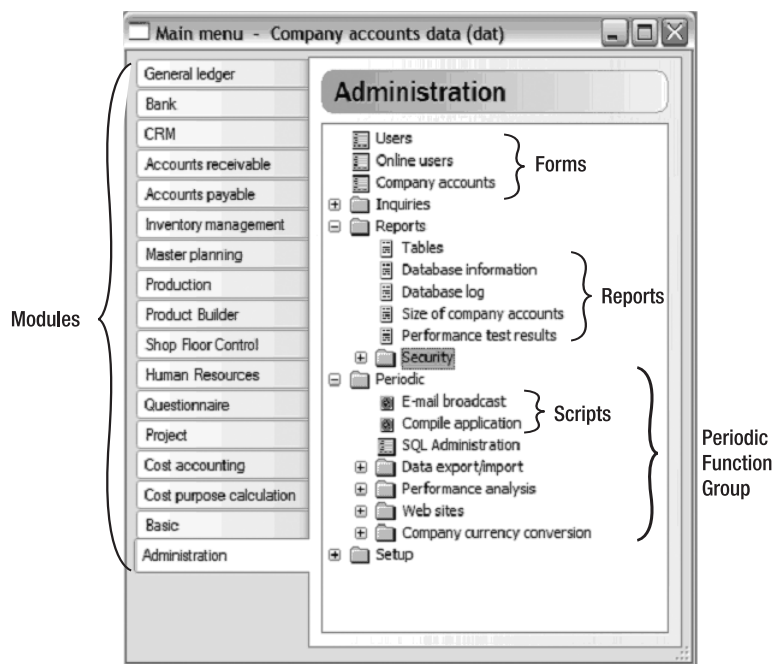

Figure 4-5. *The main menu and its options pane*

Figure 4-5 provides a good overview of how the main menu elements are structured. Each module is identified by a tab. Each tab, in turn, contains folders and forms. Folders contain subfolders, which group other elements, i.e. forms, reports, and scripts (folders may also contain reports and scripts, though this is rare). As a general rule each subfolder corresponds to a function group. The default function groups are as follows:

- *Journals*: In Axapta, journals are used for both standard accounting and to manually update data throughout the system.

- *Inquiries*: Form views of system data. These are used for reporting purposes and we prefer them over standard flat reports because inquires are much quicker and easier to filter and sort.

- *Reports*: Standard flat reports. Axapta has many built-in reports, and it's possible to create your own. Chapter 14 focuses on reporting and business analysis.

- *Periodic*: Jobs or scripts used periodically for data updates.

- *Setup*: Used to control the base setup of features and functionality for the specific tab or module.

Navigating around the main menu is pretty simple—simply position the cursor over a tab to display its contents in the submenu pane. Click once on the plus (+) or minus (-) symbol to the left of a folder to expand or collapse it, or double-click on the folder itself. Double-click on the form, report, and script icons to run them, or click once on their labels.

The Status Bar

The Status bar, at the bottom of the desktop, displays a hint about the active control in its leftmost pane, as shown in Figure 4-6, as well as a wealth of information about the state of your Axapta configuration.

| Administration | | EUR | dat | usr | | lxbm | 15-02-2005 | 02:53 | | |

Figure 4-6. *The status bar*

To the right of that is a series of panes that display information about the system and its activities. You can double-click some of these, such as the currency and active company, to bring up the corresponding form for editing.

The exact information displayed on the status bar depends on which fields you have selected to display in your personal options (using the Status Bar tab page on the Options form that you display from the Tools menu of the Axapta menu bar). The best way to see what an element of the status bar represents is to check all the status bar check boxes on the Status Bar tab page. Also be sure to check the Show Tool Tips check box in the Customize form shown in Figure 4-3. You can then place the cursor over each element of the toolbar to see a short text description of its purpose.

That covers the desktop in a nutshell. Basically it's a Windows application and it can be re-sized, maximized, closed, etc., just like all Windows applications.

Forms, Dialogs, and Reports

Data is presented to a user in Axapta via a form, dialog, or report. It's important you know what each does and what your options are when you encounter them:

- Axapta uses forms for the majority of data that is displayed in the system. Generally forms are resizable windows and contain data in fields that can be sorted.

- Axapta uses dialogs to capture specific data or alert the user for informational purposes.

- Axapta uses reports for standard flat reporting. There are many options for reporting, and you'll learn the basics here. Chapter 14 talks more about creating your own reports.

Forms

Forms are where most of the action happens in Axapta, so knowing how to get around in them is crucial. Figure 4-7 shows a sample form (access it by selecting Accounts Receivable ➤ Customers).

■Note Different options are enabled and displayed depending on the form. Not all forms support all functionality.

Figure 4-7. *The Overview tab of the Customers form*

The title bar of the form displays the form name, and possibly two fields of the currently selected record.

The first tab, labeled Overview, presents core data from an underlying table or set of tables in tabular format with one record per line and one field per column.

The table uses the field names as column headings. Clicking on a column heading automatically sorts the data set by the field. An up or down arrow is displayed to indicate the order; i.e., ascending or descending.

The leftmost column of the table is unlabeled. It is used to indicate the selected row with a right-facing arrow. Additionally, the selected row's background appears gray.

■Note The fields to be displayed are determined by the form's properties specified at design time in the property editor. These fields can be edited by a user with privileges to the Setup function (right-click on the form, and select Setup from the pop-up menu that is displayed).

Typically the right side of the form will display a group of buttons. These fall into two categories:

- *Menu buttons* display a pop-up menu from which you can select a menu option that executes an associated function. These have a right-pointing arrow aligned with the right side, as in Figure 4-8.

- *Command buttons* execute functions. These are standard Windows buttons and do not have an arrow.
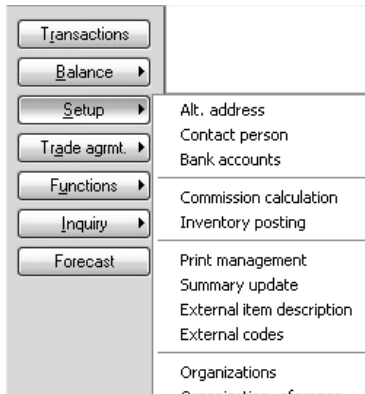

Figure 4-8. *Form buttons*

■**Note** Buttons can also appear within individual tabs, but this is rare.

Pop-Up Menus

Axapta offers a pop-up menu that you can invoke by right-clicking on any field. The menu offers options to perform common tasks based on selecting a field, plus a few options that are form-wide (see Figure 4-9; you can access this menu by selecting Accounts Receivable ➤ Customers ➤ Setup tab).
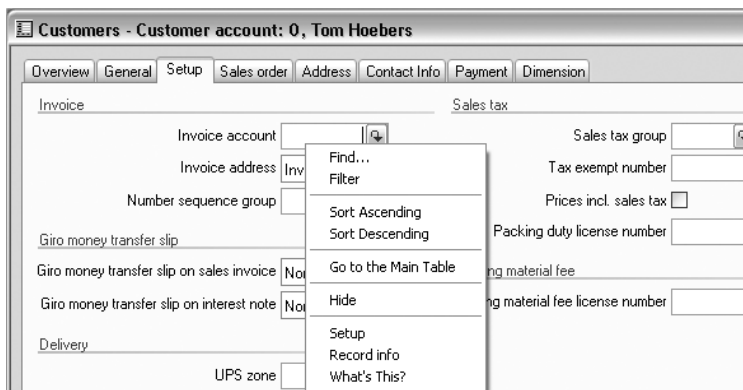

Figure 4-9. *A pop-up menu invoked by a right click*

The menu options are as follows:

- *Find s*earches for records with a given pattern in the selected field.

- *Filter* blocks out all records that do not contain the value in the selected field.

- *Sort Ascending* and *Sort Descending* sort the records in the current data set by the selected field in ascending or descending order, respectively.

- *Go to the Main Table* is useful when you need to enter data in a field that is looked up in a table or is a foreign key of a parent table. You can use it to look up a valid value or even to create the necessary data, and then return to the form you are working in and enter or select the data.

- *Hide* hides the selected field or control. The form setup is saved for the currently logged-in user, and persists across sessions.

- *Show* displays fields/controls that have been hidden previously, and is displayed only if you have previously hidden a control on the form.

- *Setup* is mostly a developer-utility function that displays information about how the form is designed. Other users can, if authorized by the designer, use this to customize the form by moving controls around, adding or removing fields, etc.

- *Record Info* shows all the fields in the form on one single screen or produces an equivalent report.

- *What's This?* displays the online help text associated with the selected control.

■**Note** Right-clicking outside a field brings up a shorter version of the pop-up menu.

These menu options can also be invoked from the toolbar, from the Command menu in the menu bar, and by using keyboard shortcuts.

The Forms Toolbar

Whenever you're active within a form, you will notice an additional panel (shown in Figure 4-10) on the toolbar, and several form-specific menu options.

Figure 4-10. *The forms toolbar*

Let's look at the buttons from left to right:

- *The Filter button* filters out all records that do not contain the value in the selected field.

- *The Remove Filter button* removes the currently applied filter.

- *The arrow buttons* let you navigate back and forth through the records.

- *The Document Handling button* displays the document handling for the selected record.

- *The Previous Field and Next Field buttons* are a quick way to hop from one field group to another on tabs that use a flow layout.

- *The Delete Record button* does exactly what its name indicates.

Saving and Restoring Form Data

There are two very important data-set navigation commands that we haven't covered: saving and restoring data. The only way to explicitly save data is by using the standard Windows keyboard shortcut Ctrl-S. However, when you exit the selected record, Axapta automatically saves any data you entered.

If, *before saving*, you regret the changes you have made, you can invoke the Restore a Menu option on the Command menu of the menu bar.

■**Tip** The record state can be restored only as long as it's not saved, and moving off a record in Axapta saves it automatically. We usually use the keyboard shortcut F5 to restore the state of the current record when we regret our changes. Alternatively, you can press Esc to get out of a form and answer No in the dialog that asks if you would like to save your changes.

■**Caution** When working through a form and going from tab to tab, give careful consideration to whether you should save along the way. Not saving may result in your losing any data you have entered; saving, on the other hand, means you will not be able to restore the record to its initial state.

Dialogs

This brings us to a variation on forms: dialogs. In Axapta dialogs generally have purely informational purposes, with buttons for accepting or canceling an operation, and some are standard Windows dialogs or equivalents. However, this is not a requirement and developers can create dialogs with any of the controls that can be used in a form.

We distinguish forms from dialogs by classifying all non-resizing windows as dialogs. Figure 4-11 is an example of a dialog.
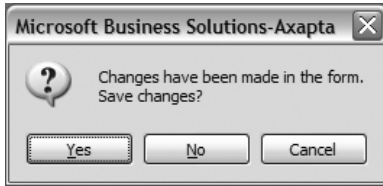
Figure 4-11. *A sample dialog. This dialog appears after you create a new record in a form and use the Esc button to exit the form before saving the record.*

Reports

Reports are a different kind of animal. Running a standard report displays either the Report Options dialog or the Query Definition form. If the Report Options dialog includes a Select button, it will take you to the Query Definition form.

The Report Options Dialog

Figure 4-12 shows a typical Report Options dialog:

Figure 4-12. *A Report Options dialog*

The General tab of this dialog allows you to specify criteria for the report—the specific fields available depend on the report. The Current Options group is not editable. The print medium is always the screen of the Axapta client (where the report can be previewed), and the printer is the system default printer (where the report will actually be printed if you decide to print after previewing it). The Default button resets the dialog fields, and the Options button displays the Print Options dialog, where you can change the printer, printer medium, and various other print options.

The Batch tab allows you to create a batch job to handle the report and is particularly useful for large reports that you want to print in off hours, or for jobs that recur.

■**Note** Batch jobs are described in Chapter 5 and queries are covered in Chapter 18.

The Query Definition Form

Figure 4-13 shows a typical Query Definition form.

Figure 4-13. *A Query Definition form*

The Query Definition form enables you to define the standard query used to produce the report that you are running. You can not only redefine it, but you can actually save your altered query so that you can reuse it later. This is a great way of creating custom reports and queries when an available query is close to what you need but not exactly it.

Printing the Report

The final step in a report is to press OK and let the report run. If you've chosen to print your report to the screen, it will open using the preview window.

■**Tip** Do not generate previews of reports for which you create a batch job— i.e., do not select the screen as the print medium—or the report will be displayed to your screen and then wait for you to print it to the final output device.

The preview window form provides a pop-up menu for resizing the report to the window size or to a set of fixed scalings that you can display by right-clicking anywhere within the report pane. The toolbar shown in Figure 4-14 provides buttons for printing and navigating the pages of the report.

Figure 4-14. *The report toolbar*

You use the toolbar to print the report to the printer selected in the Report Options dialog and to navigate the report preview on-screen. Place the cursor on a button to see a tooltip with a short explanation of the button's function and its keyboard shortcut.

Searching and Filtering

Axapta's searching and filtering features make it easy for you to obtain the exact information you need, organized the way you want it. They are accessible via the menu bar, the buttons on the toolbar, keyboard shortcuts, and/or the pop-up menu invoked by right-clicking on a field within a form.

Not all navigation features are available from every navigation element of Axapta; try them out now to get an idea of what is available where.

Start by opening the Item form (Inventory Management ➤ Items), position your cursor in one of the fields, then right-click. Figure 4-15 shows the result.
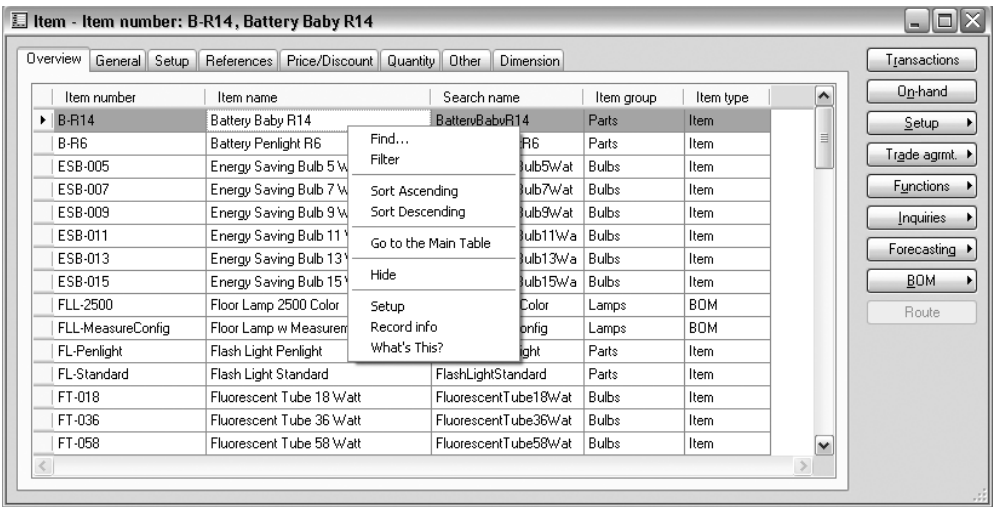

Figure 4-15. *The pop-up menu in the Item form*

We covered the pop-up menu options in the "Pop-Up Menus" section of this chapter. Now we'll explore the menu's filtering options in more detail.

Both the Find and Filter options create a filter that constrains the displayed data set. After you find or filter, your form will display only a subset of the records you had originally. If you want to see them all again, use the Remove Filter button on the toolbar (second from the left in Figure 4-11—a funnel with a red X on it). Alternatively, you could use the Remove Filter menu option in the menu bar's Command menu—see Figure 4-16.
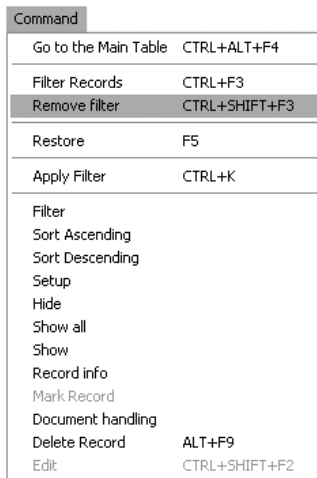

Figure 4-16. *The Remove Filter option in the Command menu*

The finding and filtering options in the Command menu behave a little differently from the pop-up menu options and the toolbar buttons:

- *Filter Records* displays the Inquiry form, where you can change the query that delivers the data set for the form. This is the same as for reports, and is cleared whenever the form is closed and reopened.

- *Apply Filter* is equivalent to the pop-up menu option Find.

Shortcut Keys

Many people find shortcut keys more productive then using the mouse, and even die-hard mouse fans sometimes use shortcuts simply because some Axapta commands cannot be invoked by any other means. However, some shortcuts can be tricky to put together and remember—we've provided an exhaustive list of shortcuts in Appendix D. Alternatively, you can look up the shortcuts in Axapta's online help by using the standard Windows shortcut F1.

Wrap-Up

In this chapter you learned most of what there is to know about moving around in Axapta. As you've also learned by now, Axapta is feature-rich, and there are so many ways of doing any particular thing that it's impossible to remember everything. Simply select the way that works best for you as you go.

The rest is up to you, and with a bit of experience, you will be whizzing through Axapta. Specifically, we covered the following:

- How to navigate the desktop (the main window of the client and its navigational components), the main application menu, and forms

- How to search for and filter data in your forms

- The importance of shortcut key combinations and where to look them up

You can read more about the topics in this chapter in the following documents available in the documentation folder of the product distribution package or CD:

- *AX-300-USG-011-v01.00-ENUS.pdf*—Getting Started