Figure 4.9 **The Mail Address dialog box**

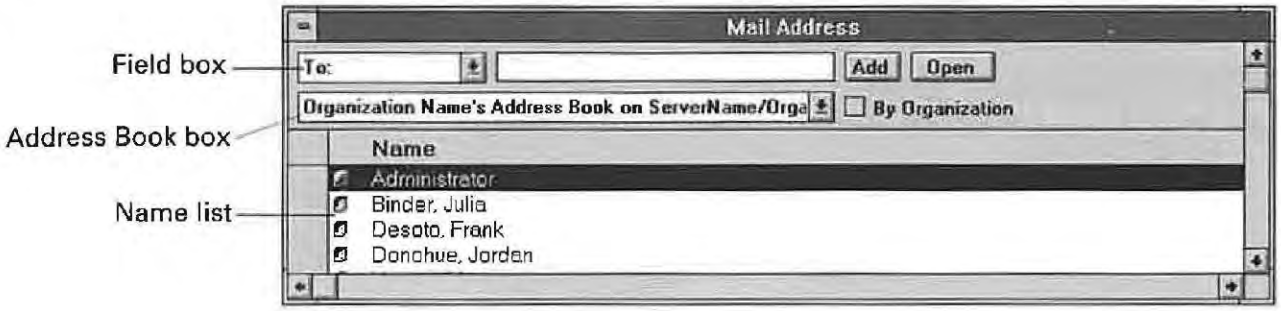
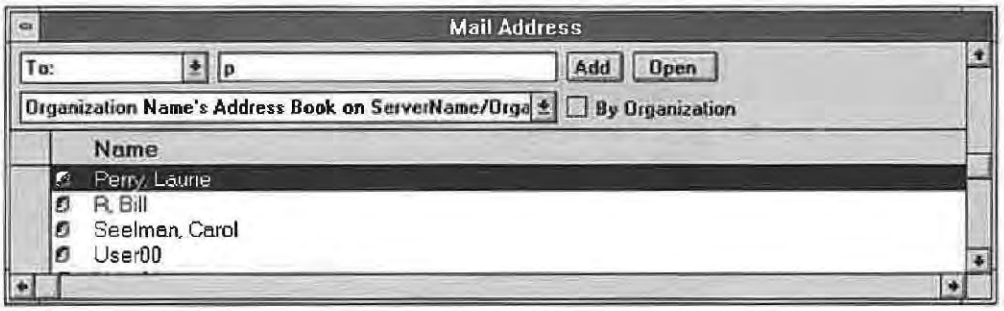


Figure 4.10 **Finding a name**



5. In the first drop-down list (it is labeled *Field box* in Figure 4.9), select **cc:**. You will use the Name & Address Book to insert your user name in the cc field.
6. Click in the box to the left of the Add button and type the first letter of your last name.
7. Select your user name and click on **Add** to insert it in the cc field (see Figure 4.11).
8. Press **Esc** to close the Mail Address dialog box.

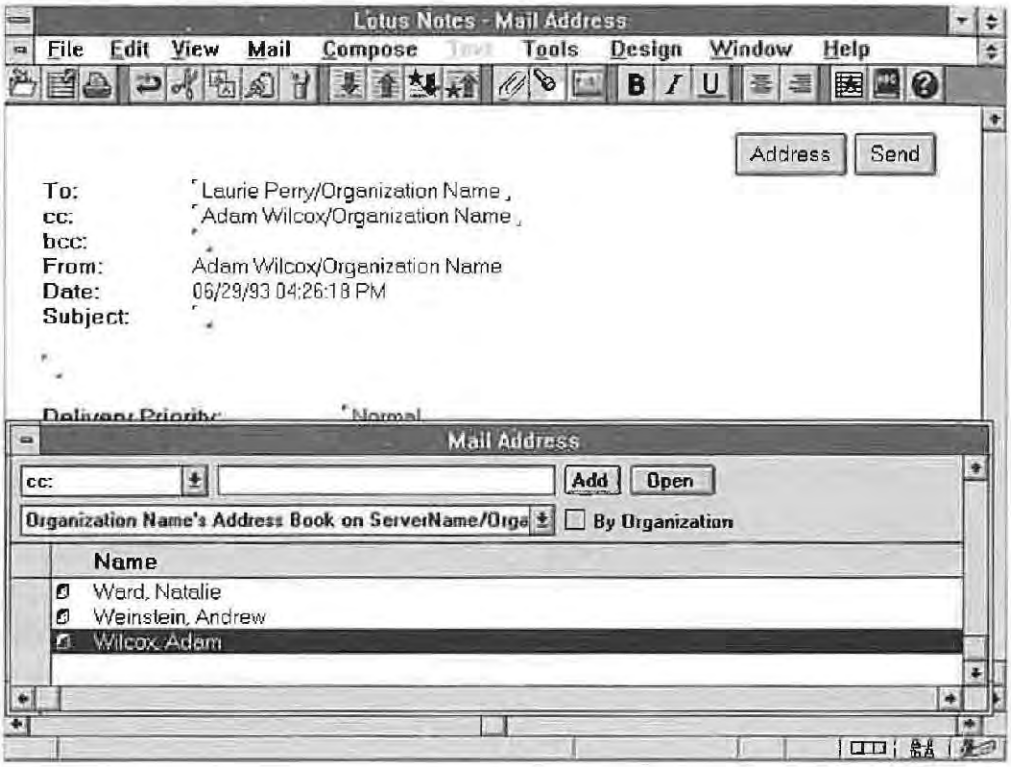


PASTING A DIFFERENT DOCUMENT INTO A MEMO

There are a number of ways to make other users aware of Notes information. One way is to paste information from another document into a memo. While composing a memo, you can use the Window menu to activate the workspace; then simply open the database and document in which you are interested and copy the

information you want. You can then use the Window menu again to activate your memo and paste the information in the body field.

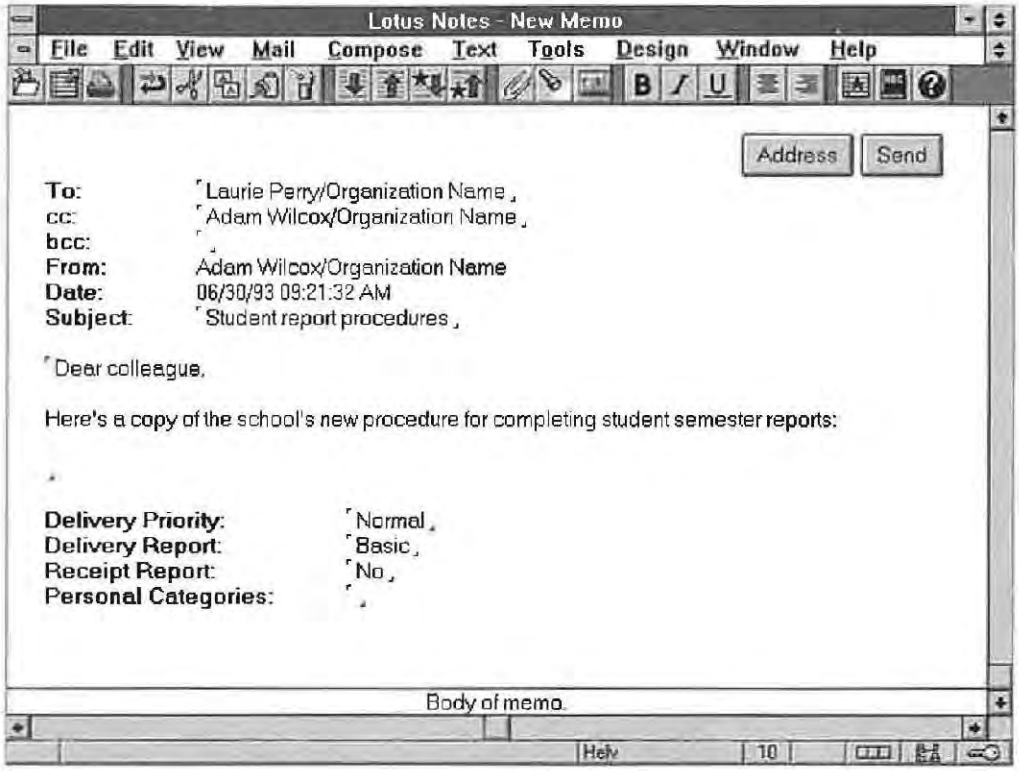
Figure 4.11 **Inserting names from a Name & Address Book**



Let's try it:

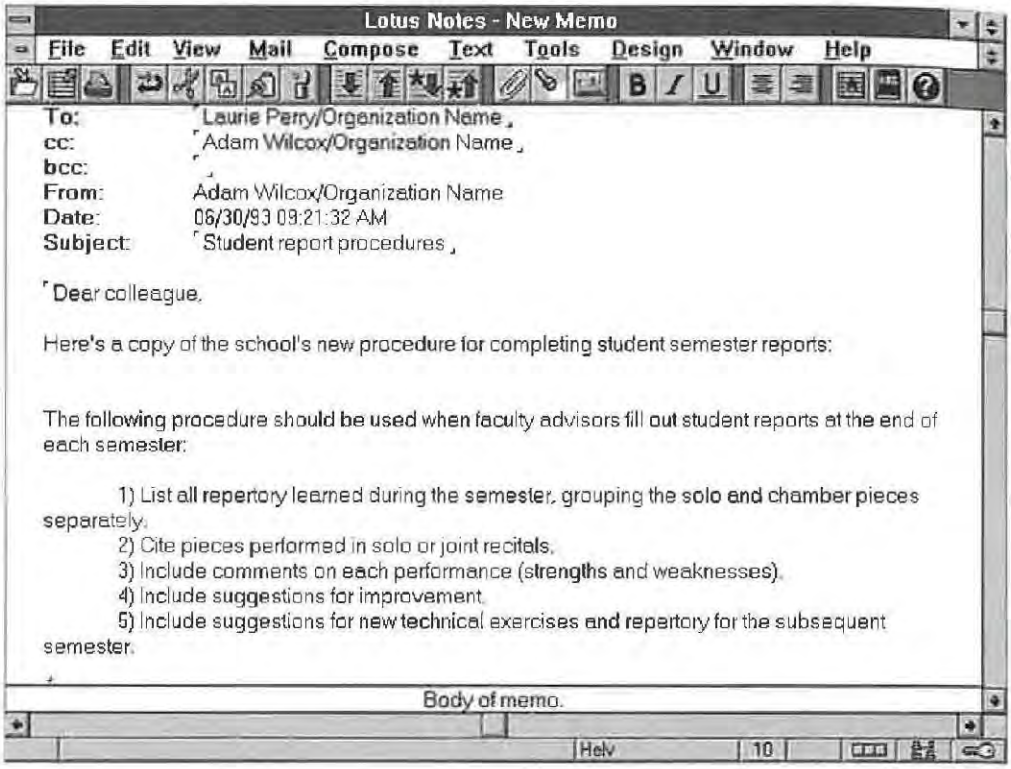
1. Click in the **Subject** field and type **Student report procedures.** You will create a memo that includes information pasted from the Working At ABC database.
2. Press **Tab** to move to the body field, type **Dear colleague,** and press **Enter** twice to insert two blank lines.
3. Type **Here's a copy of the school's new procedure for completing student semester reports:** and press **Enter** twice. Your memo should resemble Figure 4.12.
4. Choose **Window, Workspace** to activate the Notes workspace, and then activate the first page.

Figure 4.12 **The partially completed memo**



5. Open the **Working At ABC** database and then open the **Student Reports** document. You will copy this document into the body of your memo.
6. Click on the **Edit Copy** SmartIcon (the double A) to copy the document to the Clipboard.
7. Close the document and the database. (When you close the database, the new memo document should be active; if it is not, choose **Window, New Memo** to activate it.)
8. Place the insertion point at the end of the body field (if necessary), and then click on the **Edit Paste** SmartIcon (the rubber-cement bottle). The Student Reports document appears in the body of the memo (see Figure 4.13).

Figure 4.13 Pasting another document into a memo





ATTACHING A FILE TO A MEMO

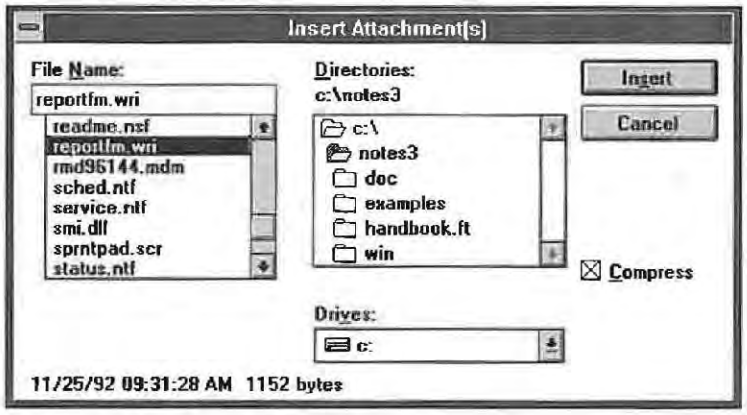
Another way to include other information in a memo is to *attach* a file to it. This technique is useful because you can use it to send other users information from programs other than Notes (for example, a budget in a Lotus 1-2-3 spreadsheet or a report in an Ami-Pro document). To attach a file to a memo document,

- Place the insertion point in the body field and choose *Edit, Insert, File Attachment* to display the Insert Attachment(s) dialog box.
- Use the Drives and Directories boxes to specify the path that contains the file you wish to attach.
- In the File Name list, select the file or files you wish to attach (hold down Ctrl while clicking to select multiple files). To deselect a file, click on it again.
- Click on Insert to attach the selected file(s) to the document.

Let's attach a file to our Student report procedures memo:

1. Press **Enter** twice and type **Attached is a copy of the form you can use to submit your report.** Then press **Enter** again.
2. Choose **Edit, Insert, File Attachment** to open the Insert Attachment(s) dialog box. By default, the dialog box displays the directory where Notes is stored on your computer's hard drive.
3. In the File Name box, type the letter **r** to display the file names that begin with *r,* and then select **reportfm.wri** from the File Name list (see Figure 4.14). You will attach this file to the memo.

Figure 4.14 **Using the Insert Attachment(s) dialog box**



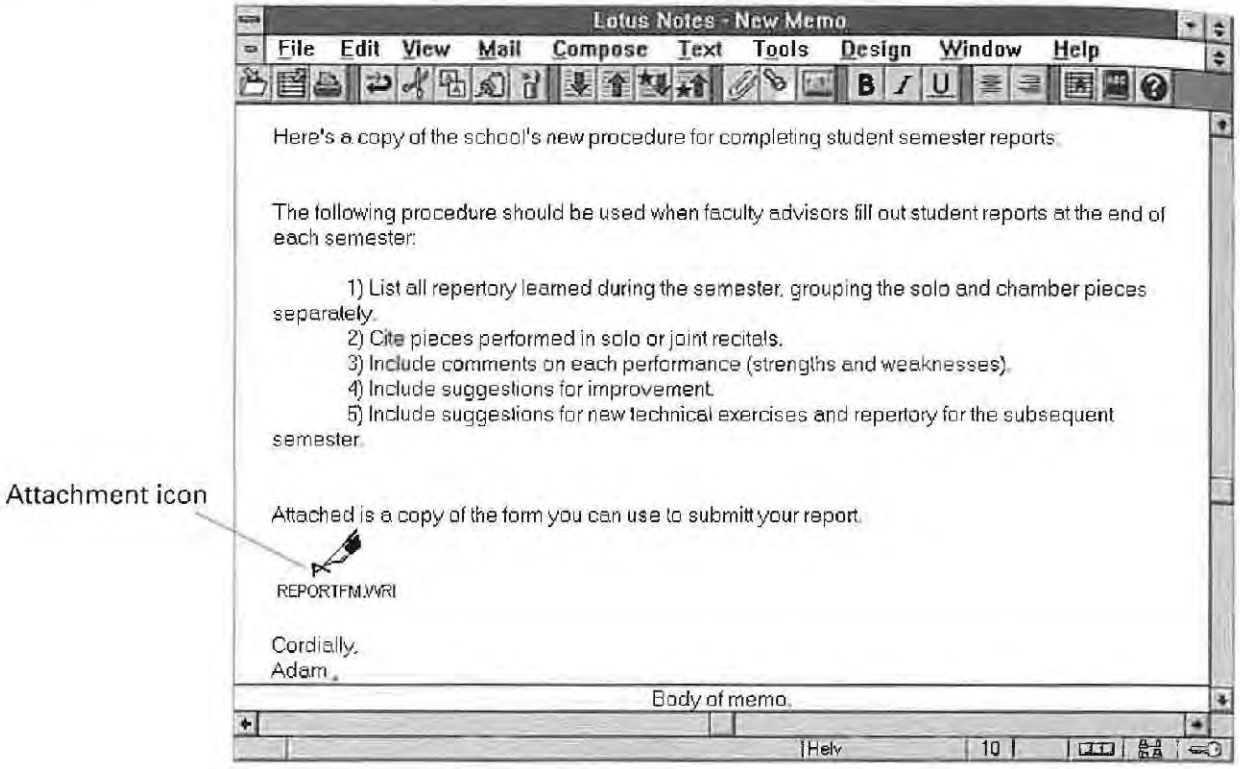
4. Click on **Insert** to attach the file to the memo. A Write icon with the file name appears in the document.
5. Press **Enter** twice, type **Cordially,** press **Enter** again, and then type your name. Your memo should resemble Figure 4.15.



SAVING A MEMO WITHOUT MAILING IT

Sometimes, you may wish to save a memo you are working on without mailing it. As we discussed earlier, this is a good idea when the memo contains emotional material because it gives you the opportunity to reconsider what you have written before sending it. Another situation in which you might save a memo without mailing it is when you are called away while composing the memo.

Figure 4.15 **The complete memo with an attached file**



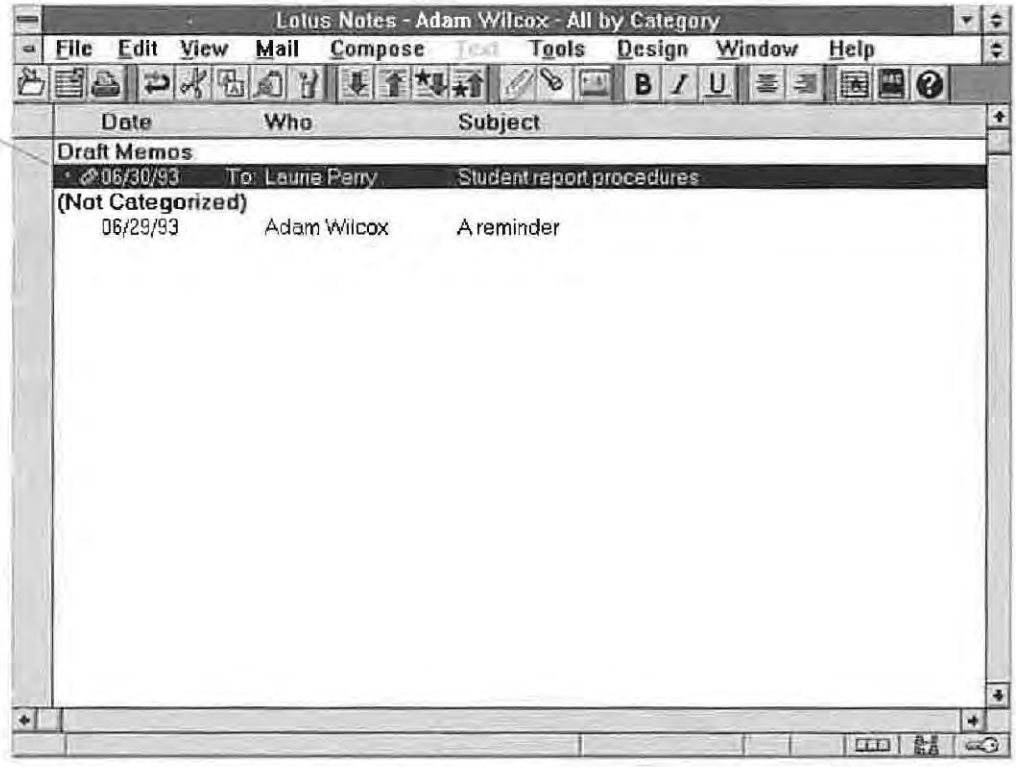
This is a good time to talk about the last field on the Memo form, Personal Categories. When you save a document to your own Mail database, this field allows you to save it in a particular category. For example, you might decide to save all unfinished memos in a category called Draft Memos, and all memos regarding meetings in a category called Meetings.

Let's save this memo without mailing it:

1. Press **Ctrl+End** to move to the last editable field in the form, Personal Categories.
2. Type **Draft Memos**. Even though there is currently no category called Draft Memos in your Mail database, Notes will create one when you save this memo. If you do not plan to save a copy of a memo in your own Mail database, then there is no reason to use this field (the Personal Categories field does not effect a recipient's Mail database).
3. Press **Esc** to close the document and display the Document Save dialog box. Depending on how your Notes workstation is set up, different options may be checked in this dialog box.

4. Make sure that **Save** is the only checked option (uncheck any other options, if necessary), and then click on **Yes** to save your document. Your new memo appears in the default view of your Mail database, under the new category Draft Memos (see Figure 4.16). The text *To:* appears in the Who column, indicating that this is a draft document. A paper clip appears to the left of the entry, indicating that it has attachments. (A database designer may have specified characters other than the paper-clip symbol to indicate attachments.)

Figure 4.16 **The new memo in the author's Mail database**





MAILING A SAVED MEMO

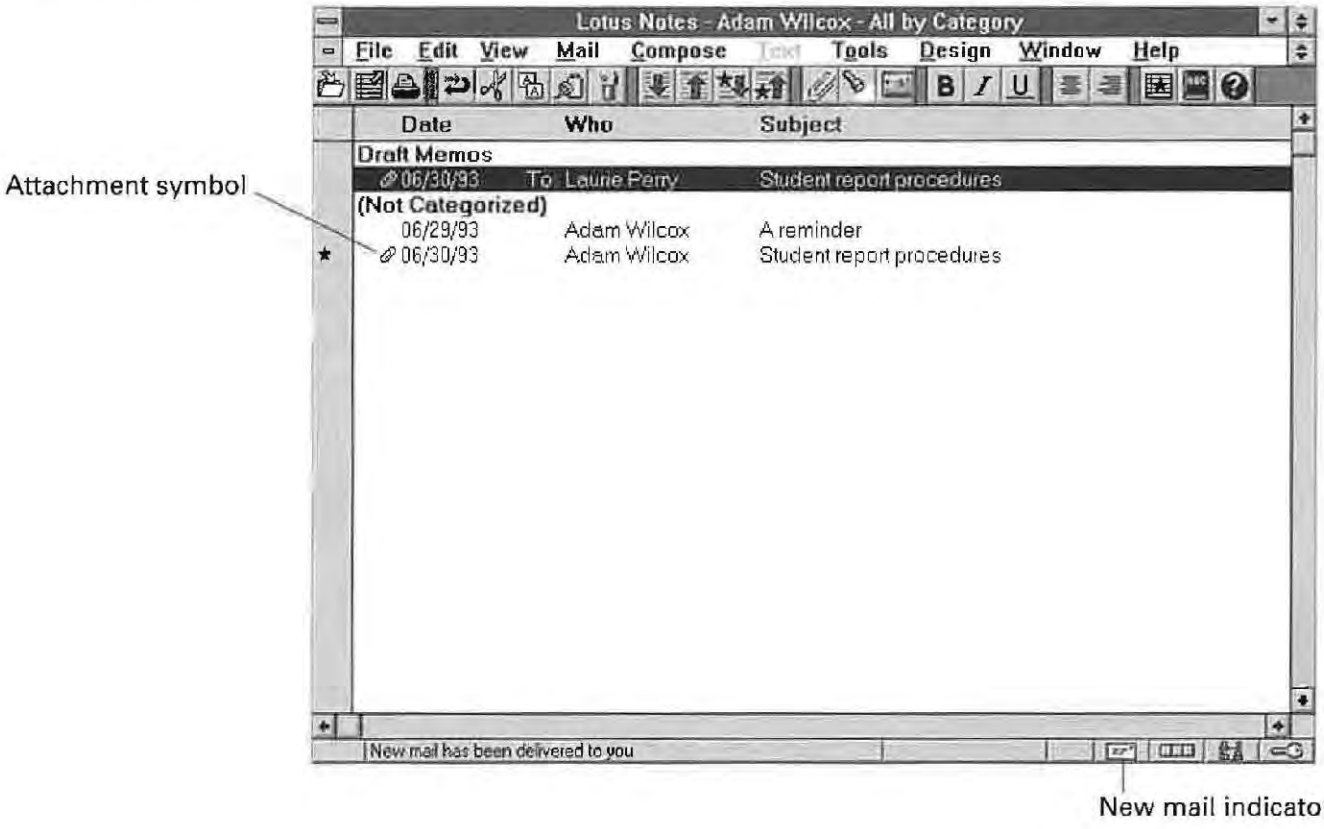
You can mail a saved memo document either by opening it and following one of the procedures you have already learned, or you can mail it directly from a view. To do so,

- Select the document you wish to send.
- Choose Mail, Send to display the Mail Send dialog box.
- Click on Send.

Let's send our draft document:

1. Select your draft memo and then choose **Mail, Send** to display the Mail Send dialog box.
2. Click on **Send** to send the memo to the person listed in the To field. Because you included yourself in the cc field, you will also receive a copy of the document.
3. Wait a minute or two, and then press **F9** to refresh the view (you may need to do this again). A copy of the memo appears in the view (see Figure 4.17). Because you *sent* this to your Mail database—as opposed to *saving* it there—it is not included in the Draft Memos category. Notice also that when you have new mail waiting, an envelope icon appears in the Status bar, next to the SmartIcons button.

Figure 4.17 **Receiving your memo with an attachment**



MANAGING YOUR MAIL

The most common thing you do with the mail you receive is read it. However, there are many other features you should be aware of for dealing with your mail. If you receive mail with an attachment, how do you use the attached file? How do you respond to mail? Both of these situations are a snap in Notes. Another useful feature is the ability to forward mail that you receive to another user. Finally, if you simply let the mail you receive pile up in your database, you will soon have great difficulty finding the documents you need when you need them. For this reason, it is important to categorize mail documents and to delete them when they are no longer needed.



WORKING WITH ATTACHMENTS

When you receive mail with attachments, there are a couple of ways you can work with them. The general procedure for detaching files from a memo is:

- Open the document and select the Attachment icon.
- Choose *Edit, Attachment, Detach* to display the Save Attachment dialog box. (You can also display this dialog box by double-clicking on the Attachment icon and then clicking on the Detach button in the File Attachment Information dialog box.)
- Use the Directories and Drives lists to specify where you would like to place the detached file.
- Click on Detach.

When you detach a file, a copy of the file is placed in the location you specify. A copy of the file also remains attached to the memo. Depending on the size of the file, attachments can take up a lot of space in your Mail database. For this reason, it is a good idea to delete documents with attachments after you detach the files they contain. We will discuss deleting documents shortly.

You can also open an attached file directly from its Attachment icon (as long as the software in which the file was created is available to you). To do so,

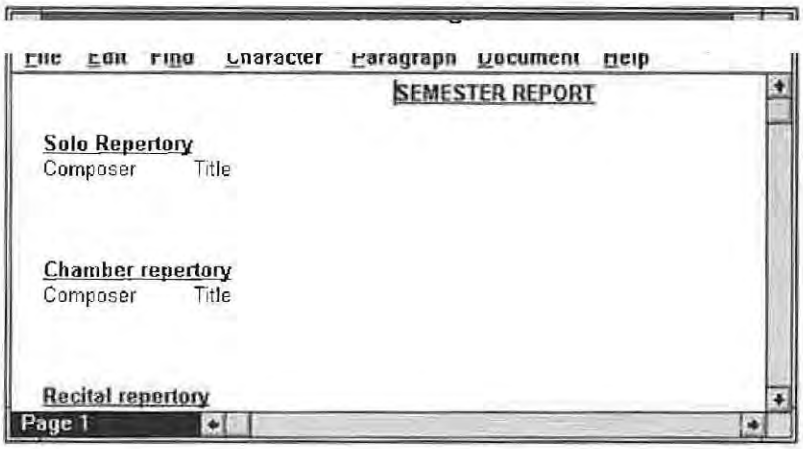
- Double-click on the Attachment icon to display the File Attachment Information dialog box.

- Click on Launch to open the file in the program in which it was created.

Let's detach a file:

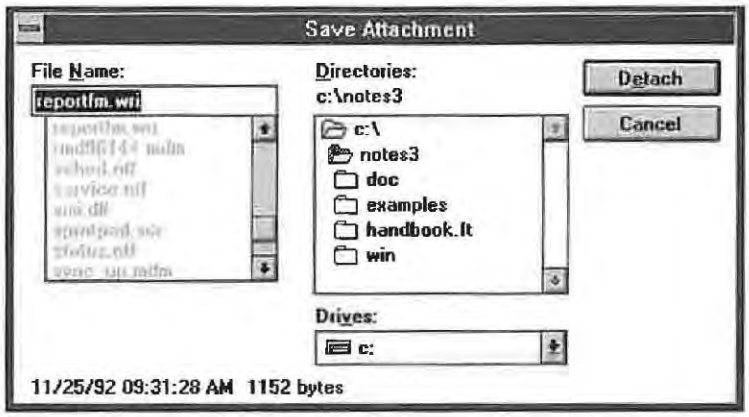
1. Open the unread Mail document with an attachment (not the saved copy, but the one you sent yourself) and scroll down until you can see the Attachment icon.
2. Double-click on the **REPORTFM.WRI** Attachment icon to display the File Attachment Information dialog box. From here, you can either launch (open) or detach the file.
3. Click on **Launch** to open the file in the Write program (see Figure 4.18). To launch an attached file, the program in which it was created must be installed on your hard drive.

Figure 4.18 **Launching an attached file**



4. Close the Write window (double-click on its **Control-Menu** box).
5. Double-click on the **Attachment** icon to display the File Attachment Information dialog box, and then click on **Detach** to display the Save Attachment dialog box (see Figure 4.19). You use this dialog box to specify a location for files you wish to detach. Because this is a file you sent to yourself, you do not need to detach another copy for yourself.
6. Click on **Cancel** to close the dialog box, and then close the document.

Figure 4.19 **The Save Attachment dialog box**





REPLYING TO A MEMO

Replying to mail that you receive is very simple. To reply to a memo that you receive,

- Select or open the document to which you wish to reply.
- If the document is selected, choose *Compose, Reply*; if the document is open, click on the *Reply* button. A blank Reply form appears on the screen, with the name of the user who sent the original memo listed in the To field.
- Fill in the Reply form and send the document.

Tip: You can compose a reply to a document in any database. If you are replying to a document that is not in your Mail database, however, you must choose *Mail, Compose, Reply* (as opposed to going directly through the Compose menu).

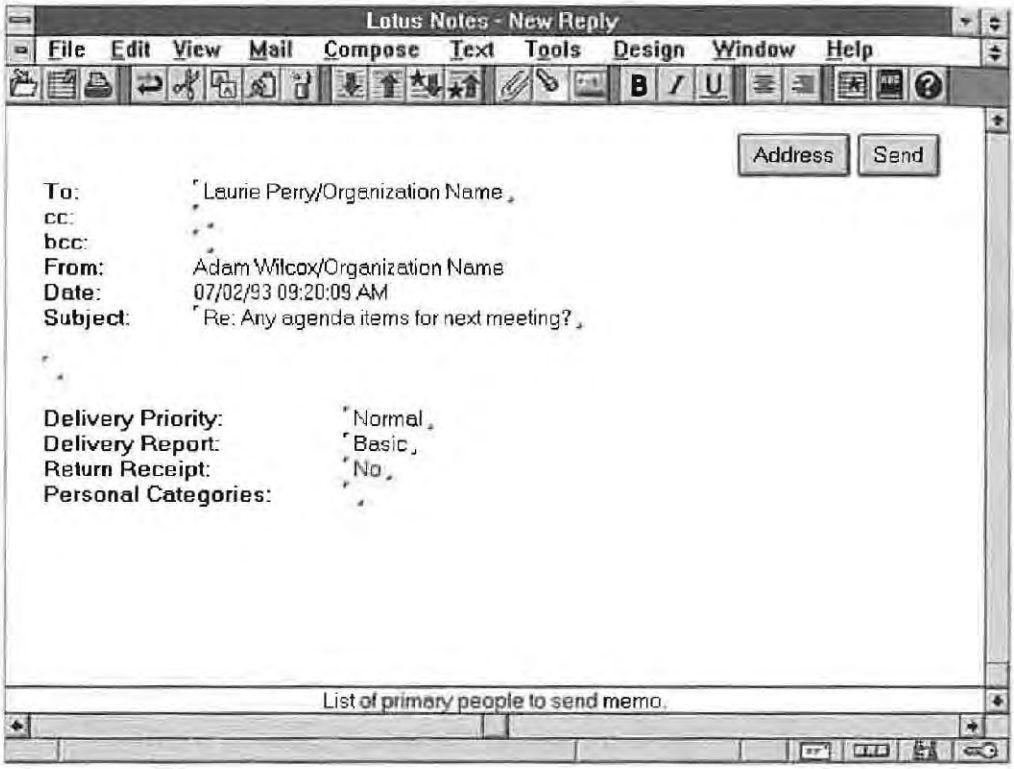
Note: For the next task, you'll need a little help from your Notes buddy. You need to have a memo document to reply to, so if you don't have any now, go ask your buddy to send you one. (The memos you have sent to yourself in this chapter won't do; you need a memo from someone else.)

Let's reply to a memo:

1. Open a memo that you have received from another user. When you open a memo, it contains a Reply button that you can use to compose a response document.
2. Click on the **Reply** button to display a blank Reply form (see Figure 4.20). The name of the person who sent you

the original memo is already entered in the To field. Notice also that the Subject field contains the text *Re:* and then the subject of the original memo.

Figure 4.20 **Replying to a memo**



3. Click in the body field and type a response to the memo. If you are responding to a test memo sent by your Notes buddy, any text will do. If you are responding to a work-related memo, you should probably give your response a little more thought.
4. Click on the **Send** button to display the Mail Send dialog box.
5. Click on **Send** to send the document and then click on **No** to indicate that you do not want to save a copy of the document in your Mail database.
6. Press **Esc** to close the document to which you were responding.



FORWARDING A MEMO

Instead of cutting and pasting documents into memos, you can *forward* entire documents through Notes Mail. You can forward documents from any database. To do so:

- Open or select the document you wish to forward.
- Choose *Mail, Forward*. A new Memo form appears with the entire selected document contained in the body field.
- Address, edit, and then send the memo.

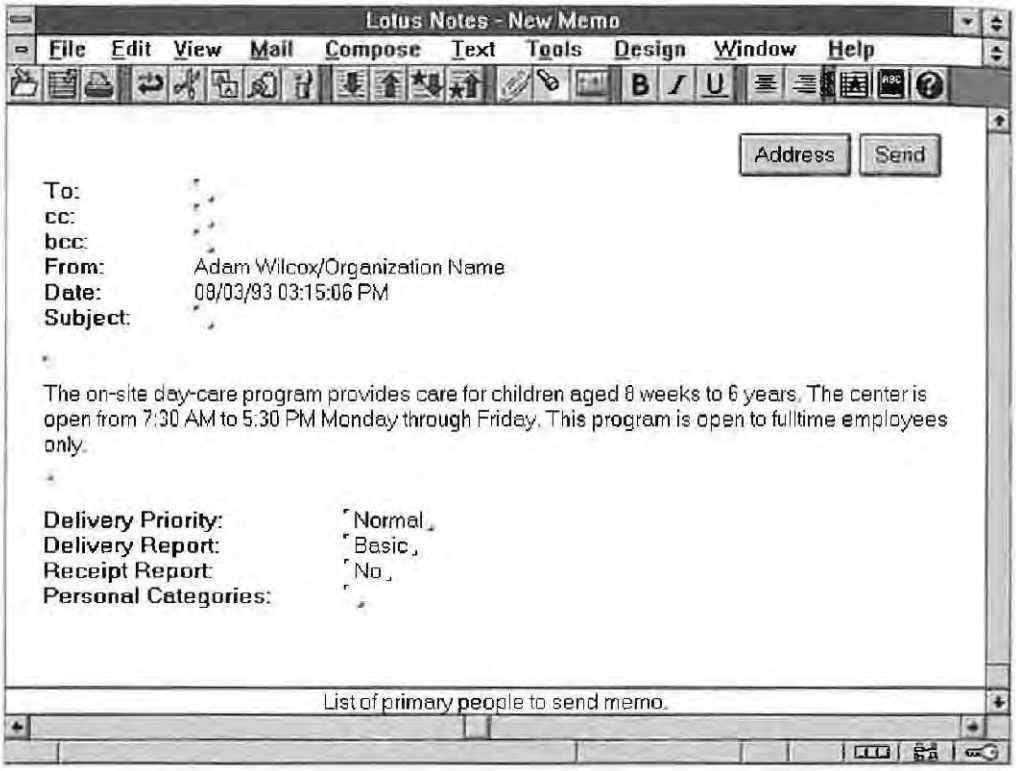
Forwarding is useful for a variety of reasons:

- It is a great way to make another user aware of information that is in another database.
- It is a good way to keep a copy of a document from another database in your own Mail database. (To do this, you would forward the document to yourself.)
- Often, forwarding a memo back to its author is preferable to sending a simple reply. People often receive a great deal of mail and can easily forget the contents of the original memo to which you are replying. Forwarding their original memo back to them (and adding your response) ensures that they will know what you are talking about.

Let's forward a document:

1. Choose **Window, Workspace** and then activate the first workspace page (if necessary).
2. Open the **Working At ABC** database and select the document **On-site day care**. You will forward this document to your Notes buddy and save it in your own Mail database.
3. Choose **Mail, Forward** to display the new memo form with the selected document contained in the body field (see Figure 4.21).
4. In the To field, enter your Notes buddy's user name. (If you don't remember the spelling, you can use the address book. To do so, click on the **Address** button; enter the first letter of your buddy's last name in the box next to the Add button; select the name; click on **Add**; and close the dialog box.)
5. In the Subject field, type **Day care policy.**

Figure 4.21 **Forwarding a document**



6. Place the insertion point at the beginning of the body field, type your buddy's name followed by a comma, and press **Enter**.
7. Type **I thought you might be interested in this information:** and press **Enter** to provide a blank line.
8. Place the insertion point in the Personal Categories field, and type **Company Policies**. Except for the names, your memo should resemble Figure 4.22.
9. Click on **Send** to display the Mail Send dialog box, and then click on **Send** to send the document. Notes asks if you want to save a copy of the document.
10. Click on **Yes** to save a copy of the document in your Mail database.
11. Close the **Working At ABC** database. You should be returned to your Mail database; if not, use the Window menu to get back there. A copy of the document is saved in your Mail database under the new category Company Policies (see Figure 4.23).

Figure 4.22 **The completed document to be forwarded**

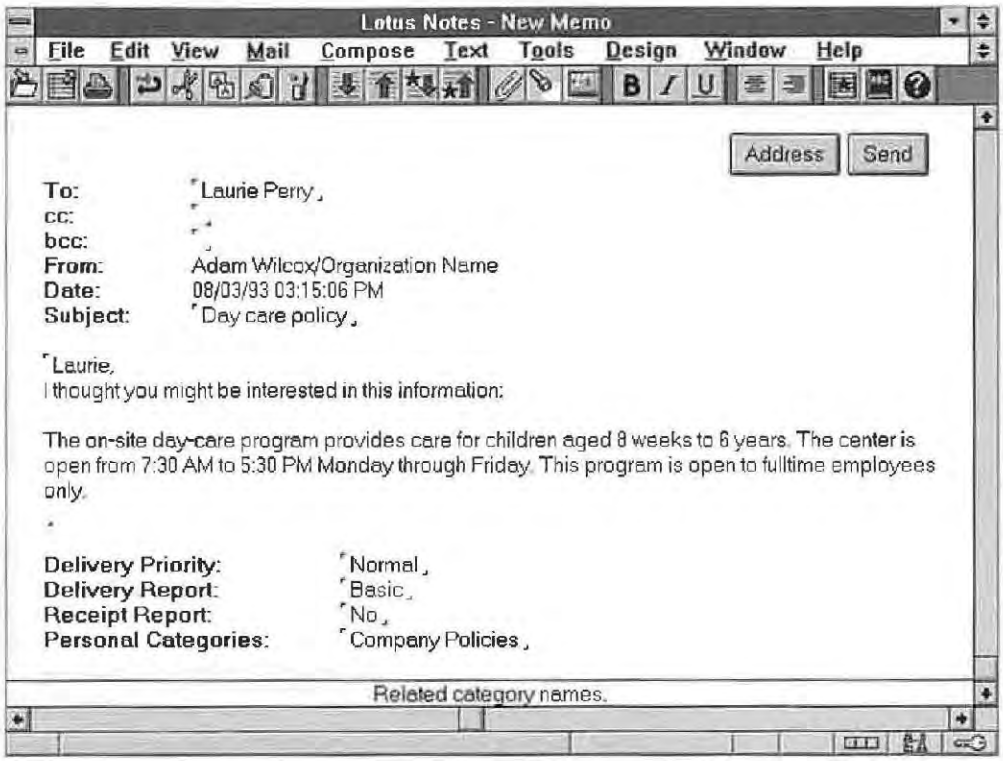
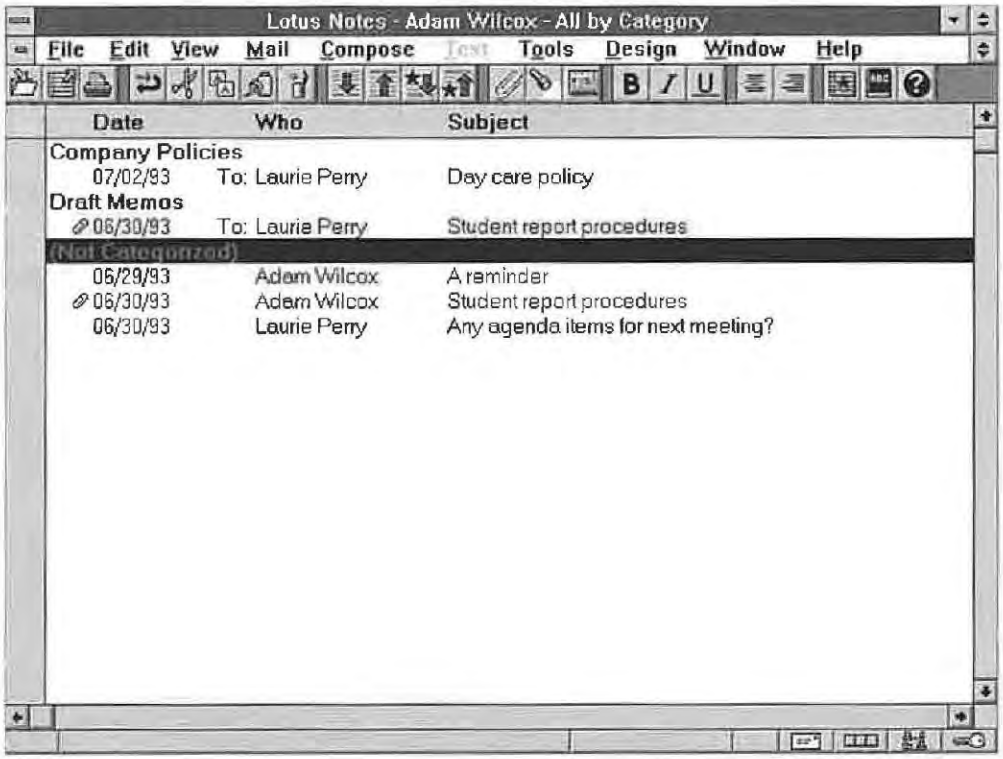


Figure 4.23 **The saved document in the new category**





CATEGORIZING DOCUMENTS

In categorized views, the documents are grouped according to similar information they contain in a particular field. In your Mail database, you can create categories and then assign memo documents to them for easy reference. To categorize Mail documents,

- Select or open the document you wish to categorize.
- Choose *Tools, Categorize* to display the Categorize dialog box.
- Select one or more categories from the Categories box, or type the name of a new category in the New Categories box.

  Note: You can select multiple categories by clicking on each you wish to select. Click on a category again to deselect it. Categories are case-sensitive; that is, *Memos* and *memos* would be different categories.
- Click on OK to categorize the document and close the dialog box.

If you are looking at a categorized view of your Mail database, the document will appear under each category you specified. Although you may see a document under several categories in a view, there is still only one copy of the document in the database.

When you categorize a Mail document, you are actually changing the contents of one of the fields on the document (specifically, the field labeled *Personal Categories*). You might remember this field from the bottom of the Memo form when you were composing a memo. When you read a memo, however, this field is not displayed. If you wish to see the Personal Categories field in a saved memo, you must place it in edit mode.

Let's categorize some of the documents in your Mail database:

1. Select all the Mail documents we've created that are not currently categorized (click in the left-hand column next to each document listed under *(Not Categorized)*). You must first select documents you wish to categorize. Note that you can categorize more than one document at a time.
2. Choose **Tools, Categorize** to display the Categorize dialog box. The Categories box lists all the categories that exist in the database.

Note: If you are looking at a view that is not categorized, you will not see documents listed in categories, no matter what you do in the Categorize dialog box.

3. Click in the **New Categories** box and type **Notes-Related** to create a new category. Your dialog box should resemble Figure 4.24, although you may have additional categories listed.

Figure 4.24 **Creating a new category**



4. Click on **OK** to categorize the selected documents in the new category. The new category appears in the view.
5. Select the document we created in the Draft Memos category, and then choose **Tools, Categorize**. Notice that the document's current category, Draft Memos, is selected in the Categories list.
6. Select **Notes-Related** (there are now two selected categories) and click on **OK**. The draft memo now appears in two categories in the view (see Figure 4.25).
7. Mark the memo in the Draft Memos category as selected (click in the left-hand column next to it). Notice that a check mark appears next to both entries for the document in the view. This is because the two entries represent one document; any action you take on one will affect the other.
8. Press **Ctrl+E** to place the selected document in edit mode, and then scroll to the bottom of the document. The two categories for the document are both shown in the Personal Categories field (see Figure 4.26).

Figure 4.25 **A document listed in two categories**

One document in two categories

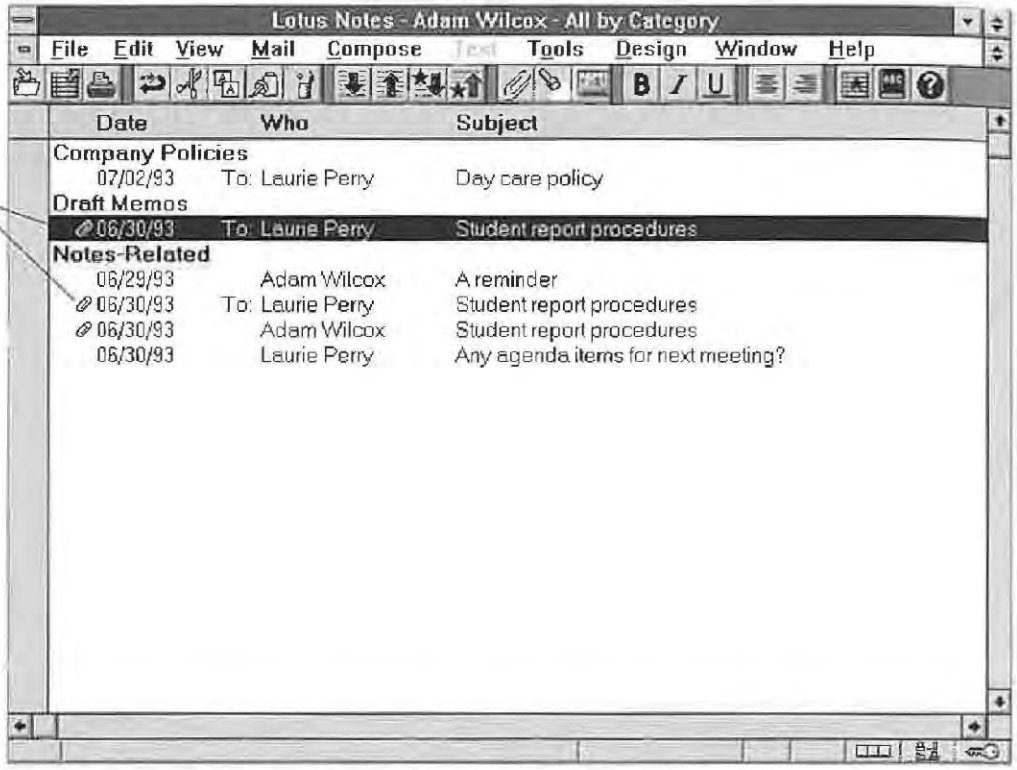
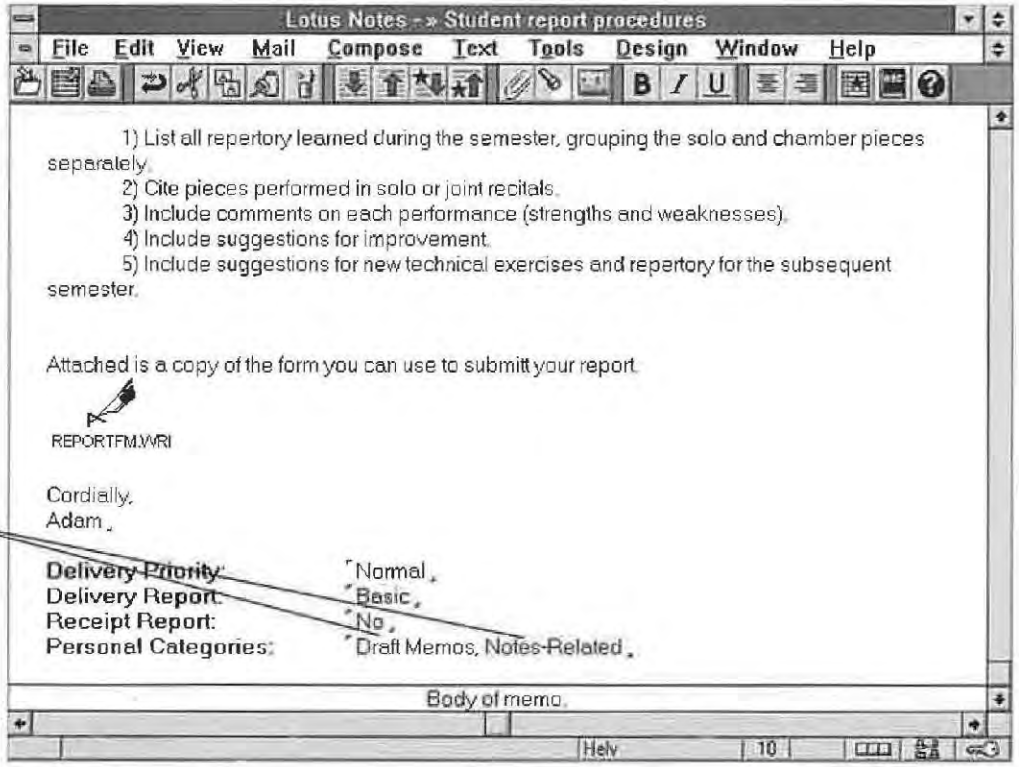


Figure 4.26 **The Personal Categories field in a categorized document**

Two categories for document



9. Close the document, and then choose **Tools, Categorize** to display the Categorize dialog box.
10. Deselect **Draft Memos** (click on it) and then click on **OK**. The document now appears under only one category, Notes-Related. The Draft Memos category no longer appears in the view. To remove a category, you must remove all the documents from the category.



DELETING AND UNDELETING DOCUMENTS

Categorizing your mail is one way to keep your Mail database orderly. You should also make a habit of deleting documents that you no longer need. To delete documents from a database,

- Select or open the document you wish to delete.
- Press Del (or click on the Edit Clear SmartIcon, or choose *Edit, Clear*). The document does not immediately disappear from the view. Rather, a deletion marker (a trash-can icon) appears in the left-hand column next to the document. You can remove a deletion marker from a document by selecting it and pressing Del again.
- Either refresh the view (press F9) or close the database. Notes asks you to confirm that you really want to delete the marked documents.
- Think about whether you are sure you want to delete the documents, and then click on Yes.

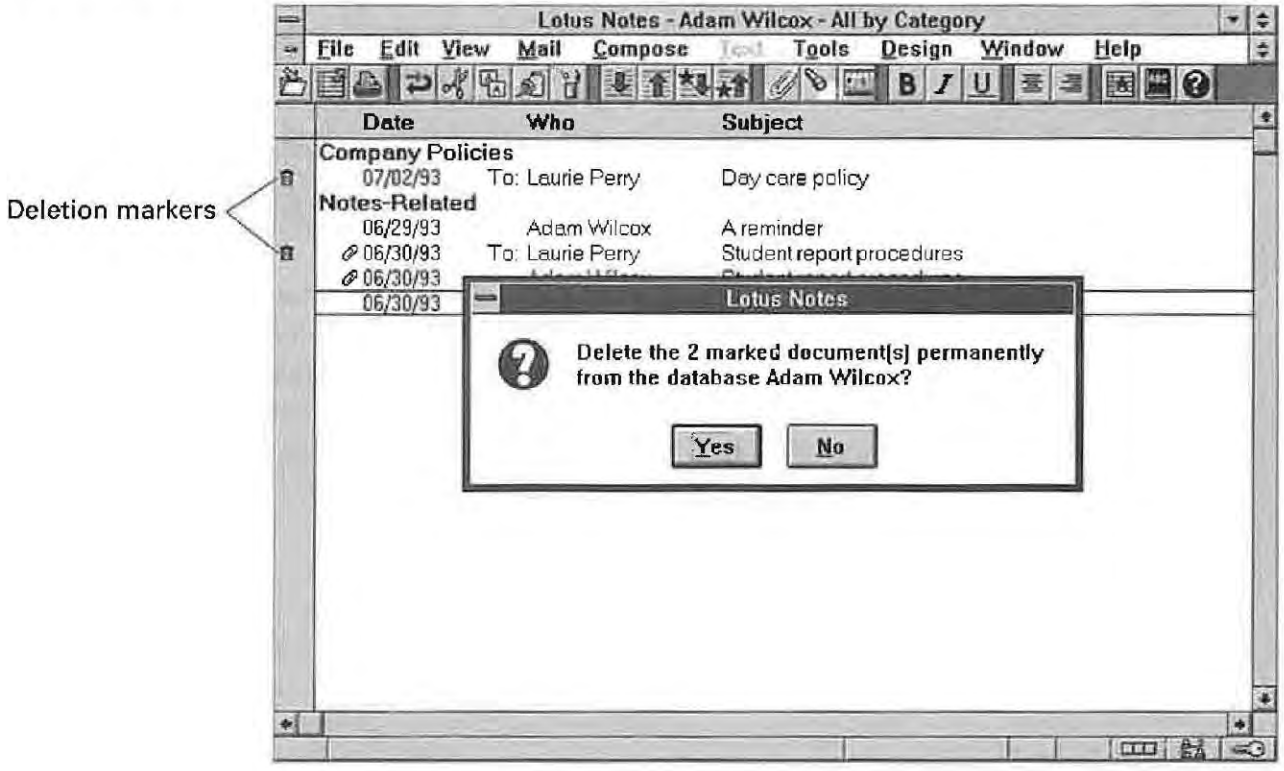
Note: You can delete documents in a database only when you have the appropriate access level to do so. This is true for all documents in your Mail database. In shared databases, however, you can usually delete only your own documents. The job of maintaining an orderly shared database usually falls to the manager of the database.

Let's delete some documents:

1. Mark the document under the category Company Policies as selected (click in the left-hand column next to it), and then click on the **Edit Clear** SmartIcon (it looks like a piece of trash flying into a garbage can). Notes asks which document you wish to mark for deletion.

2. Click on **Checked** to mark the selected document for deletion. A trash-can icon appears in the left-hand column next to the document.
3. Click on the **Edit Undo** SmartIcon (the fourth SmartIcon from the left) to remove the deletion marker. (Remember, you can view the names of SmartIcons in the Notes Title bar by pointing to them and clicking the right mouse button.)
4. Mark both draft documents as selected (the draft documents begin with *To:*). You will mark these documents for deletion.
5. Press **Del** and then click on **All Checked** to mark the selected documents for deletion.
6. Press **F9** to refresh the view. Notes asks if you want to delete the two marked documents from your database (see Figure 4.27; your message will show your name instead of the author's).

Figure 4.27 Confirming a deletion



7. Click on **Yes** to delete the marked documents. Notice that the Company Policies category no longer appears in the view because you removed all the documents from that category.

PRACTICE YOUR SKILLS

1. Delete the documents **A reminder** and **Student report procedures** from your Mail database.
2. Close the database.

CREATING MAIL GROUPS

If you find that you often send mail to the same group of people, you can create a mailing list, or *group*, so that you can send mail to everyone on the list by using a single address. You create groups by composing a Group document in your personal Name & Address Book database. You should create groups only when the group is not already defined in the public Name & Address Book.



COMPOSING A MAIL GROUP

To create a Mail group,

- Open or select your personal Name & Address Book database.
- Choose Compose, Group to display a blank Group form.
- In the Group Name field, type the name you wish to use for the group.
- If you like (it is not necessary), enter a description of the group in the Description field.
- In the Members field, type the names of the members of the group (you can separate the names either with commas, or by pressing Enter after each one). You can also use the Mail, Address command to fill in this field. A group can contain names of other groups as well as individual user names.
- Save the document.

After you compose a group, you can use the group name as you would any other name.

Tip: You can also compose Person documents in your personal Name & Address Book. This is useful when you need a shorthand address for people with long names or names that are difficult to spell. For example, if you often send mail to a user named Phineas J. Whoopee, you could create a person document for him so that you can address mail to plain old Mr. Whoopee.

Let's compose a Mail group:

1. Activate the **My Mail** page in your workspace and open your personal Name & Address Book. The default view of this database lists any individual names you have defined.
2. Choose **View, Groups** to display the Groups view of the database.
3. Choose **Compose, Group** to display a blank Group form.
4. In the Group Name field, type **Friends**. You will be able to use this name in place of a list of names of users the group contains.

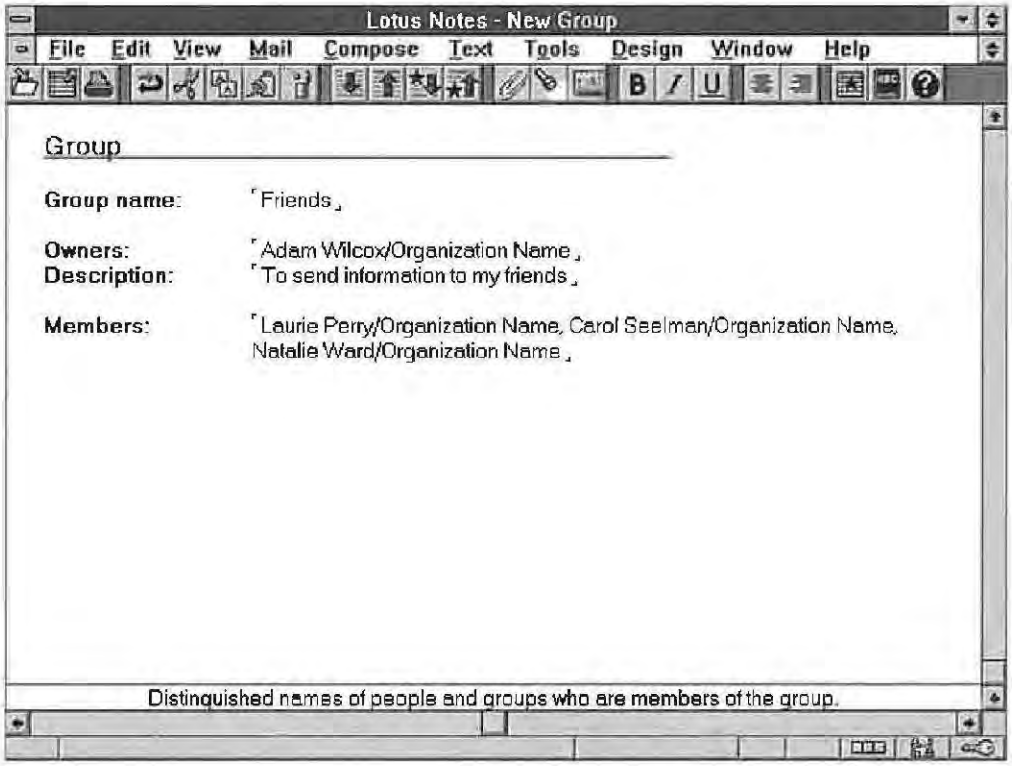
   Note: Avoid adding names in your personal Name & Address Book that duplicate those in the public Name & Address Book because Notes will ask you to distinguish between the identical names whenever you try to use them.
5. In the Description field, type **To send information to my friends.** It is not necessary to provide a description for a group, but it might help you remember the group's purpose sometime in the future.
6. Place the insertion point in the Members field, and then choose **Mail, Address** to display the Mail Address dialog box.
7. Click on the drop-down arrow next to *To:* and select Current Field. To insert names in a field other than one of the standard address fields, you should use this option.
8. In the Name list, select your buddy's user name (you might need to scroll to find it) and click on **Add**.

PRACTICE YOUR SKILLS

1. Use the Name list and the Add button to add the names of other people you consider friends to the list.

2. Close the Mail Address dialog box. Your document should resemble Figure 4.28, although the names will be different (to protect the innocent?).
3. Close and save the document, and close the database.

Figure 4.28 **Composing a Mail group**





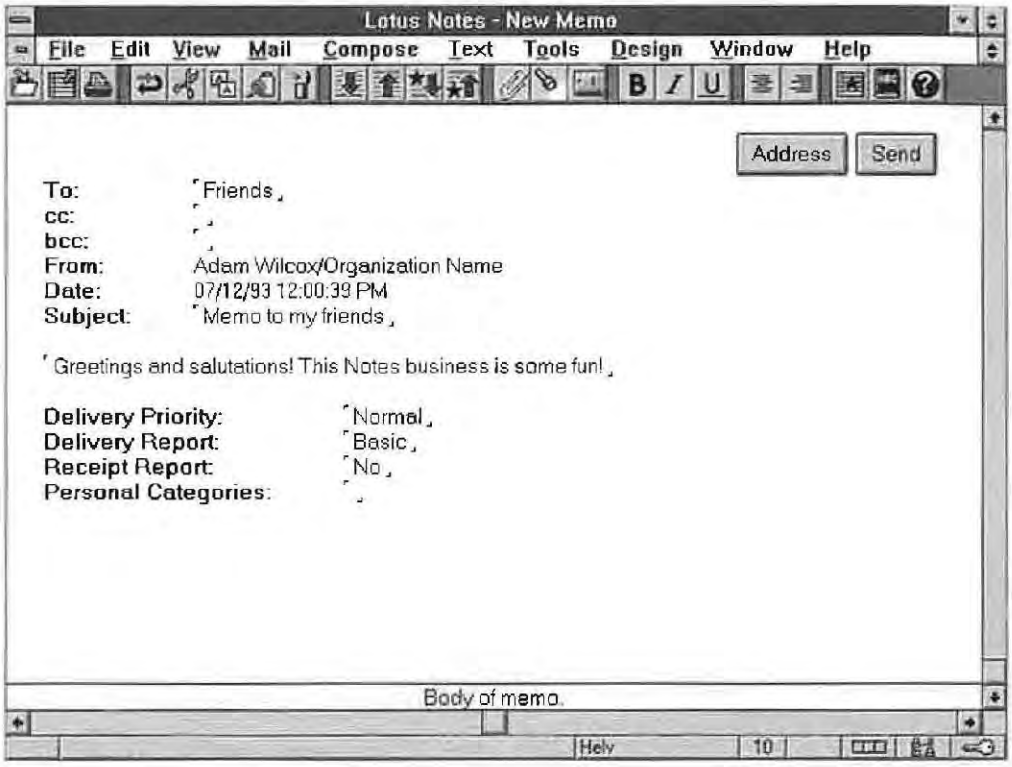
USING A GROUP NAME

You use a group name as you would any other name. Let's use the group name we just created to send a memo to our friends:

1. Choose **Mail, Compose, Memo** to display a blank Memo form. (You do not need to be in your Mail database to compose Mail documents; you can do so at any time by using the Mail, Compose submenu.)
2. Click on the **Address** button to display the Mail Address dialog box.

3. Select your personal Name & Address Book (use the drop-down arrow next to the large box that shows the name of the address book).
4. Select **Friends** from the Name list and then click on **Add** to add the group name to the To field.
5. Close the dialog box.
6. In the Subject field, type **Memo to my friends**.
7. In the body field, type **Greetings and salutations! This Notes business is some fun!** Your memo should resemble Figure 4.29.

Figure 4.29 **Sending a memo to a group**



8. Click on **Send** to display the Mail Send dialog box, and then click on **Send** to send the memo. Notes asks if you wish to save the document.
9. Click on **No**.

SUMMARY

In this chapter, you learned about Notes Mail. You learned about the Notes Mail database and how to compose and send memo documents. You also learned about various Mail features, including how to use Name & Address Books; and how to attach files and save, reply to, and forward memos. We also discussed how to manage your mail by categorizing and deleting documents. Finally, you learned how to compose a group document in your personal Name & Address Book to make it easy to send memos to a group of users.

The following table summarizes some of the techniques you learned in this chapter:

Desired Result	**How to Do It**
Open Mail database	Choose **Mail, Open** (or double-click on **Mail** database icon)
Compose memo document	Choose **Compose, Memo** and fill in fields
Send memo	Click on **Send** (or choose **Mail, Send**) and click on **Send**
Save memo	Click on **File Save** SmartIcon (or choose **File, Save**)
Close and send (or save) memo	Close document (press **Esc** or double-click right mouse button), check desired option(s) (**Mail** or **Save**), click on **Yes**
View unread mail	Choose **Mail, Scan Unread**
Use Address Book to enter name	Click on **Address** (or choose **Mail, Address**), specify field in which to insert name, select desired Name & Address Book, select desired name from Name list, click on **Add**
Attach file to memo	Place insertion point in body field; choose **Edit, Insert, File Attachment**; specify drive, directory, and name of file to attach; click on **Insert**

Desired Result	How to Do It
Mail saved memo	Select memo in view; choose **Mail, Send**; click on **Send**
Detach file from memo	Double-click on **Attachment** icon; click on **Detach**; specify drive, directory, and name for detached file; click on **Detach**
View attached file	Double-click on **Attachment** icon and click on **Launch** (software in which the file was created must be available)
Reply to memo	Select or open memo to which you will reply; choose **Compose, Reply**; fill in form; send document
Forward document	Select or open document; choose **Mail, Forward**; address, edit, and send memo
Categorize document(s)	Select document(s); choose **Tools, Categorize**; select or type category or categories for document(s); click on **OK**
Delete document(s)	Select document(s), press **Del**, click on **Checked** (or **All Checked**), refresh view, confirm deletion
Create Mail group	Select or open personal Name & Address Book; choose **Compose, Group**; complete and save form

In the next chapter, you will learn about managing the databases in your workspace. You will learn how to display information about a database on its icon, how to scan for unread documents, and how to remove a database from your workspace. You will also learn more about access levels, as well as how to copy, search, and index databases.

IF YOU'RE STOPPING HERE

If you wish to stop here, please choose **File, Exit** to exit Notes (you will need to restart Notes when you begin Chapter 5). If you wish to proceed directly to Chapter 5, please do so now.

CHAPTER 5: MANAGING DATABASES

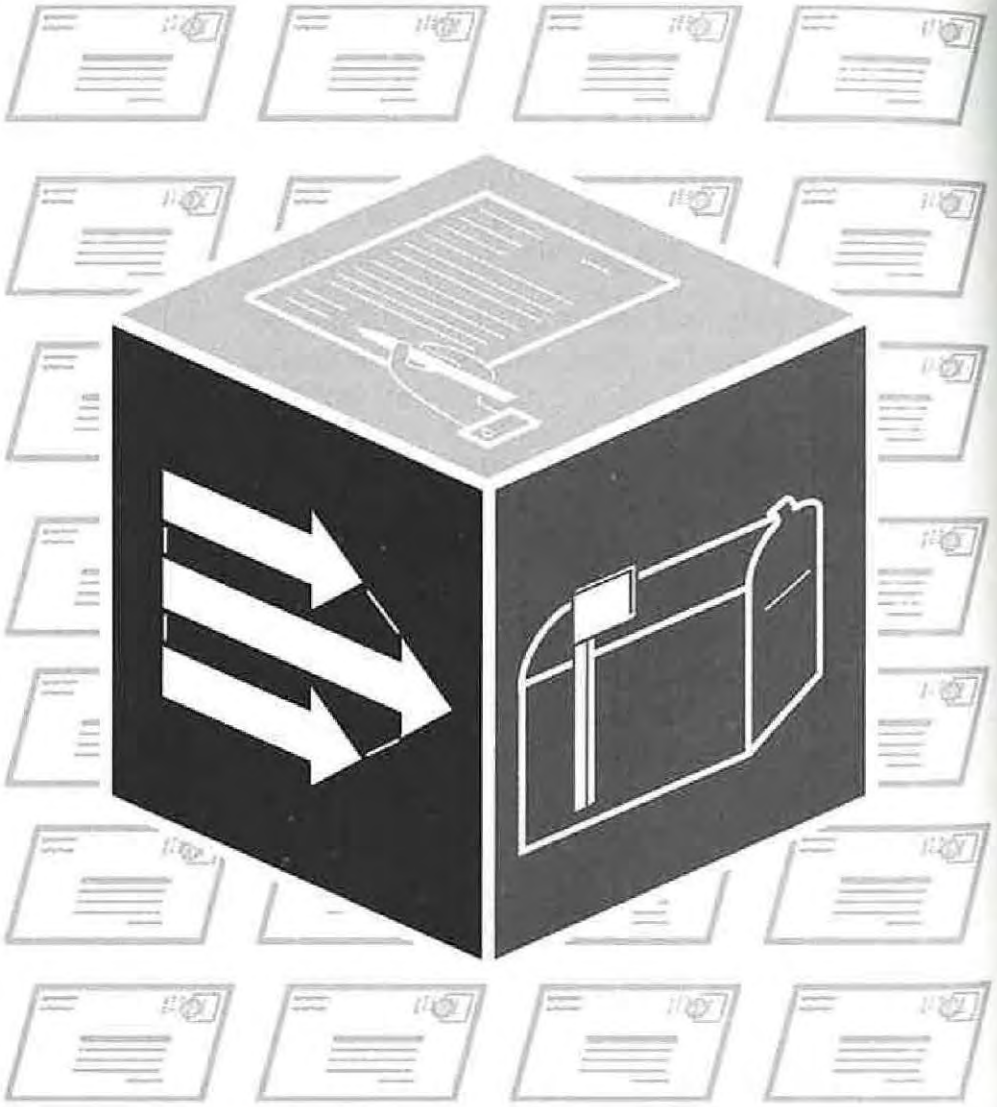
Getting Information about Databases

Notes Security

Copying Databases

More about Searching Databases

Indexing Databases



Sometimes, you might want to know how many unread documents are in a database or where the database is stored. Or perhaps you will want to make a copy of a database or search through a database for documents that pertain to a particular customer. Notes provides many tools for getting information about and managing databases.

In this chapter, we'll learn how to display information about a database on its icon, how to scan for unread documents, and how to remove database icons from your workspace. We will discuss how access control aids in Notes security. We'll also get into a little more detail about managing databases. You will learn how to create a replica of a shared database on your hard drive so that you can work with a database even when you are not connected to a server. Finally, we'll talk about indexing and searching databases to find the documents you want.

When you're done working through this chapter, you will know

- How to display database information on database icons
- How to scan databases for unread documents
- About database access control
- How to create a replica of a database
- How to use the Query Builder to search a database
- How to index a database so that it can be searched

GETTING INFORMATION ABOUT DATABASES

There are some pieces of database information that you cannot get by opening a database, or that you might rather get without opening it. For example, you cannot find out where a database is stored simply by opening it. And if you want to know how many unread documents are in a database, you'll probably want a method that is faster and more efficient than opening the database and counting the unread markers. Fortunately, you can handle both these situations by displaying the information on database icons. If you know there are unread documents you wish to read, you can read them without opening the databases in which they are stored by using the *Tools, Scan Unread* command.



DISPLAYING DATABASE INFORMATION

You can display the unread-document count, location, or file name for a database on its icon by using the View menu. To display the unread-document count,

- Choose *View, Show Unread.* A box with a number appears on every database icon in your workspace. This number might not be accurate, because documents could have been added to a database since the unread-document count was last refreshed.
- Choose *View, Refresh Unread* (or press F9) to update the unread count for databases on the current page. (You can update the unread counts for databases on all workspace pages by holding down the Shift key and pressing F9.)

Two other pieces of information you can display on a database icon are the name of the server where the database is stored, and the database's file name (the title of a database and its file name are different things; the file name must conform to standard file-naming conventions).

To display the name of the server on which a database is stored, choose *View, Show Server Names*. The database titles in the workspace will now include the names of the servers where the databases reside. For example, a database called Sales Tracking that is stored on a server called Shostakovich would display the text *Sales Tracking on Shostakovich* on the database icon. Databases that are stored on your hard drive will not show server names.

To display the file name for a database on its icon, hold down the Shift key while choosing *View, Show Server Names* (yes, this is not particularly intuitive). The file names will appear in blue at the bottom of the database icons.

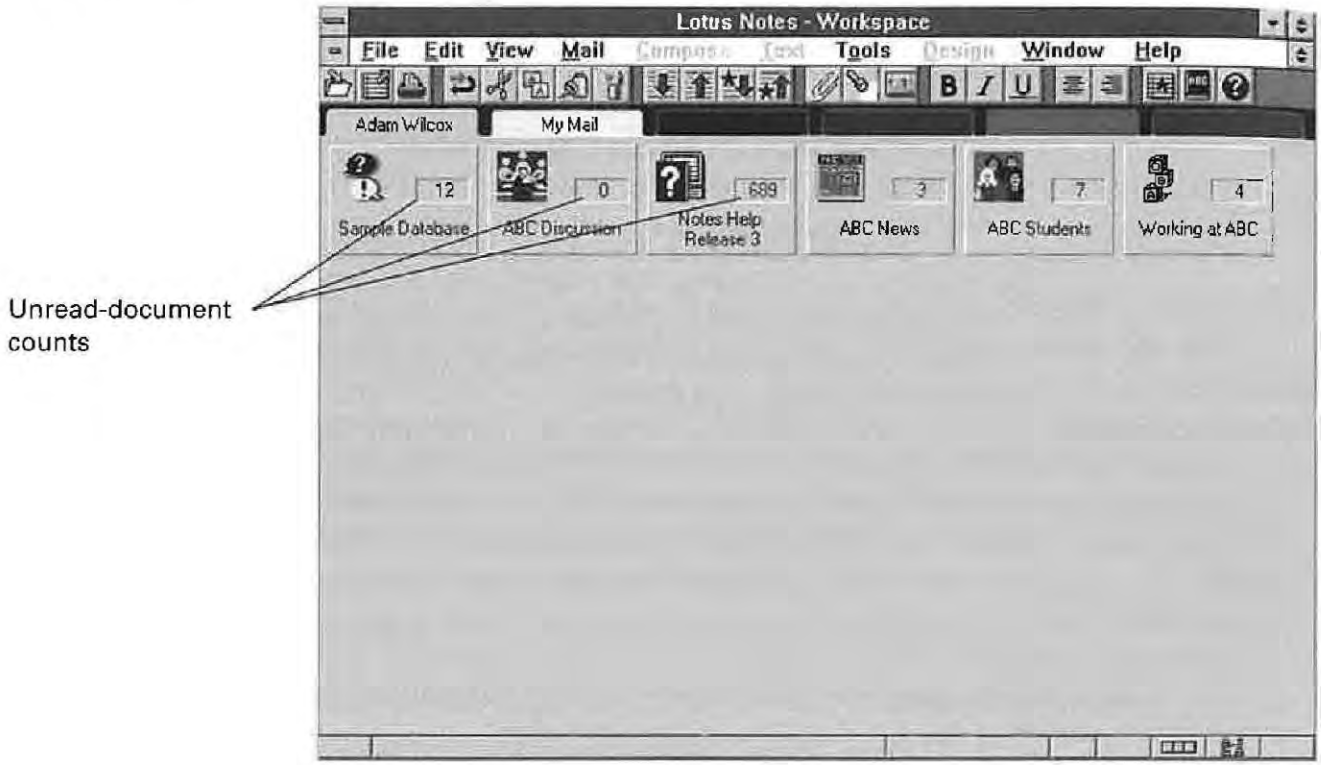
Note: If you show server names and then exit Notes, the names will still be displayed next time you start Notes. This does not apply to file names, however. If you exit and then restart Notes, you will need to show file names again.

Let's display some information on our database icons:

1. Activate the first workspace page (if necessary).
2. Choose **View, Show Unread** to display the unread-document count on each of the database icons (see Figure 5.1; you may see different icons and different unread counts). If you are asked to enter your password, do so and click on **OK**.
3. Activate the second workspace page. Notice that the unread count appears for the databases on this page as well. The View, Show Unread command affects all databases in the workspace. These numbers might not reflect the current unread count, because documents may have been added to the databases since the counts were last refreshed.
4. Keep your eyes on the Status bar, and choose **View, Refresh Unread** (if you are asked to enter your password, do so and click on **OK**). The name of each database on this page appears briefly in the Status bar. If any documents have been added to these databases since you last opened or refreshed them, the unread counts will change to reflect it. The Refresh Unread

command, unlike the Show Unread command, affects only databases on the current workspace page.

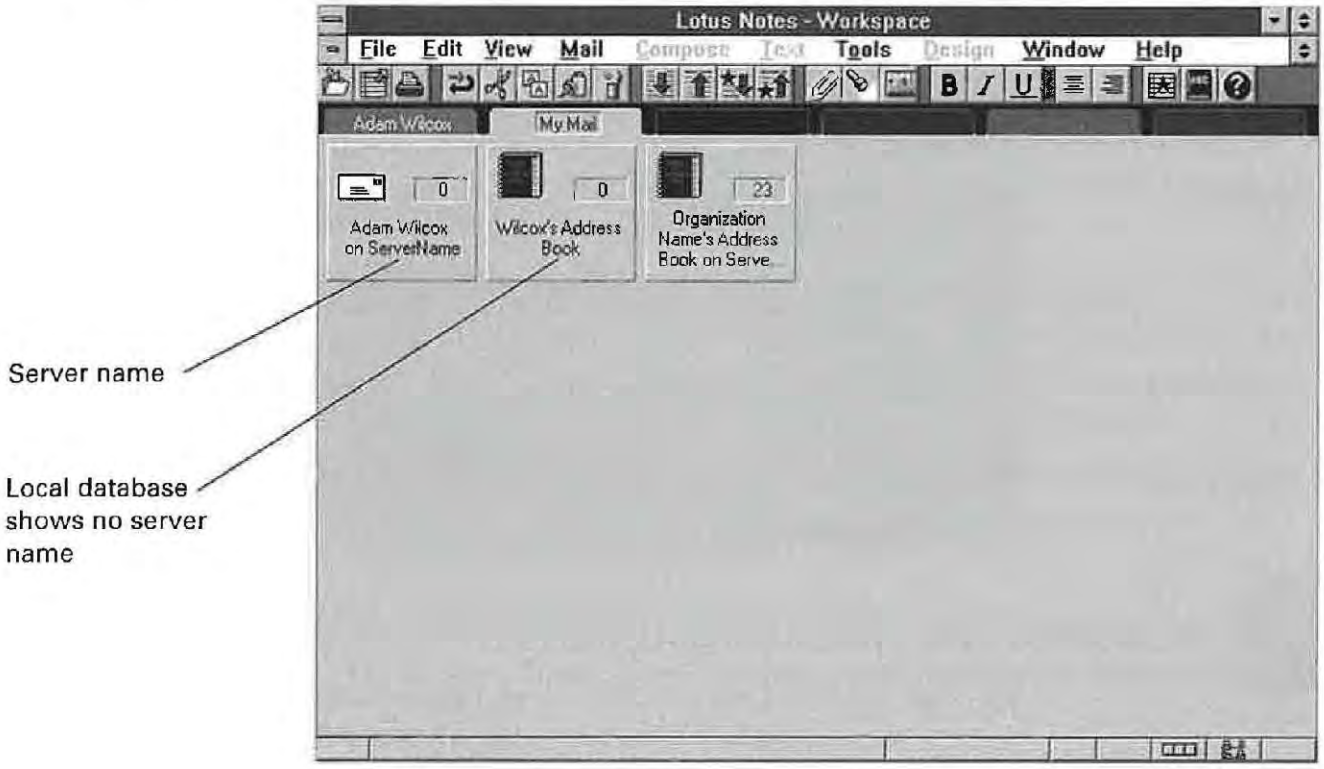
Figure 5.1 **Displaying the unread-document count**



5. Activate the first workspace page and press **F9** to refresh the unread counts for the databases on this page. The F9 key will always issue the Refresh command that is appropriate for what you are doing (Refresh Fields when composing a document, Refresh View in a view, or Refresh Unread from the Workspace window).
6. Watch the Status bar again, but this time press **Shift+F9**. The name of every database in the workspace—regardless of the page it is on—appears briefly in the Status bar. This command refreshes the unread count for all databases in your workspace.
7. Activate the second workspace page, and then choose **View, Show Server Names** to display the names of servers on which the databases are stored (see Figure 5.2; you may see

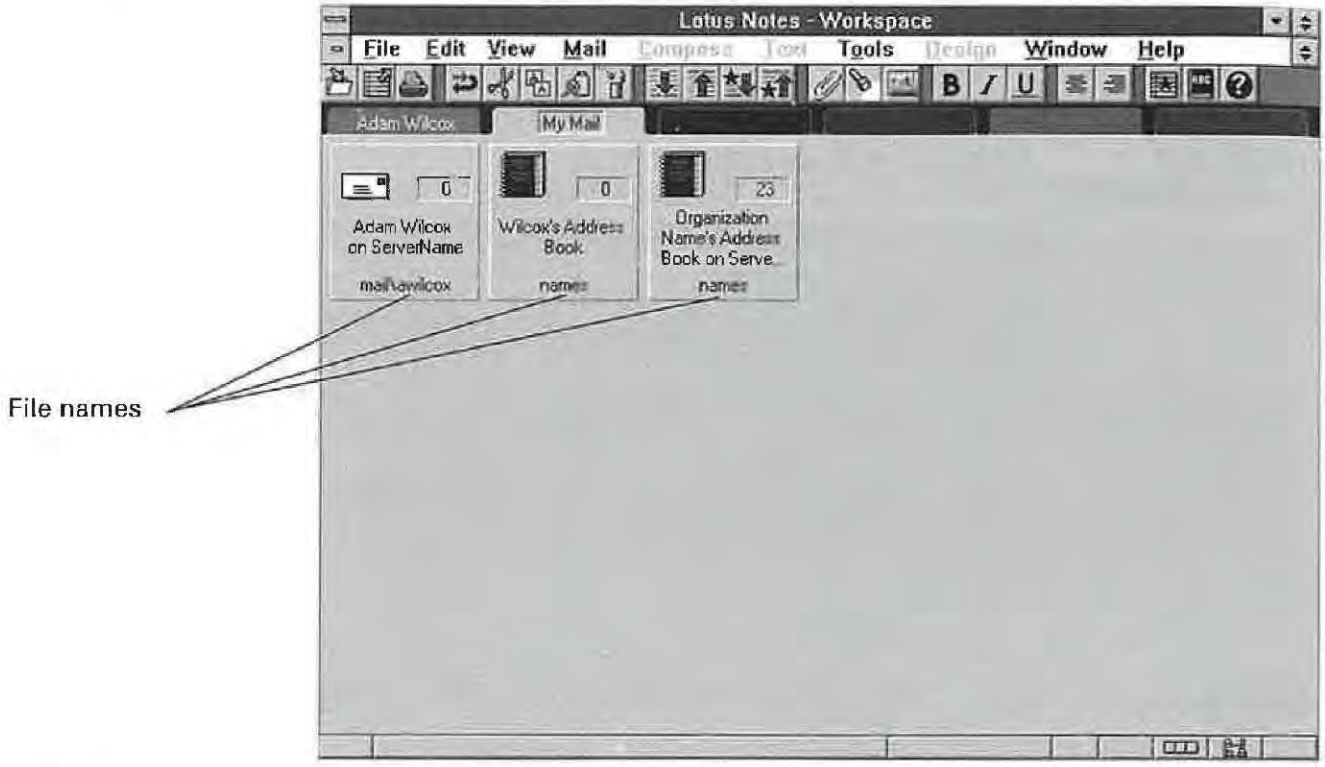
different icons and your server names will be different). Databases that are stored on your hard drive do not show any server name.

Figure 5.2 **Displaying server names**



8. Activate other workspace pages and observe the server names for the databases. When you are done, return to the second workspace page.
9. While holding down the **Shift** key, choose **View, Show Server Names** to display file names on the database icons (see Figure 5.3; you may see different icons and file names). A database's file name is different from its title.
10. Hold down **Shift** and choose **View, Show Server Names** to turn off the display of file names.

Figure 5.3 **Displaying database file names**





SCANNING FOR UNREAD DOCUMENTS

You can use the Tools, Scan Unread command to view unread documents. You can choose to scan all the databases in your workspace, or you can select only certain databases to be scanned. To scan for unread documents in databases you deem preferred, choose *Tools, Scan Unread, Preferred Databases* (or click on the Tools Scan Unread SmartIcon). (You can also scan unread documents in only the selected database(s) by choosing *Tools, Scan Unread, Selected Databases.*) The name of the first scanned database appears in the Scan Unread dialog box. When you are in this dialog box,

- Click on *Mark All Documents Read* to remove the unread markers from all the documents in the database. You might want to do this if there are many unread documents and you do not intend to read most of them.
- Click on Open to open the next unread document in the database (when you close the database, Notes returns you to the Scan Unread dialog box). If you choose this command, you

can then move through the other unread documents in the database by pressing the Tab key. When there are no more unread documents, Notes returns you to the Scan Unread dialog box.

- Click on Done to close the dialog box and return to the workspace.
- Click on Next to display the unread count for the next database to be scanned.
- Click on *Next Unread* to display the unread count for the next database to be scanned that *has* any unread documents. If there are no unread documents in any of the databases to be scanned, the dialog box will close.

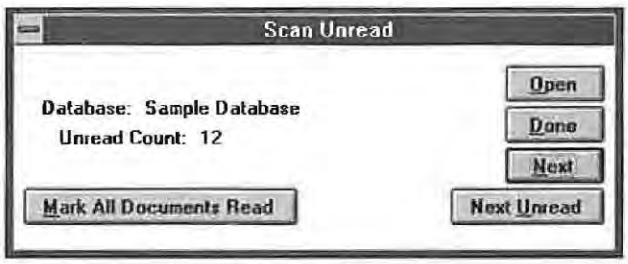
To determine which databases are scanned,

- Choose *Tools, Scan Unread, Choose Preferred* to display the Scan Unread Preferred Setup dialog box, which shows an alphabetical list of all databases in your workspace.
- To scan only certain databases, select the name of each you wish to scan in this dialog box. If none are selected, all the databases will be scanned.

Let's experiment with the Scan Unread feature:

1. Choose **Tools, Scan Unread, Preferred Databases** to display the Scan Unread dialog box (see Figure 5.4; your dialog box may show a different database).

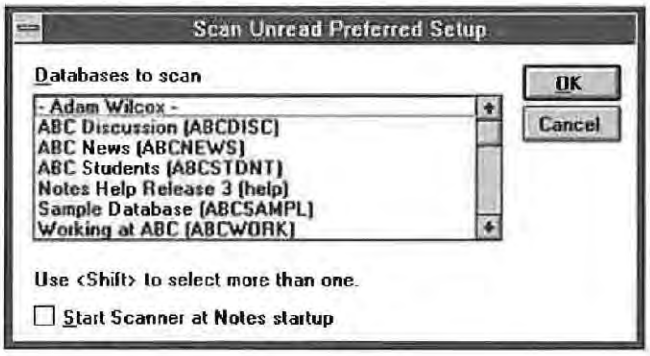
Figure 5.4 **Scanning for unread documents**



2. Click on **Next** a few times and examine the dialog box each time. Notes displays the name and unread count for each database in your workspace.

3. Click on **Done** to close the Scan Unread dialog box.
4. Choose **Tools, Scan Unread, Choose Preferred** to display the Scan Unread Preferred Setup dialog box (see Figure 5.5; you may see different databases in this, or, for that matter, any dialog box throughout this book). You use this dialog box to choose which databases are scanned when you issue the Tools, Scan Unread, Preferred Databases command. When none are selected, all databases will be scanned.

Figure 5.5 **The Scan Unread Preferred Setup dialog box**



5. Scroll down in the Databases To Scan list. All the databases (and their file names) in your workspace are shown. They are arranged alphabetically by workspace page.
6. In the Databases To Scan list, select **ABC News** and **Working at ABC** by clicking on each. (Although the dialog box says you must hold down Shift to select more than one item, this is not so.)
7. Click on **OK** to accept your selections and close the dialog box.
8. Click on the **Tools Scan Unread SmartIcon** (it is third from the right) to display the Scan Unread dialog box. The ABC News database is displayed.
9. Click on **Next** several times. Only the two databases you specified, ABC News and Working at ABC, are being scanned.
10. Click on **Next** to display ABC News (if necessary), and then click on **Mark All Documents Read**. The unread count changes to zero.

11. Click on **Next Unread** to display the unread count for the next preferred database that *has* unread document, Working at ABC.
12. Click on **Next Unread** again. Because this is the only preferred database that still has unread documents, its name still appears in the dialog box.
13. Click on **Open** to read the next unread document in the Working at ABC database.
14. Press **Tab** several times to view the unread documents in the database. When there are no more unread documents, Notes returns you to the Scan Unread dialog box. In this manner, you can read the unread documents in all your preferred databases. You will probably want to add only the databases you use most often to the preferred list. In many cases, this might include only your Mail database and a company news database.
15. Click on **Done** to close the dialog box.

NOTES SECURITY

One of the most important aspects of Notes database management is security. The two primary ways Notes provides this security are through passwords and database *access control*. You can examine the access control for most databases, and in some cases you can even change it. The combination of who you are (which is verified by your password and your ID file) and your *access level* to a database determines what you can do in that database.



UNDERSTANDING ACCESS CONTROL

The manager of a database creates an *Access Control List* (ACL) for that database. The ACL specifies access levels for various users or groups of users. Table 5.1 summarizes the seven levels of Notes database access.

Table 5.1 Notes Access Levels

Access Level	Database Rights
No Access	No rights in the database. Users with this access level cannot even add the database icon to their workspaces.
Depositor	Can compose new documents but cannot read existing ones.
Reader	Can read documents but cannot compose or edit them.
Author	Can read and compose documents, but can edit only documents he or she composed.
Editor	Can read, compose, or edit any document. Cannot modify forms, views, or ACL.
Designer	Can do everything an editor can do, but can also modify forms, views, and the database icon. The designer cannot modify the ACL, and cannot delete the database.
Manager	Can do anything to the database; the manager is the supreme Notes being.

Figure 5.6 depicts the "hallway of Notes access." Each user has an access level, which acts as a key to open the doors to all the access levels before his or her own. With the exception of Reader and Depositor—which are exclusive to each other—each Notes access level encompasses the rights of all the levels that come before it.

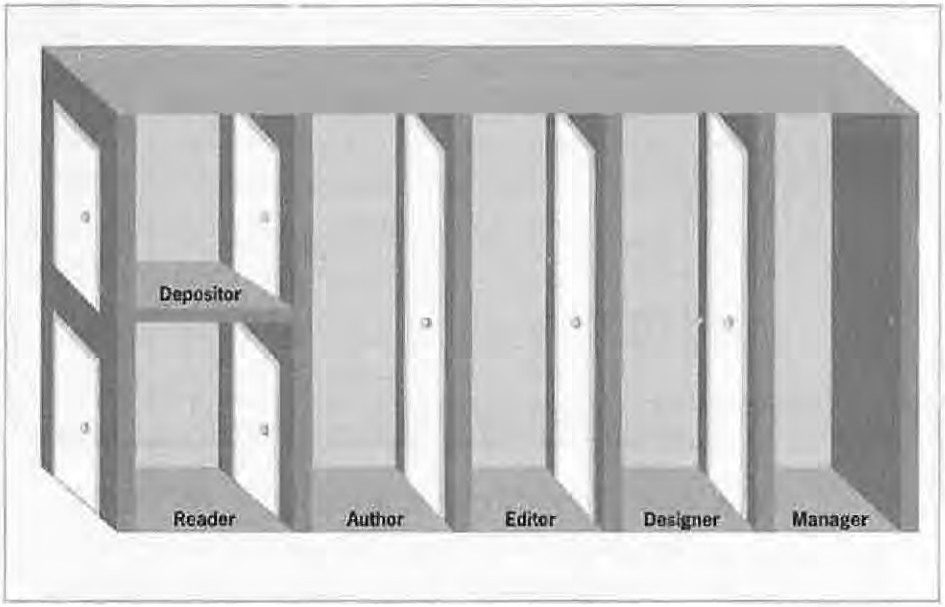


EXAMINING AN ACCESS CONTROL LIST

To examine the ACL for a database,

- Select or open the database.
- Choose *File, Database, Access Control* to display the Database Access Control List dialog box.
- Select the name of a user or group and observe the Access Level box (we will discuss changing access levels in Chapter 9).

Figure 5.6 **The "hallway of Notes access"**

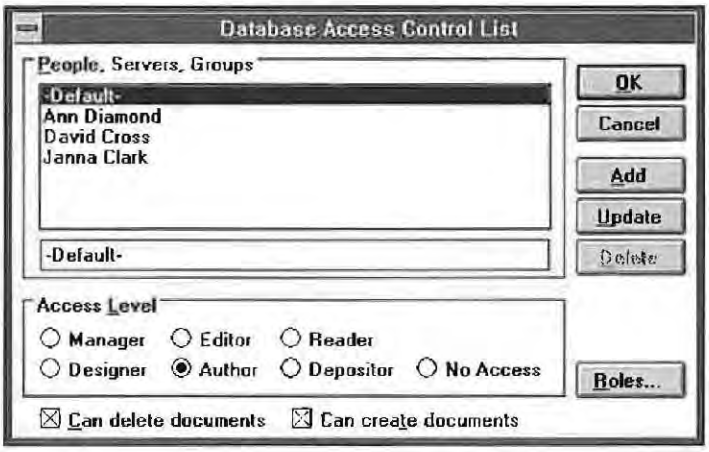


Every database has a user called -Default- whose access level applies to all users who are not specifically defined in the ACL. In a company-wide discussion database, the default access level would most likely be Author to allow all users to contribute to the discussion. In a personnel database, on the other hand, the default access level would be No Access to safeguard the sensitive information the database contains. You will always have Manager access to databases that are stored on your hard drive.

Let's examine the ACLs for some databases in your workspace:

1. Activate the first workspace page (if necessary) and select the **Sample Database** icon.
2. Choose **File, Database, Access Control** to display the Database Access Control List dialog box (see Figure 5.7). The name *-Default-* is selected in the People, Servers, Groups box, and the Author access level is selected. Because this is a discussion database, it is appropriate for any user to be able to compose and read documents.
3. In the People, Servers, Groups box, select **David Cross**. The access level for David Cross is Manager. Every database must have at least one user with Manager access.

Figure 5.7 **The ACL for the Sample Database**



4. Select and examine the access levels for **Ann Diamond** and **Janna Clark**. Ann Diamond has Designer-level access to this database, meaning she can alter forms and views, but cannot modify the ACL or delete the database. Most databases will have at least one person besides the manager with at least this level of access. Janna Clark's access level is Editor, meaning she can modify documents written by any user.
5. Click on **Cancel** close the dialog box.
6. Select the **Working at ABC** database icon and then choose **File, Database, Access Control**. The default access level in this database is Reader. Although any employee should be able to refer to these documents, the right to compose or modify documents in this database must be restricted to few.
7. Select and observe the access level for **Personnel Director** (Manager) and then click on **Cancel** to close the dialog box.
8. Select the **ABC Students** database icon and then choose **File, Database, Access Control**. The default access level in this database is No Access, because only certain users should be able to view students' documents.
9. Select and observe the access level for **Teachers**. This is a group that has been defined to include all teachers at the ABC School; they have Editor-level access so that they can modify students' documents.
10. Click on **Cancel** to close the dialog box.

PRACTICE YOUR SKILLS

Examine the ACLs for any other databases in your workspace.

Note: When a database is stored on your hard drive, you can do anything to the database, regardless of the ACL. This is true of the sample databases provided with this book. Their ACLs were created by the author as examples of what ACLs might look like in the shared databases you encounter.



REMOVING A DATABASE ICON FROM THE WORKSPACE

If you decide you no longer need to use a database, it's a simple matter to remove its icon from your workspace. To do so,

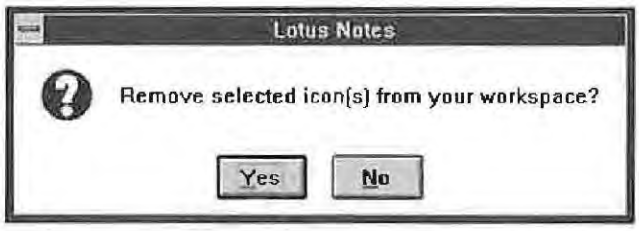
- Select the database icon(s) you wish to remove.
- Press the Del key. Notes asks if you want to remove the selected icon(s) from your workspace.
- Click on Yes.

When you remove a database icon from your workspace, you are not deleting the database itself. It's more like you're just boarding up the door. You can *delete* a database (which we'll discuss later in this chapter) only if you have Manager access to the database or if the database is stored on your hard drive.

Let's remove a database icon from your workspace:

1. Activate the first workspace page (if necessary) and select the **Sample Database** icon.
2. Press **Del**. Notes asks if you want to remove the selected icon(s) from your workspace (see Figure 5.8).

Figure 5.8 **Removing a database icon from your workspace**



3. Click on **Yes** to remove the selected icon from your workspace.
4. Choose **File, Open Database** to display the Open Database dialog box.
5. In the Server box, select **Local** and click on **Open** to display the databases that are available on your hard drive. Notice that Sample Database is still in this list; when you remove a database icon from your workspace, you are not deleting the database itself.
6. Click on **Done** to close the dialog box.



SECURING DATABASES

After you enter your password once in a Notes session, you will not have to enter it again to gain access to shared databases. This presents a security problem when you walk away from your computer without exiting Notes, because anyone could walk up and look at any database to which you have access.

To protect yourself against this problem, you can choose the *Tools, User Logoff* command (or press F5) before you walk away. After doing so, you will not be able to access any databases on the server (including your Mail database) without entering your password again. You will, however, still be able to access databases on your hard drive.

Let's try using this command:

1. Choose **Tools, User Logoff**. The Status bar indicates that your private user information has been cleared (see Figure 5.9). This means you will not be able to access databases on the server without entering your password again.
2. Choose **Mail, Open** to open your Mail database. Notes asks you to enter your password.
3. Click on **Cancel** to remain logged off the server.
4. Activate the **My Mail** workspace page and open your personal Name & Address Book. Because this database is stored on your hard drive, you can open it even though you are currently logged off.

Figure 5.9 **Clearing private user information**



Tip: If you are running Notes under Windows 3.1, you can use the Windows screen-saver feature to secure your entire workstation. This feature is available in the Windows Control Panel. Consult your Windows manual for more information.

5. Close your Name & Address Book database.

COPYING DATABASES

Most databases you work with are stored on servers to which you are connected. There are times, however, when you may want to copy databases from a server to the hard drive of your computer. For example, you can copy a database to the hard drive of a portable computer and then work on the database at home. Then, by a process called *replication*, you can synchronize your copy of the database with the original on the server. You might also want to make a copy of your Mail database on your hard drive to serve as a backup.



CREATING A REPLICA OF A DATABASE

You can make two kinds of copies of a database: a *new copy* or a *replica copy*. Which kind you choose to make depends on what you want to do with it. If (as in the example above) you want to work on a shared database at home, you would make a replica copy, because it maintains a relationship to the original database on the server. If you want to make a copy of a database to use as a starting point for creating a new database, you would make a new copy. Unless you are a database designer, chances are you will make more replica copies than new copies of databases, particularly if you work at home or travel frequently.

To make a replica of a database,

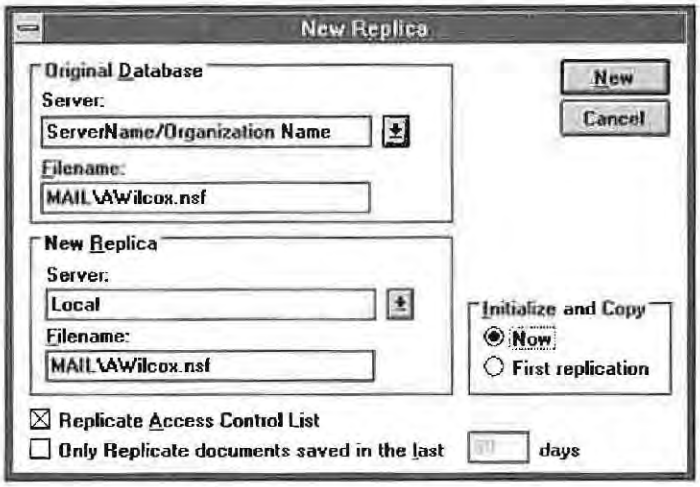
- Select the database for which you wish to create a replica.
- Choose *File, New Replica* to display the New Replica dialog box.
- Verify that the Original Database box indicates the server and file name of the database for which you wish to create a replica.
- In the New Replica box, indicate the server and file name for the new replica. By default, Notes will make the new replica on your hard drive (in your Notes directory) and will use the same file name as the original database. In most cases, this name and location should be fine. If you choose to change the file name, it can consist of up to eight characters with no spaces (Notes will automatically add the .NSF extension to the file name).

  Note: You should *never* copy databases to a server without first consulting your Notes administrator. Because servers are shared resources, the administrator must be aware of all changes that are made to them. This is a very important concept, and we'll be reminding you of it throughout the book.
- In the Initialize And Copy box, select *Now* if you want to copy both the structure and the documents of the original database. If you select *First Replication*, you will not be able to use the new database until you replicate it manually (which we'll discuss shortly).
- Click on *New* to create the replica. After a few seconds (or maybe minutes, if the database is very large), the new database icon appears on the active workspace page.

Let's create a replica of your Mail database:

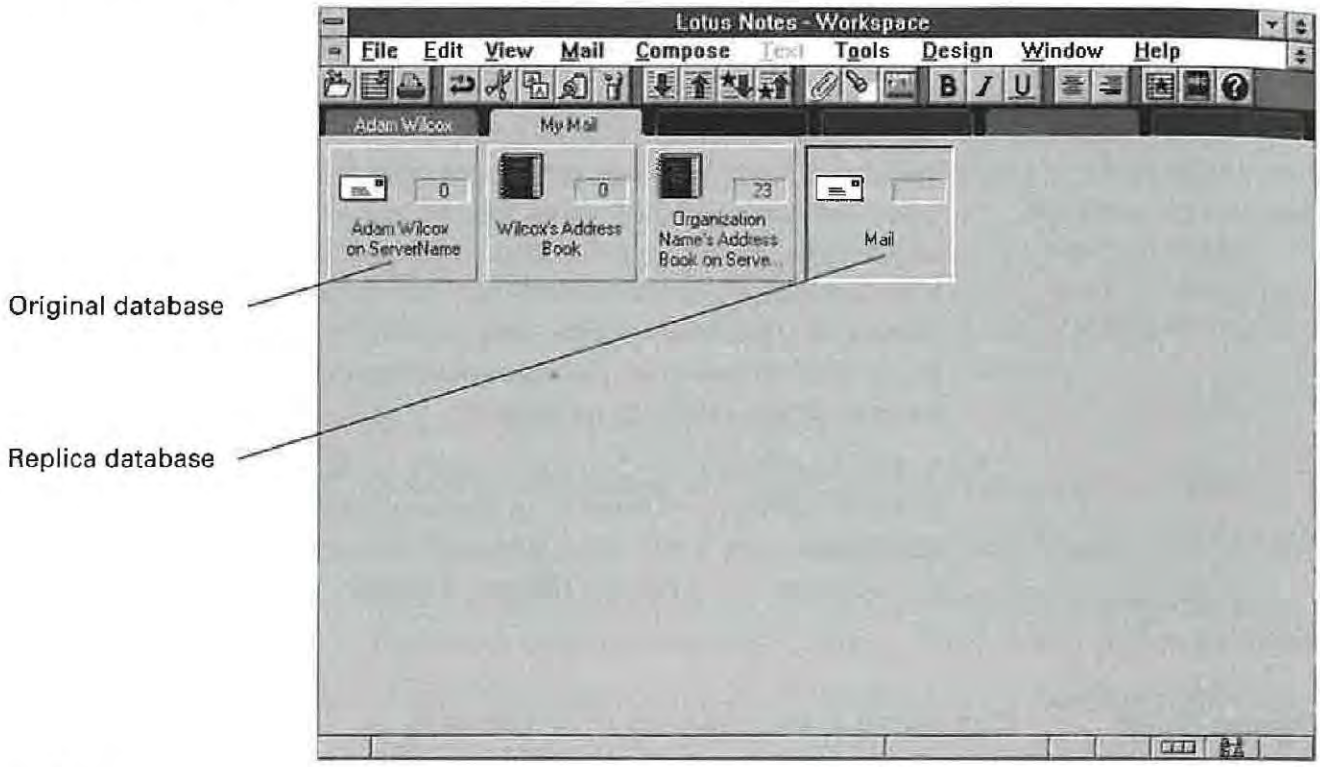
1. Activate the second workspace page and select your Mail database icon. Your Mail database is stored on a server, but you can use it when you work at home or when you travel by creating a replica of it on your hard drive.
2. Choose **File, New Replica** to open the New Replica dialog box. The Original Database box shows the name of the server on which your Mail database resides and the database's file name. The New Replica box shows *Local* as the server for the new replica; this means it will be located on your hard drive. The file name Notes suggests is the same as that of the original database.
3. In the Initialize And Copy box, click on **Now** to instruct Notes to copy both the documents and the structure of the original database now. Your dialog box should resemble Figure 5.10, except that you will see different server and file names.

Figure 5.10 **Creating a replica of a database**



4. Click on **New** (if necessary, enter your password and click on **OK**). As Notes creates a replica, the Status bar shows messages about the status of the replica. When the process is finished, a new Mail database icon appears in the workspace (see Figure 5.11). The replica's icon does not show a server name, because it is stored on your hard drive.

Figure 5.11 **A replica of the author's Mail database**



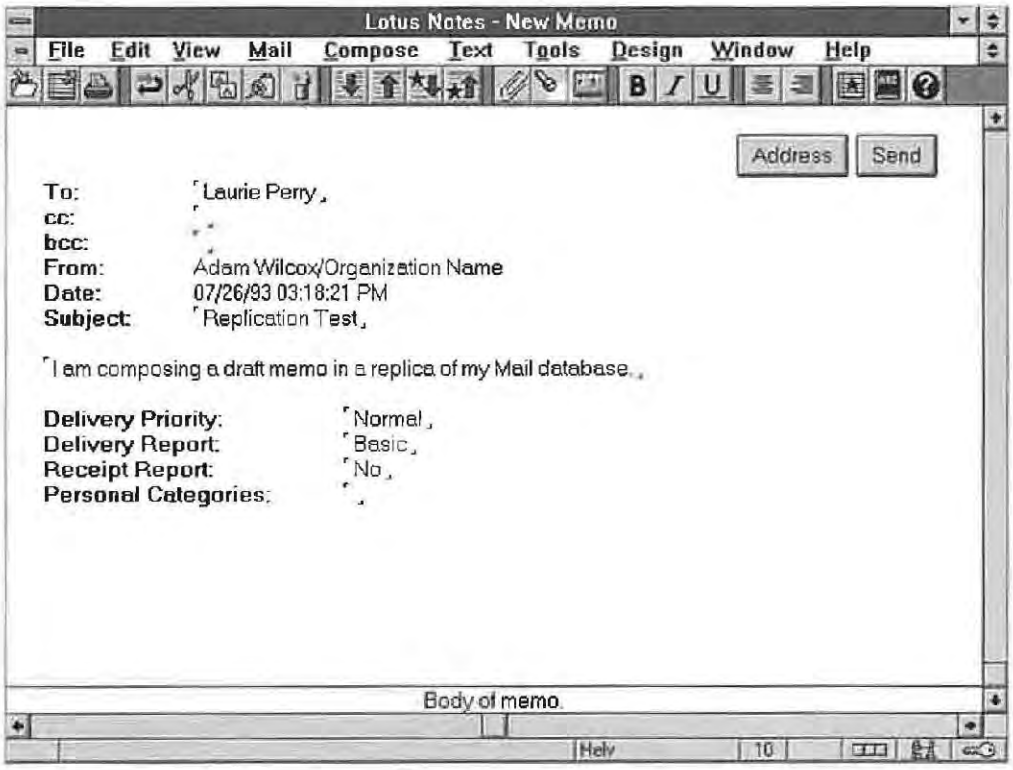


CREATING A DOCUMENT IN THE REPLICA DATABASE

Creating a document in a replica of a database is exactly the same as creating a document in any other database. The difference is that when you want to move the document from the replica back to the original database, you must *replicate* the databases. We'll get to that right after we create a document in the new replica of your Mail database.

1. Open the replica of your Mail database and then choose **Compose, Memo** to display a new Memo form. (If you need a story line, imagine you are working at home and want to compose a draft memo to your Notes buddy.)
2. Enter the name of your Notes buddy in the To field.
3. In the Subject field, enter **Replication Test**.
4. In the Body field, enter **I am composing a draft memo in a replica of my Mail database.** Your memo should resemble Figure 5.12, but with different names.

Figure 5.12 **Composing a memo in the replica database**



5. Press **Esc** to display the Document Save dialog box, check **Save** (if necessary), and uncheck **Mail**. You will save but not mail this document.
6. Click on **Yes** and observe the new draft document in the view.
7. Close the database and then open the original Mail database (its icon includes the server name). The new draft document does not appear in the original database. To synchronize a replica with its original database, you must replicate it manually.
8. Close your Mail database.



REPLICATING DATABASES

Before going on, be sure you understand the difference between "creating a replica" and "replication." Creating a replica is the process of making a replica copy of a database; you need do this only once. Replication is synchronizing a replica copy of a database with its original; you will do this frequently with the replicas you create.

When you replicate databases, the original is updated to reflect changes you have made to the replica, and the replica is updated to reflect changes that have been made to the original. Replication can work differently in different databases (this is set up by the database manager). For example, documents you delete in a replica may or may not be deleted in the original when you replicate the databases. In fact, if a document you delete in a replica is still in the original, it may well reappear in the replica when you replicate the databases.

To replicate databases,

- Select the database icon for one of the databases to be replicated. (If you wish to replicate all databases for which you have replicas, do not select any icons.)
- Choose *Tools, Replicate* to open the Tools Replicate dialog box.
- If necessary, select the server where the original databases are stored.
- In the Replicate box, check the options that apply:
  - Check *All Databases In Common* to replicate all databases for which there are replicas on your hard drive.
  - Check *Selected Databases* to replicated only selected databases.
  - Check *Receive Documents From Server* to update your replica based on changes to the original (but not to update the original).
  - Check *Send Documents To Server* to update the original based on changes to your replica.
  - Check *Replicate Database Templates* to update database templates (we will discuss database templates in Chapter 8).
  - Check *Exchange Document Read Marks* to synchronize the unread markers in the databases.
- Unless you have SHARE.EXE running in DOS, uncheck *Run In Background*. This option lets you do other things while the databases replicate, but it works properly only if SHARE.EXE is loaded.

- Click on OK. When the replication process is complete, Notes displays a Replication Statistics dialog box giving you information about the process.

> **Note to remote users:** When you work at home or on the road, replication will be an important part of your life. You will compose most of your documents in replicas of the original databases and then periodically replicate all of them. When you choose the Tools, Replicate command from a remote Notes workstation (one that is not connected to a server), you will need to go through a couple of extra steps to connect to a server through your modem.
>
> When you replicate remotely, you will probably want to check the *Transfer Outgoing Mail* option in the Tools Replicate dialog box to ensure that any mail you have sent is sent to the server. Using the *Hangup When Done* option may save you money by disconnecting your modem as soon as the replication process is complete. If you need to set up your computer as a remote workstation, you should talk to your Notes administrator.

Let's replicate our Mail databases:

1. Select the icon for the replica of your Mail database (it does not show a server name).
2. Choose **Tools, Replicate** to display the Tools Replicate dialog box.
3. In the Replicate box, check **Selected Database(s)** (if necessary) to replicate only the databases you have selected.
4. Uncheck the **Run In Background** option at the bottom of the dialog box, if necessary (SHARE.EXE must be loaded to use this feature). Your dialog box should resemble Figure 5.13.
5. Click on **OK** and observe the messages in the Status bar while the databases replicate. When the process is complete, Notes displays the Replication Statistics dialog box (see Figure 5.14).

Figure 5.13 **Replicating databases**

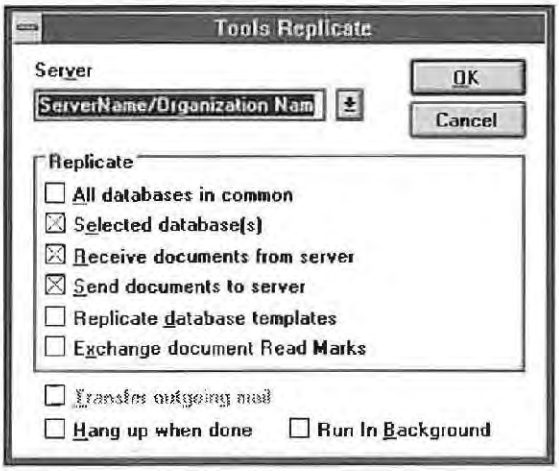
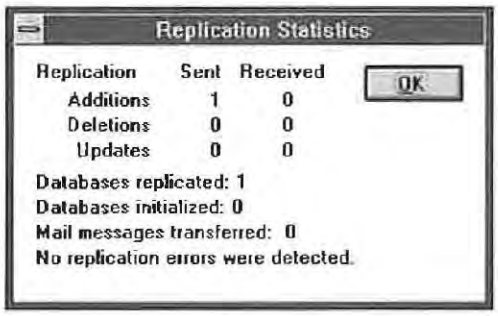


Figure 5.14 **The Replication Statistics dialog box**



6. Click on **OK** to close the dialog box and then open your original Mail database (the one with the server name). The draft memo you composed in the replica is now in the original database.
7. Close the database.



DELETING A DATABASE

You can delete a database if it is stored on your hard drive or if you have Manager access to it. To do so,

- Select the database icon.
- Choose *File, Database, Delete.* Notes asks you to confirm that you really want to delete the database. Think carefully about

this, because it is not the same as removing a database icon. When you delete a database, you are deleting the actual database file from its location.

- Click on Yes to delete the database.

Let's delete the replica of your Mail database from your hard drive:

Note: If you will be working remotely and therefore need a replica copy of your Mail database, you can skip this task.

1. Select the replica of your Mail database (remember, no server name).
2. Choose **File, Database, Delete**. Notes asks if you really want to delete the database.
3. Be sure the database you are about to delete is not your original Mail database (if it is, the message will mention the server name), and click on **Yes**.

MORE ABOUT SEARCHING DATABASES

In Chapter 3, you learned how to use the Edit, Find command to search through documents or views for specific text. This command is available within any database. Some databases, however, allow you to use the much more powerful *full-text search* features of Notes. You might remember seeing the Search bar when we examined the Working at ABC database; this is one of the tools you can use to perform full-text searches. Using this more powerful type of search will allow you to find documents that contain various combinations of *text strings* (a text string is any combination of characters; it may or may not be a word).



OPENING AN INDEXED DATABASE

For a database to support full-text searches, it must have a current *full-text index*. The database designer usually creates and maintains the index for a database. To check whether a database has an index,

- Select or open the database.
- Choose *File, Full Text Search, Information* to display the Full Text Information dialog box, which will indicate whether an

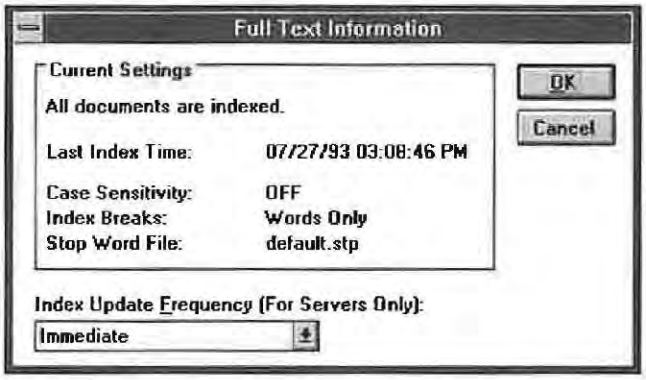
index has been defined and whether all the documents in the database are indexed.

Note: "Creating an index" and "indexing a database" are two different things. Later in this chapter, you will learn how to create an index and index a database.

Let's look at a database that has an index:

1. Activate the first workspace page and select the **Working at ABC** database icon.
2. Choose **File, Full Text Search, Information** to display the Full Text Information dialog box (see Figure 5.15). The Current Settings box indicates that all documents in the database are indexed; it also shows the settings for the index. You can perform simple searches on databases that are not indexed, but to use the full-text search features on a database it must be indexed.

Figure 5.15 **The Full Text Information dialog box**



3. Click on **OK** to return to the workspace and then open the **Working at ABC** database. Notice the Search bar at the top of the view; the Search bar is available only in indexed databases.



USING THE QUERY BUILDER TO SEARCH A DATABASE

In an indexed database, you can perform searches that contain various combinations of text (*boolean searches*), or searches for documents that contain particular words that are near one another (*proximity searches*). Notes provides two tools for performing

these searches, the Search bar and the Query Builder dialog box. To perform a search using the Search bar,

- Open a view containing the documents you wish to search.
- Choose *View, Show Search Bar* to display the Search bar, if necessary (you can also use this command to hide the Search bar when you are not using it).
- In the text box on the Search bar, enter the text for which you wish to search.
- Click on the *Search* button. Only documents that contain specified text remain listed in the view. You also can see the entire view with found documents marked as selected by choosing *View, Show Only Search Results* (this command is a toggle between the two ways of viewing search results).
- To return to the full view, click on the *Clear* button.

You can use *wildcards* to search for variations on a particular word or when you do not know all the characters for which you are searching. For example, if you want to search for documents containing the words *hubbub, hubcap,* or *Hubble* (as in the telescope), you could search for the text *hub* followed by a wildcard character. Table 5.2 explains the wildcard characters that are available.

Table 5.2 Full-Text Search Wildcards

Wildcard	Use/Example
? (question mark)	Represents any single character in a particular position. For example, the query *c?t* would find the words *cat, cot,* and *cut.*
* (asterisk)	Represents any number of characters in a particular position. For example, the query *hub** would find the words *hubbub, hubcap,* and *Hubble.*
- (hyphen)	Represents a space, a hyphen, or no space between two text strings. For example, the query *part-time* would find *part-time, part time,* and *parttime.*

To search for multiple-word phrases, you should enclose them in quotation marks. For example, you would use the query *"Lotus Notes"* to find documents containing the words *Lotus* and *Notes* in succession.

You can use the *logical operators* AND, OR, NOT, and ACCRUE to find documents that contain various combinations of words and text strings. At this point, all this probably seems so complicated that you'd never want to use it. Fortunately, Notes provides the Query Builder dialog box to create complex queries for you. The Query Builder lets you type text strings in various boxes, depending on how you want to search for those strings, and then translates your request into Notes query language. Not only does this provide an easy way to perform complex searches, but it also helps you learn query syntax.

To construct a boolean search query using the Query Builder,

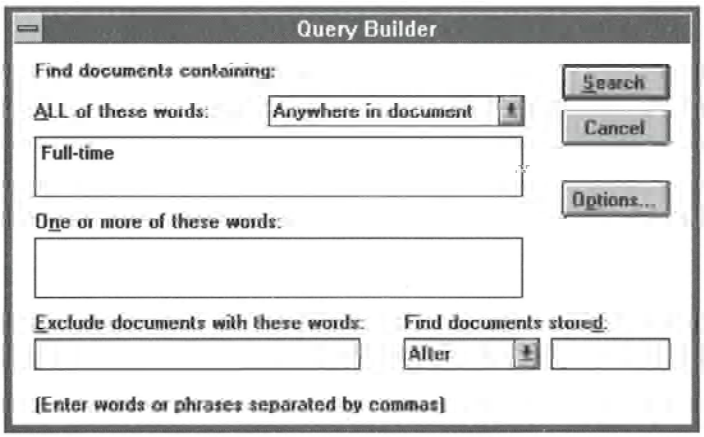
- Open a view containing the documents that you wish to search.
- Click on the *Edit Find* SmartIcon. When you click on this SmartIcon in an indexed database, Notes displays the Query Builder dialog box.
    - To find documents containing all of several words, enter these words in the All Of These Words box. You should separate individual words by commas.
    - To find documents that contain one or more of several words (but not necessarily all of them), enter these words in the One Or More Of These Words box.
    - To exclude documents containing particular words, enter these words in the Exclude Documents With These Words box.
    - To find documents saved before or after a specific date, select *Before* or *After* from the Find Documents Stored drop-down list, and then type the desired date.
    - To rank documents by how close the specified words are within the document, select *Near Each Other* from the drop-down list at the top of the dialog box.
- Click on *Search*. The found documents are either listed alone or selected within the view (depending on whether the Show Only Search Results option is on or off). You will also notice

that the appropriate query appears in the text box on the Search bar.

That's an awful lot to digest. It's probably easier to understand if we look at an example. Over the next several pages, we will find documents in the Working at ABC database that pertain to vacation policy and full-time employees. Let's start by searching for documents that contain the text *full-time*:

1. Choose **View** to examine the View menu. There is a check mark next to the Show Search Bar option. You could hide the Search bar by choosing this option again (but don't).
2. Close the View menu and then click on the **Edit Find** SmartIcon (it looks like a flashlight) to display the Query Builder dialog box. In a database that is not indexed, this SmartIcon will display the Find dialog box.
3. Click on the drop-down arrow next to the box containing the text *Anywhere In Document*. You can search for text anywhere in a document, or you can search for text strings that are near each other. If you use the latter option, found documents will be ranked by how close the text strings are to each other.
4. Click in the **All Of These Words** box and type **Full-time** (case is not important, because the index for this database is not case-sensitive). The dialog box should resemble Figure 5.16. If you want to search for documents that contain all of several words, type them all in this box, separated by commas.

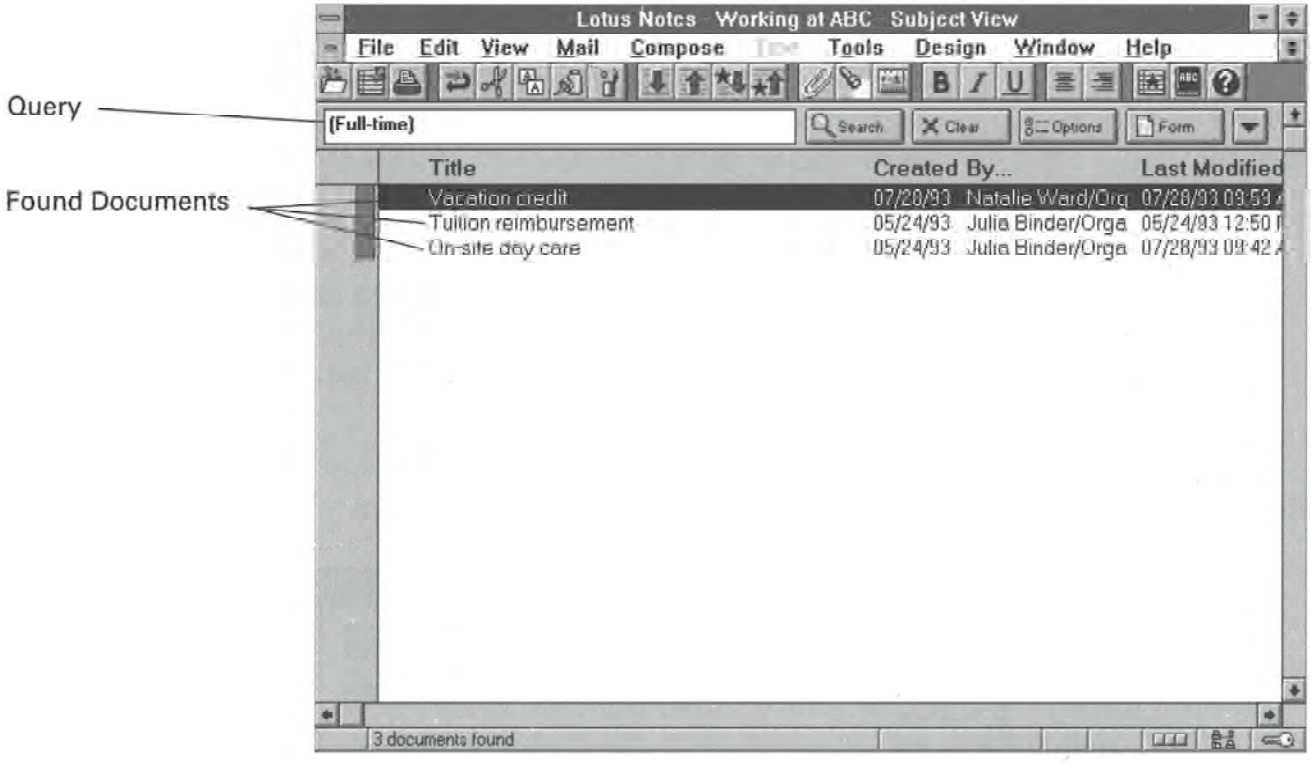
Figure 5.16 **Using the Query Builder dialog box**



5. Examine the other options in the Query Builder dialog box. You can create complex search queries by using the various boxes here. You can search for documents that contain either one word *or* another, you can exclude documents that contain certain words, and you can even combine these different types of searches. To type such a query directly into the Search bar would be difficult, but it's a snap using the Query Builder.

6. Click on **Search** to find the documents that contain the specified text (see Figure 5.17). The Status bar tells you that three documents have been found, and these are the only documents that remain listed in the view. Notice also that the query *(Full-time)* now appears in the text box on the Search bar.

Figure 5.17 The results of a query

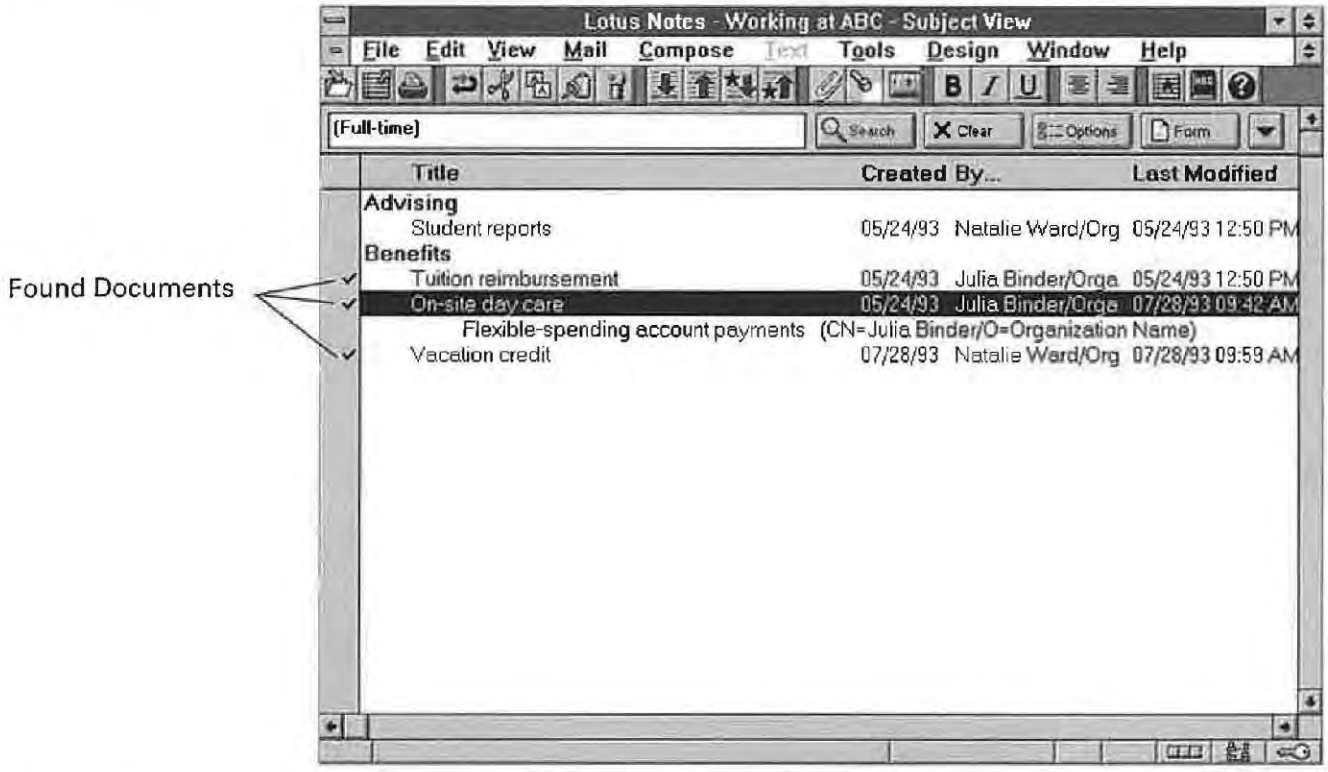


7. Open the first document listed in the view. The found text *Full time* is indicated by a red box. The hyphen wildcard also finds text strings separated by a space.

8. Press **Enter** twice and observe each found document. The query also found documents containing the text *Full-time* and *fulltime*.

9. Close the document and then choose **View, Show Only Search Results**. The view again displays all its documents, with the found documents marked as selected (see Figure 5.18).

Figure 5.18 The found documents selected in the view





REFINING A SEARCH

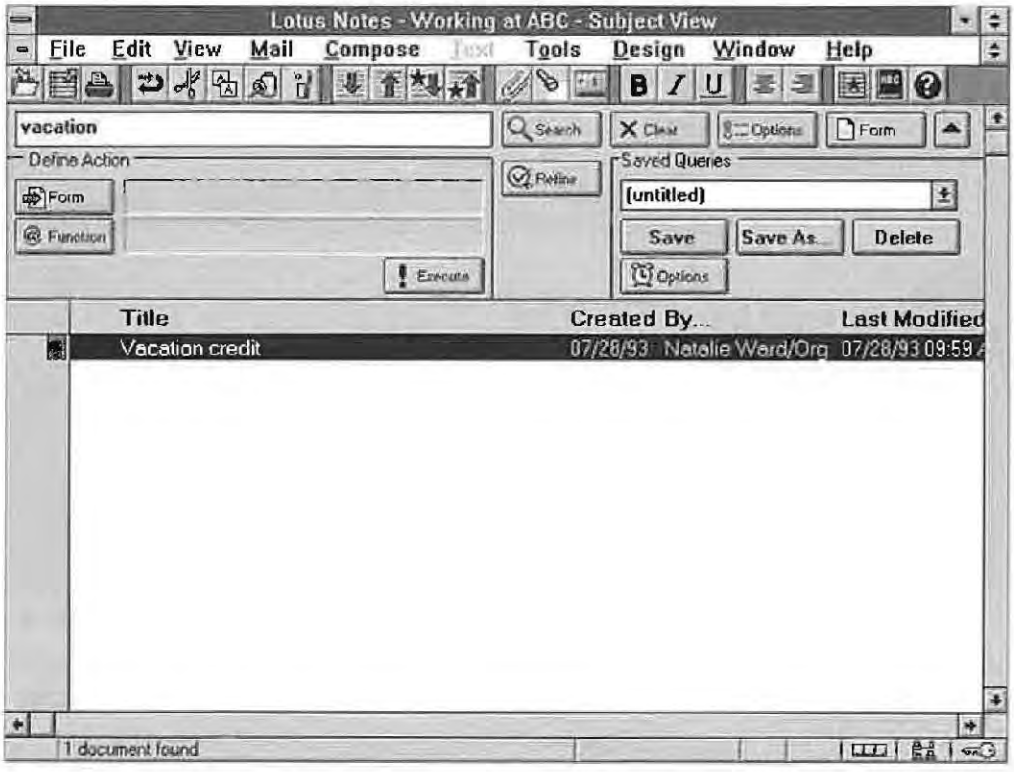
After you perform a search, you can refine the search to find other text in the remaining documents. To refine a search,

- Click on the downward-pointing triangle on the far right of the Search bar. Notes displays more options for searching as well as for writing macros (we'll discuss macros in Chapter 10).
- In the text box on the Search bar, replace the current query with the text you want to search for in the documents found by the previous search. (You can also use the Query Builder.)
- Click on *Refine*. Only documents containing the specified text remain.

So far, we've found documents that pertain to full-time employees. Let's refine our search to find which of those documents have to do with vacation (the phrase "full-time vacation" has a certain appeal, don't you think?):

1. Choose **View, Show Only Search Results** to display only found documents in the view.
2. Click on the downward-pointing triangle on the far right of the Search bar to display additional search and macro options.
3. In the text box on the Search bar, select (**Full-time**) and then type **vacation** to replace the current query.
4. Click on the **Refine** button to search the listed documents. Only one document remains in the view (see Figure 5.19).
5. Click on the upward-pointing triangle on the far right of the Search bar to hide the additional options.

Figure 5.19 **Refining a search**



6. Click on **Clear** to clear the Search bar and again display all the documents in the view.



SEARCHING USING A FORM

You can use the forms in a database to create queries that search for text in a particular field. To search by using a form,

- Point to the Form button in the Search bar, and press and hold the mouse button to display a list of forms.
- Choose the form you wish to use for the query. Notes displays the blank form.
- Enter the text for which you want to search in the appropriate field.
- Click on *Search*. The view shows documents containing the specified text *in the specified field.*

Let's use a form to search for Policy Procedure documents that contain the text *Full-time* in the body field:

1. Point to the **Form** button (in the Search bar) and press and hold the mouse button to display a list of the two forms in the database.
2. Choose **Policy Procedure** to display a blank Policy Procedure form. You can now search for text in particular fields by typing in the appropriate spot on the form.
3. Click in the body field and type **Full-time**. Your form should resemble Figure 5.20.
4. Click on the **Search** button to find the matching documents. This query finds the same documents that were found by our first query, because the text *Full-time* (or *fulltime* or *full time*) is contained in the body field of each of these documents.
5. Examine the query on the Search bar (see Figure 5.21). When you query using a form, the syntax of the query is a bit different. By observing the relationship between queries you create using either a form or the Query Builder and the queries as they appear in the Search bar, you can become familiar with Notes query syntax. In time, you might find it easier to type complex queries directly into the Search bar.

Figure 5.20 **Searching using a form**



Figure 5.21 **A query created using a form**



6. Click on **Clear** to clear the Search bar and again display all the documents in the view, then close the database.

INDEXING DATABASES

As we discussed earlier, a database must be indexed for the full-text search features to be available. If a shared database (one that is stored on a server) is not indexed, and you wish to use full-text search features on it, you should contact the database manager. You can create an index for a shared database only if you have Designer or Manager access to the database. You can, however, create indexes for any databases that are stored on your hard drive.



CREATING AN INDEX FOR A DATABASE

There are two steps to indexing a database: First you create the index (this means defining the kind of index it will be), and then you index the text in the documents. You might think of it as being like creating a card catalog for a library. The first step would be to decide how to design the catalog (to do this, you would answer questions like, "Will it be in alphabetical order?" and "What information will appear on the cards?"). The second step would be to create the catalog itself, making cards for every book in the library.

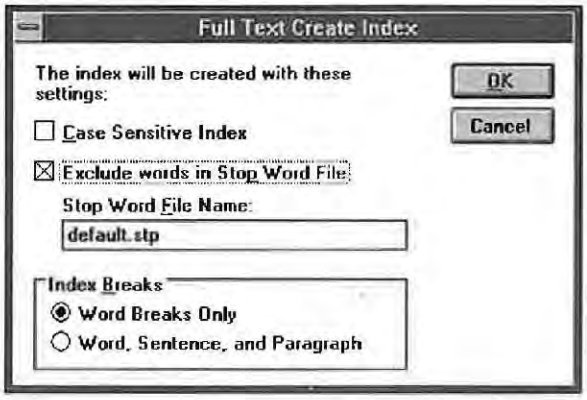
To index a database,

- Select the database you wish to index.
- Choose *File, Full Text Search, Create Index* to display the Full Text Create Index dialog box. The options you choose here determine the full-text search features you will be able to use. Indexes are quite large, and some options use more room than others.
  - If you want to be able to perform case-sensitive searches, check *Case Sensitive Index*. This option will increase the size of the index by about 25 percent.
  - If you want to exclude common words such as *the, an,* and *were* from the index, check *Exclude Words In Stop Word File*. This decreases the size of the index by 15 to 20 percent, but it also means you can't search for strings that contain the words in the Stop Word File.
  - If you want to be able to search for words in the same sentence or paragraph, select *Word, Sentence, And Paragraph* in the Index Breaks box. This will also increase the size of the index.
- Click on OK to accept your settings for the index. Notes asks if you want to index the database now. At this point, you have already "created" the index; this means only that you have indicated the settings to be used when the database is indexed. You still must index the documents in the database.
- Click on Yes to index the database (this can take several minutes in a large database). When Notes finishes indexing the documents, a dialog box appears, giving you information about the index.

Let's index the ABC Discussion database:

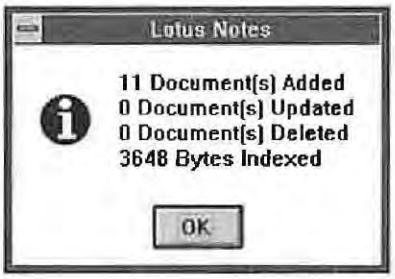
1. Open the **ABC Discussion** database and choose **View** to display the View menu. The Show Only Search Results command is not available, because this database is not indexed.
2. Close the View menu.
3. Choose **File, Full Text Search, Create Index** to display the Full Text Create Index dialog box.
4. Check the **Exclude Words In Stop Word File** option to indicate that the index should not include words like *a, an,* and *the.* Your dialog box should resemble Figure 5.22. Because indexes are very large, and because you will seldom search for these words, it is a good idea to exclude them from the index.

Figure 5.22 **Creating an index**



5. Click on **OK** to accept the index settings. Notes gives you a message telling you that this is a local database and must be indexed manually, and asks if you want to do so now.
6. Click on **Yes** to index the database. After a few moments, Notes shows you some statistics about the index (see Figure 5.23; your exact statistics may vary).
7. Click on **OK** to accept the message and return to the database.

Figure 5.23 **Index statistics**





EXAMINING THE INDEXED DATABASE

After you index a database, some commands become available that were not before. Another difference is that when you click on the Edit Find SmartIcon, Notes will display the Query Builder dialog box instead of the Find dialog box. Let's take a look at the ABC Discussion database for which we just created an index:

1. Notice that the Search bar is displayed above the view. The Search bar appears by default in all indexed databases.
2. Click on the **Edit Find** SmartIcon. Because the database now has an index, Notes displays the Query Builder dialog box instead of the Find dialog box.
3. Click on **Cancel** to close the dialog box and then close the database.

Each time you add to or alter a database, you must index it again before you can properly use the full-text search features. To index a database for which you have already created an index, choose *File, Full Text Search, Update Index*. In some cases, when an index is not up to date, Notes will prompt you to update the index when you attempt to use a full-text search feature.

SUMMARY

In this chapter, you learned a bit more about managing databases. You learned how to display various information on database icons, including the unread-document count, the server name, and the file name. You also learned how to use the Scan Unread feature to read unread documents in some or all of your databases.

We went on to discuss database security, including access control and passwords. You learned more about managing databases,

including creating replica copies of databases, replicating databases, using full-text search features, and indexing.

The following table summarizes some of the techniques you learned in this chapter:

Desired Result	How to Do It
Display unread count	Choose **View, Show Unread**
Refresh unread counts	Choose **View, Refresh Unread** (or press **F9**)
Display server names	Choose **View, Show Server Names**
Display file names	Hold **Shift** and choose **View, Show Server Names**
Scan unread documents	Choose **Tools, Scan Unread, Preferred Databases** (or click on **Tools Scan Unread** SmartIcon) and click on desired option for each database
Choose preferred databases	Choose **Tools, Scan Unread, Choose Preferred**; select desired databases; click on **OK**
View ACL	Select database and choose **File, Database, Access Control**
Remove database icon	Select icon, press **Del**, click on **Yes**
Clear private user information	Choose **Tools, User Logoff** (or press **F5**)
Create replica of database	Select database; choose **File, New Replica**; indicate server and file name for replica; in Initialize And Copy box, select **Now**; click on **New**
Replicate databases	Select database(s); choose **Tools, Replicate**; check desired replication options; click on **OK**

Desired Result	How to Do It
Delete database	Select database; choose **File, Database, Delete**; click on **Yes**
Get index information	Select database and choose **File, Full Text Search, Information**
Show or hide Search bar	Choose **View, Show Search Bar**
Use Query Builder to find documents	Click on **Edit Find** SmartIcon, enter desired text in appropriate boxes, click on **Search**
Refine search	Click on downward-pointing triangle on far right of Search bar, enter new query, click on **Refine**
Query using form	Press on and hold **Form** button, choose desired form, enter text in appropriate field(s), click on **Search**
Index database	Select database; choose **File, Full Text Search, Create Index**; select index settings; click on **OK**; click on **Yes**
Update index	Choose **File, Full Text Search, Update Index**

In the next chapter, you will learn more about editing documents. You will learn about changing the appearance of text, and how to insert DocLinks and tables in your documents. You will also learn about another Notes security feature called encryption.

IF YOU'RE STOPPING HERE

If you wish to stop here, please choose **File, Exit** to exit Notes (you will need to restart Notes when you begin Chapter 6). If you wish to proceed directly to Chapter 6, please do so now.

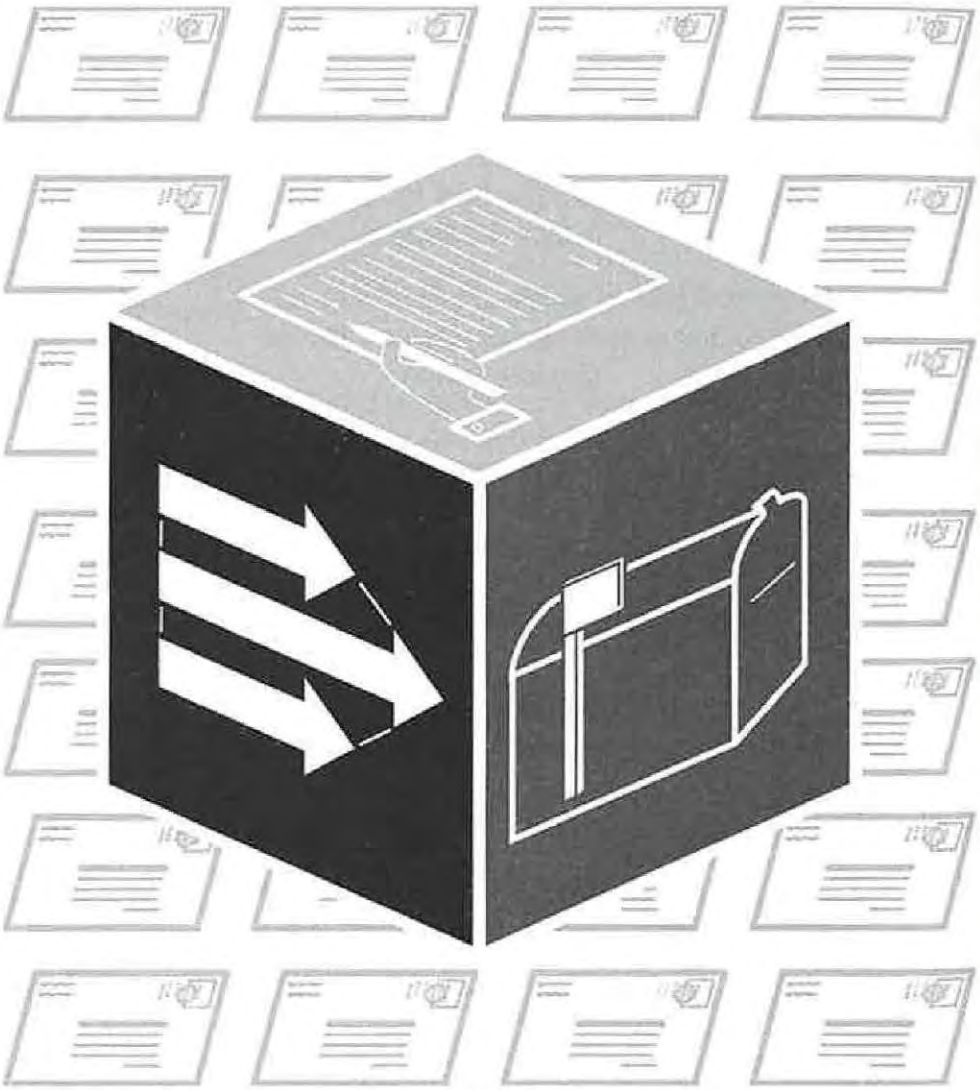
CHAPTER 6: MORE ABOUT EDITING DOCUMENTS

Changing the Appearance of Text

Creating DocLinks

Inserting Tables

Encryption



Notes provides many tools for editing and enhancing your documents. In this chapter, we'll learn how to do some fancy word processing to improve the appearance of a document. We'll also learn how to make your documents more powerful by using DocLinks and tables. Finally, we'll discuss how to use another Notes security feature called *encryption*.

When you're done working through this chapter, you will know

- How to apply formatting to your documents
- How to create a DocLink
- How to create and format a table
- How to use encryption to safeguard sensitive information

CHANGING THE APPEARANCE OF TEXT

You can change the appearance of text in both text and rich-text fields to better communicate the messages in your documents. For example, you might emphasize a word by making it bold, or you might indent a secondary paragraph to the right of the main information.

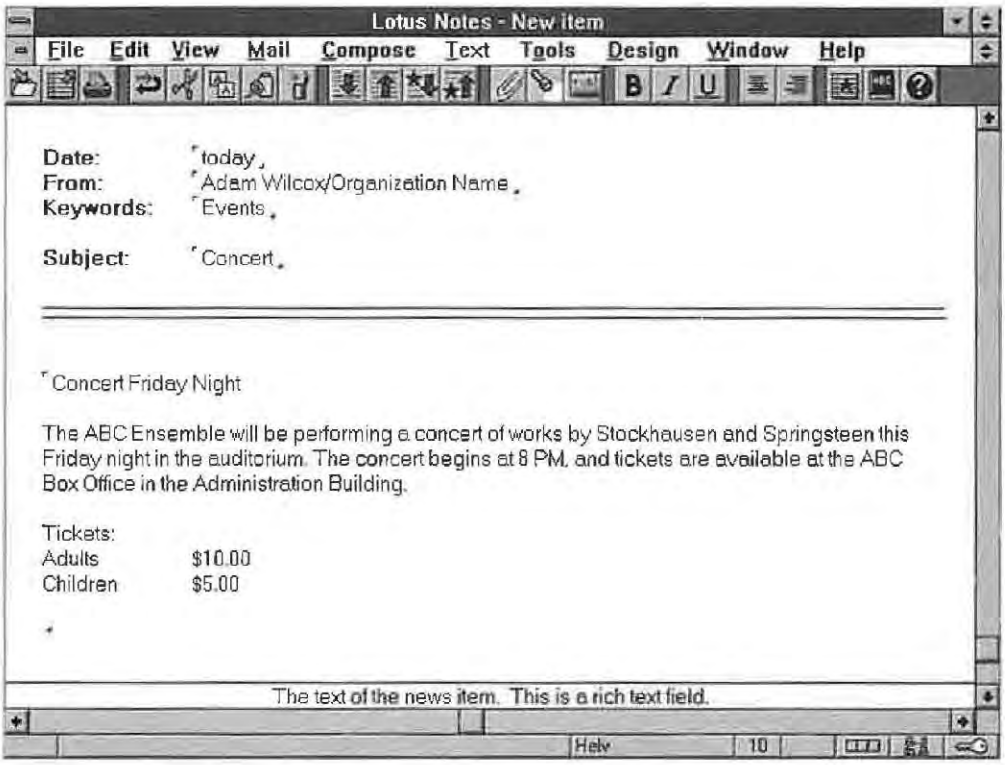
Notes provides many tools for accomplishing this, including menu commands, SmartIcons, and keyboard shortcuts. If you are experienced with a word processing program, many of the concepts involved in formatting will be familiar to you. If you are not experienced with word processing, you will still be able to format documents quickly and easily.

PRACTICE YOUR SKILLS

We'll begin this chapter by composing a document so that we have something to format:

1. Begin to compose a new News Item document in the ABC News database.
2. Enter **today** in the date field, **Events** in the keywords field, and **Concert** in the subject field.
3. Move to the body field and enter the text shown in Figure 6.1. When you type the ticket price information, press the Tab key between *Adults* and *$10.00* and between *Children* and *$5.00*. This will be important later in the chapter.

Figure 6.1 **The new document**





USING THE TEXT MENU TO APPLY CHARACTER FORMATTING

You can apply formatting to individual characters or words in a rich-text field. To format text,

- Select the text you wish to format.
- Choose *Text, Font* to display the Font dialog box.
- Change the font, size, color, or attributes of the text.
- Click on OK.

You can do some formatting without using the Font dialog box by choosing commands from the bottom of the Text menu. You can also make selected text bold, italicized, or underlined by using SmartIcons (see Figure 6.2).

You can also use keyboard shortcuts to apply character formatting. Table 6.1 summarizes some common keyboard formatting techniques.

Figure 6.2 Formatting SmartIcons

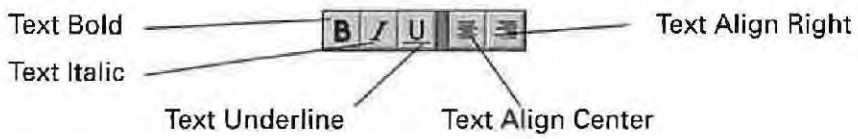


Table 6.1 Character-Formatting Shortcuts

To	Press
Make selected text normal (turn off bold, italics, and so on)	Ctrl+T
Make selected text bold	Ctrl+B
Italicize selected text	Ctrl+I
Underline selected text	Ctrl+U
Enlarge (reduce) selected text	F2 (Shift+F2)

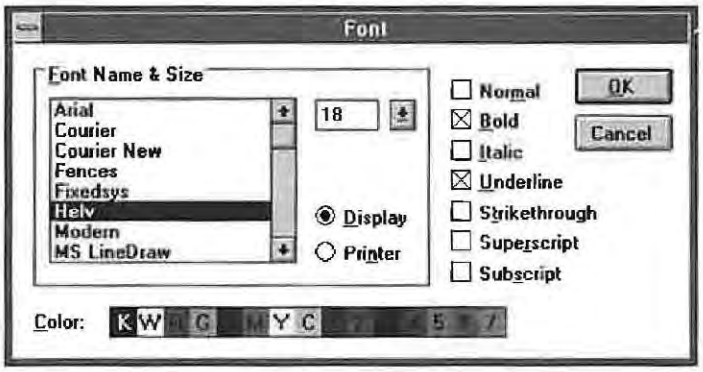
The keyboard shortcuts for bold, italics, and underlining are toggles; to turn these attributes off, simply press the keyboard shortcut again.

Let's apply some character formatting to our new document:

1. Select the text **Concert Friday Night**. Because this is the title of your announcement, you will apply some formatting to make it stand out.
2. Choose **Text, Font** to display the Font dialog box. You can use this dialog box to apply all kinds of formatting.
3. Click on the drop-down arrow next to the size box (it is the unlabeled box next to the list of fonts), and choose **18**. Font sizes are measured in *points* (there are 72 points in an inch). Generally, the fonts you read are between 10 and 12 points; 18 is large enough to stand out in most contexts.
4. Check the **Bold** and **Underline** options. This will make the text stand out more.

5. In the Color bar, select **B** (the blue box; your dialog box should resemble Figure 6.3). Now the text will *really* stand out. You can easily go too far with character formatting; try to use enough to make your text stand out without making it an eyesore.

Figure 6.3 **Using the Font dialog box**



6. Click on **OK** and then click anywhere in the body field to deselect the text so you can see the new formatting.



APPLYING PARAGRAPH FORMATTING

In a rich-text field, a *paragraph* is all the text you type before pressing Enter. Paragraph formatting includes things like indenting an entire paragraph or its first line, setting tab stops, and line spacing. Unlike when you apply character formatting, you can format a paragraph without selecting all its text. As long as the insertion point is somewhere within a paragraph, you can format the entire paragraph.

If you are an experienced word processor, you may wish to use the *Text, Paragraph* command to apply paragraph formatting. Much of this formatting, however, can be accomplished more easily by using SmartIcons or keyboard shortcuts. Table 6.2 summarizes some common paragraph-formatting techniques.

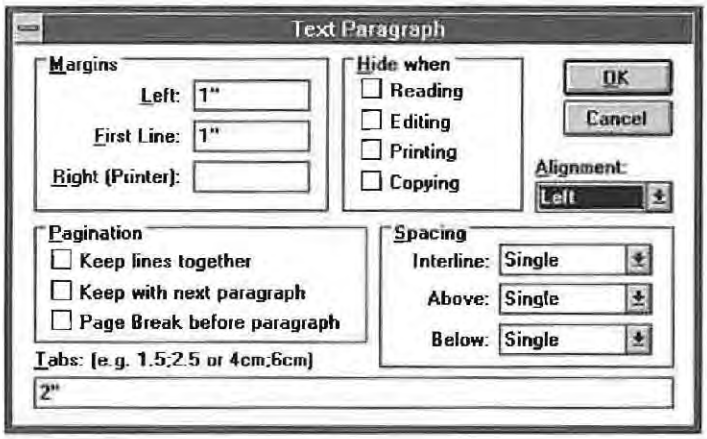
Table 6.2 **Paragraph-Formatting Techniques**

To	Press
Indent first line(s) of selected paragraph(s) to the right (or left)	F7 (Shift+F7)
Indent selected paragraph to the right (or left)	F8 (Shift+F8)
Center selected paragraph(s)	Click on the Text Align Center SmartIcon (refer to Figure 6.2)
Right-align selected paragraph(s)	Click on the Text Align Right SmartIcon (refer to Figure 6.2)

Let's apply some paragraph formatting to your document:

1. Place the insertion point within the paragraph *Concert Friday Night*. Remember, a paragraph is everything you type before pressing Enter.
2. Choose **Text, Paragraph** to display the Text Paragraph dialog box (see Figure 6.4). If you are experienced with word processing concepts, you can use this dialog box to control margins, spacing, pagination, alignment, and tab stops.

Figure 6.4 **The Text Paragraph dialog box**



3. Click on **Cancel** to close the dialog box and then click on the **Text Align Center** SmartIcon (it is fifth from the right) to center the selected paragraph.
4. Place the insertion point in the paragraph beginning with *The ABC Ensemble.*
5. Press **F7** to indent the first line of the paragraph to the right.
6. Press **F8** to indent the entire paragraph to the right. The first line remains indented to the right of the rest of the paragraph.
7. Press **Shift+F8** to reposition the entire paragraph to the left. In a similar manner, Shift+F7 will move the first line indent back to the left. You can create *hanging indents* by "indenting" the first line to the left of the rest of the paragraph.
8. Select the text from *Tickets:* to *Children.* As long as you select some of the text in each of several paragraphs, you can apply paragraph formatting to all of them at once.
9. Press **F8** twice to indent the paragraphs two levels to the right and then click anywhere in the document to deselect the text. Your document should resemble Figure 6.5. Notice that the ticket prices do not line up; we will fix this next by setting new tab stops.

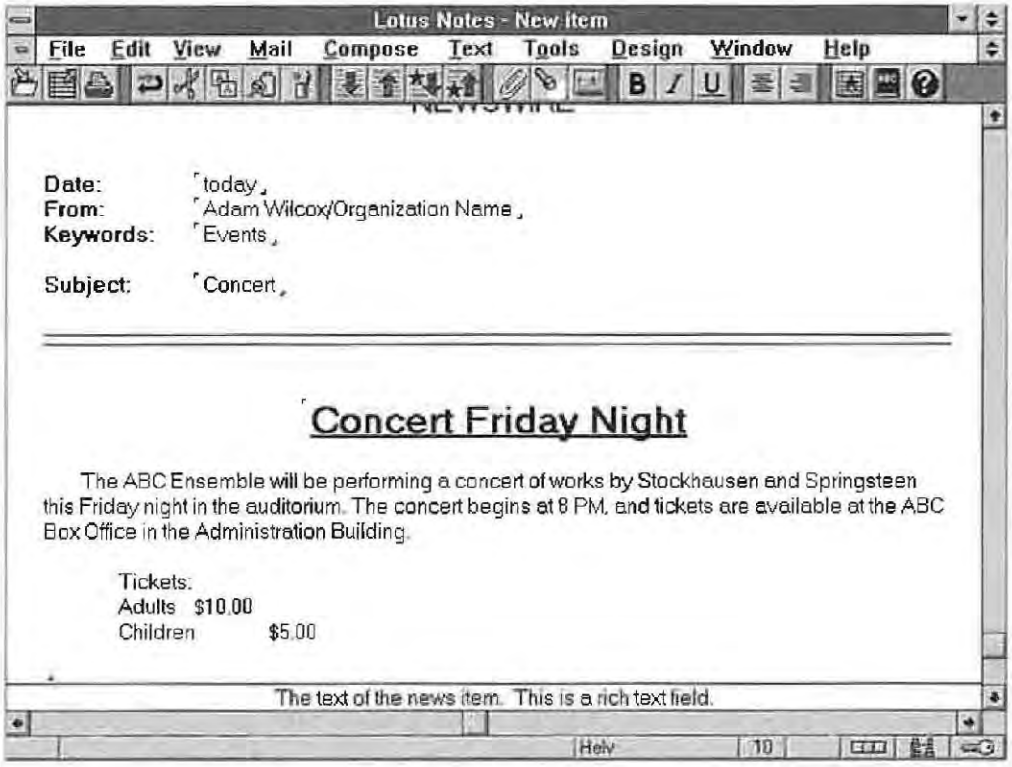


USING THE RULER TO APPLY TAB STOPS

When you press the Tab key in a rich-text field, the insertion point moves to the next defined tab stop. By setting tab stops in the same places in a number of paragraphs, you can make columns of information line up nicely in your documents. To set tab stops,

- Select the paragraph(s) for which you wish to set tab stops.
- Choose *View, Show Ruler* to display the ruler at the top of the document, if necessary (you can also use the *View Show Ruler* SmartIcon).
- Click at the point on the ruler where you want to place a tab stop. An arrow appears where you click. You can move a tab stop by dragging it, and you can remove it by clicking on it again.

Figure 6.5 **The formatted document**

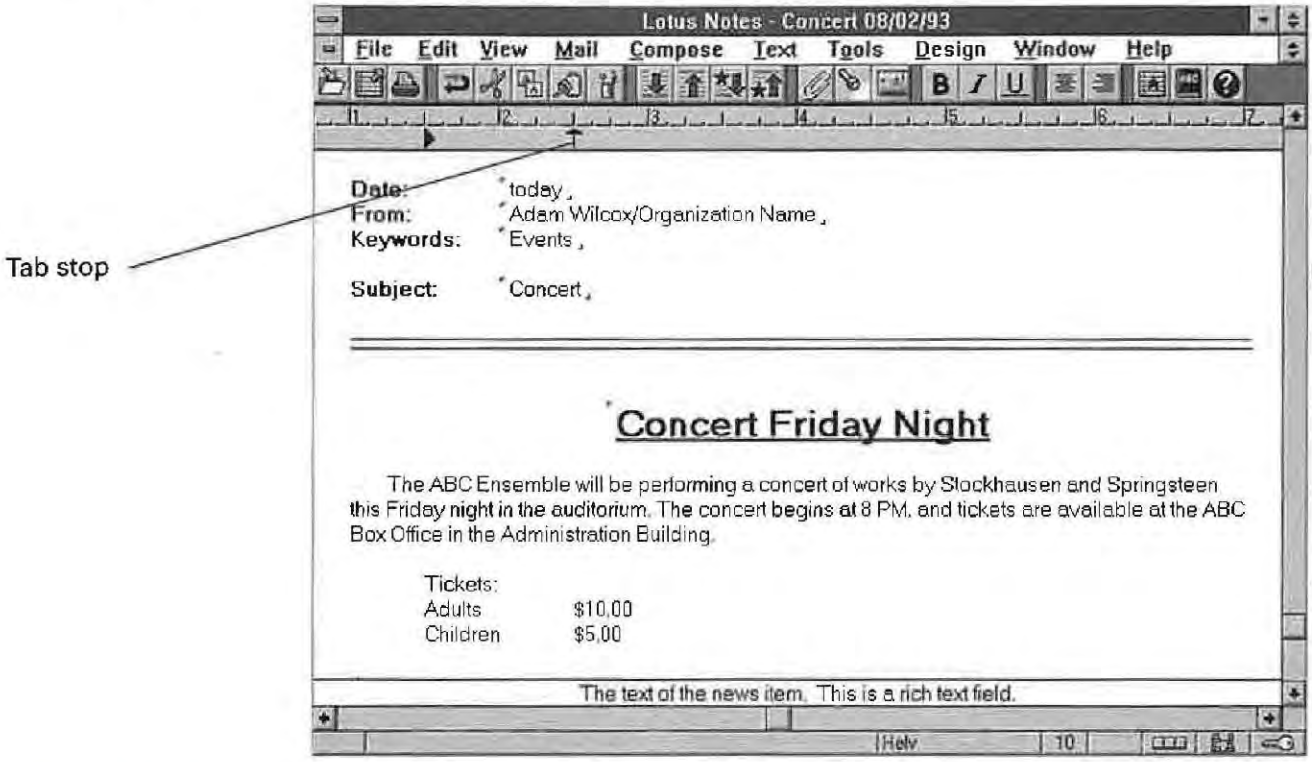


Tip: When you want to set tab stops, it is a good idea to type the text first. Press the Tab key once between each group of text that will be separated. This way, when you apply the tab stops, you will immediately see how the text will look.

Let's set some tab stops in your document:

1. Select the text from *Tickets:* through *Children* to prepare to set tab stops for these three paragraphs. You will use tab stops to make the ticket prices line up.
2. Click on the **View Show Ruler** SmartIcon (it looks like the tip of a ruler) to display the ruler. There is currently one tab stop defined for the selected paragraphs; it is at the 2-inch mark.
3. Drag the tab stop (it looks like an arrow) from the 2-inch mark to the 2.5-inch mark and then click anywhere to deselect the text. The ticket prices now line up at the 2.5-inch mark (see Figure 6.6).
4. Click on the **View Show Ruler** SmartIcon to hide the ruler.
5. Close and save the document.

Figure 6.6 **Setting tab stops**



CREATING DOCLINKS

When we looked at the Help database in Chapter 2, you used DocLinks to move between related documents. You can put DocLinks in rich-text fields in the documents you create to allow yourself or other users to move quickly to related documents. The document to which you create a link does not need to be in the same database as the document that contains the link.

Using a DocLink is like using a canister to send your banking transactions from the drive-up machine to the teller behind the window. The canister connects you to the teller, saving you the time it would take to park your car and walk into the bank to conduct transactions. Likewise, a DocLink connects two Notes documents and saves you the time it would take to return to the workspace, open another database, and read a document.



CREATING A DOCLINK

Creating a DocLink is similar to copying and pasting information in Notes documents. To create a DocLink,

- Open the document to which you want to create the DocLink (or simply select the document in a view). This is the document that will appear when someone double-clicks on the DocLink.
- Choose *Edit, Make DocLink*. The Status bar tells you that the DocLink has been copied to the Clipboard. At this point, all you need to do is paste the DocLink where you want it.
- Compose or edit the document in which you wish to place the DocLink and then place the insertion point in a rich-text field.
- Choose *Edit, Paste* (or click on the *Edit Paste* SmartIcon) to paste the DocLink at the insertion point.

Let's create a DocLink to the News Item we just created:

1. Open the **ABC News** database (if necessary) and then open the document you just created (it should be called Concert).
2. Choose **Edit, Make DocLink** to copy a DocLink for this document to the Clipboard. A message on the Status bar indicates that this has been done (see Figure 6.7).
3. Close the document and the ABC News database.
4. Choose **Mail, Compose, Memo** to display a blank Memo form.
5. In the To field, enter your user name. You will send this memo to yourself.
6. In the subject field, type **News Item**.
7. In the body field, type **Double-click on this DocLink to view a new News Item:** and then press **Tab**.
8. Click on the **Edit Paste** SmartIcon (it still looks like a rubber-cement bottle) to paste the DocLink into the memo (see Figure 6.8).
9. Mail the document without saving it (click on **Send**, click on **Send** again, and then click on **No**).

Figure 6.7 **Making a DocLink**

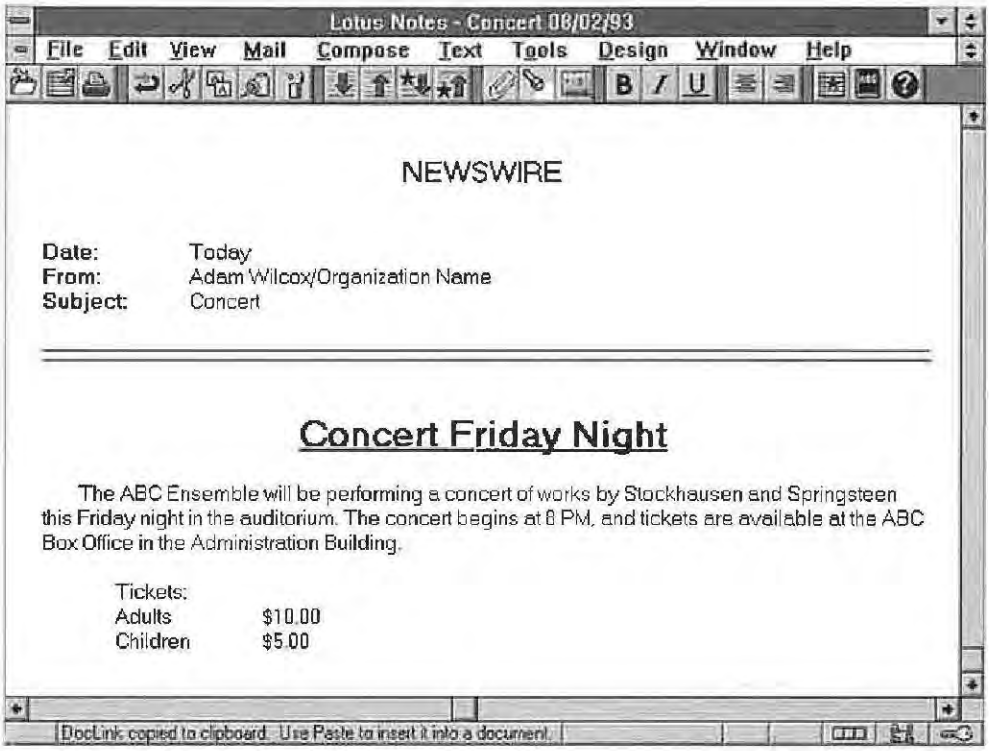
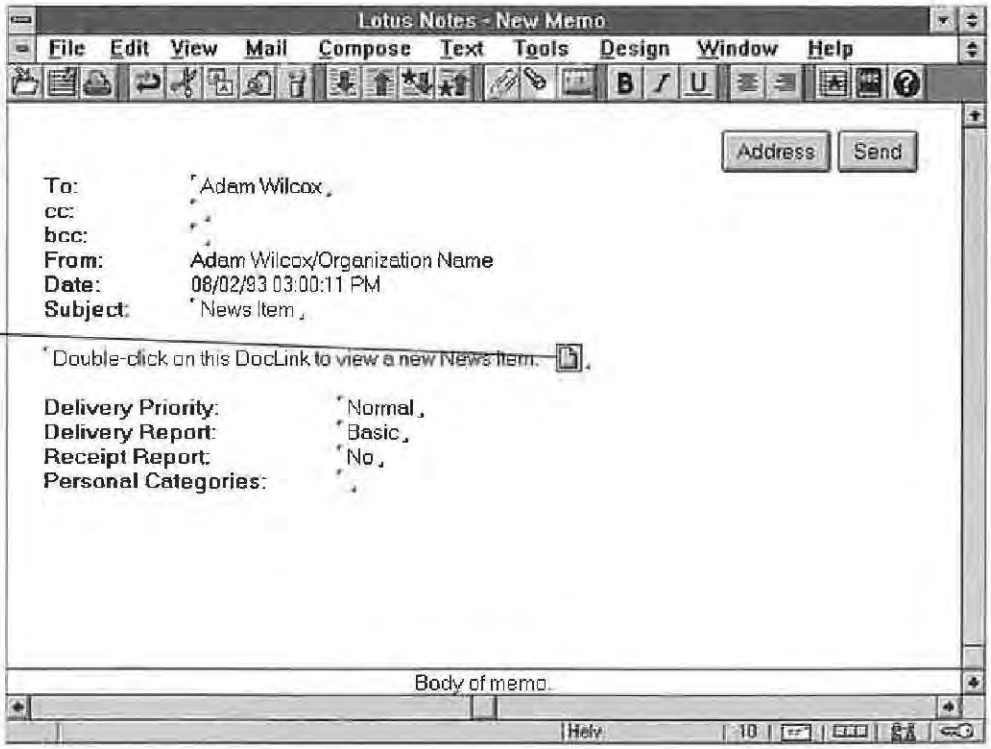


Figure 6.8 **Pasting a DocLink into a document**



New DocLink



USING A DOCLINK TO VIEW A DOCUMENT

You use a DocLink by double-clicking on it. This takes you immediately to the document from which the DocLink was created. The only stipulation is that the database containing the document from which the DocLink was created must be available to the person who tries to use the DocLink. If a user double-clicks on a DocLink to a document in a database that is not represented in the workspace, Notes will search the available servers and add the database to the workspace. If the database containing the original document is not available, the user will receive an error message.

DocLinks are useful when you want to call someone's attention to a document that is in a shared database. You can also use them to remind yourself of documents in various databases. If you get to the point of designing databases, you may find that DocLinks are a good way to distribute new databases to users.

Let's use the DocLink you just created:

1. Choose **Mail, Scan Unread** to view your unread mail. You will have at least one piece of mail.
2. Press **Enter** until the memo you just sent yourself appears. (The amount of mail you have received may vary.)
3. Double-click on the **DocLink** to view the News Item document.
4. Close the News Item document. Notes returns you to the mail document you were reading. When you use a DocLink, only the document (and not the database) is opened.
5. Press **Enter** until you have no more mail documents to read.

INSERTING TABLES

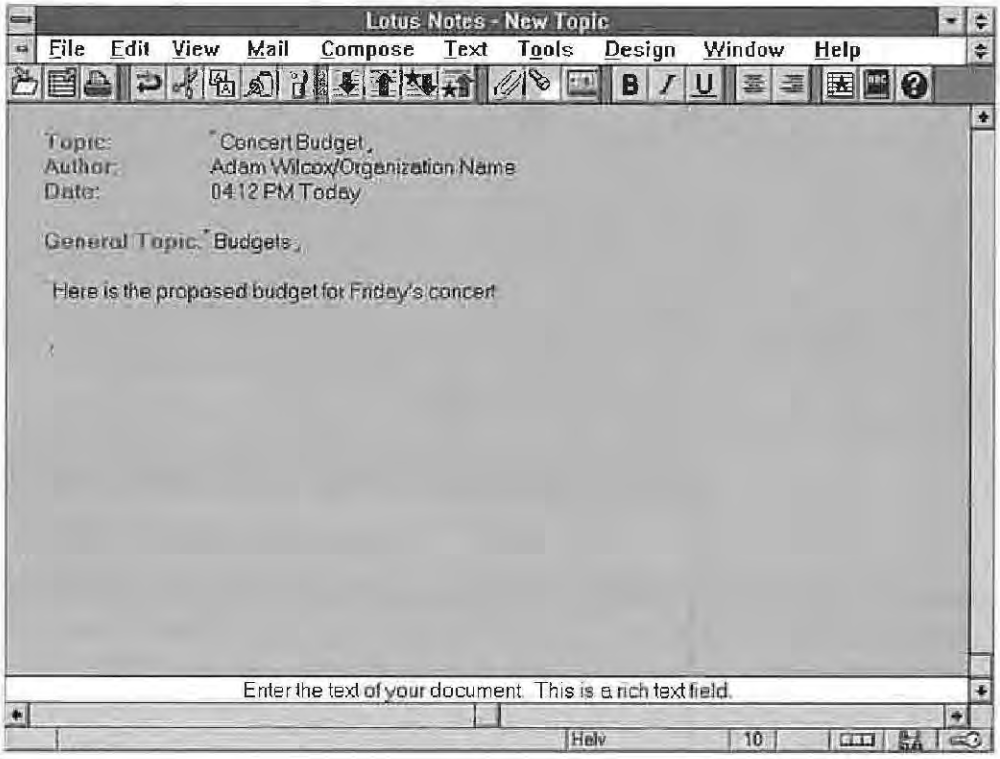
You can use the *Edit, Insert, Table* command to create tables within rich-text fields. Tables are a good way to communicate information such as budgets and schedules. It is often easier to use a table than to set up tab stops just the way you want them.

PRACTICE YOUR SKILLS

To learn about tables, we'll need a document in which to insert one:

1. Begin to compose a new Main Topic document in the ABC Discussion database.
2. Enter **Concert Budget** in the topic field, and choose **Budgets** from the keyword list for the general topic field.
3. Enter **Here is the proposed budget for Friday's concert:** in the body field and then press **Enter** twice. Your document should resemble Figure 6.9.

Figure 6.9 **The new ABC Discussion document**





INSERTING A TABLE

To insert a table in a rich-text field,

- Place the insertion point where you wish to insert the table.
- Choose Edit, Insert, Table to display the Insert Table dialog box.

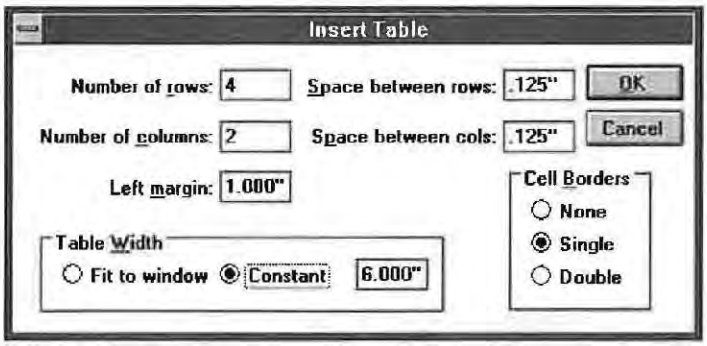
- Specify the number of rows and columns the table will have. You can also specify the space between rows or columns, the cell border style, and whether the table's width is constant or changes with the size of the window.
- Click on OK to insert the table.

The intersection of a row and a column in a table is called a *cell*. To enter text in a cell, place the insertion point there and type. When you are in a table, pressing Tab will move the insertion point to the next cell to the right.

Let's insert a table in our document:

1. Make sure the insertion point is at the end of the body field, and then choose **Edit, Insert, Table** to display the Insert Table dialog box.
2. Type **4** in the Number Of Rows box, and type **2** in the Number Of Columns box.
3. In the Table Width box, click on **Constant** (see Figure 6.10). You can choose between a constant width and a table that will fit the size of the window in which it is being viewed. If you choose the Fit To Window option, the table might become distorted when viewed in smaller windows.

Figure 6.10 **Inserting a table**

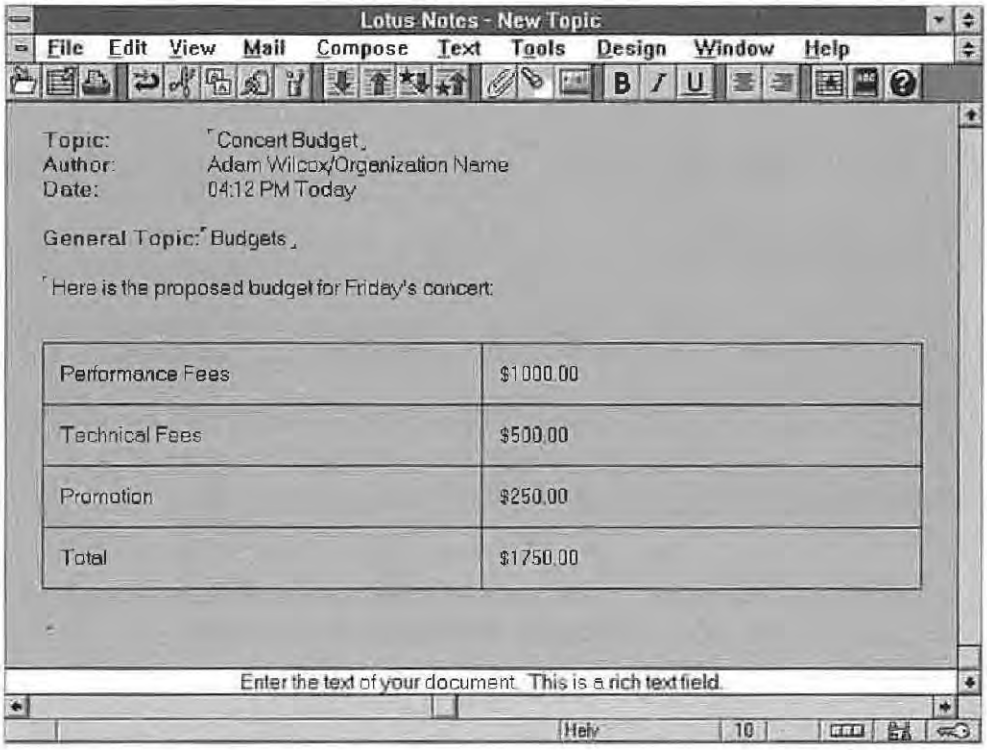


4. Click on **OK** to insert the table.
5. Click in the first cell of the table, type **Performance Fees**, and then press **Tab** to move to the next cell.
6. Type **$1000.00** and press **Tab** to move to the first cell in the next row.

PRACTICE YOUR SKILLS

Using Figure 6.11 as a guide, fill in the rest of the budget table (press **Tab** to move between cells).

Figure 6.11 The completed budget table





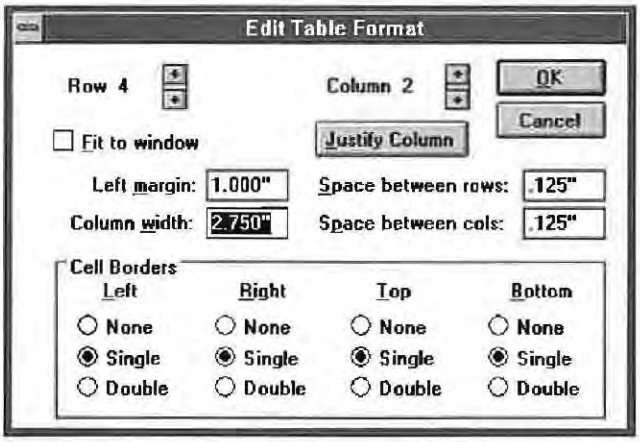
FORMATTING A TABLE

After you create a table, you can use the *Edit, Table, Format* command to change its appearance. When you choose this command, Notes displays the Edit Table Format dialog box from which you can change spacing, borders, justification, and margins. To change any of these attributes, select the appropriate row and column at the top of the dialog box, and then choose the desired option.

Let's format our budget table:

1. Place the insertion point anywhere in the second column of the table and then choose **Edit, Table, Format** to display the Edit Table Format dialog box (see Figure 6.12).

Figure 6.12 **The Edit Table Format dialog box**

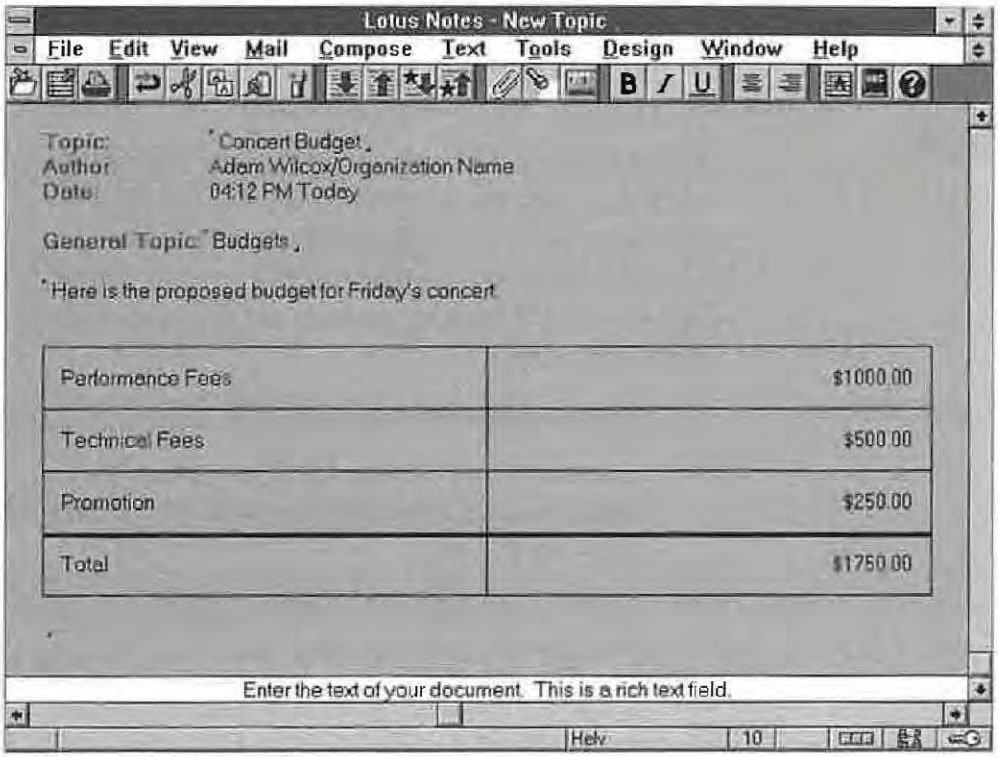


2. Verify that **Column 2** is displayed at the top of the dialog box and then click on the **Justify Column** button to display the Justify Table Column dialog box.
3. Select **Right** and then click on **OK** to right-justify the second column of the table. (Columns of numbers should be right-justified whenever possible.)
4. Use the row and column arrows to display **Row 4** and **Column 1** at the top of the dialog box. You will add a double border to the top of this cell.
5. Under Top in the Cell Border box, click on **Double**.
6. Change to **Row 4** and **Column 2** (use the arrows at the top of the dialog box), and then click on **Double** under Top in the Cell Border box to apply a double border to the top of this cell, as well.
7. Click on **OK** to accept your changes and close the dialog box. The table should resemble Figure 6.13.

ENCRYPTION

Encryption keys allow you to "lock up" sensitive information so that only users to whom you give the key can view it. You can encrypt entire Mail documents, and you can encrypt individual fields in documents in which the designer has enabled the encryption feature for one or more fields.

Figure 6.13 **The formatted table**



Encryption works differently in these two cases. In Mail documents, encryption is quite simple. Encrypting fields, on the other hand, is a more complicated process. In this chapter, we will be talking about encrypting fields.

Using encryption keys involves four steps:

- Creating an encryption key, which is like buying a padlock for a door
- Adding an encryption key to a document, which is like locking a door with the padlock
- Sending an encryption key, which is like giving another user the key to the padlock
- Accepting an encryption key, which is like the other user unlocking the padlock

Because a thorough demonstration of encryption requires a shared database and considerable participation from a second user, we will be demonstrating only parts of this process. If you

have a very patient Notes buddy, you might be able to practice the entire process on your own.



CREATING AN ENCRYPTION KEY

As mentioned above, creating an encryption key is like buying a lock and key for a door. You can use an encryption key to "lock up" any field for which the encryption feature has been enabled by the database designer. The encryption keys you create become a permanent part of your User ID (although you can delete them if you so choose).

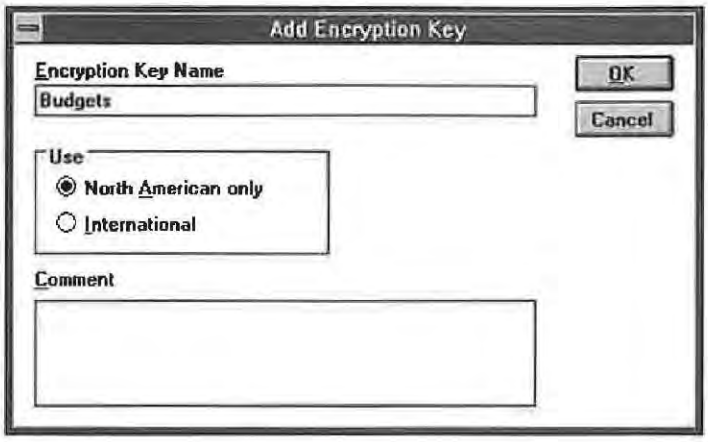
To create an encryption key,

- Choose *Tools, User ID, Encryption Keys*. Because creating encryption keys alters your ID file, Notes will ask you to enter your password.
- Enter your password and click on OK to display the User ID Encryption Keys dialog box.
- Click on New to open the Add Encryption Key dialog box.
- Type a name for the encryption key and click on OK (if you wish, you can also add a comment about the encryption key).
- Click on OK to close the User ID Encryption Keys dialog box.

Let's create an encryption key:

1. Choose **Tools, User ID, Encryption Keys**. Notes asks you to enter your password.
2. Enter your password and click on **OK** to display the User ID Encryption Keys dialog box. If you have any encryption keys in your ID file, they will appear in the Encryption Key List box.
3. Click on **New** to display the Add Encryption Key dialog box.
4. In the Encryption Key Name box, type **Budgets**. If you like, you can also enter a comment about the encryption key. Your dialog box should resemble Figure 6.14.
5. Click on **OK** to create the new encryption key, which will then appear in the User ID Encryption Keys dialog box.
6. Click on **OK** to close the dialog box.

Figure 6.14 **Creating a new encryption key**





ADDING AN ENCRYPTION KEY TO A DOCUMENT

To be able to be encrypted, a field must first have its encryption feature enabled by the database designer. In general, a field that can be encrypted will be surrounded by red corner brackets, although this might not always be the case. To add an encryption key to a field,

- Place the insertion point in the field you wish to encrypt.
- Choose *Edit, Security, Encryption Keys* to open the Encryption Keys dialog box.
- Select the encryption key you wish to use and click on *Add* to add it to the Document Encryption Keys box. (To remove an encryption key from this list, select the key and then click on *Remove*.)
- Click on OK.

After you encrypt a field, only users who have the encryption key may view the information in the field. Because you must already have any encryption key that you use to encrypt a field, you will always be able to see the fields that you encrypt (unless you delete the key from your ID file).

Let's encrypt the body field in our Concert Budget document:

1. Place the insertion point in the body field of the new Concert Budget document (this document should still be open and in edit mode; if it is not, select the document in a view and press **Ctrl+E** to place it in edit mode).

2. Choose **Edit, Security, Encryption Keys** to open the Encryption Keys dialog box.
3. Select **Budgets** in the Encryption Keys Available box (if necessary) and click on **Add** to add *Budgets* to the list of document encryption keys (see Figure 6.15). Although you encrypt fields (and not entire documents), encryption keys are applied to a document as a whole. When you do so, all encryptable fields in the document are encrypted. You cannot encrypt only some of the encryptable fields in a document.

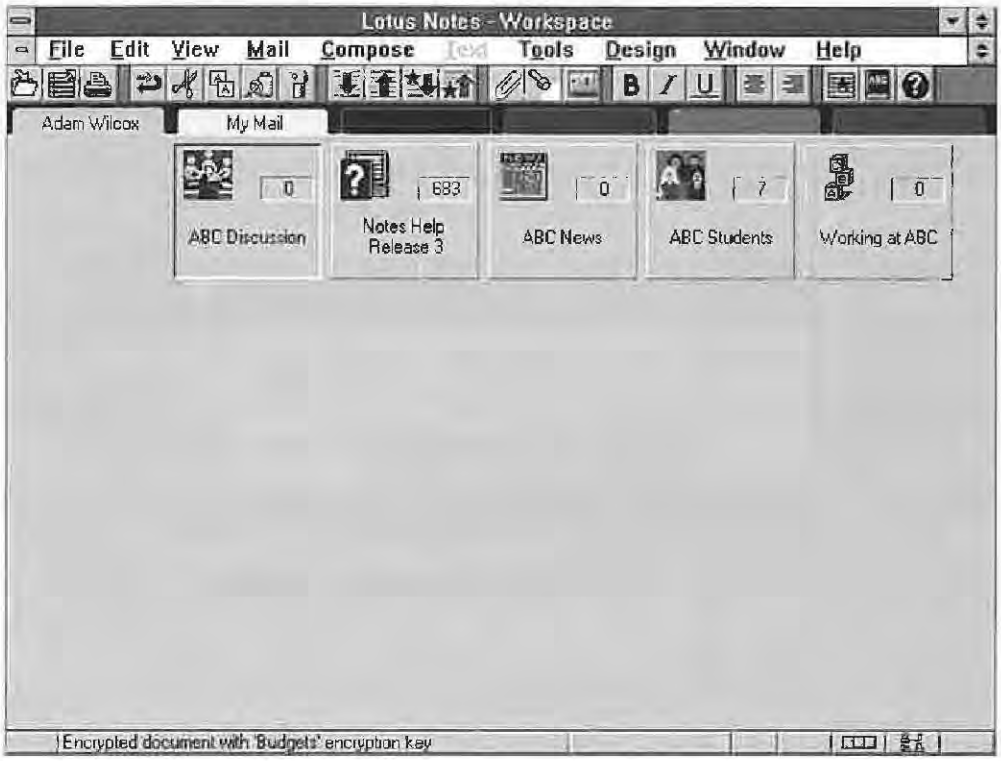
Figure 6.15 **Adding an encryption key to a document**



4. Click on **OK** to close the dialog box.
5. Close and save the document. The Status bar indicates that the document has been saved with the encryption key (see Figure 6.16).

Note: Because this database is stored on your hard drive, it might seem there is no real point to encrypting documents within it. After all, you already *have* the encryption key you just used. But if you use the User Logoff command, encrypted documents on your hard drive will be protected from anyone who might try to sit at your computer and read them. If this were a shared database, nobody but you could read the encrypted body field in the Concert Budget document until you sent them the Budgets encryption key.

Figure 6.16 **Saving an encrypted document**





SENDING AN ENCRYPTION KEY

For other users to be able to see fields that you encrypt, you must first send them the appropriate encryption key. They must then accept the encryption key into their ID files (which we'll get to shortly).

To send an encryption key,

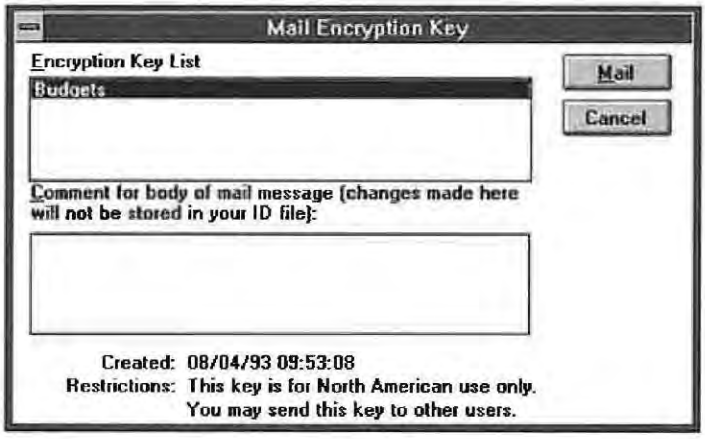
- Choose *Mail, Send User ID, Encryption Key.* Because you are dealing with your ID file, Notes asks you to enter your password.
- Enter your password and click on OK to open the Mail Encryption Key dialog box.
- In the Encryption Key List box, select the key you wish to send, then click on Mail. Notes displays the Mail Address Encryption Key dialog box.
- Enter the user or group name to which you want to send the key and click on Send. Notes asks whether the recipient should be allowed to send the key to other users.

- If you want the recipient to be able to forward the key, click on Yes; otherwise, click on No. In general, you should not allow other users to forward encryption keys because this can lead to breaches of security.

Let's send the Budgets encryption key to your Notes buddy:

1. Choose **Mail, Send User ID, Encryption Key.** Notes asks you to enter your password.
2. Enter your password and click on **OK** to open the Mail Encryption Key dialog box (see Figure 6.17).

Figure 6.17 The Mail Encryption Key dialog box



3. Select **Budgets** in the Encryption Key List box (if necessary) and click on **Mail** to display the Mail Address Encryption Key dialog box.
4. In the To box, enter your Notes buddy's user name and then click on **Send** (you can also use your Name & Address Books in this dialog box by clicking on the **Address** button). Notes asks whether the recipient should be allowed to send the key to other users (see Figure 6.18).
5. Click on **No**. In general, you should not allow other users to forward the encryption keys you send them.
6. If necessary, close the ABC Discussion database.

Figure 6.18 **Sending an encryption key to another user**





ACCEPTING AN ENCRYPTION KEY

The last step in using encryption is accepting an encryption key that is sent to you into your ID file. Until an encryption key is accepted into your ID file, you will not be able to see information that has been encrypted using that key. Figure 6.19 shows a document in a shared database in which the body field was encrypted by the author's Notes buddy.

Before the author could see this information, his buddy would have to go through the steps to send him the key that was used to encrypt the information. When someone sends you an encryption key, you will receive a Mail document similar to the one you see in Figure 6.20.

To accept an encryption key into your ID file,

- Open the Mail document to which the encryption key is attached.
- Choose *Mail, Accept Encryption Key*. Notes asks you to enter your password.

Figure 6.19 **A document encrypted by the author's Notes buddy**

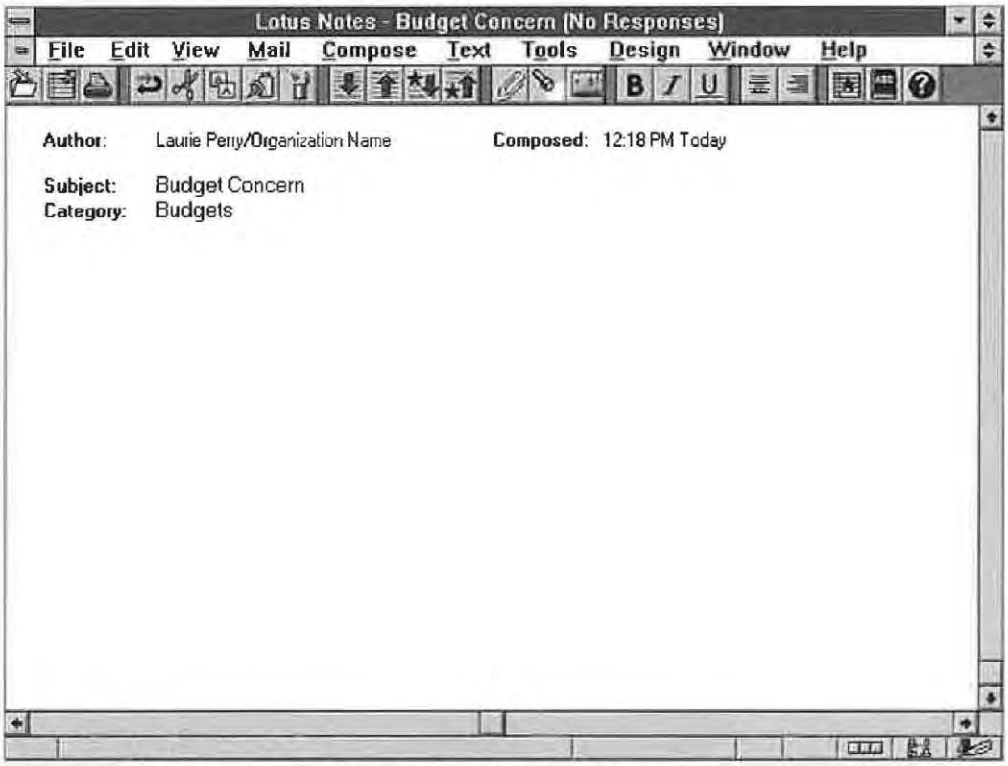
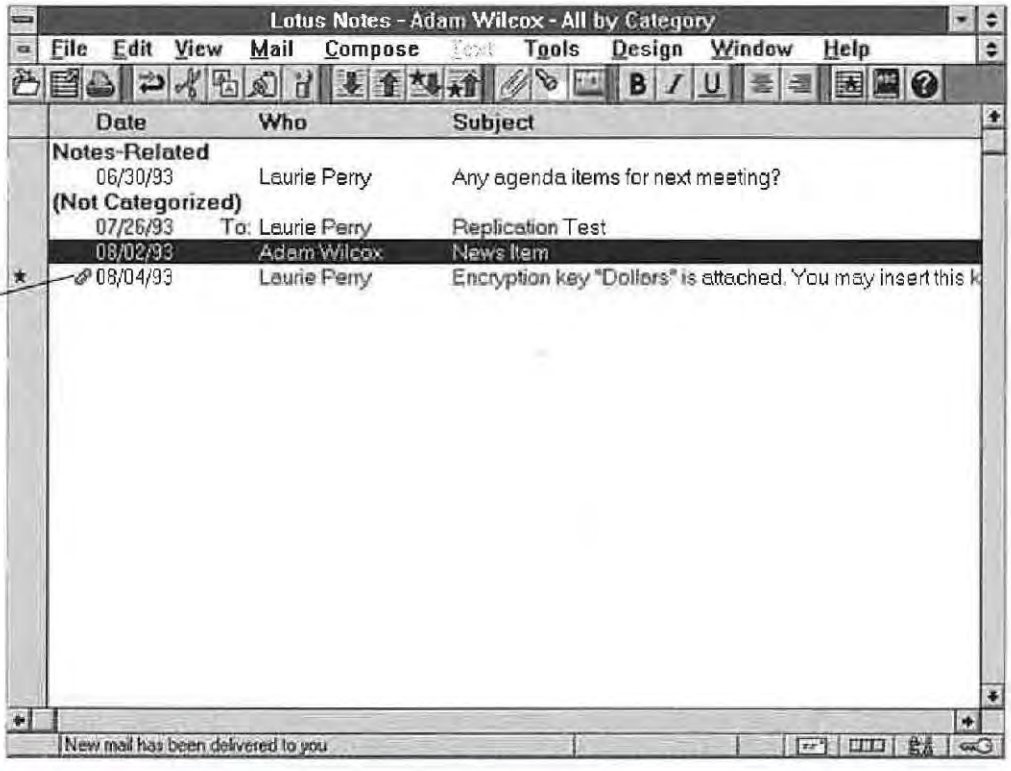


Figure 6.20 **The author receiving a Mail document with an attached encryption key**



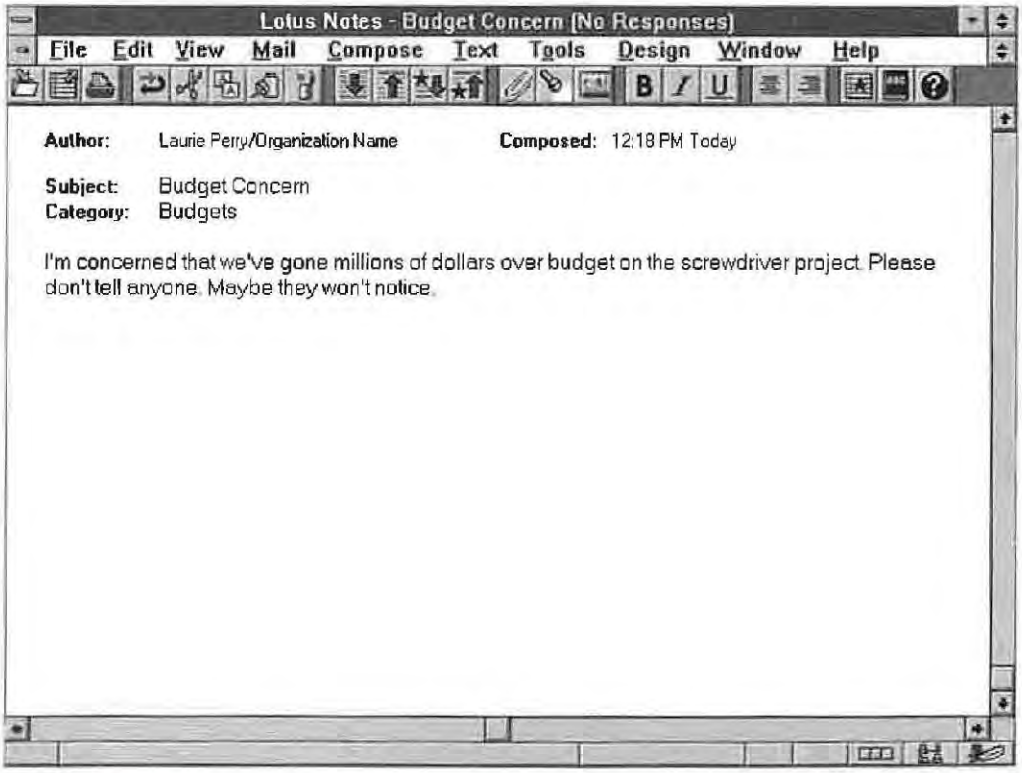
- Enter your password and click on OK to open the Accept Encryption Key dialog box (see Figure 6.21).
- Click on *Accept* to accept the encryption key into your ID file.

After the author went through these steps, he could then see the information that was invisible in Figure 6.19 (see Figure 6.22).

Figure 6.21 **The author accepting an encryption key**



Figure 6.22 **The author viewing the document after accepting the encryption key**



If you want to try these steps yourself, you will need to find a shared database that contains a form with an encryptable field. You can then teach your Notes buddy how to create an encryption key, encrypt a field, and send you the encryption key. After that, you will be able to go through the steps to accept an encryption key yourself.



DELETING AN ENCRYPTION KEY

If you are very sure you no longer need an encryption key, you can delete it from your ID file. After you do so, you will no longer be able to see any information encrypted using the deleted key. To delete an encryption key from your ID file,

- Choose *Tools, User ID, Encryption Keys*.
- Enter your password and click on OK to open the User ID Encryption Keys dialog box.
- Select the key you wish to delete and click on Delete.
- Click on OK to close the dialog box.

Let's delete the Budgets encryption key from your ID file:

1. Choose **Tools, User ID, Encryption Keys**; then enter your password and click on **OK** to display the User ID Encryption Keys dialog box.
2. Select **Budgets** in the Encryption Key List box and click on **Delete**. Notes doesn't ask you if you're sure about this; no, Notes just goes ahead and gets rid of the encryption key. You should be sure of what you are doing before you delete an encryption key.
3. Click on **OK** to close the dialog box and then open the **ABC Discussion** database.
4. Open the **Concert Budget** document. You cannot see the budget table because it is encrypted with a key that you have thrown away.
5. Close the document.

PRACTICE YOUR SKILLS

1. Mark the Concert Budget document for deletion.

2. Close the ABC Discussion database (and confirm the deletion of the marked document).

SUMMARY

In this chapter, you learned more about editing and enhancing documents. You learned how to apply character and paragraph formatting by using the menu, SmartIcons, and the ruler. You also learned how to link documents together by using DocLinks, and how to create and format tables. Finally, we discussed how you can use encryption to safeguard sensitive information in your documents.

The following table summarizes some of the techniques you learned in this chapter:

Desired Result	How to Do It
Format text	Select text and choose desired command from **Text** menu (or click on SmartIcon)
Format paragraph	Place insertion point within paragraph and choose desired command from **Text** menu
Indent first line of paragraph to right (or left)	Press **F7** (or **Shift+F7**)
Indent entire paragraph to right (or left)	Press **F8** (or **Shift+F8**)
Apply tab stops	Select paragraph(s) for which you wish to set tab stops; choose **View, Show Ruler** (or click on **View Show Ruler** SmartIcon); click on ruler at each point where you want a tab stop

Desired Result	How to Do It
Create DocLink	Open document to which you wish to create DocLink; choose **Edit, Make DocLink**; compose or edit document in which you will place DocLink; place insertion point within rich-text field; choose **Edit, Paste** (or click on **Edit Paste** SmartIcon)
Create table	Place insertion point within rich-text field; choose **Edit, Insert, Table**; specify number of rows and columns, and any other desired options; click on **OK**
Move between table cells	Press **Tab**
Format table	Place insertion point within table; choose **Edit, Table, Format**; specify row and column; change any desired attributes
Create encryption key	Choose **Tools, User ID, Encryption Keys**; enter password and click on **OK**; click on **New** and enter name for new key; click on **OK** twice
Add encryption key to document	Compose or edit document; choose **Edit, Security, Encryption Keys**; select encryption key and click on **Add**; click on **OK**
Send encryption key	Choose **Mail, Send User ID, Encryption Key**; enter password and click on **OK**; select key and click on **Mail**; enter name of user or group to which to send key and click on **Send**; indicate whether key can be forwarded
Accept encryption key	Open Mail document with attached key; choose **Mail, Accept Encryption Key**; enter password and click on **OK**; click on **Accept**

Desired Result	How to Do It
Delete encryption key	Choose **Tools, User ID, Encryption Keys**; select key; click on **Delete**

In the next chapter, you will learn about private views. You will learn how the structure of a view relates to the structure of a document, and how to create a private copy of an existing view. You will then learn how to modify a view to better suit your needs.

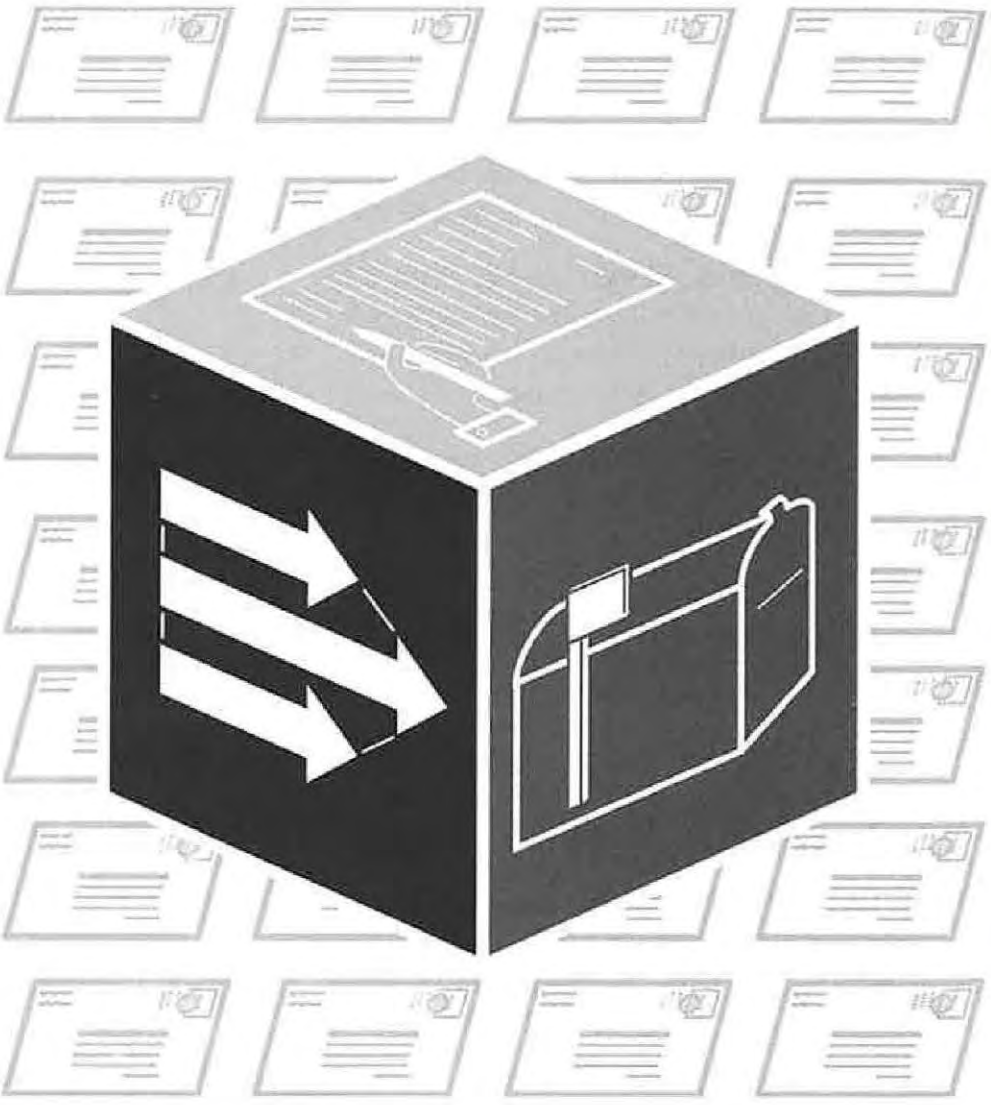
IF YOU'RE STOPPING HERE

If you wish to stop here, please choose **File, Exit** to exit Notes (you will need to restart Notes when you begin Chapter 7). If you wish to proceed directly to Chapter 7, please do so now.

CHAPTER 7: PRIVATE VIEWS

Understanding the Structure of a View

Creating a Private View



The views in a database give you different ways of looking at the documents in that database. In some cases, however, you may wish to see information in a way not presented in any of the database's views. In this chapter, you will learn to create your own private views so that you can see just the information you want, just the way you want to see it. In order to be able to create views, you will first learn about the underlying structure of documents and views, and how they relate to each other.

When you're done working through this chapter, you will know

- About the structure of documents and views
- How to make a copy of an existing view
- How to move and delete columns in a view
- How to control which documents are displayed in a view
- How to control what information is displayed in a column in a view

UNDERSTANDING THE STRUCTURE OF A VIEW

Suppose you purchased a new home and planned to do extensive remodeling. Before you began the remodeling, you would want to know certain things about the house's foundation, plumbing, and wiring. Likewise, before you begin designing views, it is important to understand their underlying structure.

Views comprise information taken from documents in a database. Each row in a view represents information from a single document; each column represents a particular kind of information. Because a view is made up of information from documents, it follows that you must understand the structure of the documents to understand the structure of the view.

The structure of a document is contained in a form. Figure 7.1 shows a form and a document created using the form. The form contains text that labels blank areas where you can enter certain types of information (fields). When you compose a document, you fill in the blank areas of a form. It is the combination of a form and the information you provide that makes up the document.

Figure 7.2 shows two views containing information from this document. In the first view, the first column displays information from the Name field, the second column displays information from the Date field, and the third column displays information from the Office field. The second view contains information that is slightly different. This time, the office is displayed first, then the name, and finally the classification. The point is that the same document information can be displayed differently in different views.

Figure 7.1 **A sample form and document**

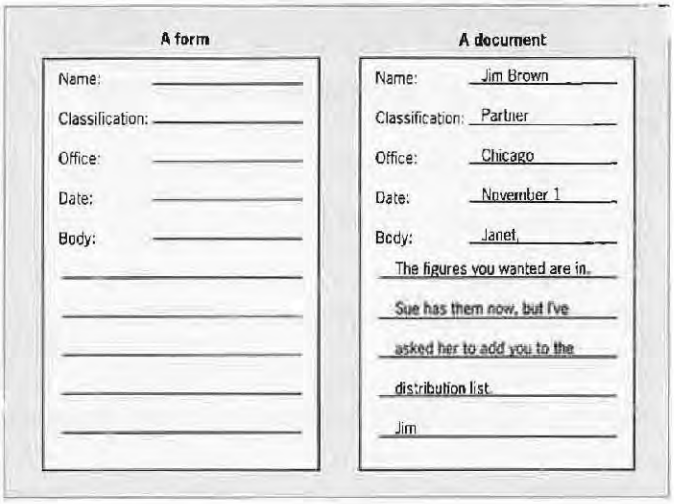
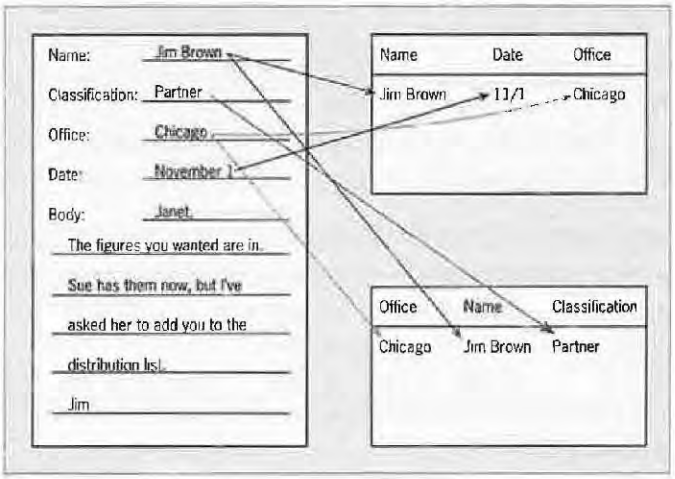


Figure 7.2 **Two views containing information from the sample document**



To truly understand the structure of a form or a view, you must use the *Design, Forms* and *Design, Views* commands. These commands list the forms or views in a database and give you the opportunity to edit them or create new ones. You should thoroughly examine the structure of a form or a view before you attempt to modify it.



EXAMINING THE STRUCTURE OF A DOCUMENT

The structure of a document is determined by the form that was used to compose it. Therefore, to understand the structure of a document, you must examine the structure of its form. You must have at least Designer access to a database to be able to examine the structure of its forms. To do so,

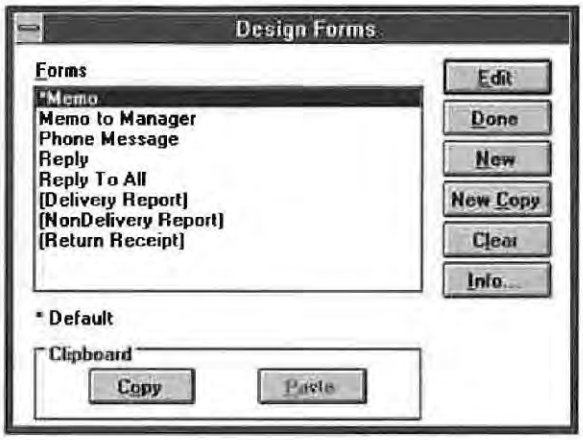
- Select or open the database containing the form you wish to examine.
- Choose Design, Forms to open the Design Forms dialog box.
- In the Forms box, select the form you wish to examine and then click on Edit. At this point, Notes may warn you that any changes you make to the form could be lost. This is because databases are often associated with *design templates* that can cause a form to revert to its former state after you have changed it.
- Click on OK to accept the message and display the structure of the form. Fields are indicated by boxes that contain field names. There also may be hidden fields that were not visible when you composed a document using the form (or when you read documents created using the form).
- When you are done, you can close the form as you would any document.

There is a lot more to understanding exactly how a form works. For the purpose of understanding a view, we are mostly interested in knowing what fields are in a form. You will learn more about forms in Chapter 8.

Let's examine the structure of a memo document in your Mail database:

1. Open your Mail database (choose **Mail, Open**, then enter your password, if necessary) and then open the first document in the view. When you read a memo document, you can see the To, cc, From, Date, Subject, and Body fields, as well as two buttons.
2. Choose **Design, Forms** to open the Design Forms dialog box (see Figure 7.3). All the forms in your Mail database are shown in the Forms box. You can examine, modify, or create new forms by using this dialog box.

Figure 7.3 **The Design Forms dialog box**



3. In the Forms box, select ***Memo** (if necessary) and click on **Edit**. (The asterisk before the name indicates that it is the default form for the database.) Notes warns you about making changes to this form.
4. Click on **OK** to accept the message and display the structure of the Memo form (see Figure 7.4). In addition to the fields and text you see when you read a memo, the form also contains fields you see only when composing a memo (such as DeliveryPriority and DeliveryReport) and fields that are visible only when you view the structure of the form.
5. Close the form and the document (press **Esc** twice; you close a form the same way you close any document or view).

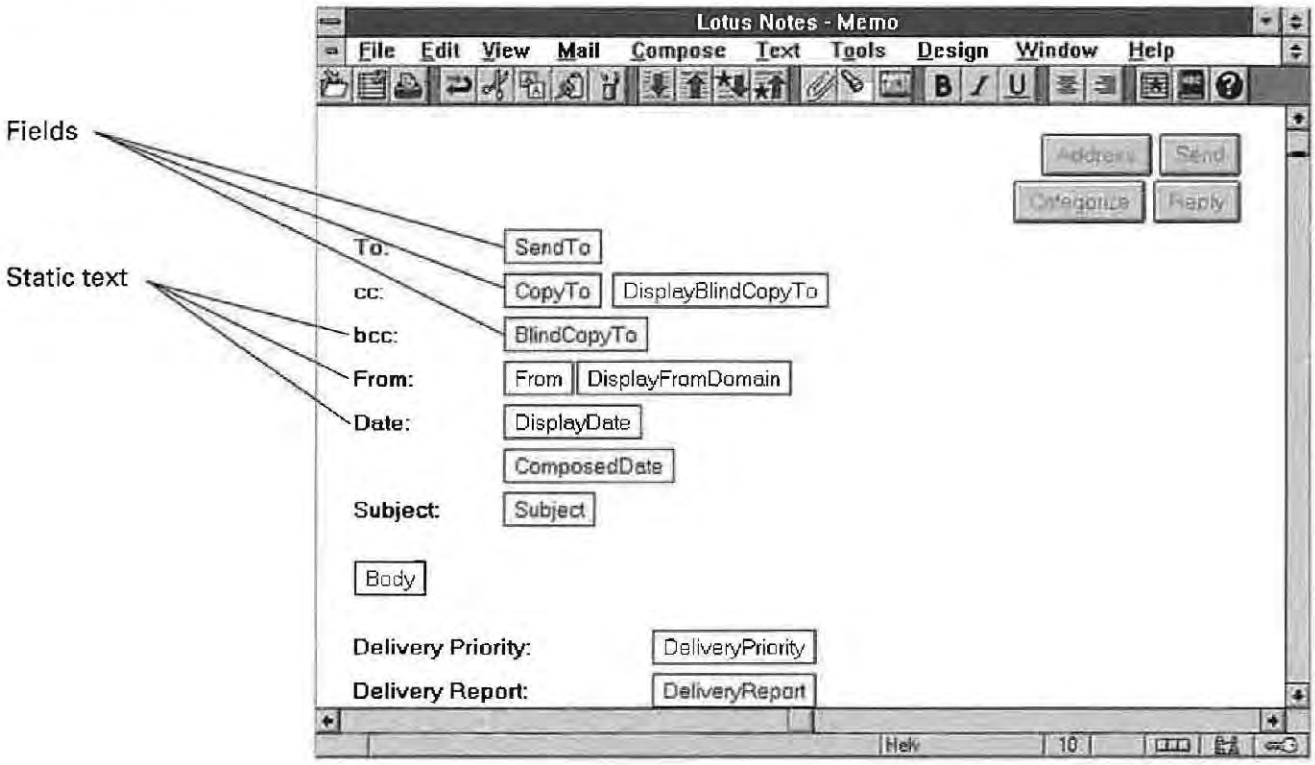


EXAMINING THE STRUCTURE OF A VIEW

There are three important aspects to the structure of a view: the information in the columns, the documents that are displayed, and the way in which the information appears. If you have at least Designer access, you can use the Design menu to examine the structure of a view. There is a great deal of detail to a view's structure, but to understand the most basic elements,

- Select or open the database that contains the view you want to examine.
- Choose Design, Views to open the Design Views dialog box.

Figure 7.4 **Examining the structure of the Memo form**



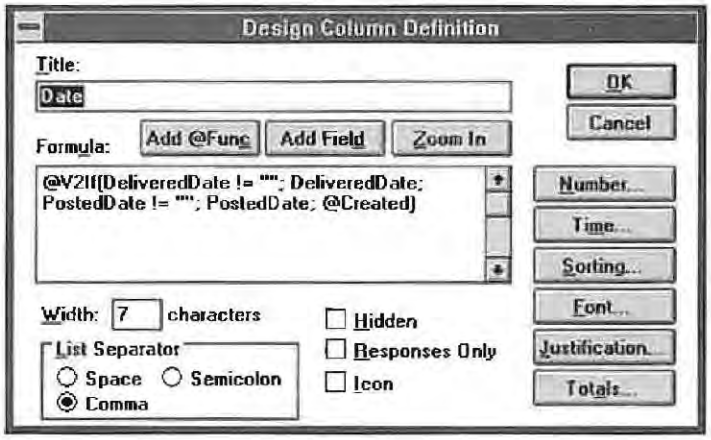
- Select the view you wish to examine, click on Edit, and then click on OK to accept the warning message (if necessary). Notes displays a version of the view in which you can see the borders between columns headings, and in which no documents are listed. For our purposes, we will call this the *view design window.*
  - To examine the definition of a column, double-click on its column heading to open the Design Column Definition dialog box.
  - To examine characteristics of a view as a whole (such as its title and response hierarchy), choose *Design, View Attributes.*
  - To examine the formula that determines which documents are displayed in the view, choose *Design, Selection Formula.*
- Click on Cancel to close any of the dialog boxes mentioned above; you can close the view design window as you would any document or view.

For now, we'll just take a quick look at the structure of a view. A bit later in the chapter, we will discuss column definitions, view attributes, and selection formulas in greater detail.

Let's examine the structure of the default view of your Mail database:

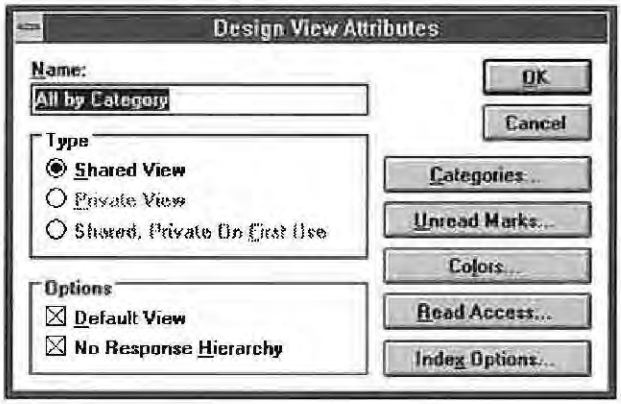
1. Choose **Design, Views** to display the Design Views dialog box, which is quite similar to the Design Forms dialog box.
2. In the Views box, select ***All By Category** and click on **Edit** (the asterisk indicates the default view). Notes warns you about the possibility of losing changes you make to the view.
3. Click on **OK** to accept the message and display the view.
4. Double-click on the column heading **Date** to open the Design Column Definition dialog box (see Figure 7.5). This is where you determine the information that is display in the column and how it is displayed. The scary-looking formula basically says "show the appropriate date."

Figure 7.5 **The Design Column Definition dialog box**



5. Click on **Cancel** to close the dialog box.
6. Choose **Design, View Attributes** to display the Design View Attributes dialog box (see Figure 7.6). This is where you name a view, determine whether it is a private or shared view (we'll be discussing this distinction shortly), and set various other options.

Figure 7.6 **The Design View Attributes dialog box**



7. Click on **Cancel** to close the dialog box.
8. Choose **Design, Selection Formula** to display the Design Selection Formula dialog box. This formula determines which documents are displayed in the view. The formula

   ```
   SELECT @All
   ```

   specifies that all the documents in the database should be displayed. Formulas in Notes are made up of *keywords* (like SELECT), *@Functions* (like @All), and field names.
9. Click on **Cancel** to close the dialog box.
10. Close the view design window and then close the database.

CREATING A PRIVATE VIEW

As long as you have Designer access, you can modify existing views or even create your own view to show only the documents and information that are important to you. Views can be either shared (available to all users with access to the database) or private (for your use only). You can create as many private views as you like, but you should not create shared views without consulting the database manager or your Notes administrator.



CREATING A PRIVATE COPY OF AN EXISTING VIEW

You can create views from scratch, but it is often easier to use an existing view as a starting point for creating a new one. To make a copy of an existing view,

- Select or open the appropriate database and choose Design, Views.
- Select the view you wish to make a copy of and click on *New Copy*. Notes displays an untitled view design window.

When you create a new view, you should give it a name and specify whether it will be shared or private. Unless you design databases for many users, you will create mostly private views. To name a view and specify that it be private,

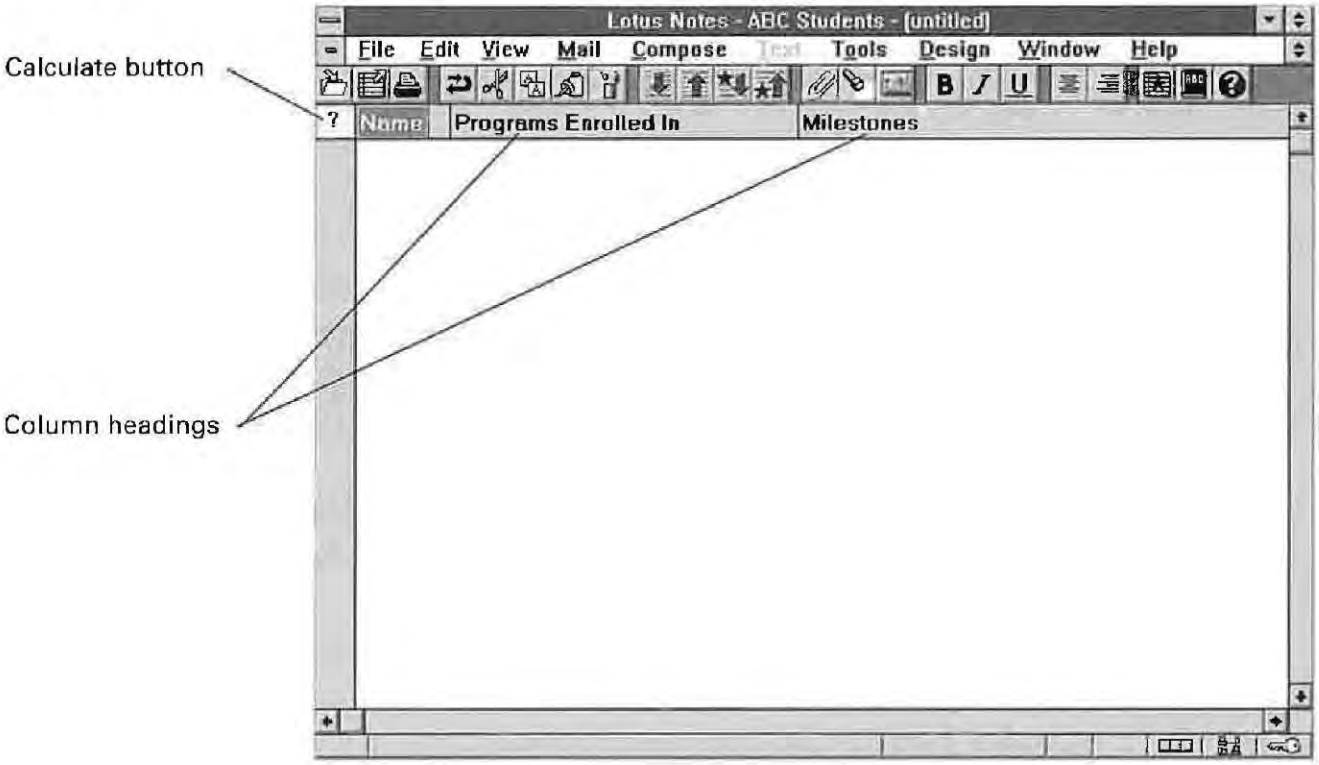
- Edit the view (choose Design, Views; select the view; and click on Edit). When you create a new copy of a view, you are editing it.
- Choose Design, View Attributes to display the Design View Attributes dialog box.
- Enter a name for the view in the Name box, and then click on *Private* in the Type box.

  Note: You can control many aspects of a view through this dialog box. For more information, refer to Chapter 8 in the Notes *Application Developer's Reference*.
- Click on OK.

Over the course of the rest of this chapter, we will create a new view of the ABC Students database that shows degree information only for full-time students. Let's start by making a new copy of the existing Student Listing view:

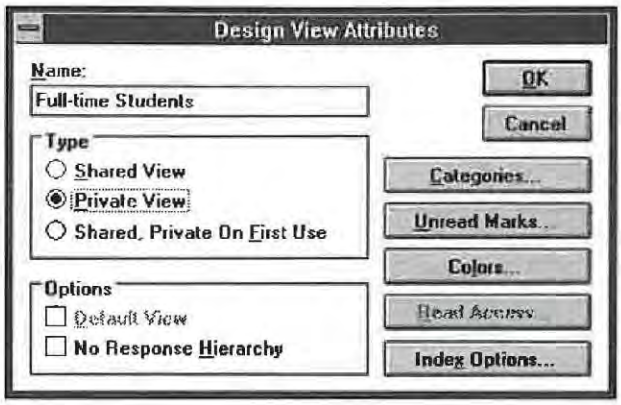
1. Open the **ABC Students** database (activate the first workspace page, if necessary) and change to the Student Listing view (if necessary). This view shows student names, programs they are enrolled in, and milestones they have achieved. The view is categorized by student name.
2. Choose **Design, Views** to display the Design Views dialog box.
3. In the Views box, select ***Student Listing** and then click on **New Copy** to create a new copy of this view (see Figure 7.7). The title bar indicates that this is an untitled view.

Figure 7.7 **The new untitled view**



4. Choose **Design, View Attributes** to open the Design View Attributes dialog box.
5. In the Name box, type **Full-time Students**. This will be the title of the new view. Later, you will change the view's selection formula so that only full-time students are displayed.
6. In the Type box, select **Private View** (see Figure 7.8). Because this database is stored on your hard drive, there is no significant difference between a private view and a shared view. However, you should create only private views in shared databases unless you have spoken with the database manager.
7. Click on **OK** to accept your changes and to close the dialog box. The title bar now displays the name of the view.

Figure 7.8 **Setting view attributes**





MOVING AND DELETING COLUMNS IN A VIEW

If you do not like the order in which columns appear in a view, you can move them around by using a simple cut-and-paste procedure. To move a column,

- Select the column you wish to move by clicking on its column heading.
- Choose *Edit, Cut* (or click on the *Edit Cut* SmartIcon) to remove the column and place it on the Clipboard.
- Select the column heading to the right of where you want to move the column.
- Choose *Edit, Paste* (or click on the *Edit Paste* SmartIcon).

You can remove a column from a view by selecting it and then pressing Del. Notes will ask you to confirm the deletion.

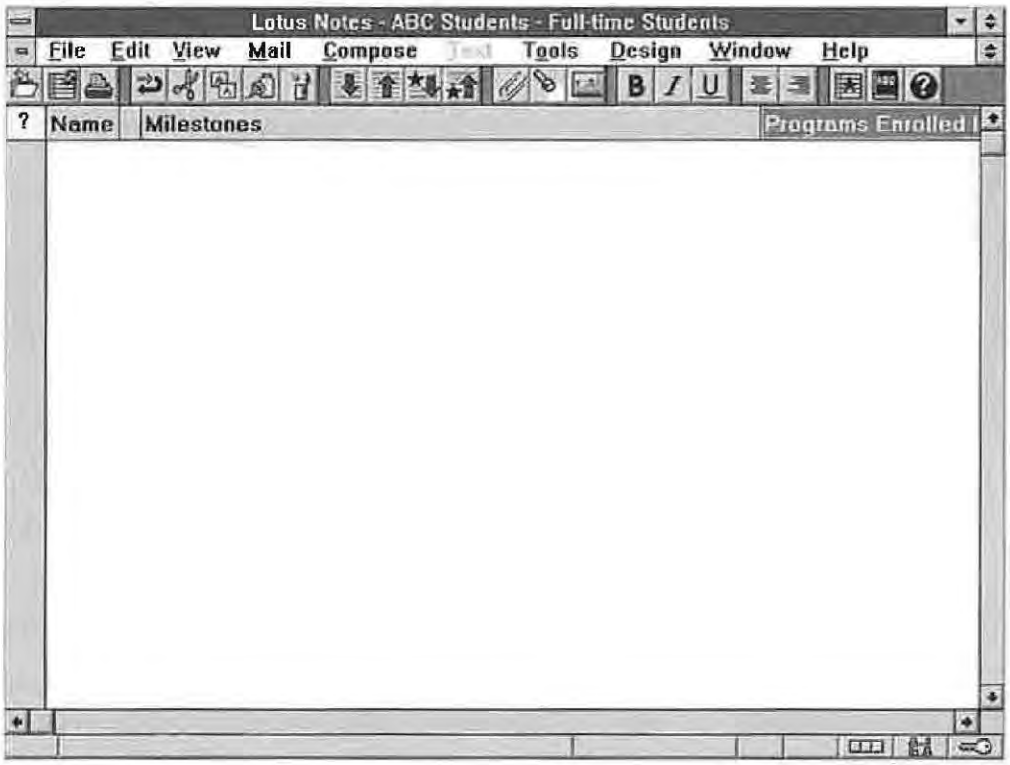
You can see how the changes you make will affect a view by refreshing the view design while you are in it. You can do this either by pressing F9 or by clicking on the *Calculate* button in the upper-left corner of the view (refer to Figure 7.7; the button looks like a question mark).

Let's rearrange some of the columns in our new view:

1. Click on the column heading **Milestones** to select the column.
2. Click on the **Edit Cut** SmartIcon (the scissors) to remove the column and place it on the Clipboard.

3. Select the **Programs Enrolled In** column (click on its column heading). You will paste the Milestones column to the left of this column.
4. Click on the **Edit Paste** SmartIcon (the rubber-cement bottle) to paste the Milestones column back into the view (see Figure 7.9).

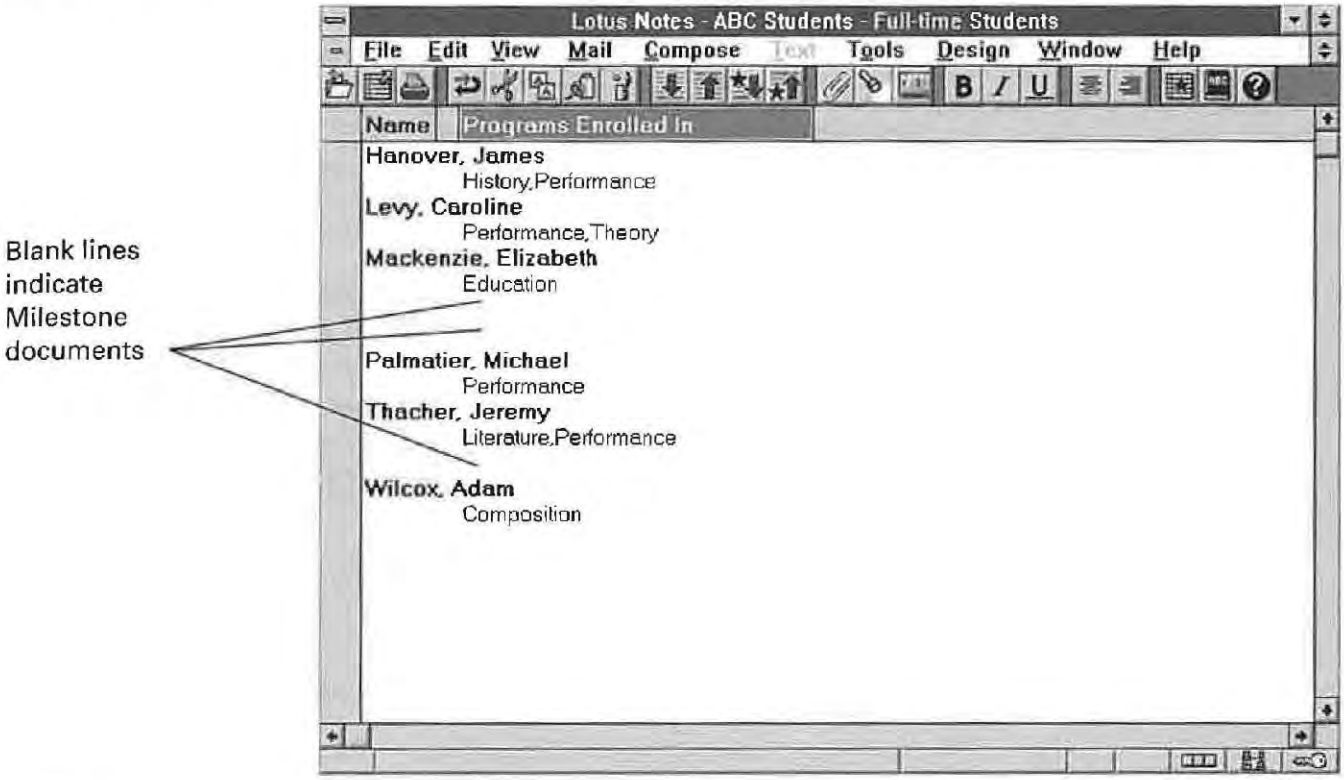
Figure 7.9 **Moving a column**



5. Select the **Milestones** column and press **Del.** Notes asks if you want to permanently delete the column.
6. Click on **Yes** to confirm the deletion of the column.
7. Click on the **Calculate** button (the question mark in the upper-left corner of the view; *not* the Help SmartIcon!) to see how the view will look (see Figure 7.10; your view will differ slightly). The Milestone information is no longer displayed. Notice the blank lines after Elizabeth Mackenzie's and Jeremy Thatcher's information. This view displays one line for every

document in the database. Because Milestone documents do not contain the Name or Programs Enrolled In information, these documents appear as blank lines in the view.

Figure 7.10 **The new view without the Milestones column**





MODIFYING A VIEW'S SELECTION FORMULA

The selection formula determines which database documents are displayed in a view. You can choose to display all the documents in a database, only documents created using a particular form, or only documents that contain certain information in a particular field. To modify the selection formula for a view,

- Edit the view.
- Choose Design, Selection Formula to open the Design Selection Formula dialog box. The selection formula is made up of

formula keywords, @Functions, and field names. Here are some things to keep in mind as you compose selection formulas:

- All selection formulas begin with the formula keyword SELECT. For example, the selection formula

  ```
  SELECT @All
  ```

  selects all the documents in the database.

- You can paste field names into the selection formula to select documents that contain particular information in a specific field. For example, in an employee database with a numeric field called Hours, the selection formula

  ```
  SELECT Hours>=40
  ```

  will select full-time employees (or documents that contain a number greater than or equal to 40 in the Hours field). To select documents that contain particular information in a text field, you must enclose the text information in quotation marks. For example, to select all documents that contain the text *West* in a field called Region, you would use the selection formula

  ```
  SELECT Region="West"
  ```

  You can click on the *Add Field* button to display a list of available field names from which to paste.

- You can select only documents created using a particular form by using a selection formula that looks for a particular value in the Form field. For example, to select only the documents created using a form called Main Topic, you would use the selection formula

  ```
  SELECT Form="Main Topic"
  ```

- You can also use @Functions in your selection formulas. Click on the *Add @Func* button to display a list of @Functions from which to choose. For a full list of @Functions, refer to Chapter 17 in the Notes *Application Developer's Reference*.

- When you complete the selection formula, click on OK.

Is your head spinning? Creating formulas in Notes can be extremely complicated. As long as you don't try to make Notes jump through very small hoops, however, creating the formulas

you need should be fairly straightforward. Let's modify the selection formula for our view to select documents that contain the text *Full-Time* in the Student Status field:

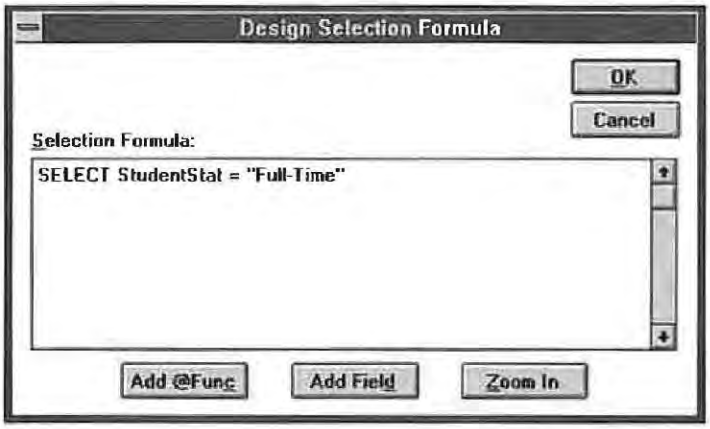
1. Choose **Design, Selection Formula** to display the Design Selection Formula dialog box.
2. In the Selection Formula box, select **@All** and press **Del** (don't delete the keyword SELECT). You will replace this function with a statement that selects documents for full-time students.
3. Click on the **Add Field** button to display a list of names of fields in the database (see Figure 7.11). Instead of trying to remember the names of the fields you wish to use, you can paste them from this dialog box.

Figure 7.11 **Pasting field names**



4. Select the field name **StudentStat** (you will need to scroll) and click on **Paste** to paste the field name into the selection formula.
5. Type = **"Full-Time"** to complete the selection formula (see Figure 7.12). In these formulas, Notes is extremely case-sensitive; if you type *full-time*, for example, you will not see any documents in the view.
6. Click on **OK** to accept the formula and close the dialog box.
7. Click on the **Calculate** button (the question mark) to see the view as it will appear. The view displays documents for only full-time students. Notice that the blank lines below Elizabeth Mackenzie's information are gone. Because the Milestone form does not contain the StudentStat field, the selection formula will not select any Milestone documents.

Figure 7.12 The complete selection formula





MODIFYING COLUMN DEFINITIONS

You control what appears in a column by using the Design Column Definition dialog box and creating a formula much like the selection formula to determine what information appears in the column. You can then control other aspects of the column (such as sorting or number formats) by using the option buttons in this dialog box. To create or modify a column definition,

- Edit the view.
- Select the desired column heading (or a new one), and choose *Design, Column Definition* to display the Design Column Definition dialog box (you can also double-click on the column heading).
  - Use the Title box to create or modify the column heading.
  - Use the Formula box to construct the formula that determines what information appears in the column. The formula can combine field names, @Functions, and text to create data that is not precisely contained anywhere in the documents. For example, in a database containing the fields FirstName and LastName, the formula

    ```
    LastName + ", " + FirstName
    ```

    would display the last name, a comma, and then the first name. (For more information on constructing column formulas, refer to Chapter 8 in the Notes *Application Developer's Reference.*)

- Use the Width box to determine the width of the column in characters.

  Tip: You also can change column widths by dragging the right-hand border of a column heading in the view design window.

- Click on *Number* to control how numeric data will appear.
- Click on *Time* to control the format for a column that contains time and date information.
- Click on *Sorting* to control the order in which documents are displayed. If you sort on more than one column in a view, the column farthest to the left will take precedence. You can also use the Design Column Sort dialog box to specify that a column be used to categorize a view.
- Click on *Font* to control the appearance of text in the column.
- Click on *Justification* to control the justification (left, right, center, and so on) of a column.
- Click on *Totals* to calculate the total for a column of numeric data and to display the total at the bottom of the column.

- Click on OK to close the dialog box.

This chapter is only an introduction to a very deep subject. If you have an interest in designing Notes databases, you should read through the entire Notes *Application Developer's Reference*. Here, we will learn only the most basic elements of view design.

Let's modify the Name column so that it no longer categorizes the view:

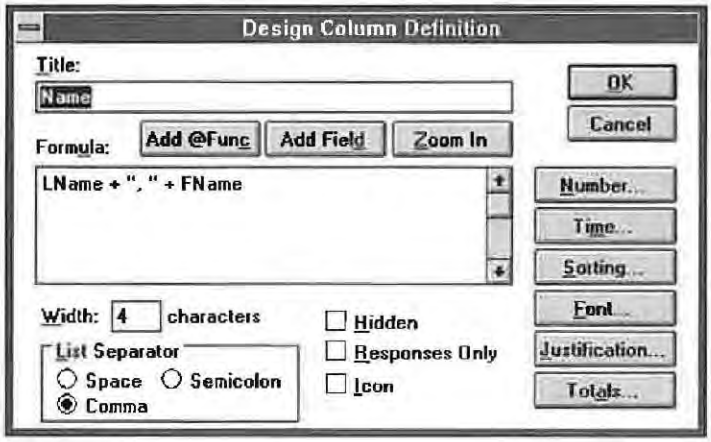
1. Double-click on the column heading **Name** to display the Design Column Definition dialog box for this column (see Figure 7.13). The formula

   ```
   LName + ", " + FName
   ```

   causes this column to display a last name, a comma, and then a first name.

2. Click on **Sorting** to display the Design Column Sort dialog box, uncheck **Categorize**, and then click on **OK**. Because this view will now display only one document for each student, it is not necessary for the view to be categorized by student.

Figure 7.13 **Observing a column definition**



3. Click on **OK** to close the Design Column Definition dialog box, and then click on the **Calculate** button. The view is no longer categorized, but the Name column is not wide enough to display all the name information.
4. Point to the right-hand border of the Name column heading (when you are pointing to the proper place, the mouse pointer will take the shape of a two-headed arrow) and drag it to the right until all the name information is visible. You may have to drag the border a couple of times to get it right (see Figure 7.14).

Now, we'll modify the Programs Enrolled In column to display degree instead of program information:

1. Double-click on the column heading **Programs Enrolled In** to display the Design Column Definition dialog box, then replace the current title with **Degree Program**.
2. In the Formula box, select **PgmEnroll** and then press **Del** to get rid of the current formula.
3. Click on the **Add Field** button to view a list of field names for the database.
4. Select **Degree** and click on **Paste** (see Figure 7.15). To display information from a single field, you can simply use the field name as the formula.

Figure 7.14 **The uncategorized view with the widened Name column**

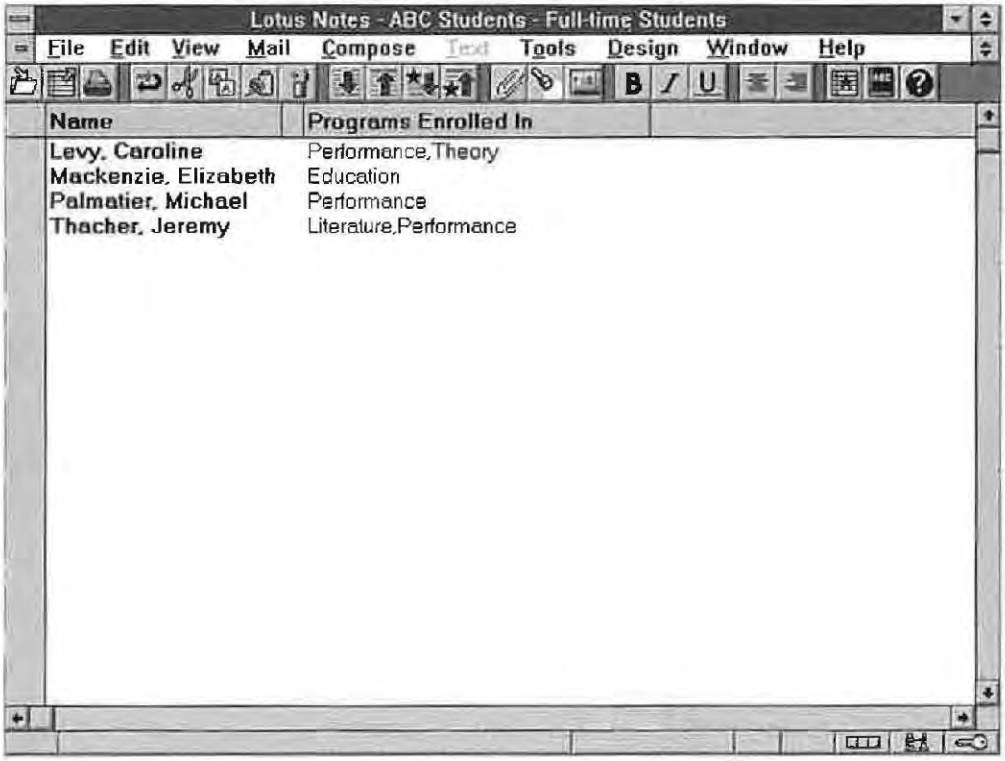
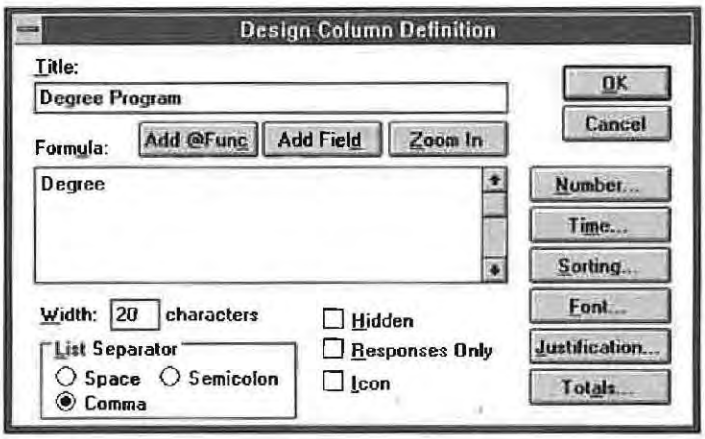


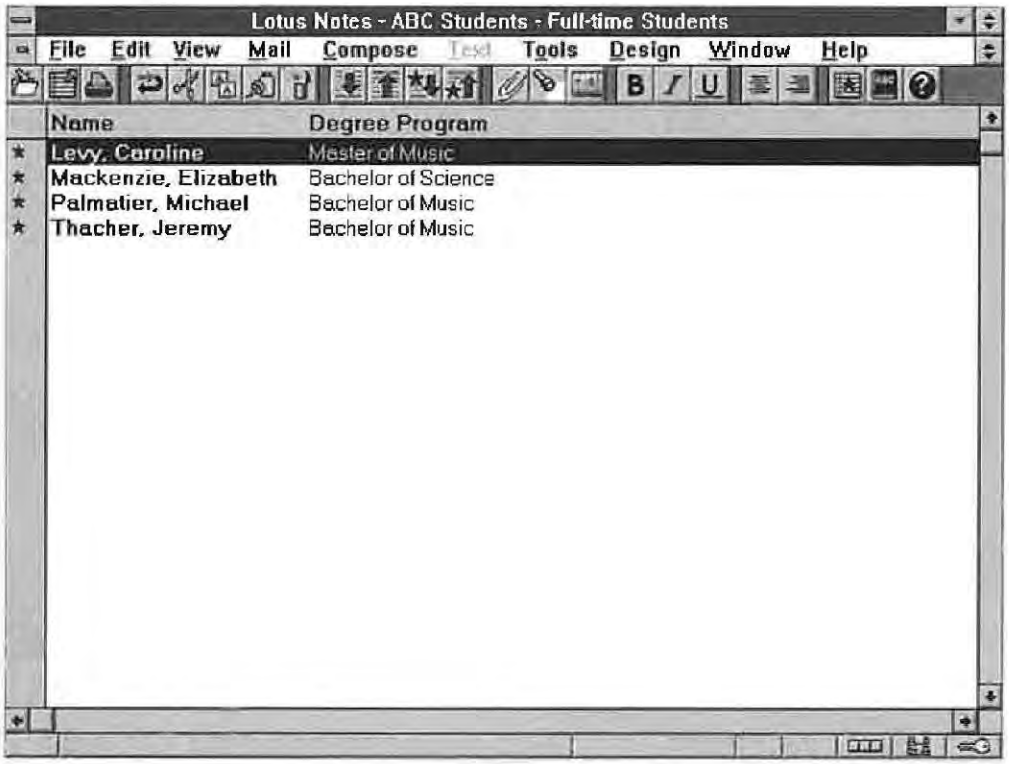
Figure 7.15 **Changing a column definition**



5. Click on **OK** to accept the new column definition, and then click on the **Calculate** button to refresh the view. The view now displays degree information.

6. Press **Esc** to close the view design window and click on **Yes** to save changes to the view.
7. Choose **View, Full-time Students** to see the new view (see Figure 7.16). Notice that the new view is listed in its own section at the bottom of the View menu. This is because private views are listed separately from shared views.

Figure 7.16 The new view

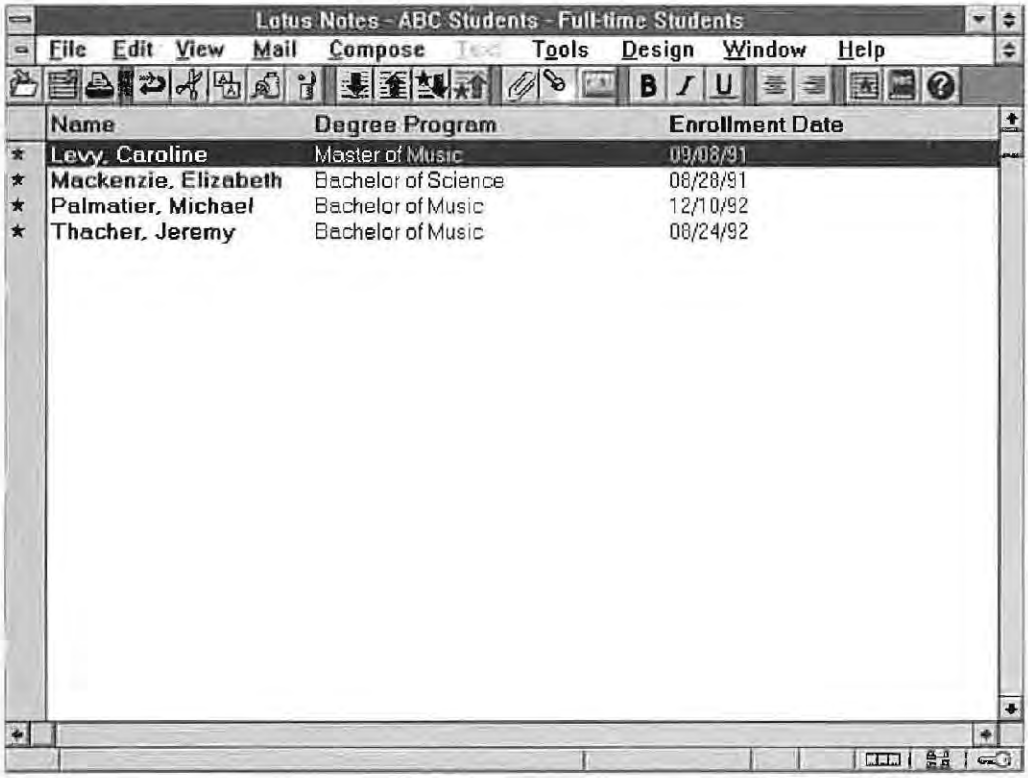


PRACTICE YOUR SKILLS

1. Edit the Full-time Students view (choose **Design, Views**; select the view; and click on **Edit**).
2. Double-click on the blank column heading to the right of the Degree Program column to open the Design Column Definition dialog box.
3. Enter the column heading **Enrollment Date**, and create a formula that will display information from the EnrollDate field.

4. Click on **Time** to display the Design Time Format dialog box and then select the date-only format in the Overall Format box.
5. Click on **OK** twice to close both dialog boxes, and then widen the new column so that the entire heading is visible.
6. Close and save the view design window, and then switch to the Full-time Students view (if necessary). Your screen should resemble Figure 7.17.
7. Close the database.

Figure 7.17 **Adding an Enrollment Date column**



SUMMARY

In this chapter, you learned about creating your own views. We began by discussing how the structure of a view is related to the structure of a document. Then you learned how to create a copy of an existing view, move and delete columns, modify a selection formula, and modify column definitions.

The following table summarizes some of the techniques you learned in this chapter:

Desired Result	How to Do It
Examine form design	Select or open database; choose **Design, Forms**; select form; click on **Edit**
Examine view design	Select or open database; choose **Design, Views**; select view; click on **Edit**
Make copy of view	Select or open database; choose **Design, Views**; select view you wish to copy; click on **New Copy**
Name view	Edit view; choose **Design, View Attributes**; enter name in Name box
Move column	Select column heading, click on **Edit Cut** SmartIcon, select column heading to right of where you want column to appear, click on **Edit Paste** SmartIcon
Delete column	Select column heading, press **Del**, click on **Yes**
Refresh view design	Click on **Calculate** button
Modify selection formula	Edit view; choose **Design, Selection Formula**; change formula as desired
Modify column definition	Edit view; select column; choose **Design, Column Definition** (or double-click on column heading); modify column as desired

In the next chapter, you will learn how to use a template to create your own private database. We'll discuss how to plan a database, and then we'll learn how to create and modify forms. Finally, we'll talk a little more about views and how to test a database.

IF YOU'RE STOPPING HERE

If you wish to stop here, please choose **File, Exit** to exit Notes (you will need to restart Notes when you begin Chapter 8). If you wish to proceed directly to Chapter 8, please do so now.

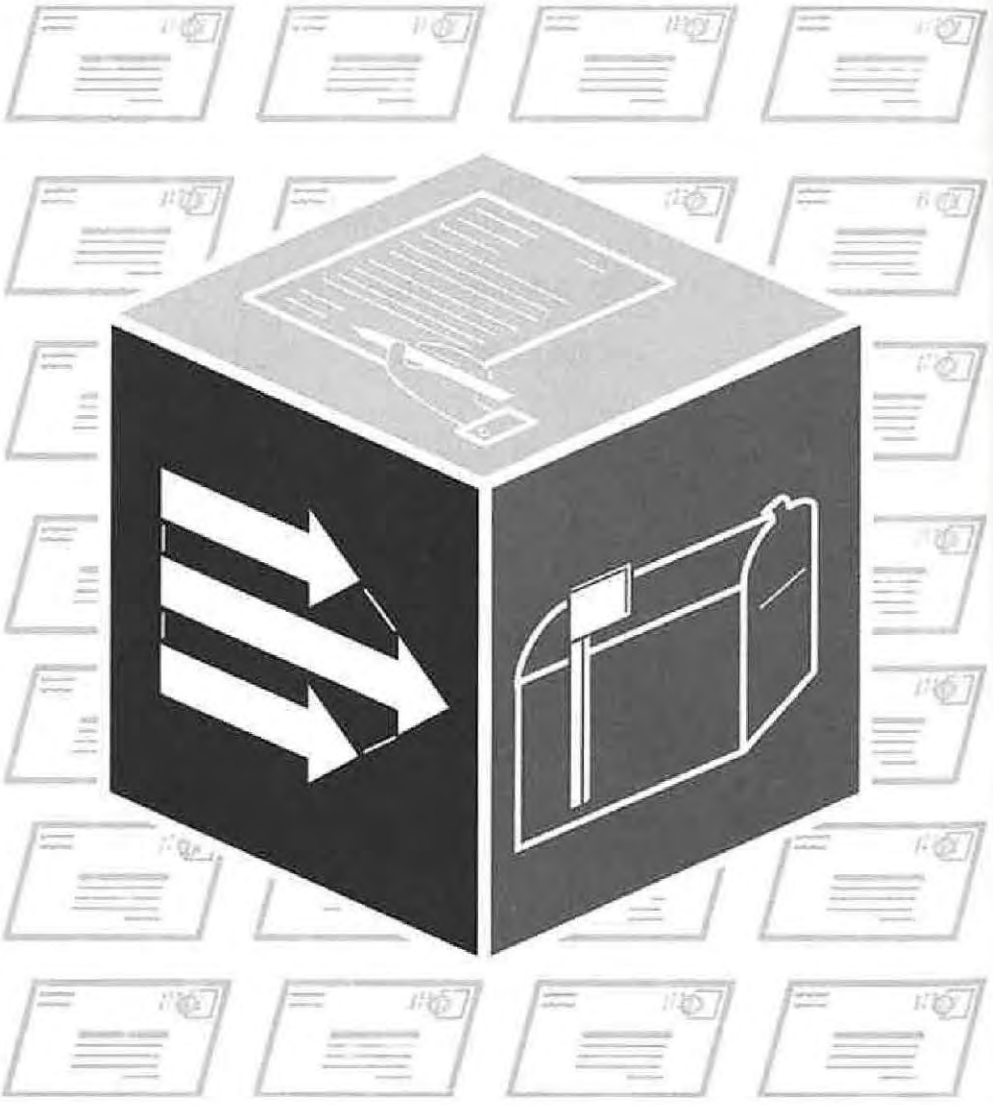
CHAPTER 8: CREATING A PRIVATE DATABASE

Using a Template to Create a Database

Modifying Forms

More about Creating Views

Testing the Database



Most of the databases you will use have been designed for you. Sometimes, however, you might find it useful to design your own databases. For example, you might want to design a tracking database to keep track of a project on which you are working, or a discussion database to share ideas about industry trends.

In this chapter, you will learn how to create a private database by using one of the templates Notes provides. You will learn how to modify existing forms to suit your needs and how to create a new view. We'll also discuss how to plan a database, and how to test it after you create it. Although we will be talking specifically about creating private databases, most everything you learn will be applicable to shared databases, as well (we will discuss further considerations for shared databases in Chapter 9).

When you're done working through this chapter, you will know

- How to plan a Notes database
- How to create a database from a template
- How to change form attributes
- How to modify and create fields
- How to create a new view
- About testing a database

USING A TEMPLATE TO CREATE A DATABASE

You can design a database from scratch, but for most applications, it is much easier to begin with one of the database templates Notes provides. There are a variety of templates, some of which might require little or no change to suit your purposes. For this reason, it is important to know exactly what you want in your database, and what templates are available (for a list of available templates, refer to Appendix B).



PLANNING A DATABASE

Whether you start from scratch or use a template, there are many factors you should consider before you begin to design a database. Good planning will save you time in the end by minimizing the need for last-minute changes. Here are some things to consider before you design a database:

- Who will be involved? Generally, a shared database will have a designer and a manager (who might be the same person). The Notes administrator also should be involved in the initial stages of planning a database. You also should consider who the users will be.

  In this chapter, you will create a private database. This means you will be the designer, manager, administrator, and sole user of the database. You should not create a shared database without the approval of your Notes administrator.

- What kind of application will you create? As we discussed in Chapter 2, most Notes applications fall into one of four general categories:
  - Tracking applications, such as a project status report database
  - Broadcast applications, such as a company newsletter
  - Reference applications, such as a policies and procedures handbook
  - Discussion applications, such as a brainstorming database

  Knowing the type of application you will create can help you determine the right template to use as a starting point.
- Outline the application you will create. Having a map of the application on paper will help as you design it. Think about the following questions as you outline your application:
  - How will information be entered in the database? The answer to this question will determine how many and what kinds of forms you need to design. As you outline forms, consider what information will be static (text or graphics that will appear the same in all documents) and what information will be variable. The variable information will correspond to the fields on the forms.
  - How do you want to see the information in the database? The answer to this question will determine how many and what kinds of views you need to design.

When you design shared databases, there are additional factors to consider. Whether you are designing a private or a shared database, however, you should initially design the database on your hard drive. Never create databases on a server without first consulting your Notes administrator. (If it seems like "don't touch the server" is becoming a kind of chant, that's good. If you do unauthorized things to your server, your Notes administrator will hate you forever.)

In this chapter, we will create a database to act as a reference library for interesting magazine articles. Table 8.1 summarizes some of the things to think about as we design this database.

Table 8.1 Planning a Magazine Article Reference Library

Question	Answer
Who will use the database?	Only you will use the database, meaning it will be private.
What kind of application will it be?	The words *reference library* give a solid clue that this will be a Reference application.
What forms will you need to create?	You will need a main topic form for each magazine article. It also might be nice to have a response form for future commentary.
What information will you need on the magazine article form?	This form will need fields for title, magazine, topic, date, and description.
What views will you need?	One view that is categorized by topic will be sufficient.



CREATING A NEW DATABASE FROM A TEMPLATE

To create a new database based on a template:

- Choose File, New Database to display the New Database dialog box.
- In the New Database section, verify that Local is selected in the Server box. Do not create new databases on the server.
- In the Template box, select a template from which to create the database. (You can get a description of a template by selecting it and clicking on the About button.)

  Note: To use templates, the template files must be installed either on your hard drive or on a server to which you have access. If the template you wish to use does not appear in the list, click on the *Template Server* button and select a different server on which to find the template.
- In the Filename box, enter a file name for the database. The file name can contain up to eight characters but cannot contain spaces. When you create the database, Notes will automatically add the extension .NSF to the file name. (Some

kinds of Notes databases require different extensions, but in most cases you don't need to worry about this.) For more information on database formats, refer to Chapter 5 in the Notes *Application Developer's Reference.*

- In the Title box, enter a title for the database (the title appears on the database icon). Database titles can contain up to 32 characters, including letters, numbers, spaces, and punctuation.
- Check or uncheck the *Inherit Future Design Changes* option. If you check this option, then future changes to the template on which the database is based will be incorporated into the database, as well. If you will be customizing the database, you should uncheck this option so that changes you make to the database are not lost in the future.
- Click on New to create the new database. Notes opens the database and displays the About *Database Name* document.

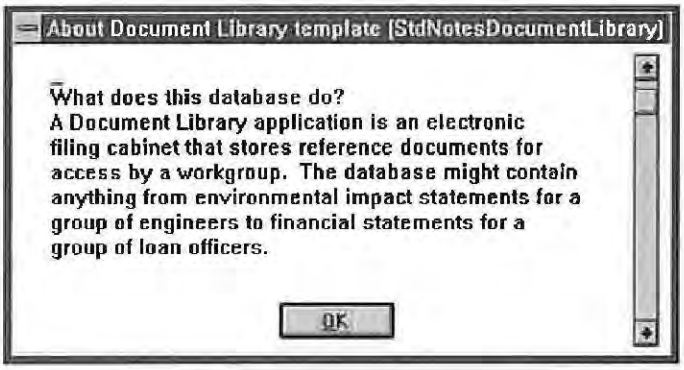
Let's use a template to create a new database from which we will create our magazine article library:

1. Activate the first workspace page and then choose **File, New Database** to display the New Database dialog box.
2. Verify that Local is selected in the Server box. You should always create your databases on your hard drive. Even a shared database should be developed locally; you can then copy it to a server when it has been fully tested and debugged (and when you have your administrator's blessing).
3. Select **Customer Tracking** in the Template box and click on **About**. You can get information on any template in this manner. This template is used to track activity between you and your customers, and is not appropriate for our purposes.

   Note: If you do not see this template in the list, click on the **Template Server** button and select a different server on which to look for the template. If the template is not available on any server, ask your Notes administrator if he or she can help you install the templates you need on your hard drive. If you can't get access to the templates, you will not be able to perform the tasks in this chapter.

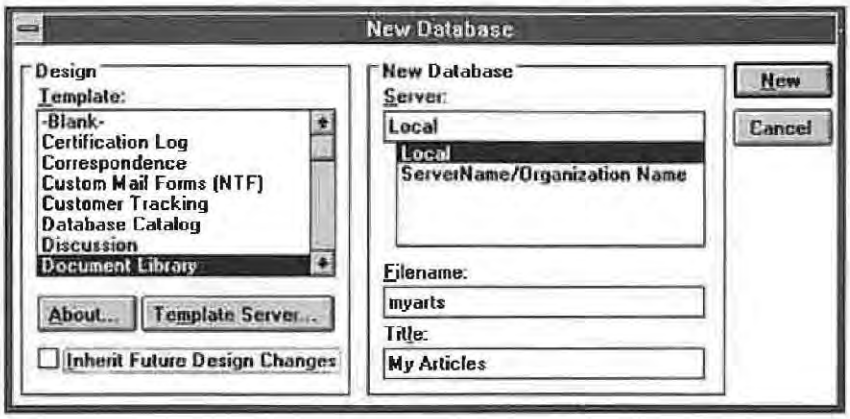
4. Click on **OK** to close the About Customer Tracking window.
5. Select **Document Library**, click on **About**, and scroll down to read the *What does this database do?* section (see Figure 8.1). This template will make a good starting point for our magazine article database.

Figure 8.1 **Reading about the Document Library template**



6. Click on **OK** to close the About Document Library window.
7. In the Filename box, type **myarts**. This will be the file name for the database. Notes will automatically add the .NSF extension.
8. In the Title box, type **My Articles**. This text will appear on the database icon.
9. Uncheck **Inherit Future Design Changes** (your dialog box should resemble Figure 8.2). If you use this option, any changes made to the template file will affect your database. Because you will be customizing the database, this is not desirable.
10. Click on **New** to create the new database. Notes opens the database and displays the About My Articles document.

Figure 8.2 **Creating a new database based on a template**





EXAMINING THE ABOUT *DATABASE NAME* DOCUMENT

When you create a new database based on a template, the first thing you see is the About *Database Name* document. Here you can get information that will be useful as you customize the template for your purposes. The document contains three main sections:

- The For Database Users section contains information about the purpose of the database and how to use it.
- The For Developers section describes important features of the template and suggests modifications you may wish to make to it.
- The For Database Managers section contains important information about managing the database.

After you customize the database, you should modify the About *Database Name* and Using *Database Name* documents to reflect the changes you have made. You can edit these documents by choosing *Design, Help Document* and then choosing the appropriate document name from the submenu.

Let's examine the About My Articles document:

1. Read the For Database Users section of the document. This section explains what the template is for, and who could use it. If this were a shared database, you would probably edit this section to explain the My Articles database more specifically.
2. Scroll down to read the Set Access Control List information in the For Database Managers section (it is under the heading The Database You Can Create Based On This Template). The ACL (that means Access Control List, remember?) determines

the rights of different users in a shared database. As the creator of a private database, you have all rights by default. It is not necessary to edit the ACL.

3. Read the Edit This About Database Document section. The About *Database Name* and Using *Database Name* documents provide a way for the database manager to communicate to users important information about the database.
4. Choose **Design, Help Document** to display the Help Document submenu. You would choose *About Database* or *Using Database* to edit one of these documents. When you edit help documents, it is as if you are working in a rich-text field.
5. Click on **Design** to close the Design menu.
6. Read the Keyword Field section. When you create databases, you should edit keyword fields to include lists of choices that are appropriate to the database.
7. Close the About My Articles document.

MODIFYING FORMS

Forms provide the means to input information in a database. Although templates may provide forms that are almost right for your purposes, you might sometimes find it necessary to modify the default forms. For example, a template might contain the right number of forms and fields, but the field names might not make sense for your application. You might also need to add or delete fields, or rearrange items on a form.



EXAMINING THE DEFAULT TEMPLATE FORMS

Before you modify forms, you should examine them thoroughly so that you understand what it is you are changing. In Chapter 7, you learned how to examine the structure of a form, but here is the procedure once again:

- Select or open the database and choose Design, Forms to display the Design Forms dialog box.
- Select the form you wish to examine and click on Edit (or double-click on the form name). Notes displays the structure of the form in a form design window.

  - To examine aspects of the form as a whole, choose Design, Form Attributes.
  - To examine the definition of a field, click on the field to select it and choose Design, Field Definition (or double-click on the field).
- You close a form design window the same way you close any other window in Notes.

We'll get into more detail about form attributes and field definitions later in the chapter. For now, let's take a look at the default template forms in our new database:

1. Choose **Design, Forms** to open the Design Forms dialog box. There are three forms in this database: Document, Response, and Response To Response. There is an asterisk (*) before Document because it is the default form.
2. Select ***Document** and click on **Edit** to display the form design window for the Document form (see Figure 8.3). This form contains fields called Date, From, Subject, Categories, and Body. It also contains the static text *Title, Category, Author,* and *Date*, as well as two hidden fields, LastEditor and TimesModified.
3. Click once on the field **Subject** to select it. A flashing line appears beneath the name of the field.
4. Choose **Design, Field Definition** to display the dialog box where you define or modify a field definition (see Figure 8.4).
5. Click on **Cancel** to close the Field Definition dialog box.
6. Double-click on the field **Categories** to display the Field Definition dialog box for this field (be sure to double-click on the field Categories, and not the text *Category*). This is a shortcut for displaying this dialog box.
7. Click on the **Format** button to display the Design Keyword Format dialog box (see Figure 8.5). This is where you create a list of keywords. The formula you see here generates a keyword list by "looking up" values using the @DbColumn function.
8. Click on **Cancel** twice to close the dialog boxes (leave the form design window open).
9. Choose **Design, Forms** to display the Design Forms dialog box.

10. Select **Response** and click on **Edit** to display the structure of the Response form.

Figure 8.3 **The structure of the Document form**

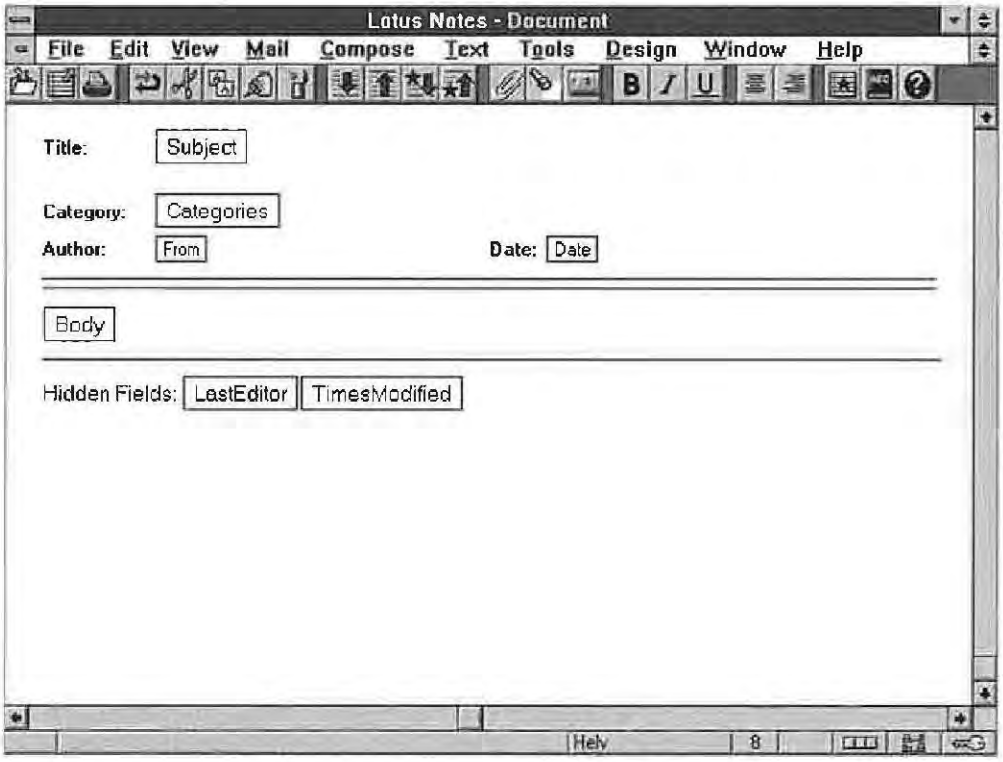


Figure 8.4 **The Field Definition dialog box**

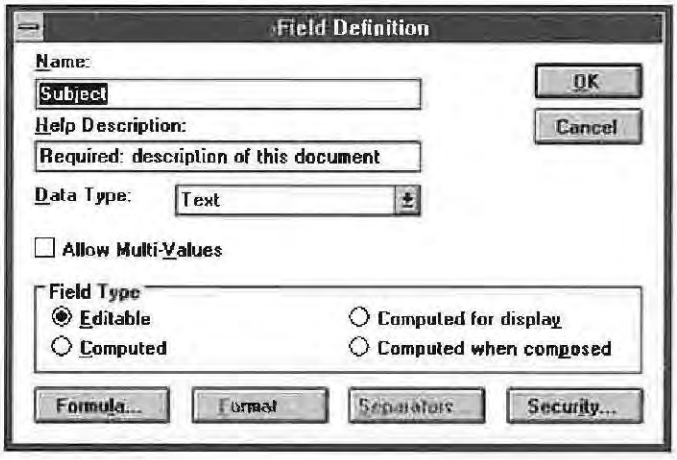
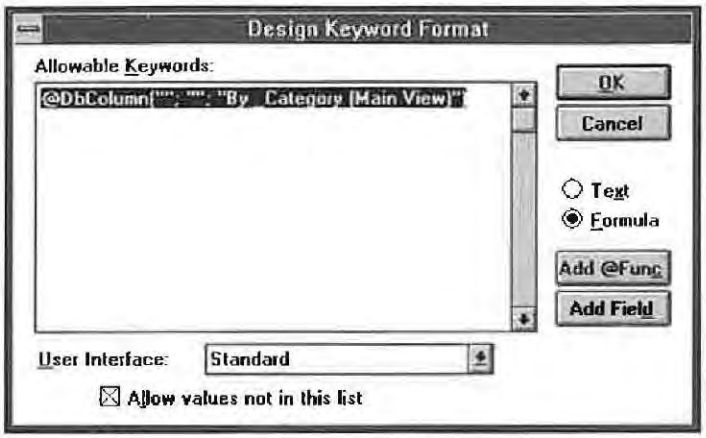


Figure 8.5 **The Design Keyword Format dialog box**



PRACTICE YOUR SKILLS

1. Examine the Field Definition dialog boxes for several fields in the Response form.
2. Close the Response form design window. (Do not save changes to the form if prompted to do so.)
3. Display the form design window for the Response To Response form.
4. Examine field definitions in the Response To Response form.
5. Close the Response To Response form design window.



DELETING A FORM

If you decide that you do not need a form that is provided in a template, it is a simple matter to delete the form from the database. To do so,

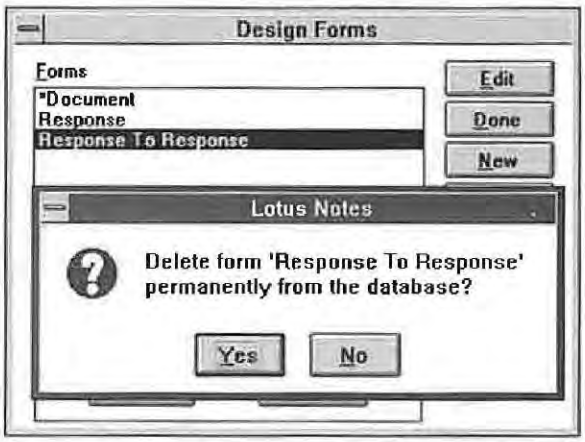
- Choose Design, Forms to display the Design Forms dialog box.
- Select the form you wish to delete and click on *Clear*. Notes asks you if you really want to delete the form. You should be careful when deleting a form from a database that already contains documents. If you delete a form that is associated with existing documents, the documents will not be removed from the database, but you will no longer be able to read or edit them.

- Click on Yes to confirm the deletion of the form.

As we discussed earlier, the Response To Response form will not be necessary in the My Articles database, so let's get rid of it:

1. Choose **Design, Forms** to display the Design Forms dialog box.
2. Select **Response To Response** and click on **Clear**. Notes asks if you really want to delete the form (see Figure 8.6).

Figure 8.6 **Deleting a form**



3. Click on **Yes** to delete the form and then click on **Done** to close the Design Forms dialog box.



CHANGING FORM ATTRIBUTES

Form attributes for many databases include the title of a form—which appears in the Compose menu—and its type—main topic, response, or response to response. (Form attributes for some types of databases may be different.) To set or modify form attributes,

- Edit the form in which you are interested (choose Design, Forms; select the form; and click on Edit).
- Choose Design, Form Attributes to display the Design Form Attributes dialog box.
  - Use the Name box to enter a name for the form. The name can contain an unlimited number of characters, but only