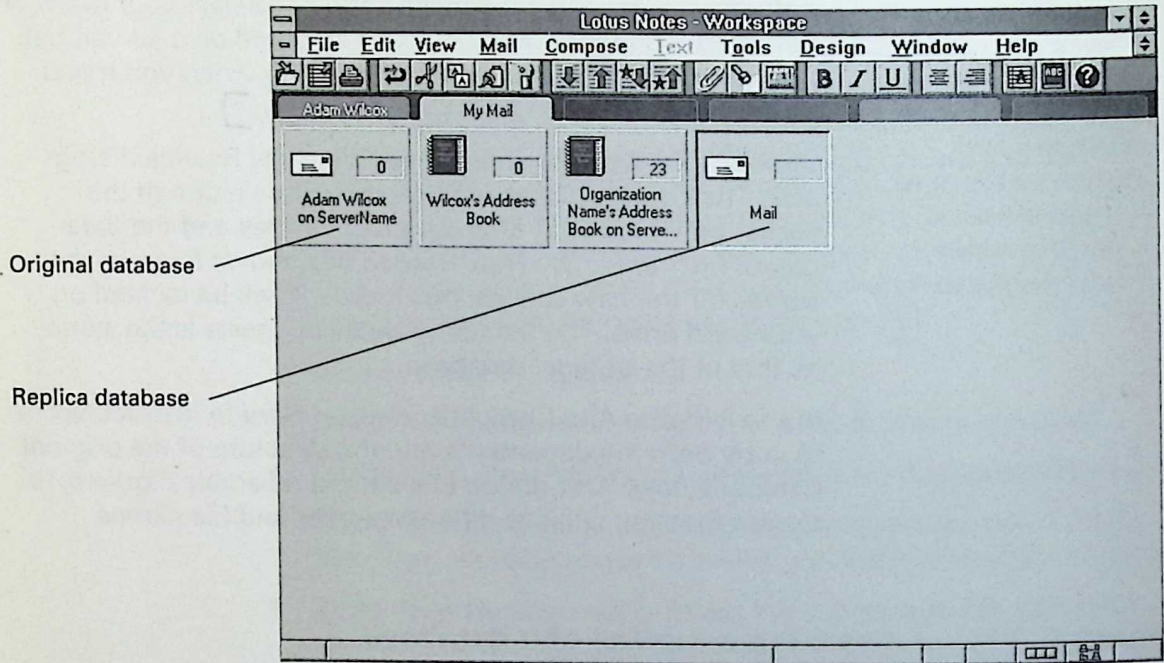
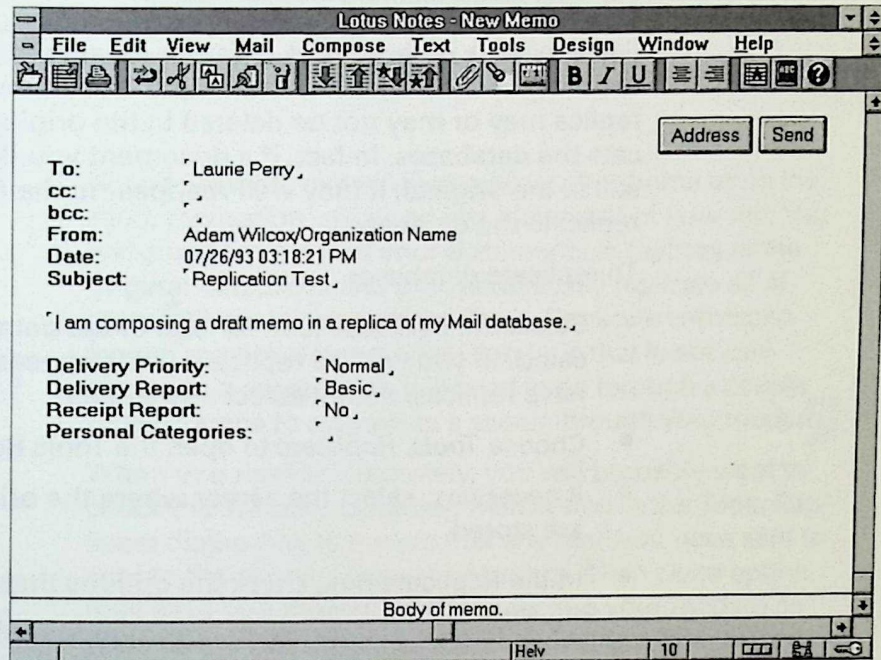


Figure 5.11 A replica of the author's Mail database

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.

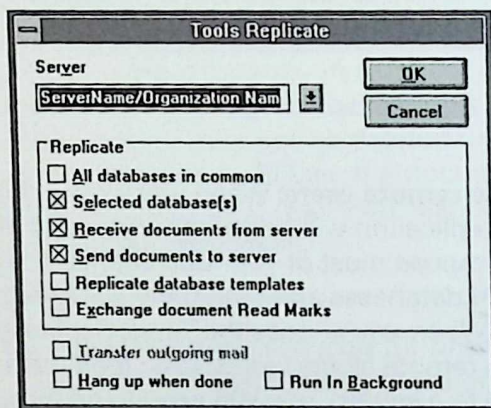
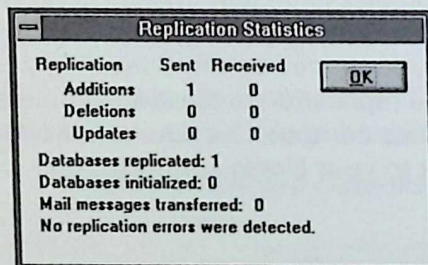
- Click on OK. When the replication process is complete, Notes displays a Replication Statistics dialog box giving you information about the process.

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

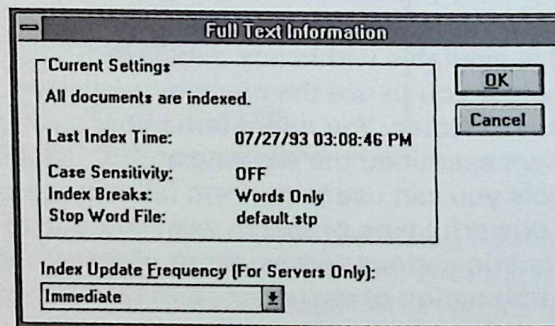
index has been defined and whether all the documents in the database are indexed.

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

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,

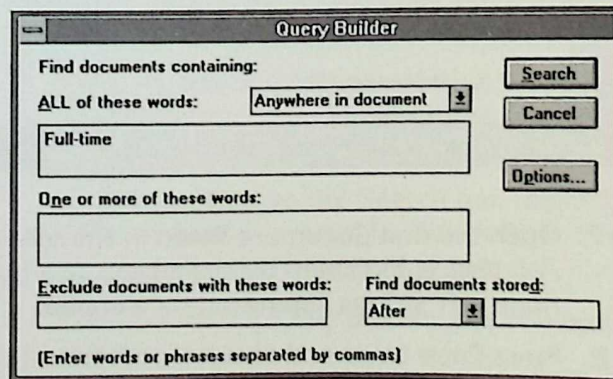
- Open a view containing the documents that you wish to search.
- Click on the *Edit Find* SmartIcon. When you click on this SmartIcon in an indexed database, Notes displays the Query Builder dialog box.
 - To find documents containing all of several words, enter these words in the All Of These Words 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*:

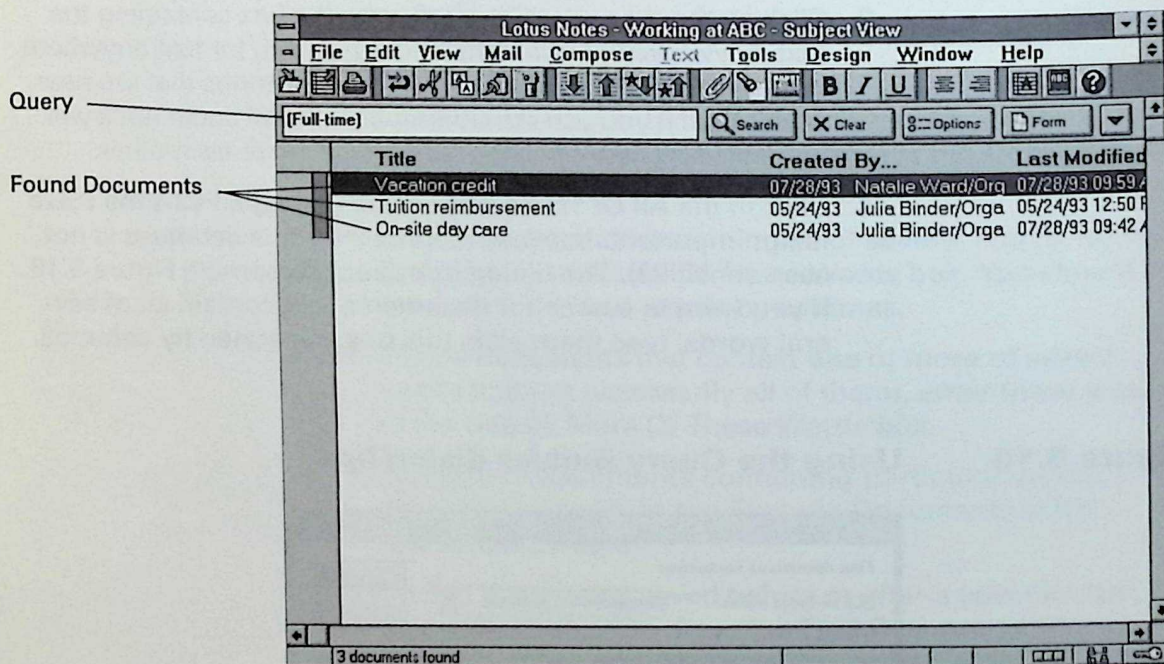
1. Choose **View** to examine the View menu. There is a check mark next to the Show Search Bar option. You could hide the Search bar by choosing this option again (but don't).
2. Close the View menu and then click on the **Edit Find** SmartIcon (it looks like a flashlight) to display the Query Builder 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.

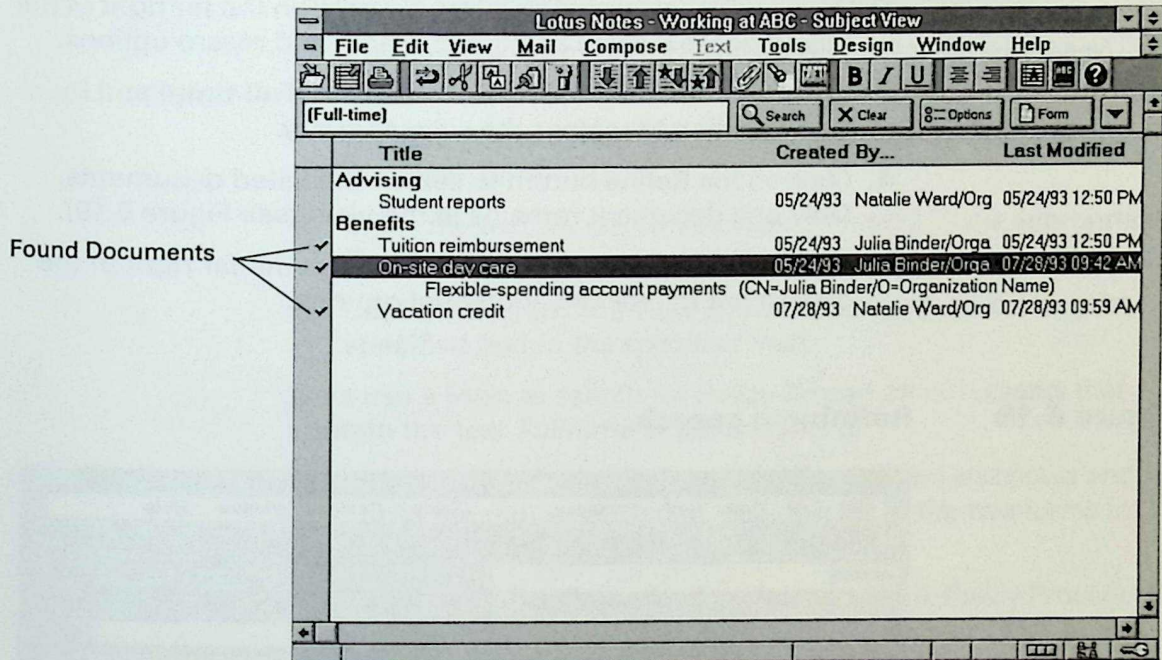
Figure 5.17 **The results of a query**



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

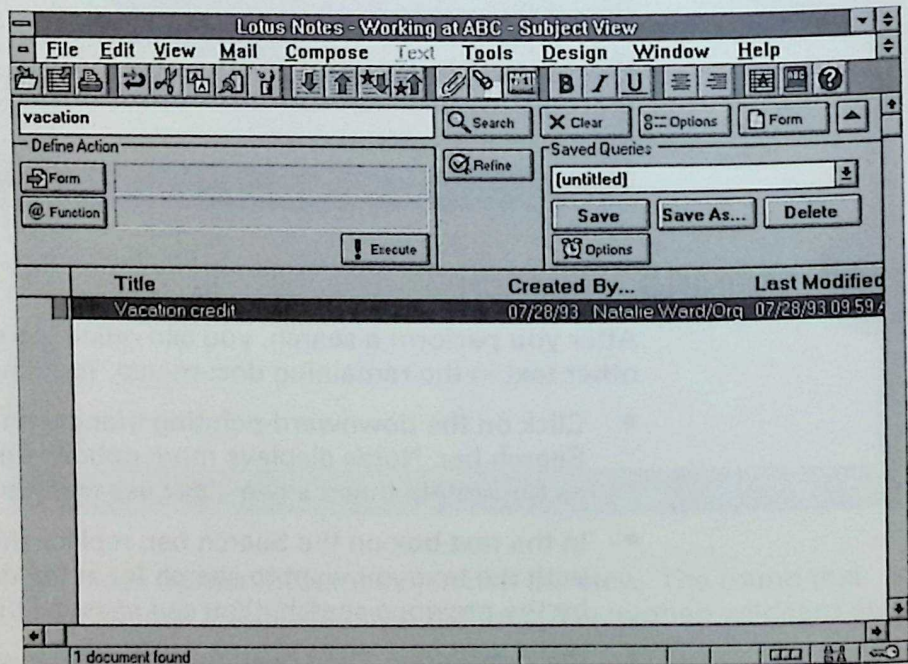
After you perform a search, you can refine the search to find other text in the remaining documents. To refine a search,

- 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

The screenshot shows the 'Lotus Notes - New Document' window. At the top is a menu bar with 'File', 'Edit', 'View', 'Mail', 'Compose', 'Text', 'Tools', 'Design', 'Window', and 'Help'. Below the menu bar is a toolbar with various icons. A search form is displayed with the following elements:

- A text input field with the placeholder text: 'Enter words to look for in the field(s) in which you're interested.'
- 'Search' and 'Cancel' buttons.
- Form fields with labels and values:
 - Title: ' ,
 - Category: ' ,
 - ' Full-time ,
- A large text area at the bottom with the placeholder text: 'Enter the text of the document. This is a rich text field.'

Figure 5.21 A query created using a form

The screenshot shows a query bar with the following elements:

- A text input field containing the query: '([Body] CONTAINS (Full-time))'.
- 'Search', 'Clear', 'Options', and 'Form' buttons.

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.

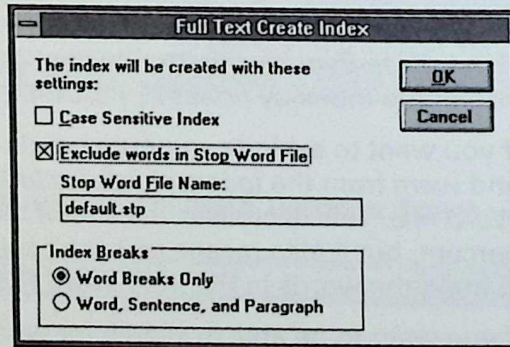
To index a database,

- 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.

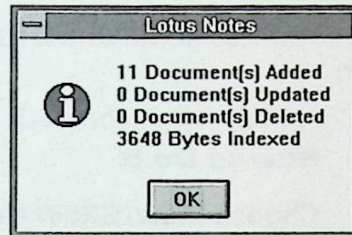
Let's index the ABC Discussion database:

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.