

Microsoft® Office Access™ 2007 Inside Out

John Viescas and Jeff Conrad

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Working with Windows SharePoint Services

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Microsoft Windows SharePoint Services (version 3) is a Web-based product from Microsoft that enables companies to create a central repository of many types of information that can be viewed and updated by authorized users. Windows SharePoint Services runs as a service on Microsoft Windows Server 2003 or later and uses Microsoft SQL Server to store and manage the shared data.

Any company that needs a way to improve team collaboration should find Windows SharePoint Services very useful. With a Windows SharePoint Services Web site, you can

- Provide a central location for collaborating on documents created using Microsoft Office applications.
- Create separate workspaces for different teams.
- Assign users to different groups, allowing some to view only shared data, permitting others to modify and contribute shared data, and allowing a few to customize the design of their own or shared sites.
- Create forums such as blogs and wikis using built-in templates.
- Customize a shared site using off-the-shelf Web Parts included as part of the Windows SharePoint Services product. These Web Parts include
 - Announcements that can be posted by the team leaders
 - Contact lists
 - Content from another Web page or file embedded within the main page
 - Event and issue tracking and task assignment
 - Online discussion board
 - Links to other pages or Web sites
 - Team membership lists
 - Shared document sublibrary
 - Online survey

Web Parts are a particularly powerful feature in Windows SharePoint Services. If you are a member of a group that has design permission on the team site, you can

customize the Web pages presented by Windows SharePoint Services by choosing the components you want, indicating where you want the component to appear on the page, and customizing the components by setting their properties. You can also apply one of dozens of themes to the team site to give it a customized look. These features are not unlike designing a form within Microsoft Access, but you perform your design work directly within your browser.

Microsoft Office Access 2007 extends the collaboration power of Windows SharePoint Services by adding features that allow the two programs to work in tandem. In this chapter you'll learn how to

- Work within the Windows SharePoint Services user interface
- Export a table stored in Office Access 2007 to a Windows SharePoint Services list
- Import a list from Windows SharePoint Services into Access 2007 as a local table
- Link to existing SharePoint lists
- Create new lists in Windows SharePoint Services from within Access 2007
- Work with Windows SharePoint Services lists offline and later synchronize any changes
- Upload your Access 2007 database to a SharePoint site
- Publish your Access 2007 database in a document library on a SharePoint site
- Open SharePoint lists in Access 2007
- Open Access 2007 forms and reports inside a SharePoint site

Note

The samples in this chapter are based on the Housing Reservations Windows SharePoint Services application, HousingSP.accdb, and the IssuesSample.accdb database that you can find on the companion CD. This particular Housing Reservations database is a scaled-down version of the full Housing.accdb sample you have been working with throughout this book. It is designed to be uploaded to a Windows SharePoint Services Version 3 Web site. In order to take full advantage of this database, you will need to have access to a Windows SharePoint Services Version 3 Web site to which you can connect. Also, all screen shots were taken using a Microsoft Office Live Web site, so the figures you see in this chapter might differ from what you see on your screen based on your Windows SharePoint Services Version 3 site. Many of the features of Windows SharePoint Services discussed in this chapter require version 3. Earlier versions might not offer all the features we discuss in this chapter. If you do not have access to a Windows SharePoint Services Version 3 site, you can sign up for one (with a free trial) at <http://office.microsoft.com/en-us/officelive/default.aspx>.



Working Within the Windows SharePoint Services User Interface

In the process of writing this book, we used an Office Live Web site running Windows SharePoint Services Version 3 to test and demonstrate how Access 2007 and Windows SharePoint Services can work together. A full discussion of Windows SharePoint Services Version 3 and all its features is beyond the scope of this book, so our goal in this section is only to familiarize you with some of the user interface elements relevant to Access 2007. Figure 22-1 shows the main page we created to demonstrate the Housing SharePoint sample you'll see later in this chapter.

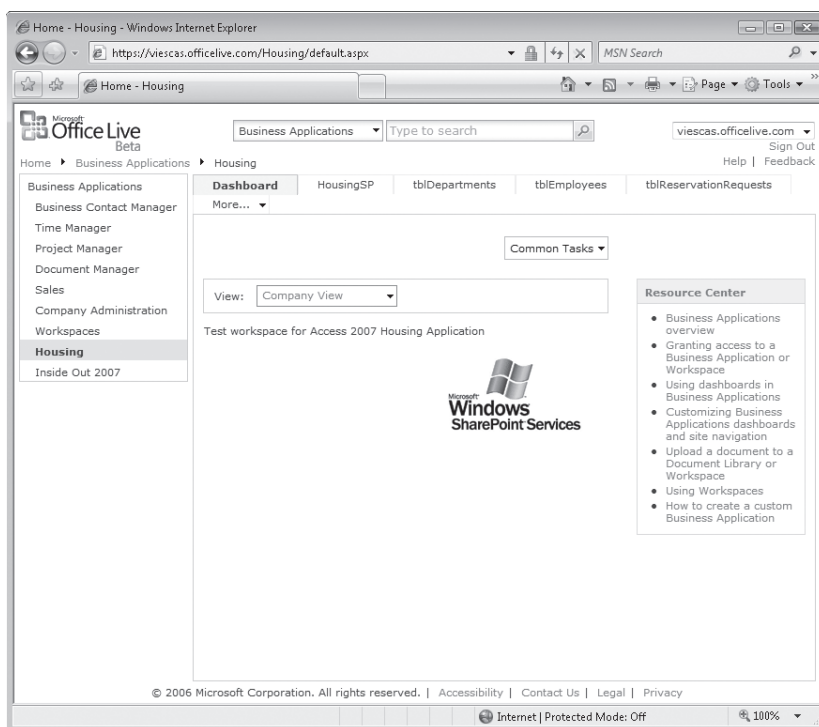


Figure 22-1 A Windows SharePoint Services Web site allows you to collaborate and share information through a Web browser.

The left side of the page is a navigation bar similar to the Navigation Pane in Access 2007. Clicking one of these links takes you to another part of this Web site. In our example, we clicked the Housing link to access the HousingSP database. Horizontally near the top of the page is a *dashboard* that displays the internal contents of the Housing folder using tabs. You can see the name of the Housing SharePoint database (HousingSP) and some of the lists within that database—tblDepartments, tblEmployees, and tblReservationRequests.

Click the Common Tasks button to see a list of customization options, as shown in Figure 22-2. You can customize the dashboard, assign permissions to various parts of your Web site, view settings for your other applications and workspaces, create new elements on your Web site, and modify the current workspace settings.

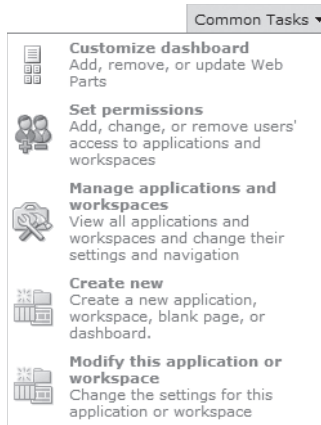


Figure 22-2 Click Common Tasks to create, edit, and customize the various elements of your Windows SharePoint Services Web site.

Editing Data in Lists

In Windows SharePoint Services terminology, a table is referred to as a *list* that stores information about a single subject. In a list you have *columns* (fields) that contain the different kinds of information about the subject. Similar to how you work in Access 2007, you can work with lists in different views for adding and editing records. Figure 22-3 shows the default view of an Employees list on our test site that looks like Data-sheet view in Access. (This list was created as part of one of the sample business applications that Office Live loaded when we set up the Web site.) You can see the column headers—such as Last Name, First Name, and Job Title—and one employee row below the column headers. This view is also set to display all the employees.

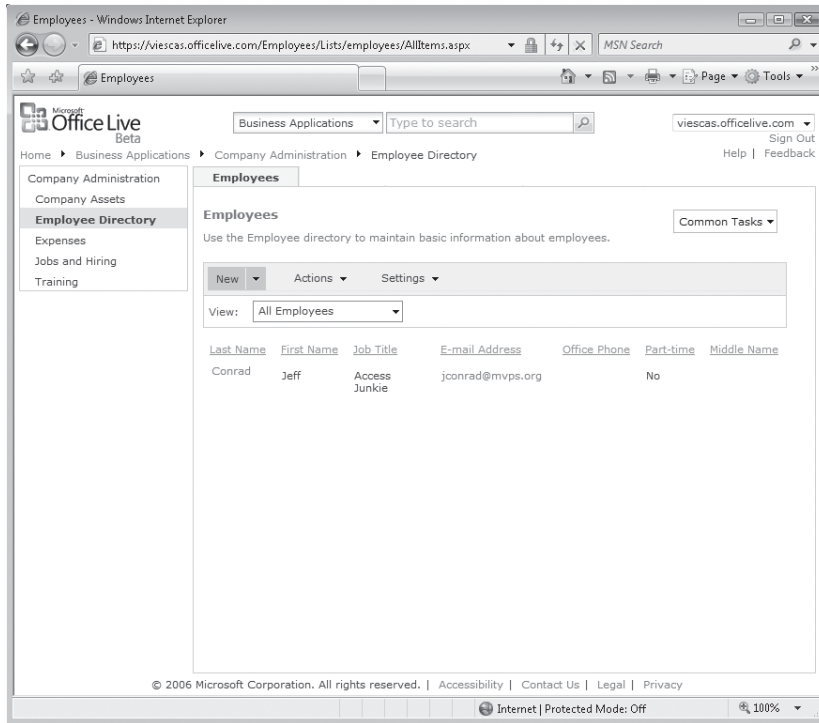


Figure 22-3 A list displayed on a SharePoint site resembles Datasheet view of a table in Access.

Although this view resembles a datasheet, you cannot edit any of the columns or records from this specific page because this is a read-only view. In the Windows SharePoint Services user interface, you'll notice that there are no record indicators or blank rows for new records. To add a record to the Employees list, click the arrow to the right of the New button and then click the New Item command, as shown in Figure 22-4.

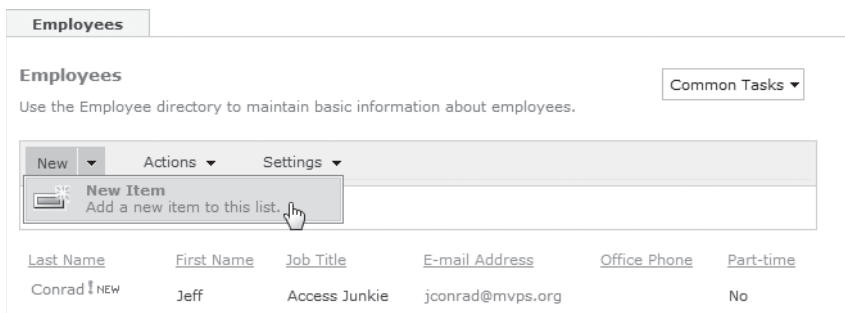


Figure 22-4 Click the New Item command to add a new record.

Windows SharePoint Services opens a new page that resembles a blank data entry form in Access, as shown in Figure 22-5. All the column headers for this list are displayed on the left side, and text boxes for the columns are on the right side. (You can't see all the columns for the Employees list in Figure 22-5.) This single-item edit form displays a red asterisk next to any required columns—for this list, you must enter a value in Last Name.

Figure 22-5 You can add new records via a view of the list that looks like a form.

As with a data entry form in Access, you enter the information for this record into the various text boxes. In Figure 22-6 you can see we are entering John's employee information. Just like Access 2007, Windows SharePoint Services supports adding attachments to individual records. In this particular view, we can click the Attach File link, shown in Figure 22-6, to browse to a location and upload an attachment for this employee's record.

Windows SharePoint Services also supports Rich Text Format for text and memo fields. The last column in the Employees list, Notes, includes formatting buttons you can use to apply different fonts, font sizes, bolding, alignments, and colors for your text, as shown in Figure 22-7. After we click OK to save this new record, we return to the default view of the Employees list, which now displays John's record, as shown in Figure 22-8.

Employees

New Item Common Tasks ▼

Attach File * indicates a required field

Last Name *	Viescas
First Name	John
Job Title	Author
Image	Type the Web address: (Click here to test) http://viescas.com Type the description:
Part-time	<input type="checkbox"/>
E-mail Address	JohnV@viescas.com
Alt. E-mail Address	
Office Phone	
Home Phone	
Emergency Contact Name	
Emergency Relationship	

Figure 22-6 You can see John's record details being added to the form.

Employees

Emergency Contact Name	
Emergency Relationship	
Emergency Address	
Emergency Phone	
Mobile Phone	
Fax Number	
Work Address	
Work City	
Work State	
Work Zip	
Work Country/Region	
Notes	<p>A A1 B I U </p> <p>Author of the following books: <i>Microsoft Office Access 2003 Inside Out</i> <i>Building Microsoft Access Applications</i></p>

OK Cancel

Figure 22-7 Windows SharePoint Services supports Rich Text Format for text fields.

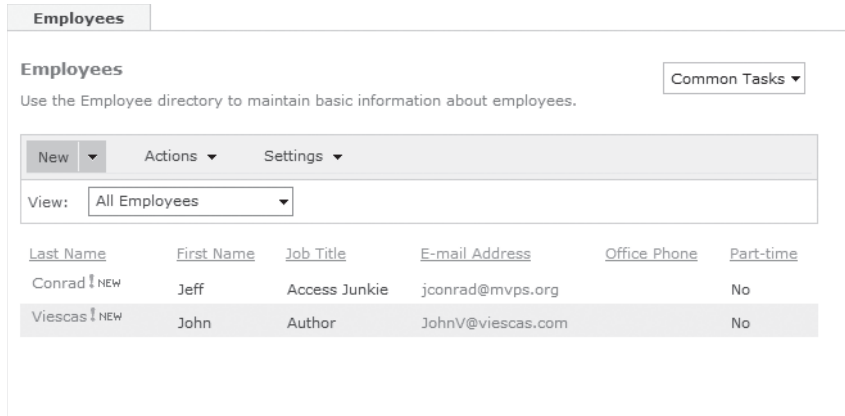


Figure 22-8 John's record has been added to the Employees list.

Creating New Views

Within the Windows SharePoint Services user interface, you can create new views of your lists. If a particular view shows too many columns or too few columns, you can create a custom view to display only the columns you need. You might find this feature handy for hiding certain columns from specific users or groups. You might also want to set up a Datasheet view of your list for quick data entry and editing many records. On our test site we created a Datasheet view of the Employees list. As shown in Figure 22-9, we clicked the arrow to the right of View and then clicked the Create View command to begin creating a new Datasheet view.

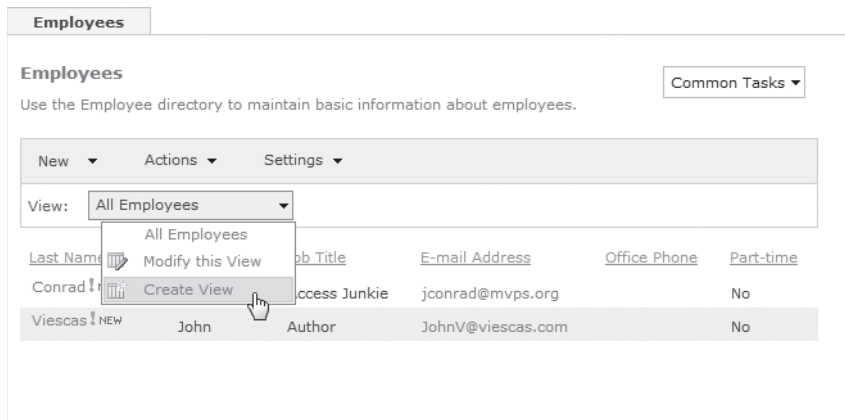


Figure 22-9 You can create new views of your lists within Windows SharePoint Services.

The Create View page opens, where you can choose from several existing view formats, as shown in Figure 22-10. This page includes built-in views such as Standard, Calendar, Access, Datasheet, and Gantt. You can even use an existing view as a basis for creating a new view. Not all views would be appropriate for certain types of lists. For instance, a list of products would not function at all if displayed in Calendar view.

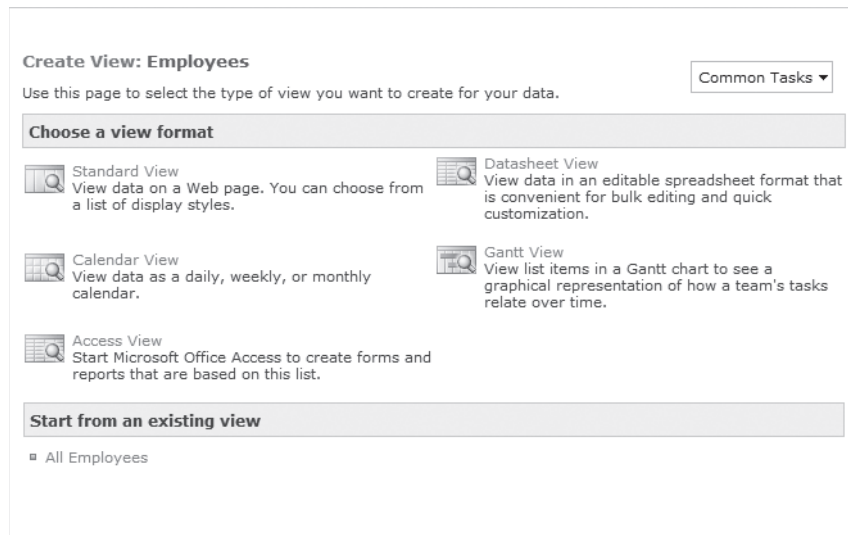


Figure 22-10 Windows SharePoint Services offers several built-in views for your lists.

We want to create a Datasheet view of the Employees list, so we clicked the Datasheet View button to open a new page to customize our new view, as shown in Figure 22-11. On this page we can choose from any of the following options for this new list view:

- **Name** Assign a name for this new list view.
- **Audience** Designate whether this view can be seen by others or only by yourself. Public is the default.
- **Columns** Select which columns will appear in the list view and in what order. All data columns appear in the sequence defined by default. You can also choose to display other columns maintained by Windows SharePoint Services such as attachments, date created, date modified, and version.
- **Sort** Assign sorting options for one or two columns. By default, no columns are sorted—the data appears in the order entered.
- **Filter** Apply one or more filters to the list view. By default, no filters are defined.

- **Totals** Calculate totals for any of the columns. No totals are defined by default.
- **Folders** Choose to show items inside folders or in a flat view without folders. The default is to display items inside folders.
- **Item Limit** Assign a maximum number of records to display in the view. The default is to display all records.

Create Datasheet View: Employees

Use this page to create a view of this list.

Common Tasks ▼

OK Cancel

Name
Type a name for this view of the list. Make the name descriptive, such as "Sorted by Author", so that site visitors will know what to expect when they click this link.

View Name:

☐ Make this the default view
(Applies to public views only)

Audience
Select the option that represents the intended audience for this view.

View Audience:

☐ Create a Personal View
Personal views are intended for your use only.

☒ Create a Public View
Public views can be visited by anyone using the site.

Columns
Select or clear the check box next to each column you want to show or hide in this view. To specify the order of the columns, select a number in the **Position from left** box.

Display	Column Name	Position from Left
<input checked="" type="checkbox"/>	Last Name (linked to item with edit menu)	1 ▼
<input checked="" type="checkbox"/>	First Name	2 ▼
<input checked="" type="checkbox"/>	Job Title	3 ▼
<input checked="" type="checkbox"/>	E-mail Address	4 ▼
<input checked="" type="checkbox"/>	Office Phone	5 ▼

Figure 22-11 On this page, you can choose options to customize your new Datasheet view.

In our example, we named this new view Employee Datasheet and kept all of the other options set to their defaults. In the Access world, what we are building is conceptually a query and a data entry form for the Employees list. For the query, we are deciding which fields to display and in which order to sort the fields. For the form, we are choosing the form layout (Datasheet, in this case), and specifying any totals to display for the columns. After clicking OK to save our new view, Windows SharePoint Services displays our Employee Datasheet list view, as shown in Figure 22-12.

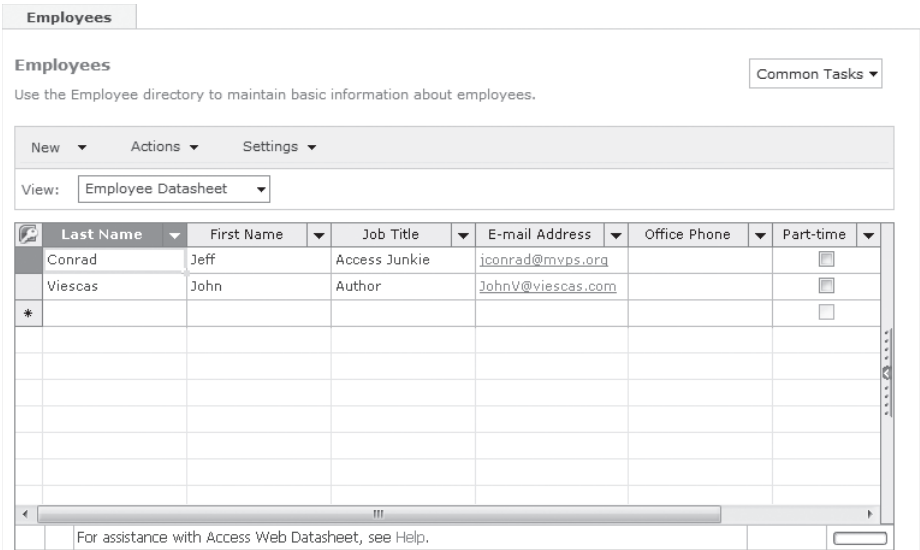


Figure 22-12 You can now see your new Datasheet view of the Employees list.

This view now looks very similar to Datasheet view of a form you might create in Access. You can easily move through the columns and records using the Tab and arrows keys. You can click the arrows on the column headers to apply additional filters to the records. You can see a blank row at the bottom of this view for entering a new record. Windows SharePoint Services even displays an Access icon in the upper-left corner of the view!

Adding Columns to Lists

In the Windows SharePoint Services user interface you can also add new columns to your lists. For our example, we might want to add a Middle Name column between the Last Name and First Name columns and reorder the columns to First Name, Middle Name, and Last Name. This is a three-step process—add the column to the list, add the column to the Employee Datasheet view, and then reorder the columns. To add the new column to the Employees list, we clicked the arrow to the right of Settings and then clicked the Create Column command, as shown in Figure 22-13.

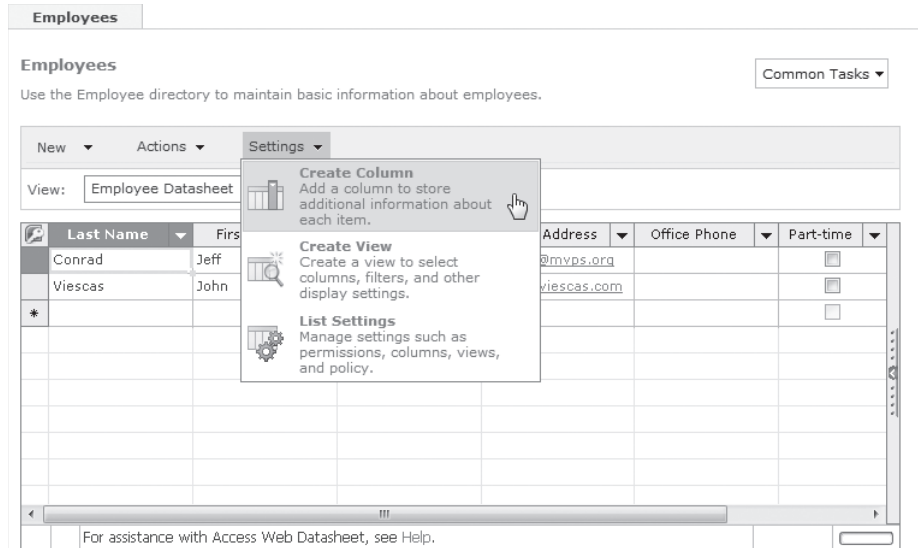


Figure 22-13 The Create Column command adds a new column to the list.

The Create Column page opens, on which you can assign properties for the new column, as shown in Figure 22-14. In Windows SharePoint Services, you assign the following properties for the new column:

- Name and Type
- Description
- Required
- Field Size
- Default Value
- Add To Default View

Depending on the data type you choose, this page displays additional options, such as the list of values for a Choice data type or the minimum and maximum values for a Number or Currency data type. After you assign your column properties, click OK and Windows SharePoint Services adds the new column to the list.

Now that we have added the column to the list, we must add the column to our Employee Datasheet view. (However, if the Datasheet view is the default view—which it isn't in this case—and we selected the Add To Default View check box to add the column to the default view when we created it, we can skip these steps.) We have already indicated which columns to display in the Employee Datasheet view so, by default, Windows SharePoint Services does not add this column to our custom view. To add the column to the custom view, we clicked the arrow to the right of View and then clicked the Modify This View command, as shown in Figure 22-15.

On the Edit Datasheet View page, you can modify the layout of the Employee Datasheet view, as shown in Figure 22-16. This page displays the name of each column with a check box to its left. Select the check box next to Middle Name to add this column to your custom view. A Position From Left box to the right of the column name lets you position each column in the view. In Figure 22-16, you can see we assigned the First Name column to the 1 position to have it appear first in the column order. When we changed the Position From Left value for the First Name column, the sequence of the other columns changed automatically. We then changed the position of the Middle Name column to 2. Windows SharePoint Services changed the sequence the other columns and assigned the Last Name column to the 3 position.

Edit Datasheet View: Employees

To customize this view further, use a Web page editor compatible with Windows SharePoint Services.

Common Tasks ▼

Delete OK Cancel

Name
Type a name for this view of the list.
Make the name descriptive, such as "Sorted by Author", so that site visitors will know what to expect when they click this link.

View Name:
Employee Datasheet

Web address of this view:
<https://viescas.officelive.com/Employees/Lists/employees/Employee Datasheet.aspx>

☐ Make this the default view
(Applies to public views only)

Columns
Select or clear the check box next to each column you want to show or hide in this view. To specify the order of the columns, select a number in the **Position from left** box.

Display	Column Name	Position from Left
<input checked="" type="checkbox"/>	Last Name (linked to item with edit menu)	2
<input checked="" type="checkbox"/>	First Name	1
<input checked="" type="checkbox"/>	Job Title	3
<input checked="" type="checkbox"/>	E-mail Address	4
<input checked="" type="checkbox"/>	Office Phone	5
<input checked="" type="checkbox"/>	Part-time	6
<input checked="" type="checkbox"/>	Middle Name	7
<input type="checkbox"/>	Alt. E-mail Address	8

Figure 22-16 You can adjust the display positions for the columns on the Edit Datasheet View page.

Note that you can change the name of the view on this page. You can also specify the Web page address, which by default will be the same as the name of the view. Finally, you can select the Make This The Default View check box to make this the view users see whenever they open the list. After you click OK to save the changes, you can see your revised Employee Datasheet view with the new Middle Name column, as shown in Figure 22-17. Windows SharePoint Services correctly positions the new column between the First Name and Last Name columns and places the First Name column first in the column order.

that you can use to restore deleted records, but you still might lose some very important data depending on when you made the last backup.

Windows SharePoint Services has a built-in Recycle Bin where you can easily recover deleted records and other Windows SharePoint Services Web site elements. Suppose, for example, we accidentally deleted John's record in our Employees list that we have been working on. We can go to the Recycle Bin on a SharePoint site by navigating to the site settings (click Common Tasks and then Modify This Application Or Workspace) and clicking Deleted Items under Recycle And Restore, as shown in Figure 22-18.

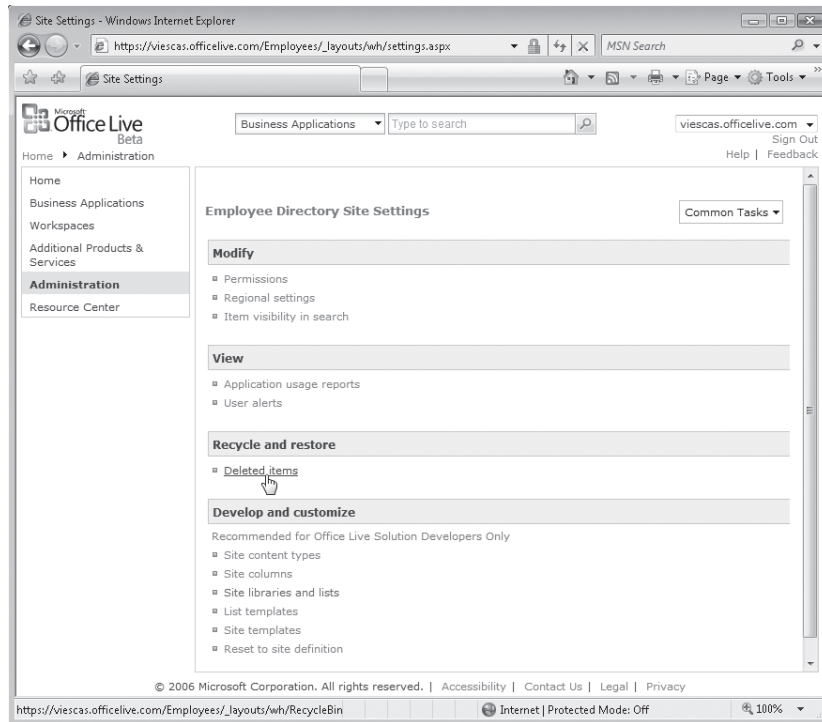


Figure 22-18 Windows SharePoint Services includes a Recycle Bin so you can recover deleted items.

After you click Deleted Items, Windows SharePoint Services displays the Recycle Bin for the Employee Directory, as shown in Figure 22-19. The Recycle Bin shows the type

of object deleted (in this case a record), the name of the deleted record, the original location of the list from which the record was deleted, who created the record, when the record was deleted, and the size of the record.

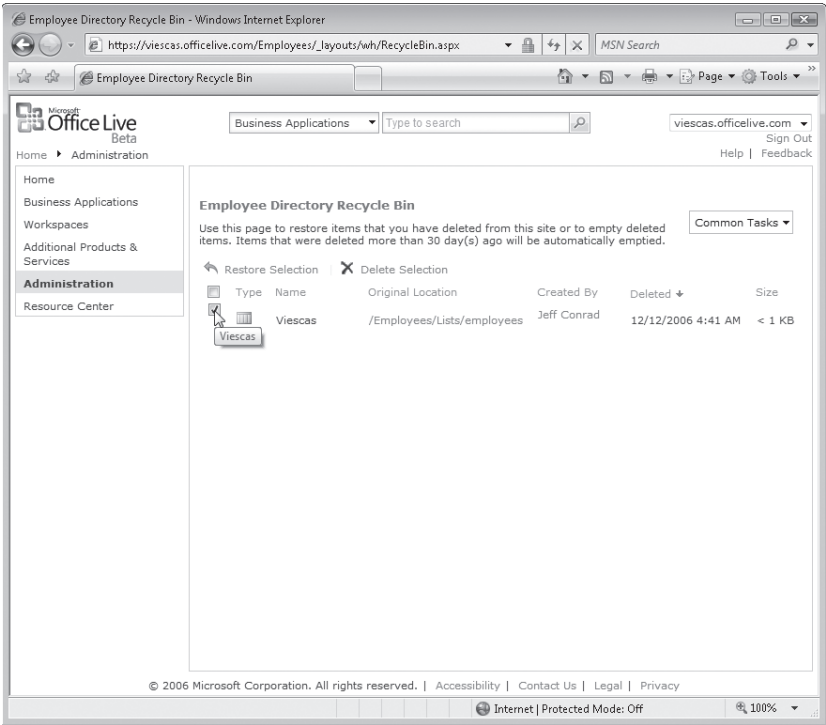


Figure 22-19 John's record can be restored from the Recycle Bin.

The Windows SharePoint Services Recycle Bin works in much the same way as the Windows Recycle Bin. The one difference is that Windows SharePoint Services automatically empties deleted items that were deleted longer ago than 30 days. To restore John's record, we selected the check box next to his record and then clicked the Restore Selection button. Windows SharePoint Services restored John's record to the correct list, as shown in Figure 22-20.

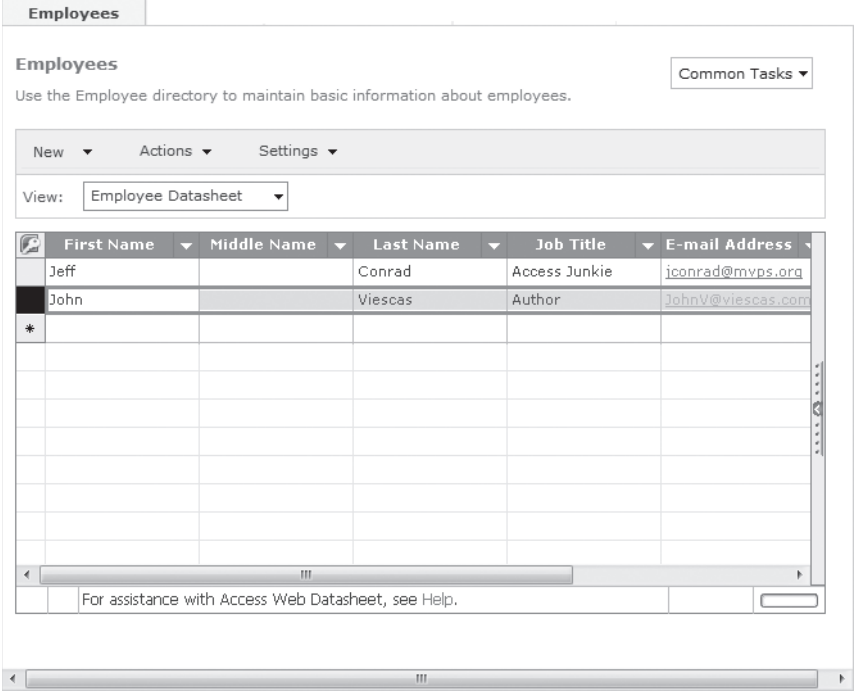


Figure 22-20 John's record has now been completely restored.

Using Windows SharePoint Services from Access

So far in this chapter you have read about how to work with lists within Windows SharePoint Services. You've learned how to edit data through different views, add new columns to your lists, and use the Recycle Bin to recover deleted records. Now that you are more familiar with how to work within the Windows SharePoint Services user interface, it's time to discover how you can leverage the power of Windows SharePoint Services within Access 2007.

Exporting Data to Windows SharePoint Services

In some situations you might find that data stored in Access 2007 for your own personal use needs to be shared by several users in different locations. You might find, for example, that a list of contacts you maintain locally in an Access data table in Oregon needs to be accessed by your sales force in Paris. By exporting this table to a SharePoint site, both you and your sales force can view, add, and edit the contact information from anywhere in the world.

Access 2007 makes the process of exporting data from a table very easy. Let's start by using the Contacts database template that comes with Access for an example. Open Access and click the Contacts database template icon in the middle of the screen. Browse to a location to save this file and name it Contacts. Click the Download button to download the database to your local computer. After Access opens the database, close the opening Contacts form so that only the Navigation Pane is visible. Click the Navigation Pane menu, click Object Type under Navigate To Category, and then click All Access Objects to display a list of all objects.

This Contacts database includes only one table—Contacts—with no records. To see how records are exported to a SharePoint site, you should add some records to this table. Open the Contacts table in Datasheet view and add a couple of records of contact information, as shown in Figure 22-21.

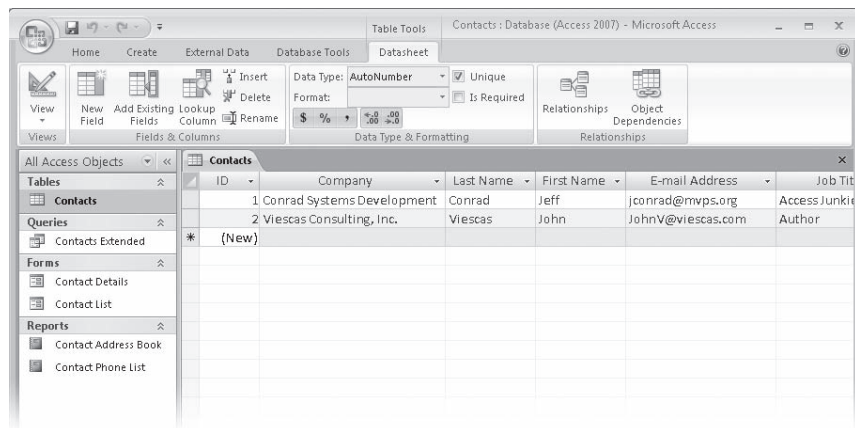


Figure 22-21 Enter some contact records before exporting the Contacts table to a SharePoint list.

Now that you have created some records, close the Contacts table. As you learned in Chapter 6, “Importing and Linking Data,” all import and export commands are located on the External Data tab of the Ribbon. Select the Contacts table in the Navigation Pane, and then on the External Data tab, in the Export group, click the SharePoint List button, as shown in Figure 22-22. Alternatively, you can right-click the table in the Navigation Pane, click the Export command on the shortcut menu that appears, and then click SharePoint List on the submenu.

Access opens the Export – SharePoint Site wizard, as shown in Figure 22-23. Under Specify A SharePoint Site, enter a valid address to a SharePoint site or subdirectory. Any SharePoint sites that you have previously imported from, linked to, or exported to are displayed in a list box. If one of these sites is the location to which you want to export the table, you can click that address and Access fills in the address text box below the list with that link. Enter a valid Windows SharePoint Services address in the text box below the list, or select a previously visited Windows SharePoint Services address from the list box.

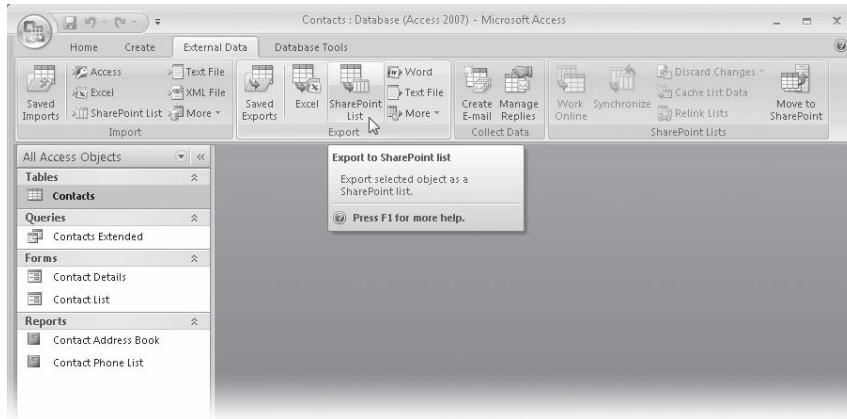


Figure 22-22 Click the SharePoint List button to start the Export – SharePoint Site wizard.

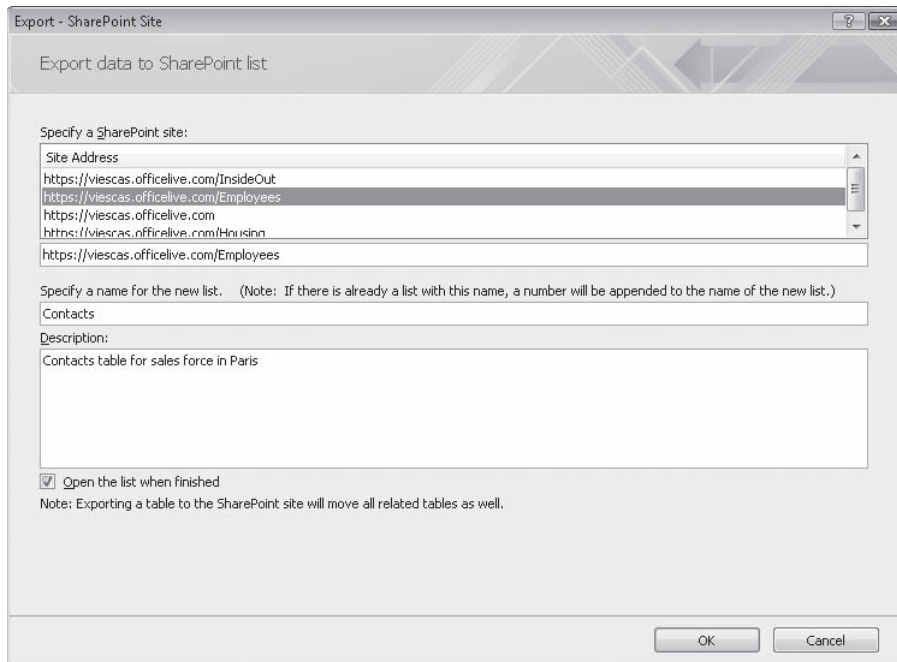


Figure 22-23 The Export – SharePoint Site wizard helps you export a table to a SharePoint list.

Under Specify A Name For The New List, give this new list a name. Keep in mind that the name you use is exactly how it appears to users on the SharePoint site. If you name it tblContacts, for instance, that is exactly how the name is displayed to users. For our example, we kept the default name of Contacts that Access used. Also, if you use the same name as an existing list, Windows SharePoint Services appends a number to the end of the name to avoid duplication. For example, if a Contacts list is already present on our site, the new list is named Contacts1.

Under Description you can optionally enter some information to describe the use of this list. This description is shown on the SharePoint site next to the name of the list. For our example, we entered a description of “Contacts table for sales force in Paris,” which you can see in Figure 22-23. Select the Open The List When Finished check box if you want Access to immediately display the new list in your browser after the export is complete. The wizard also displays a message noting that any tables related to this one are also going to be exported to the SharePoint site. We’ll discuss this concept later in the chapter. Click OK to start the export process. If you are not logged on to your SharePoint site, you might be prompted to enter your logon information before continuing. During the export process, Access displays a message screen with progress indicators.

The duration of the export process depends on how many tables you are exporting, your connection speed, and the amount of data being transferred. In our simple test of this Contacts table using a high-speed connection, Access completed the task in only a few seconds. If you selected the Open The List When Finished check box in the Export – SharePoint Site wizard, your browser should open, displaying the Contacts list on the SharePoint site, as shown in Figure 22-24. You can see the name of the list, Contacts, as well as the optional description we entered in the wizard. By default, Windows SharePoint Services shows an All Items view for all lists; in this case it is called All Contacts, which shows both contact records. In our example, our sales force can now view, add, and edit these records in their Paris office using their browser.

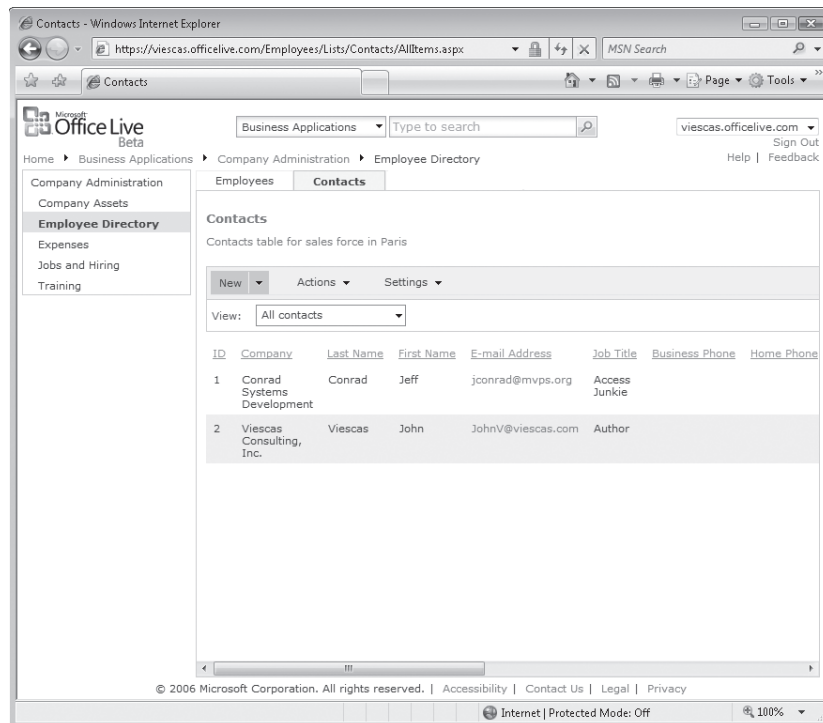


Figure 22-24 Your new Contacts table is now displayed as a list on the SharePoint site.

When the export is complete, Access displays a confirmation message on the last page of the wizard, as shown in Figure 22-25. This page also offers you the option to save the export steps you just performed if you plan to repeat these steps on a regular basis. You can execute saved exports by clicking the Saved Exports button in the Export group on the External Data tab of the Ribbon. If the export process encounters any problems, Access displays a message on this page informing you of the errors and creates a local table of those it encounters. We'll discuss this error table later in the chapter. Click Close to close the wizard.

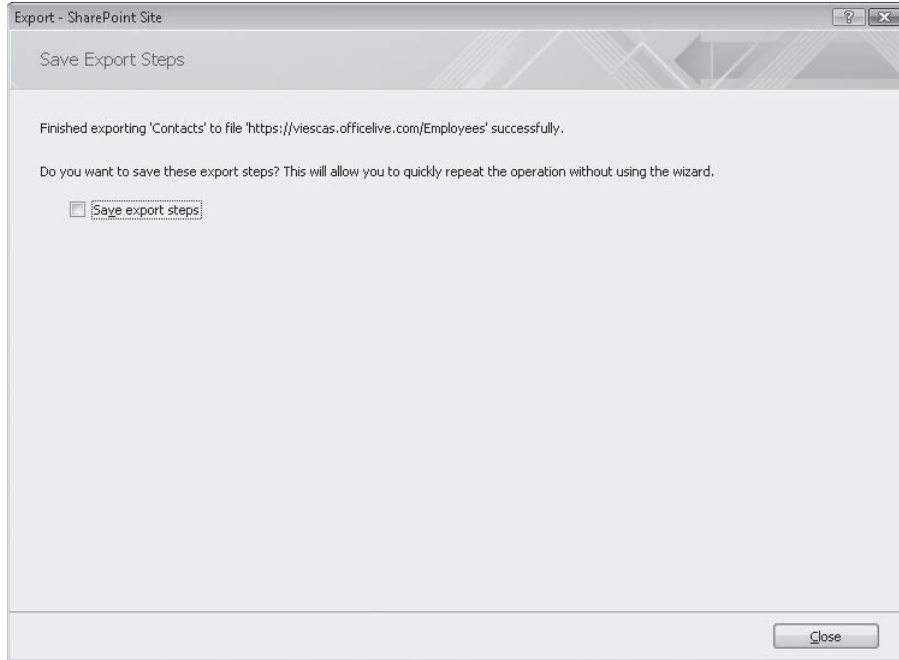


Figure 22-25 Access confirms whether the table export was successful on the last page of the wizard.

Importing a List from Windows SharePoint Services

Importing a list into Access 2007 from a SharePoint site works in much the same way as exporting a table. In this case, you are downloading data from a SharePoint site and saving a local copy of the data in an Access table. After Access creates the table and imports the records, you can use all the powerful tools at your disposal in Access—queries, forms, and reports—to analyze the data.

Continuing with our Contacts table example, let's import the Contacts list from the SharePoint site to the Contacts database we created earlier. You already have a

Contacts table in this database, so if you import the list, Access appends a number (in this case, 1) to the name of the imported table—Contacts1. You can either temporarily rename the existing Contacts table in your database to a new name, perhaps OldContacts, or just delete the table. We deleted the existing Contacts table by right-clicking the table in the Navigation Pane and clicking Delete on the shortcut menu.

Begin the import process by opening the Contacts database in Access and on the External Data tab, in the Import group, clicking the SharePoint List button, as shown in Figure 22-26.

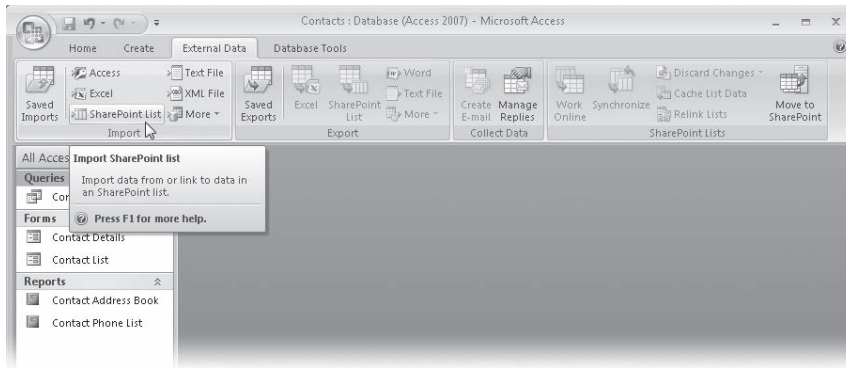


Figure 22-26 Click the SharePoint List button to start the import process.

Access opens the first page of the Get External Data – SharePoint Site wizard, as shown in Figure 22-27. You can use this wizard to either import or link to Windows SharePoint Services lists. We'll discuss linking in the next section. Under Specify A SharePoint Site, enter a valid address to a SharePoint site or subdirectory. Any SharePoint sites that you have previously imported from, linked to, or exported to are displayed in a list box. If one of these sites is the location from which you want to import the table, you can click that address and Access fills in the address text box below the list with that link. Enter a valid Windows SharePoint Services address in the text box, or select a previously visited Windows SharePoint Services address from the list box. Select the first option, Import The Source Data Into A New Table In The Current Database, to import the list and records to a local table and then click Next.

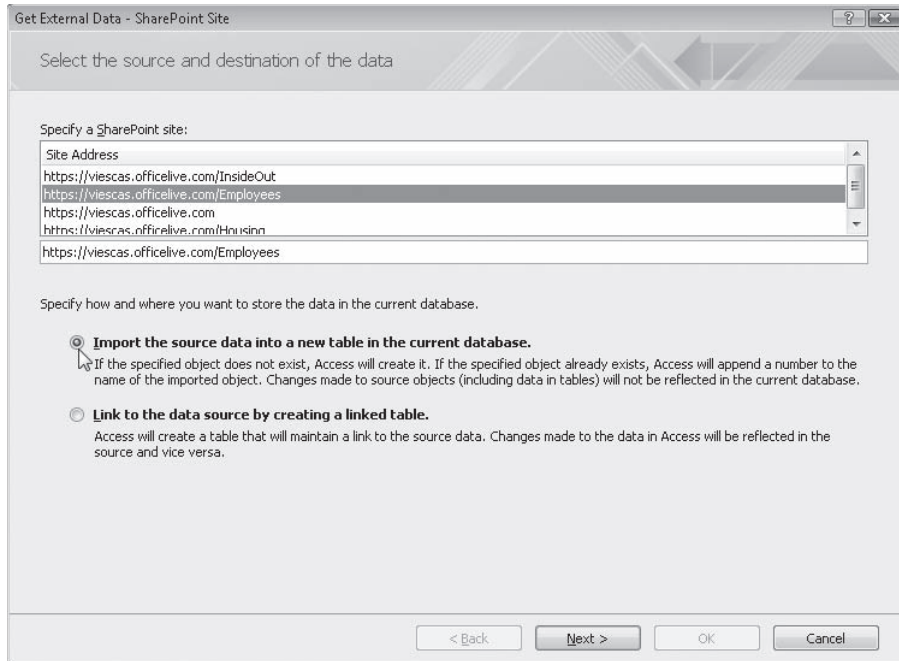


Figure 22-27 You can import or link to Windows SharePoint Services lists using this wizard.

The second page of the wizard displays all the lists found in the SharePoint site directory that you specified on the previous page, as shown in Figure 22-28. Select a check box in the Import column to specify which list to import to Access. The Type column displays icons representing the different types of lists. User-defined lists, for example, are shown in orange, and built-in Windows SharePoint Services lists are shown in gray. The Name column displays the names of the lists on the SharePoint site. The fourth column, Items To Import, shows a list of views. If the list has more than one view defined in Windows SharePoint Services, you can select which specific view you want to import. The default view, All Contacts, is the only view defined in our example. The last column, Last Modified Date, displays the date the list was last modified.

Near the bottom of this page is an option to import the display values from any lookup fields instead of the actual lookup field ID. If you think a list has one or more related lookup lists, and you want to fetch the linking ID instead of the lookup value, clear this check box so that you fetch the actual ID value. For example, if an Orders list is related to a Customers list, clearing this check box fetches the Customer ID instead of the customer name that might be defined in a lookup. If you leave this item selected, you'll see the customer name imported in the Customer ID field. In this case there are no related or lookup tables for Contacts, so this option does not apply.

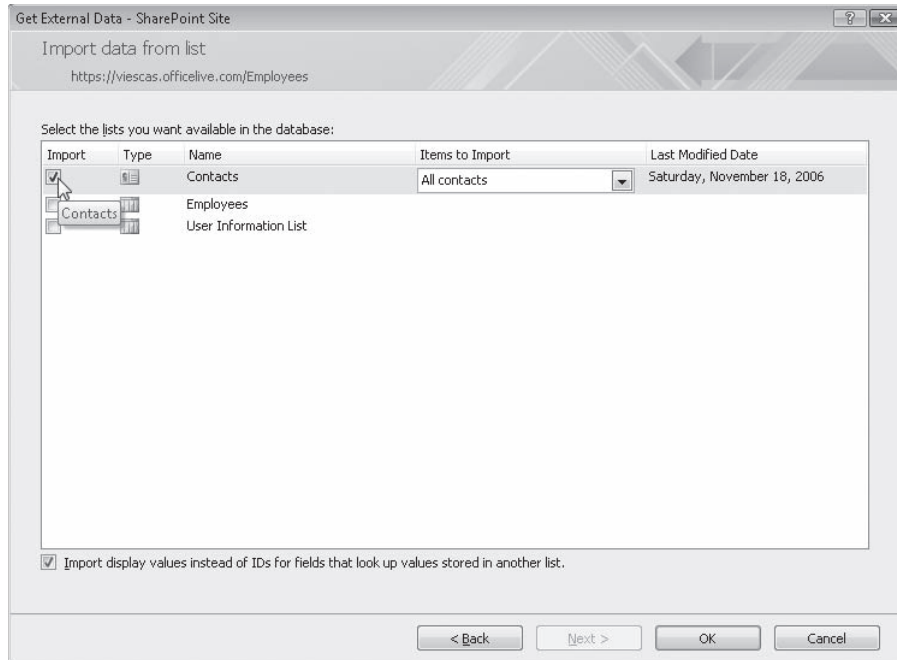


Figure 22-28 Select which lists to import to Access on the second page of the wizard.

Select the check box for the Contacts list, leave the other options set to their defaults, and then click OK to begin the import process. Access creates a new local table in your database and then imports the records. After the import process is complete, Access displays the last page of the wizard, as shown in Figure 22-29. A message at the top of this page indicates whether the import process was a success or if any problems were encountered. The wizard also displays an option to save your import steps in case you want to perform the exact import procedure again in the future. You can execute saved imports by clicking the Saved Imports button in the Import group of the External Data tab on the Ribbon. Click Close to dismiss the wizard.

Access now displays the new Contacts table in the Navigation Pane. Open the table in Datasheet view to confirm that the table includes the two contacts records, as shown in Figure 22-30. You can now analyze the data using queries and reports or build data entry forms for adding records to the table or editing them. Note, however, that you've made a *copy* of the data stored on the SharePoint site. Any changes you make to the local copy won't be reflected in the Web site list. If you want to be able update the data in the list directly from Access, read on to the next section.

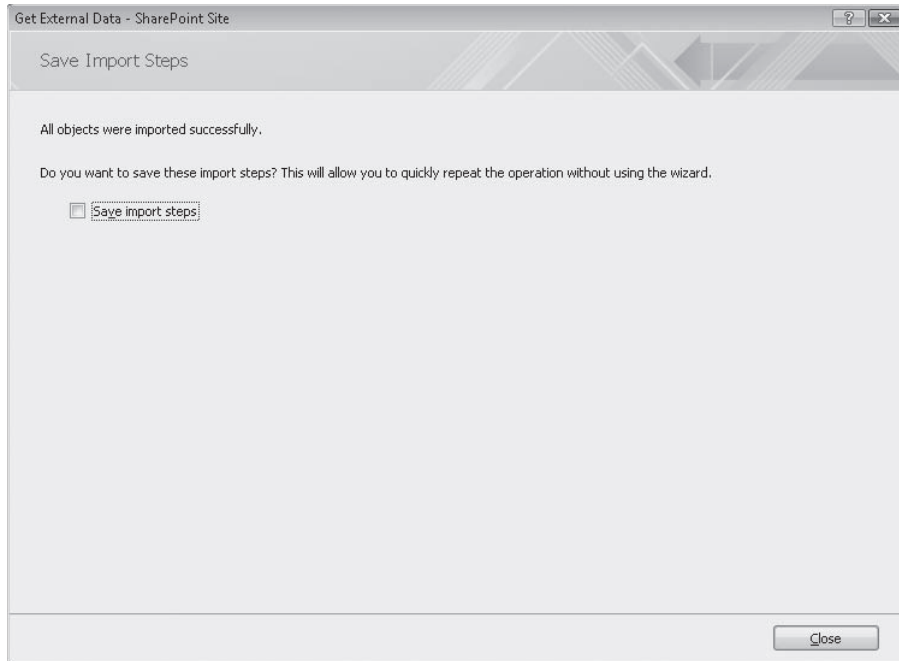


Figure 22-29 The last page of the wizard asks if you want to save the import steps.

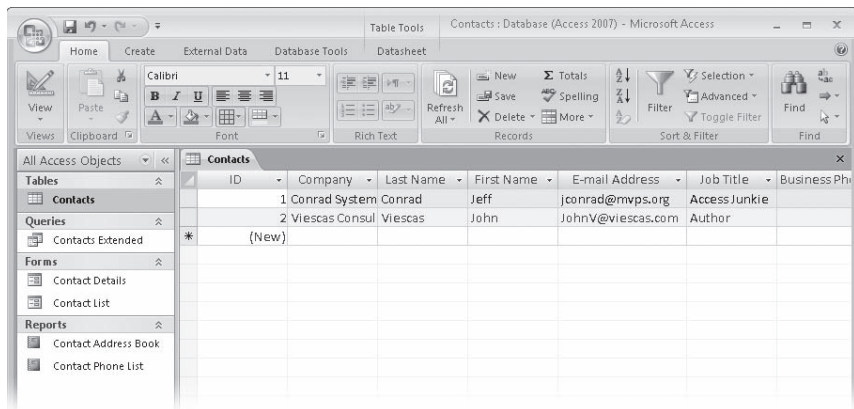


Figure 22-30 The Contacts list from the SharePoint site has now been imported as a local table into Access.

TROUBLESHOOTING

Why doesn't my imported Windows SharePoint Services list include all the records?

Earlier in this chapter, you learned how to create different views of a list in Windows SharePoint Services. You can define filters, include only certain columns, and assign sort orders to a custom view. If your custom view restricts the number of records returned, Access follows those rules and imports only those specific records. So, for example, if you define a custom view that shows only contacts whose last name equals Viescas and then import that view into Access, the only records imported are ones where the last name equals Viescas. If you need to import all the records into Access, make sure you import a view that returns all the records in the list.

Linking a Windows SharePoint Services List into Access

As you might recall from Chapter 6, we discussed the differences between deciding to import from or link to another data source. If you need to share your data with other users or if the data changes frequently, you should consider linking to instead of importing from another data source. You just imported a Contacts list from a SharePoint site to an Access database. If you add new records, edit existing records, or delete records in this table, these changes are not reflected in the list on the SharePoint site. This can be problematic if all users need to have the most up-to-date data available to them. You could make changes to your local table and then export the table to the SharePoint list, but what if another user had also made changes to the records in the list? You can see the dilemma this causes when trying to keep accurate data.

Fortunately, with Access you can link to a SharePoint site just as you can to other data sources. If you export an Access table to Windows SharePoint Services and then link it back, this allows both your desktop application users and authorized members of your Windows SharePoint Services team to work with and update the same data. To link to a SharePoint list from Access, click the SharePoint List button in the Import group on the External Data tab, as shown in Figure 22-31.

Access opens the first page of the Get External Data – SharePoint Site wizard, shown in Figure 22-32. This particular wizard is the same one you used for importing lists from a SharePoint site in the previous section. Enter a valid Windows SharePoint Services address in the address text box below the list of previously visited sites or select a previously visited Windows SharePoint Services address from the list box. Select the second option, Link To The Data Source By Creating A Linked Table, to link to an existing list on a SharePoint site and then click Next.

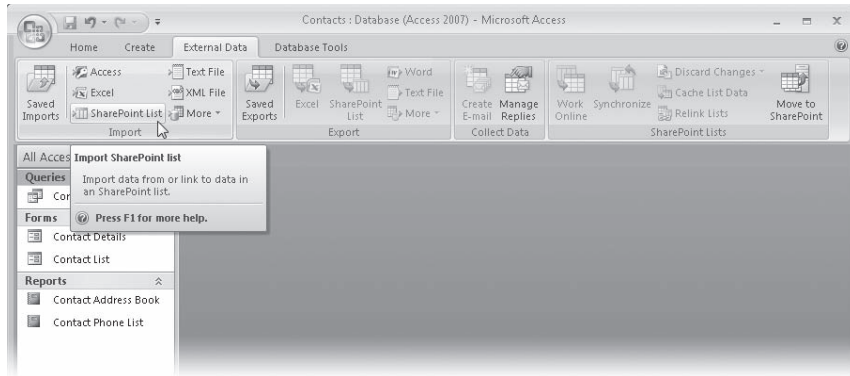


Figure 22-31 Click the SharePoint List button to start the Get External Data – SharePoint Site wizard.

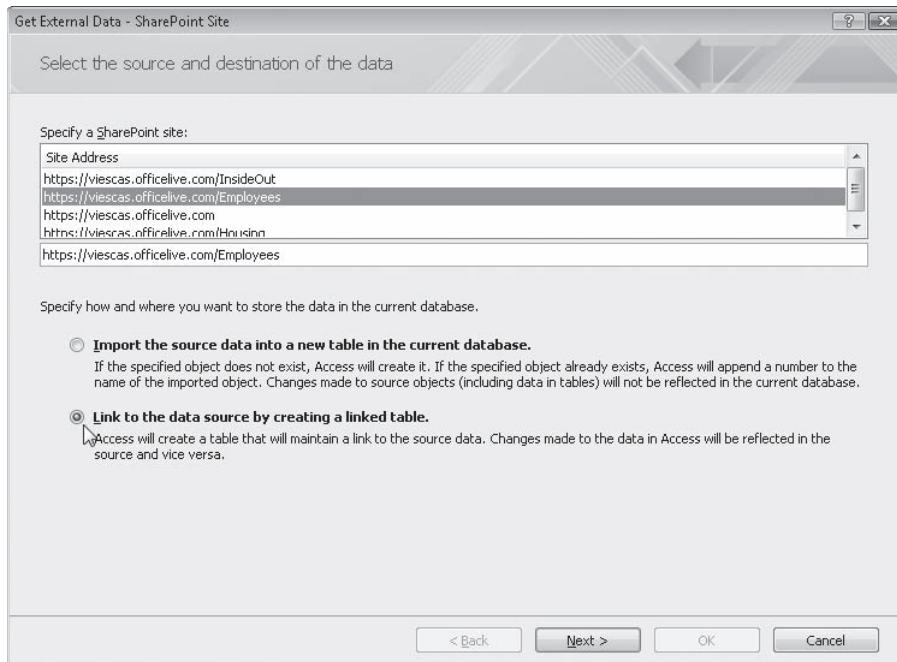


Figure 22-32 Select the link option on the first page of the wizard to link to a list.

The second page of the wizard displays all the lists found in the SharePoint site directory that you specified on the previous page, as shown in Figure 22-33. Select a check box in the Link column to specify which list you want to link to Access. The Type column displays icons representing the type of list. User-defined lists, for example, are shown in orange when clicked, and built-in Windows SharePoint Services lists are shown in gray when clicked or not clicked. The Name column displays the names of the lists on the SharePoint site. The last column, Last Modified Date, displays the date the

list was last modified. Select the Link check box next to Contacts and then click OK to start the link process.

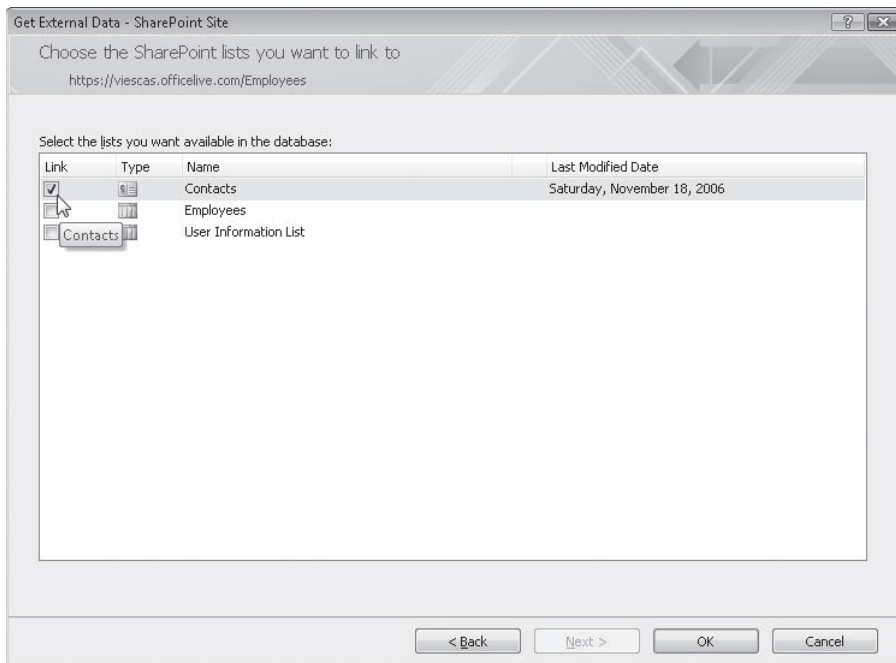


Figure 22-33 Select the list you want to link to on this wizard page.

Note

You'll notice in Figure 22-33 that you cannot select any views on a SharePoint site as you can when you are importing a list. Access allows you to link only to the full list as opposed to views created from lists.



Access creates a link to the Windows SharePoint Services Contacts list and marks the icon for linked Windows SharePoint Services tables in the Navigation Pane with a blue arrow, as shown in Figure 22-34. If Access finds a duplicate name, it generates a new name by adding a unique integer to the end of the name as described earlier. Because objects such as forms, reports, macros, and modules might refer to the linked table by its original name, you should carefully check name references if Access has to rename a linked table.

On the status bar at the bottom of the Access window shown in Figure 22-34, you'll notice that Access displays Online With SharePoint. This message appears on the status bar whenever you have any active links to a SharePoint site.

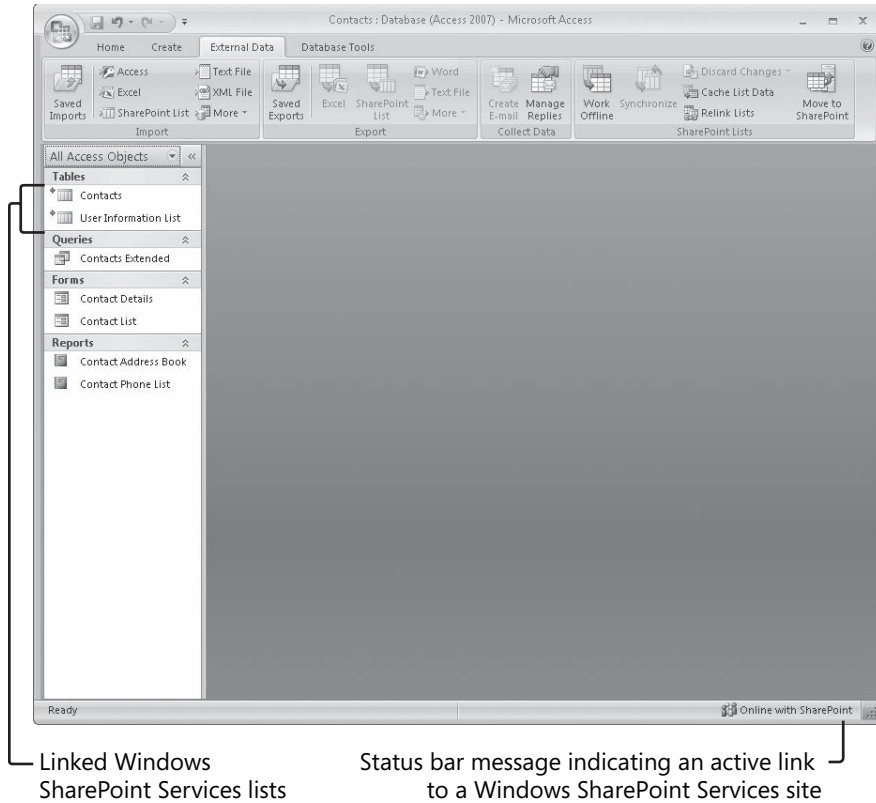
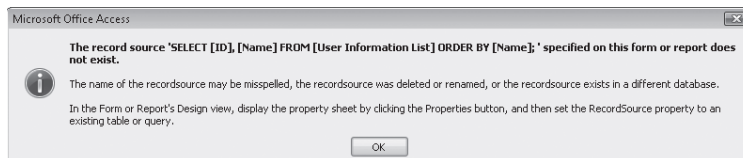


Figure 22-34 Access now has a link to the Contacts list on the SharePoint site.

INSIDE OUT

Do Not Delete the User Information List Link!

You might have noticed that Access created a link to the User Information List in addition to the Contacts list, even though you did not explicitly link to that list. Access adds links to other related lists such as those used for lookup values. Every list in Windows SharePoint Services includes hidden columns for Created By and Modified By dates, and this data is stored in the User Information List in Windows SharePoint Services. If you delete this link, Access displays error messages, like this one, whenever you attempt to update records in the list.



You can now use this Contacts list just like the original table in this application. In Figure 22-35, you can see that we opened the Contact List form in Access bound to the linked table, and both contact records are there. If you add a new record to the Contacts table using this form, the Contacts list on the SharePoint site is also updated. Note that using data from a SharePoint list as a linked table in Access requires a high-speed Internet connection or local area connection to your intranet server. Performance will be poor over a dial-up connection.

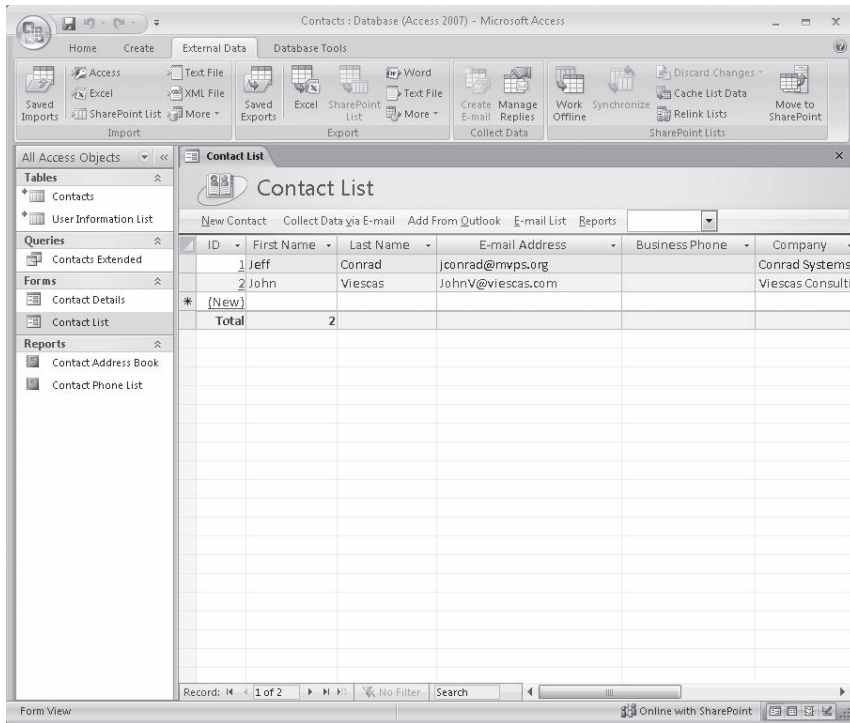


Figure 22-35 You can update a linked SharePoint list just like local tables or tables linked to other data sources.

Also note that Windows SharePoint Services doesn't enforce referential integrity. If you use Windows SharePoint Services lists as the tables in your application, your application must perform additional checks to ensure that data integrity is maintained. For example, you might have a Contact Events list that includes the Contact ID field from the Contacts list. Before allowing a user to delete a Contacts record, you should check to see that no related records exist in the Contact Events list. If records exist, you can either delete them or disallow deleting the Contacts records. You'll learn more about working with recordsets in code behind forms in Chapter 20, "Automating Your Application with Visual Basic."

Using SharePoint List Options with Linked Lists

When you have a linked list, Access 2007 offers several options for interacting directly with the SharePoint site interface through a shortcut menu. If you've been following along to this point, you should still have an active link to the Windows SharePoint Services Contacts list. Close the Contact List form if it's still open, and then right-click the Contacts table link in the Navigation Pane, as shown in Figure 22-36.

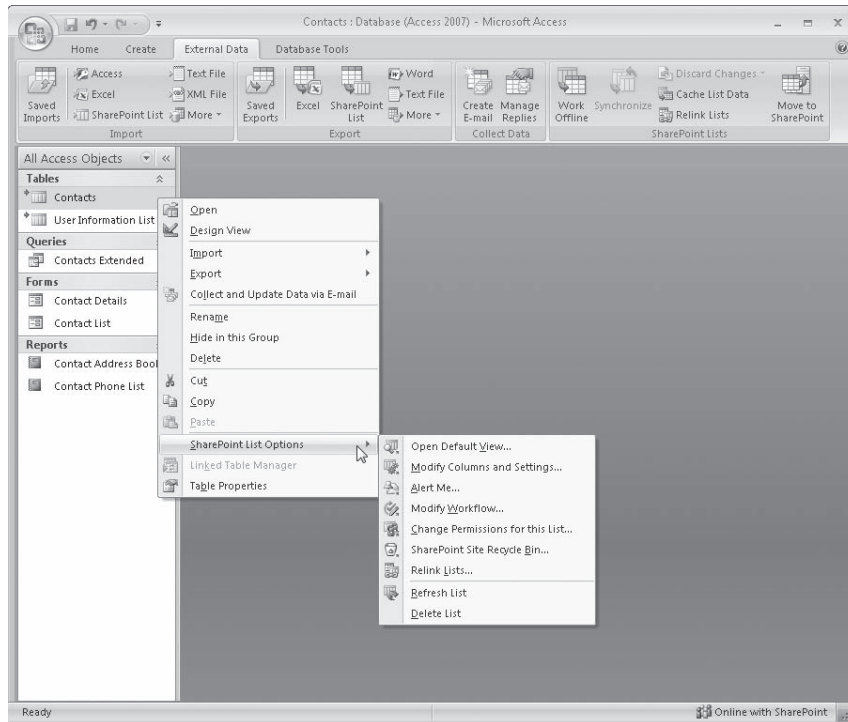
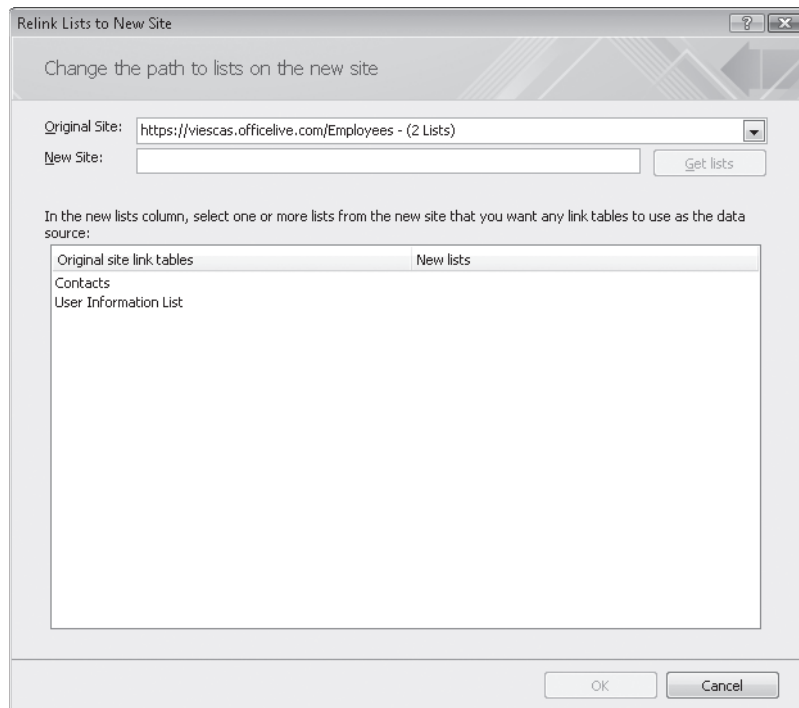


Figure 22-36 You can interact directly with the Windows SharePoint Services interface from within Access by using commands on the shortcut menu of a linked list.

You can do any of the following from the SharePoint List Options submenu:

- **Open Default View** This option sends a command to the SharePoint site and opens the default view for the list. In our example, Windows SharePoint Services displays the All Contacts view.
- **Modify Columns And Settings** This option opens a page where you can modify the design of the list. Similarly to modifying a table in an Access database, you can rename columns, change data types, change the sequence of columns, delete columns, or add new columns.
- **Alert Me** This option opens a page on the SharePoint site where you can set options to be notified via e-mail if any data is added to this list, if data is modified, or even if data is deleted.

- **Modify Workflow** This option takes you to the Workflow page for this list where you can modify existing workflow rules or add new workflow rules. You can use workflow rules to attach business logic to items in a SharePoint, similarly to setting validation rules in an Access table.
- **Change Permissions For This List** This option opens a page on the SharePoint site where you can view and change the users and their permissions levels.
- **SharePoint Site Recycle Bin** This option opens the Recycle Bin page on the SharePoint site where you can restore items (lists, views, rows, and so on) to your site or permanently delete them. Windows SharePoint Services stores elements in the Recycle Bin for 30 days and automatically purges anything left in the Recycle Bin longer than that.
- **Relink Lists** This option opens the Relink Lists To New Site dialog box so that you can relink your lists to a new SharePoint site location. This dialog box, shown here, works in much the same way as the Linked Table Manager for relinking tables when the data source location has changed. You might need to use this facility if you have moved your lists to a new Web site.



- **Refresh List** This option causes Access to refresh the list from the SharePoint site.

- **Delete List** This option deletes the selected list from the SharePoint site. Access displays a message asking you to confirm the deletion. If you accidentally delete a list by mistake, you can recover it in the Recycle Bin.

Note

When you open a database that has tables linked to Windows SharePoint Services lists and if you're not currently logged on to your SharePoint site, you'll see a standard Web site logon dialog box where you must enter your user name and password and click OK.

Creating a New Windows SharePoint Services List from Within Access

Access 2007 also includes a powerful new feature that lets you dynamically create new lists on a Windows SharePoint Services site. With only one click on a Ribbon button and a few wizard options to set, you're essentially creating a new table as a list directly in Windows SharePoint Services. We'll continue using our Contacts database and our existing SharePoint site to demonstrate this functionality. If you have any objects open in this database, close them so that you see only the Navigation Pane. On the Create tab, in the Tables group, click the SharePoint Lists button. Access displays a menu of six options, as shown in Figure 22-37.

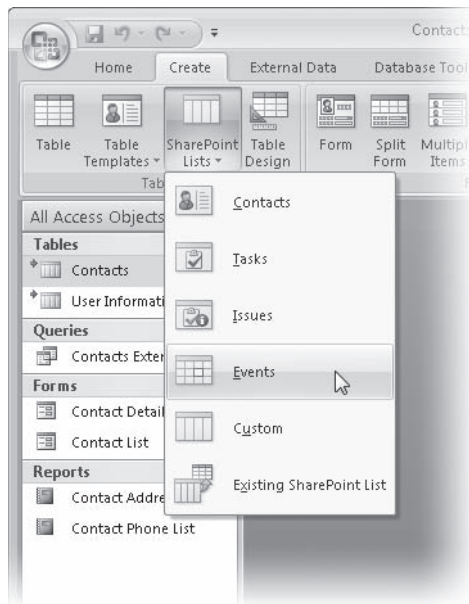


Figure 22-37 You can create new lists on a SharePoint site from within Access.

Using an Existing List Template

The first four options—Contacts, Tasks, Issues, and Events—create a new list on the SharePoint site and a table in Access that links to that list using a built-in template. These first four options are commonly used list styles on a SharePoint site. The Custom option, discussed in the next section, creates a new list on the SharePoint site with only three visible columns—ID, Title, and Attachments. The Existing SharePoint List option opens the Get External Data – SharePoint Site wizard to import or link to a Windows SharePoint Services list.

Let's step through creating a new Events list on the SharePoint site so that we can coordinate vacation scheduling with our sales force in Paris. Click the Events option on the SharePoint Lists menu, as shown in Figure 22-37. Access opens the Create New List wizard, shown in Figure 22-38. Under Specify A SharePoint Site, enter a valid address to a SharePoint site or subdirectory on that site. Enter a valid Windows SharePoint Services address in the text box or select a previously visited Windows SharePoint Services address from the list box.

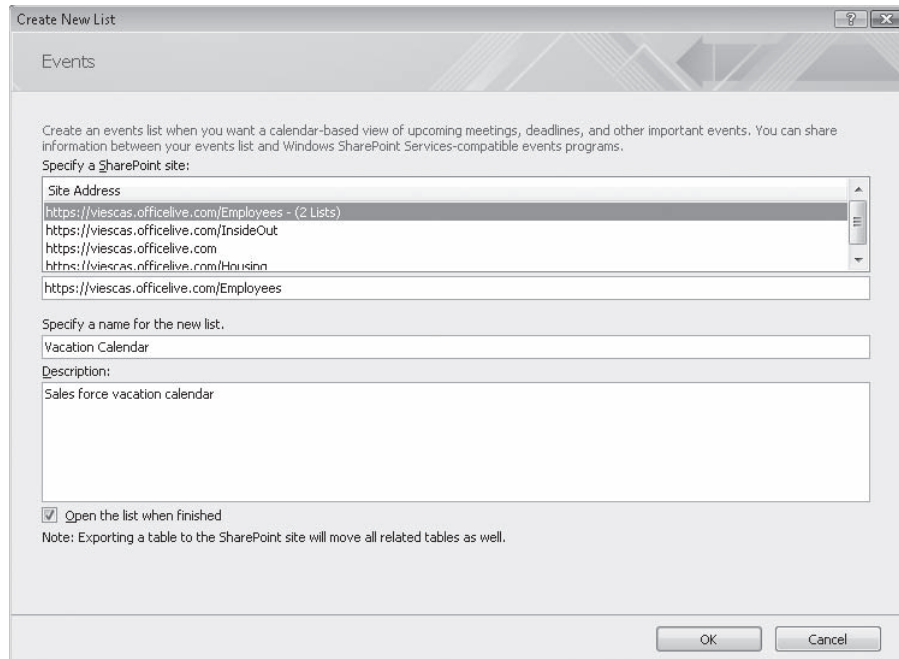


Figure 22-38 To create a new list, specify a name for the list and the location of the SharePoint site.

Under Specify A Name For This List, give this new list a name. Keep in mind that the name you use is exactly how it appears to users on the SharePoint site. We decided to name our new list Vacation Calendar. Under Description you can optionally enter some information to describe the use of this list. We entered a description of “Sales force vacation calendar,” which you can see in Figure 22-38. This description appears on the SharePoint site next to the name of the list. Leave the Open The List When Finished

check box selected so that Access immediately displays the new table in Datasheet view after you create the list. Click OK to create the new list.

Access sends commands to the SharePoint site to create the new list and then creates a new table linked to the Vacation Calendar list. Access also opens the new table in Datasheet view, as shown in Figure 22-39. This new table has 21 fields, such as Location, Start Time, End Time, and Description, which you can use to describe an event.

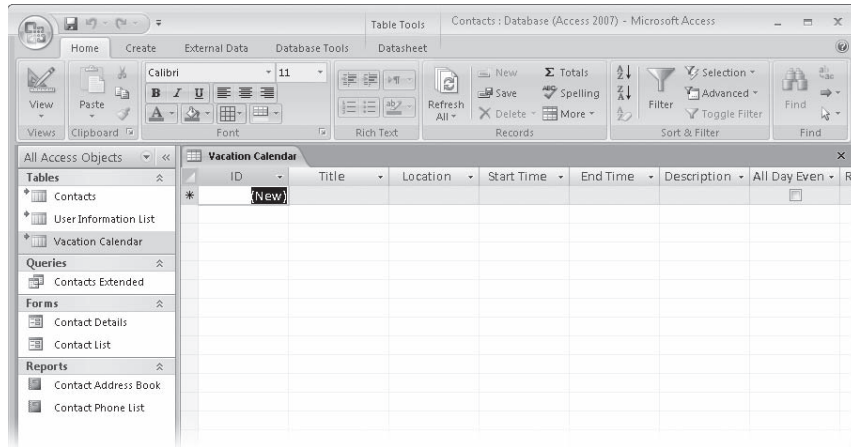


Figure 22-39 Access created a new list on a SharePoint site and a table linked to the list.

If you use Internet Explorer to navigate to the address you specified for the list, you should now see the new Vacation Calendar list on the SharePoint site. This type of list is perfectly suited for display in a Calendar view. As you can see in Figure 22-40, the default view for the Vacation Calendar list is Calendar. The Vacation Calendar list also has two other views—All Events and Current Events—that display the records in a more traditional Datasheet view. At the moment, the Calendar view is empty because no records have been created in the list.

Switch back to Access, and let's add a new record to the table to see how easily we can interact with the Calendar view on the SharePoint site. Our sales manager, John, is going to be on vacation from October 30 through November 3. You can enter this data directly into the table's Datasheet view in Access, or you could build a data entry form. As you learned in Part 3 of this book, you have a lot more control over how data is entered if you use a form instead of entering data directly into a table datasheet, but for this simple exercise we entered John's vacation schedule into the table's Datasheet view, as shown in Figure 22-41. (If you're following along with this example, select a start and end time within the current month.)

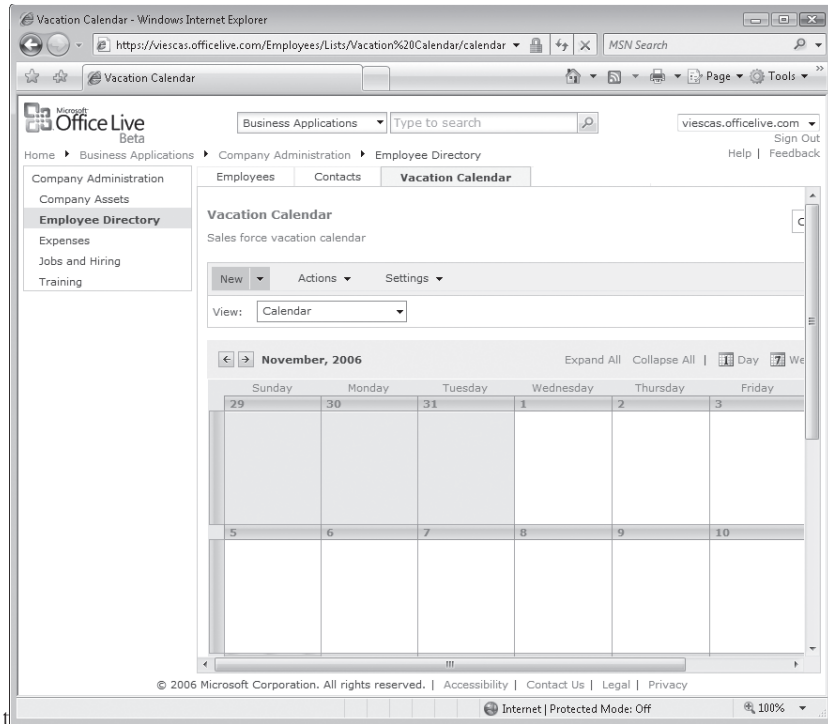


Figure 22-40 By default, the new Vacation Calendar list is displayed in Calendar view.

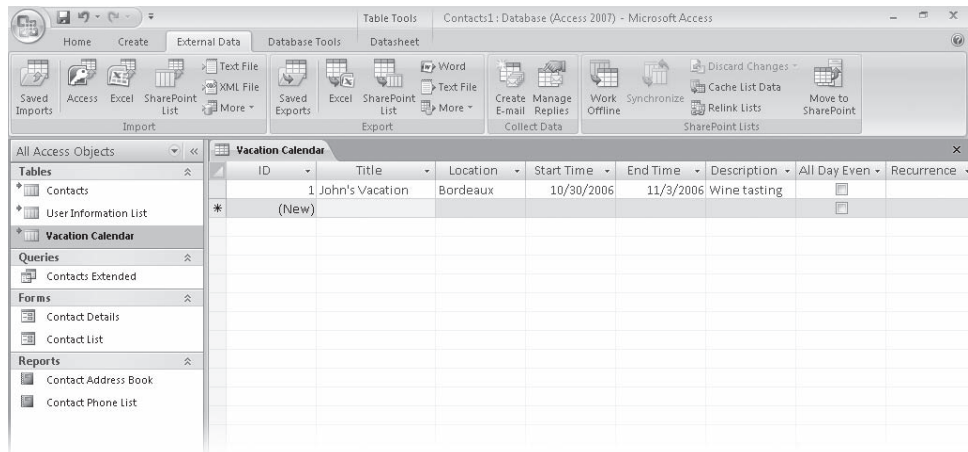


Figure 22-41 Enter a vacation record into the table to see it displayed on the SharePoint site.

After you move from the record or save it by clicking the Save button in the Records group on the Home tab, Access saves the information on the Windows SharePoint Services site. Go to the Windows SharePoint Services site using your browser, click the Refresh button, and navigate to the appropriate month and year to see the changes reflected in the Calendar view, as shown in Figure 22-42. John's vacation schedule can now be seen by any users of our Windows SharePoint Services site.

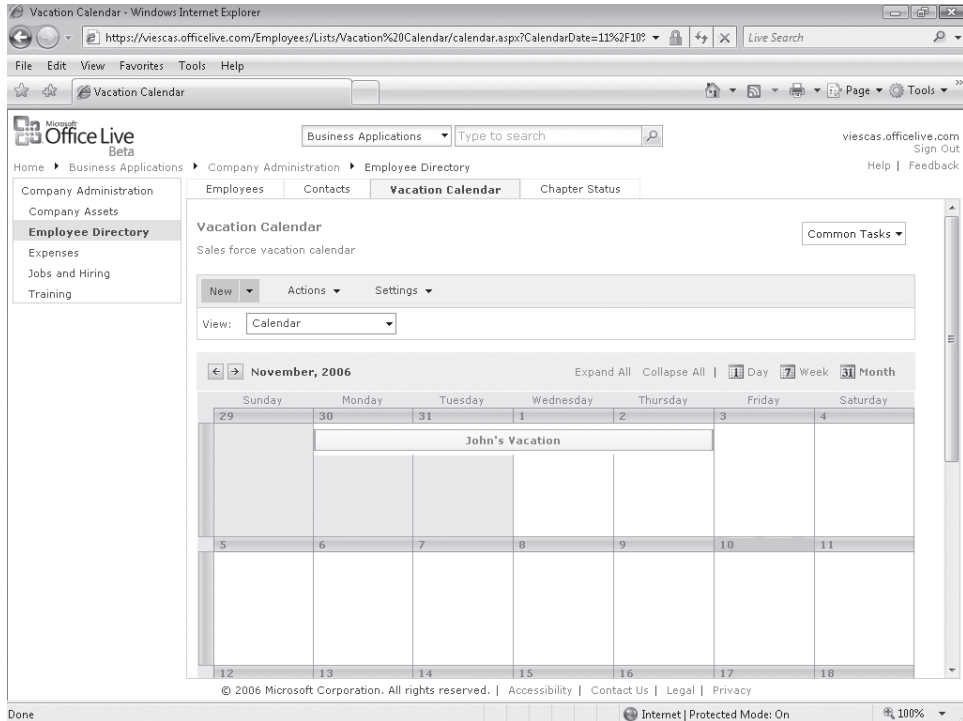


Figure 22-42 John's vacation schedule now appears as a block of time in the Calendar view.

If you click on the block of time in the Calendar view, Windows SharePoint Services displays a single-list view showing the details of John's record that we entered in Access, as shown in Figure 22-43.

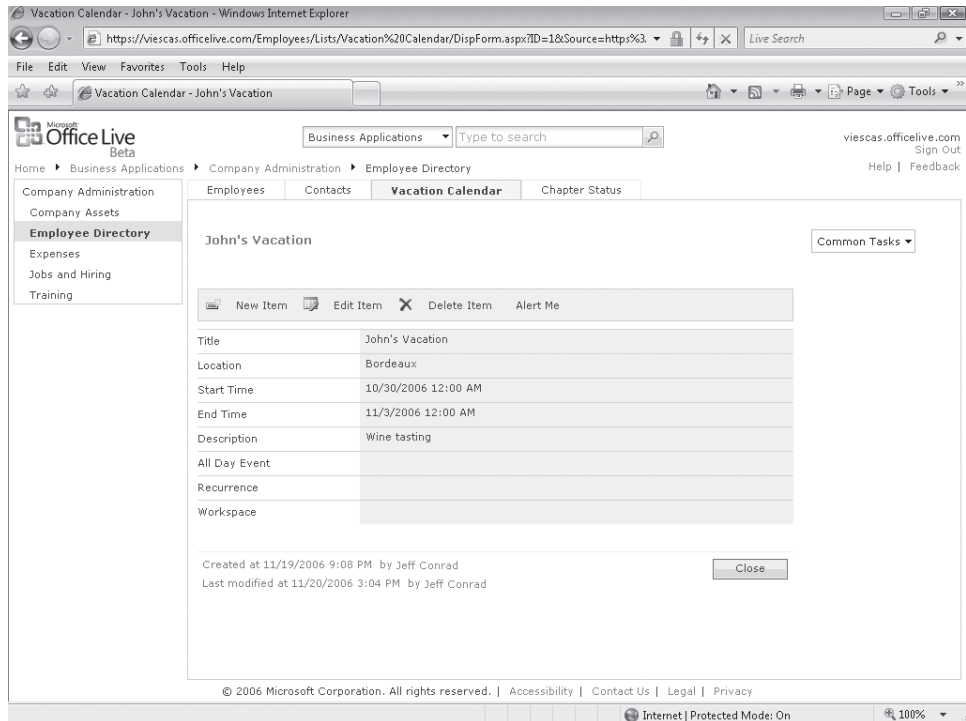


Figure 22-43 The single-list view shows the details of John's schedule.

Creating a Custom List

You can also create a new custom list on a SharePoint site through Access 2007. When you choose this option, Windows SharePoint Services does not use one of its built-in templates for the list structure. In Access, if you have any database objects open, close them now so that only the Navigation Pane is visible. On the Create tab, click the SharePoint Lists button in the Tables group, as shown in Figure 22-44.

Next, click the Custom option. Access opens the Create New List wizard, as shown in Figure 22-45. Enter a valid Windows SharePoint Services address in the text box or select a previously visited Windows SharePoint Services address from the list box. Under Specify A Name For This List, we entered Chapter Status. In the Description box we entered "Status of chapters for Microsoft Press," as you can see in Figure 22-45. Leave the Open The List When Finished check box selected and then click OK to create the new list.

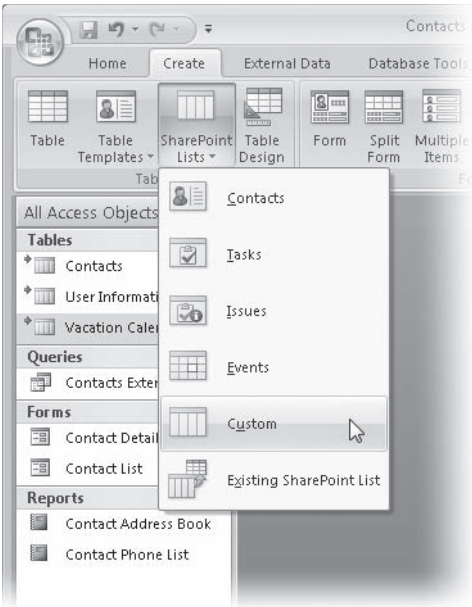


Figure 22-44 Click the Custom option to create a custom list on the SharePoint site.

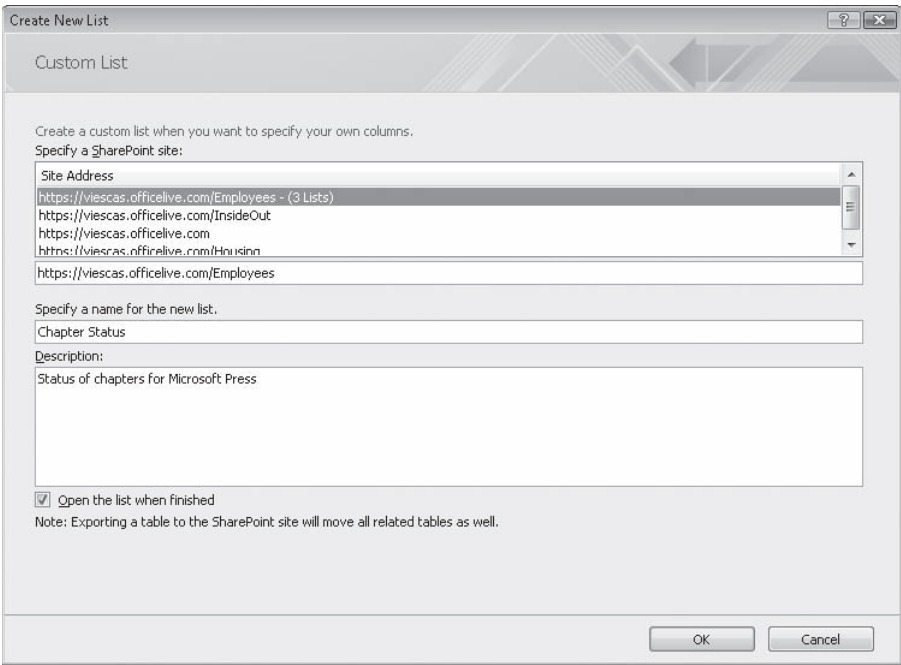


Figure 22-45 Enter a name for the custom list and the location of the SharePoint site.

Access instructs Windows SharePoint Services to create a new default list, creates a table linked to the list, and opens the new list in Datasheet view, as shown in

Figure 22-46. A Windows SharePoint Services custom list by default contains only ID, Title, and Attachments columns.

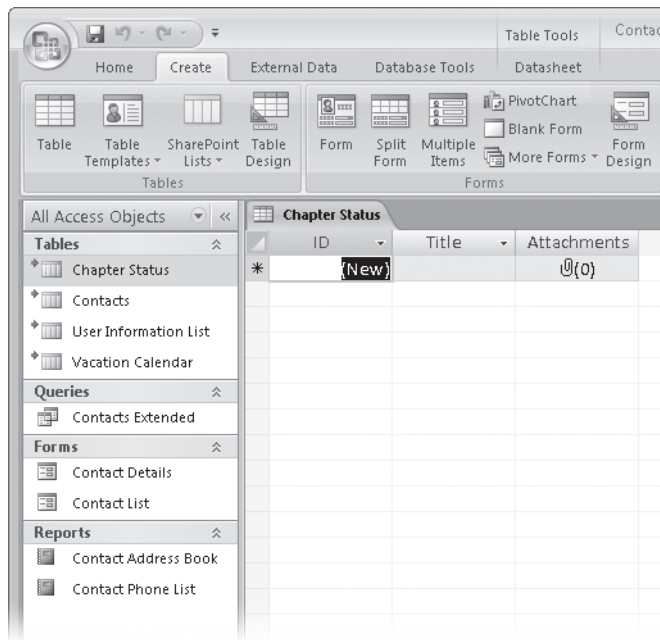


Figure 22-46 By default, the new list includes three columns.

If you go to the SharePoint site in your browser, you can see the new custom list, as shown in Figure 22-47. The only view created so far is the All Items view, and the list is empty. Windows SharePoint Services displays the description of the list that we entered in the wizard beneath the list name. In this view, the Attachment column is to the left of the Title column, and the ID column is hidden.

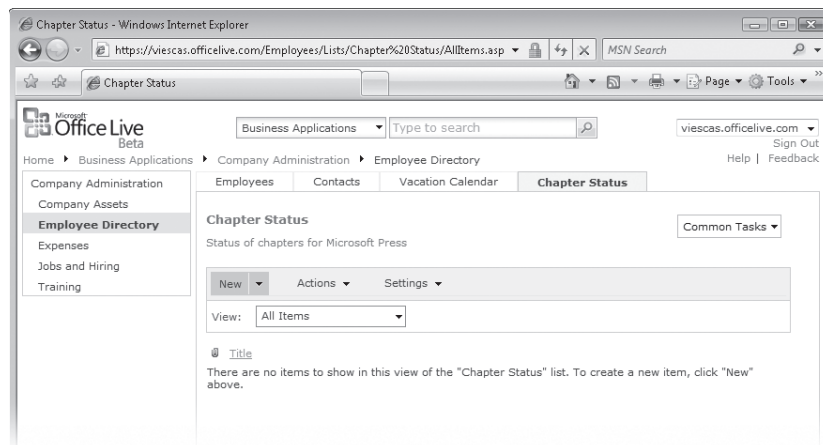


Figure 22-47 The new custom list shows up in the browser window.

Go back to Access, and let's take a closer look at the table that Windows SharePoint Services created. Right-click the Chapter Status linked table in the Navigation Pane and click Design View on the shortcut menu. Access displays a warning message that Chapter Status is a linked table and that you cannot change any of its properties. Click Yes in the message box to open the table in Design view, as shown in Figure 22-48.

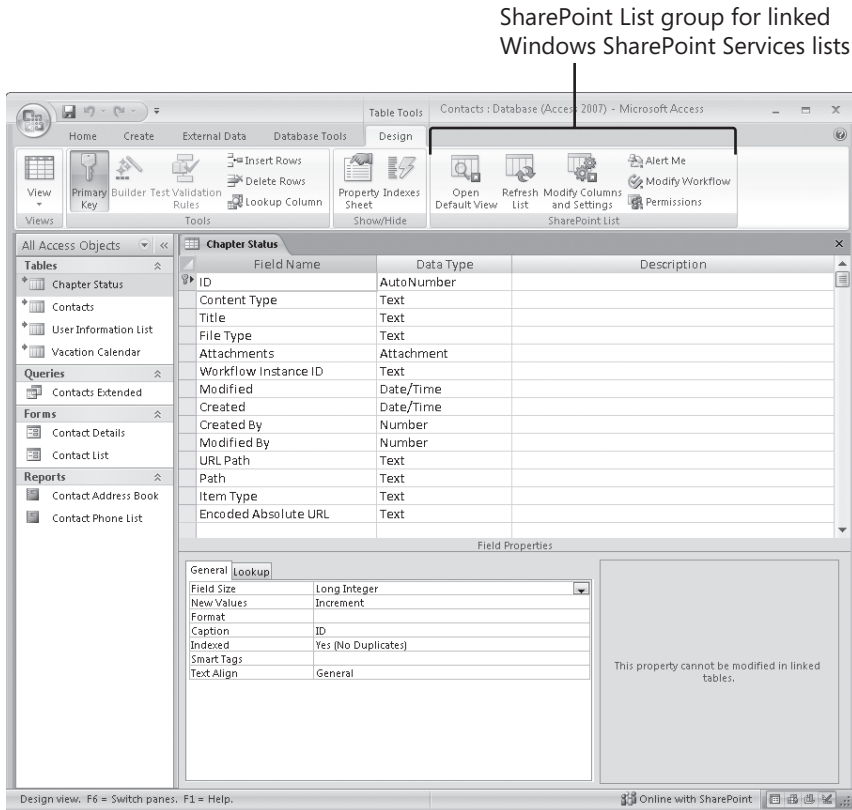


Figure 22-48 Access displays all the hidden columns of the list in the table's Design view.

You'll immediately notice that instead of seeing only three fields as you did in Datasheet view, Access displays 14 fields in Design view. These extra fields are hidden columns that Windows SharePoint Services uses to maintain the list. You can also see in Figure 22-48 a new group on the Design contextual tab under Table Tools called SharePoint List. Access displays this group only when you are working with tables that are linked to Windows SharePoint Services lists. In the SharePoint List group, you can do the following:

- **Open Default View** This option sends a command to the Windows SharePoint Services browser and opens the default view for that list.
- **Refresh List** This option causes Access to refresh the list from the SharePoint site. If any column properties have changed, Access closes the table.

- **Modify Columns And Settings** This option opens the SharePoint site to a page where you can modify the design of the list. Similar to modifying a table in an Access database, you can rename columns, change data types, change the sequence of columns, delete columns, or add new columns. Just as with other linked tables, to make changes to the source table, you must make them in the source data store, in this case on the SharePoint site.
- **Alert Me** This option opens a page on the SharePoint site where you can set options to be notified via e-mail if any data is added to this list, if data is modified, or even if data is deleted.
- **Modify Workflow** This option takes you to the Workflow page for this list where you can modify existing workflow rules or add new workflow rules.
- **Permissions** This option opens a page on the SharePoint site where you can view and change the users and their permission levels.

After you create a custom list, you can use these commands to modify your list according to your specific needs. Close the Design view for this table now.

Migrating an Access Database to a Windows SharePoint Services Site

You'll learn in Part 7 of this book that you can use an SQL server as a data source for an Access project file. You can also use a Windows SharePoint Services site as a data source for your Access 2007 database. You can either *publish* or *move* your Access 2007 database when migrating to a SharePoint site. When you publish your database, you are simply copying your database to the Windows SharePoint server so that others can open and use it. Any changes you make to the data in the local copy are not reflected in the copy on the SharePoint site. If you change queries, forms, reports, macros, or modules, you must republish your database to make the copy on the server current.

When you move your database, Access makes a backup copy of your database, uploads all the tables into Windows SharePoint Services lists, and replaces all the tables with a link to the appropriate list so that any data editing you perform in the local copy is reflected in the copy on the SharePoint site. You can set form and report properties so that Access creates a view of the SharePoint list that points to the form or report in the moved database. If you change queries, forms, reports, macros, or modules in your local copy, you must republish your database to make the copy on the server current.

Similar to the process of upsizing an Access database to SQL Server, Access 2007 includes a Move To SharePoint Site Wizard that walks you through the process of moving your tables and data to Windows SharePoint Services lists. By moving your database, you can share the data with many users and take advantage of the Windows SharePoint Services security, version control, and Recycle Bin. Users can update and view the data either through links to the lists in an Access 2007 database or by using their browser.

When you move an Access 2007 database to a SharePoint site, Access places an entire copy of the database in a document library on the site. Users can open the database from the SharePoint site and download a copy to their local computer to work with the data. By having a copy of your database objects on a SharePoint site, users can always have the latest copy of the queries, forms, reports, macros, and modules.

Note

Before we began the next steps in this chapter, we deleted all the existing lists we previously created on our SharePoint site.

Publishing Your Database to a Windows SharePoint Services Site

Publishing a database to a SharePoint site is somewhat similar to copying a database to a file server where users can obtain a copy of the data, work with it, and send changes back to the server. When you open a published database on the SharePoint site, Access downloads a cached copy of the file for you to use. Any changes you make to the data or objects are not reflected in the database on the SharePoint site unless you republish the changes.

Close the current Contacts database if you haven't already done so; we'll use another new Contacts database template that comes with Access for an example of publishing a database. Open Access if you closed it, and click the Contacts database template icon in the middle of the Getting Started screen. Browse to a location in the right task pane to save this file and name it Contacts. Beneath the file path, you can see an option to create and link your database to a SharePoint site, as shown in Figure 22-49. If you select this check box and then click Download, Access downloads the database template to your computer and then prompts you for the address of your SharePoint site. After you provide the appropriate address, Access creates a new list for each table in the sample database on the SharePoint site and then creates a link to each list in the database. You also have the option to move a copy of the entire database up to the SharePoint site. (We discuss moving a database in the following sections.)

To continue our publishing example, clear the Create And Link Your Database To A SharePoint site check box, and then click the Download button to download the database to your local computer. After Access opens the database, close the open Contact List form so that only the Navigation Pane is visible. Click the Navigation Pane menu, click Object Type under Navigate To Category, and then click All Access Objects to display a list of all objects.

This Contacts database includes only one table—Contacts—with no records. To publish the database, click the Microsoft Office Button, point to the Publish option, and then click Document Management Server, as shown in Figure 22-50.

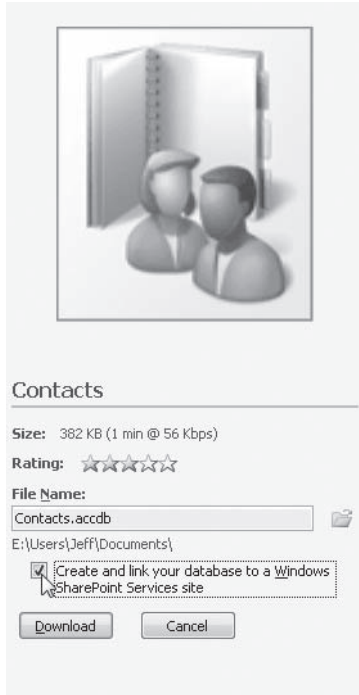


Figure 22-49 The right task pane on the Getting Started screen includes an option to create links to a SharePoint site when you create the database.

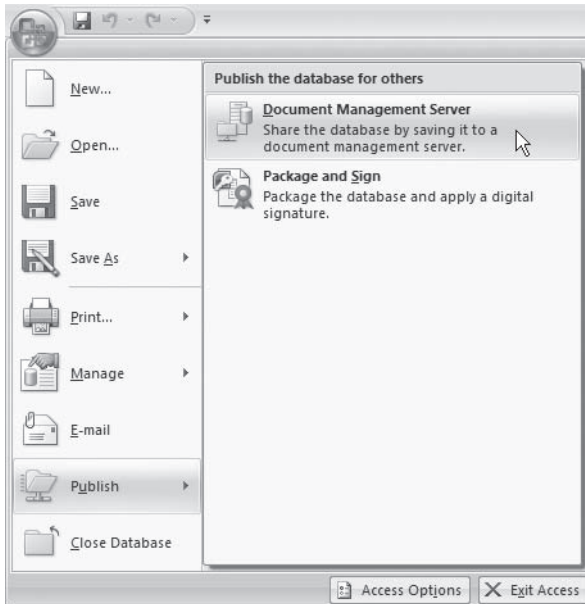


Figure 22-50 Click Document Management Server to begin publishing your database.

Note

You can publish an Access database to a SharePoint site only if the database is in the Access 2007 .accdb file format.

Access opens the Publish To Web Server dialog box, as shown in Figure 22-51. You need to specify the address to the workspace on the SharePoint site in the File Name box. (If you're working in a corporate environment, you might need to ask your network administrator for this information.) We entered the address to the InsideOut workspace on our SharePoint site. Click Publish. You should see a standard Windows logon dialog box to verify your credentials on the SharePoint site. Enter your user name and password and click OK to continue.

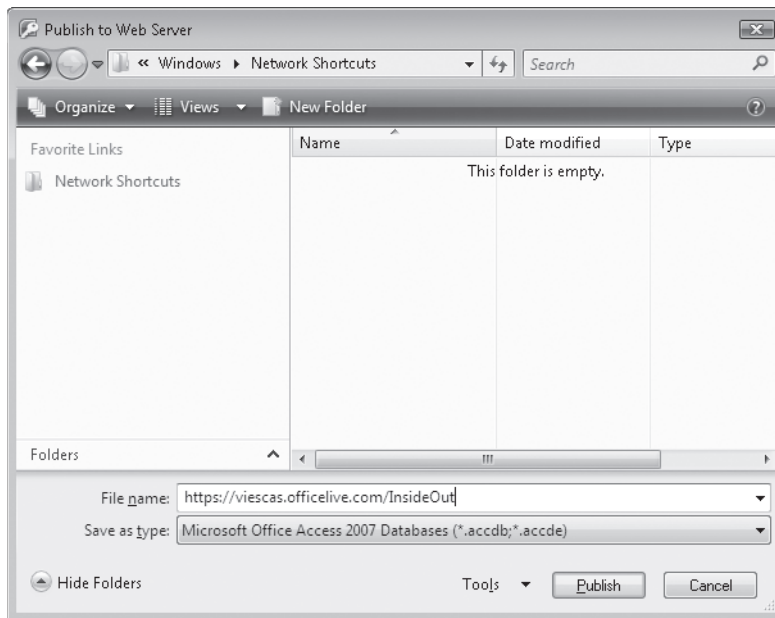


Figure 22-51 Enter the address to your SharePoint site in the Publish To Web Server dialog box.

Access then shows the contents of the InsideOut workspace on our SharePoint site and enters the name of the file, Contacts, in the File Name text box. In our case, we selected the Shared Documents library under Document Libraries, as shown in Figure 22-52. Click the Publish button to begin publishing your database to the SharePoint site.

During the publishing process, Access sets a property in the database to note that it has been published. After the process is complete, Access opens the Contacts database again and displays the Contact List form, as shown in Figure 22-53. You'll notice that there is no link to the Contacts table in this database, and no Online With SharePoint message appears on the status bar. Note, however, that Access knows that you have published this database, and it provides you with a handy button on the Message Bar that enables you to republish any changes.

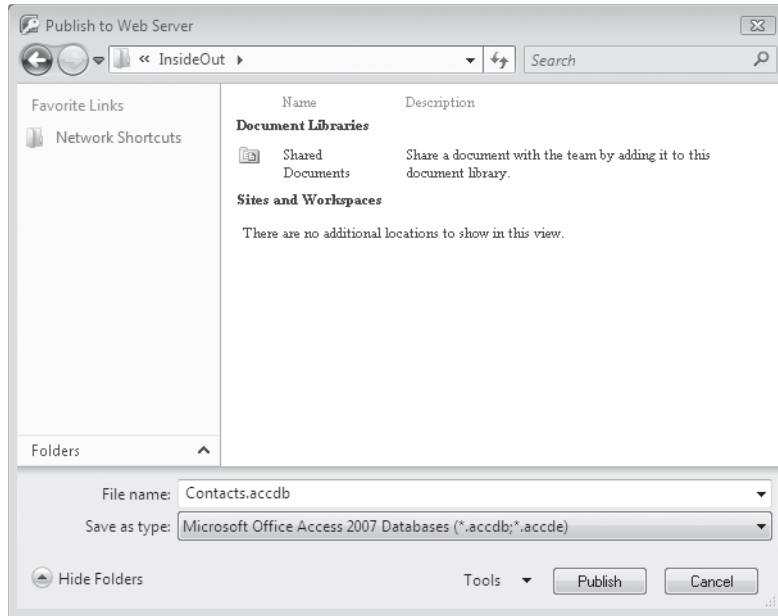


Figure 22-52 Select the Shared Documents library to publish the Contacts database.

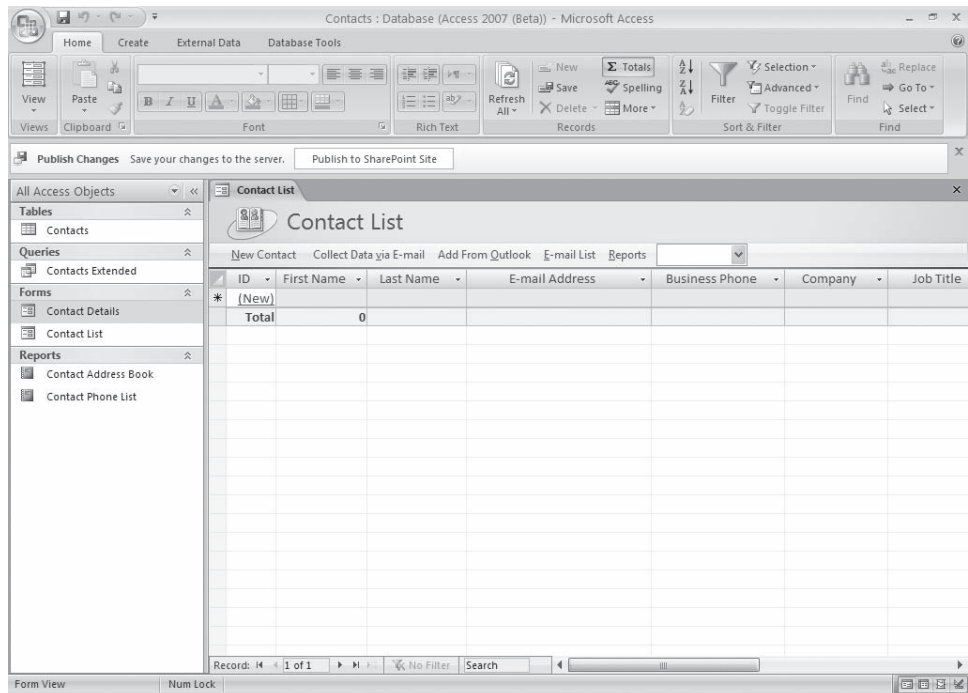


Figure 22-53 The published database does not have active links to any list on the SharePoint site.



Moving Your Database to a Windows SharePoint Services Site

To show you the process of moving an Access 2007 database to a Windows SharePoint Services site, we'll use the Issues Sample database on the companion CD. (You previously used this sample in Chapter 2, "Exploring the New Look of Access 2007.") This database already has data in the two tables—Contacts and Issues—so you can see how Access moves data to a SharePoint site. Begin by opening the Issues Sample database (IssuesSample.accdb), and then close the Issue List form so that only the Navigation Pane is visible. Next, on the External Data tab, click the Move To SharePoint button in the SharePoint Lists group, as shown in Figure 22-54.

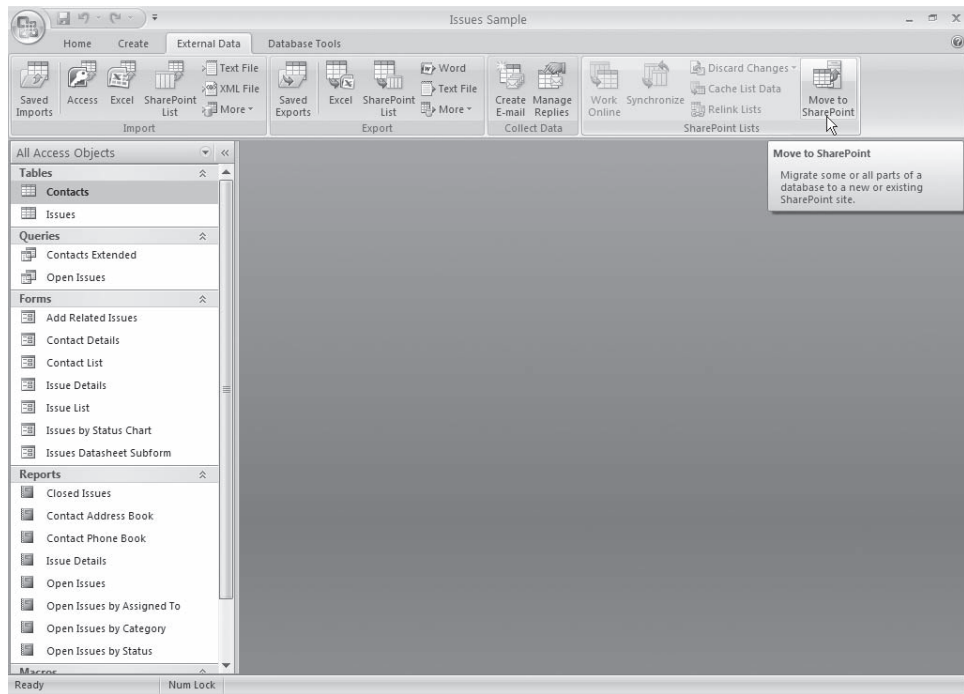


Figure 22-54 The Move To SharePoint button facilitates the process of moving your database to a SharePoint site.

Note

You can move an Access database to a SharePoint site only if the database is in the Access 2007 .accdb file format.

Access opens the Move To SharePoint Site Wizard, as shown in Figure 22-55. Enter the address for your SharePoint site in the What SharePoint Site Do You Want To Use? text box. If you select the Save A Copy Of My Database To The SharePoint Site And Create Shortcuts To My Access Forms And Reports check box, Access uploads an entire copy of your database into a document library on that SharePoint site. If you clear this check box, Access creates only new lists for the tables, moves the data to those lists, and creates linked local tables in the Access database.

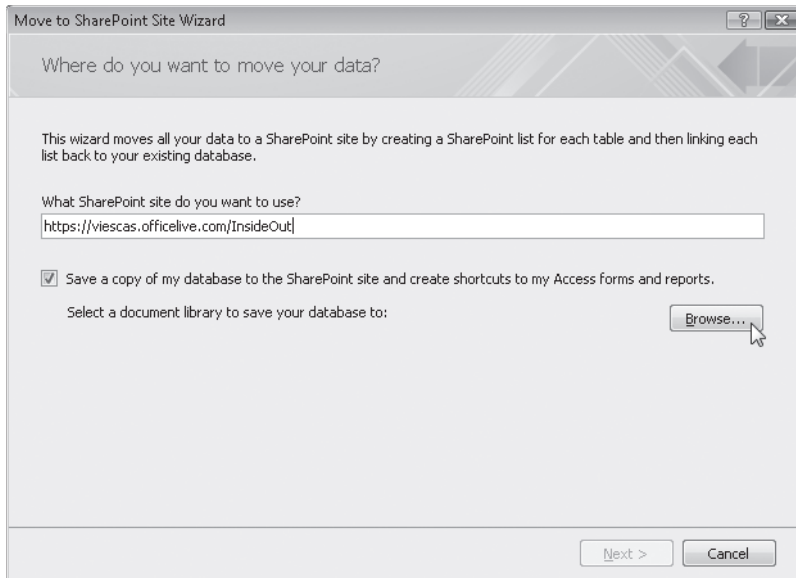


Figure 22-55 On the first page of the wizard, enter the address of your SharePoint site and decide whether you want to upload a copy of the database.

Click the Browse button to browse for a document library location in which to save your database. If you're not currently logged on to your SharePoint site, you'll see a standard Windows logon dialog box, as shown in Figure 22-56. Enter your user name and password and then click OK to proceed.

Note

The Office Live Web site we used to demonstrate migrating a database authenticates users using a Windows Live ID—an e-mail address.

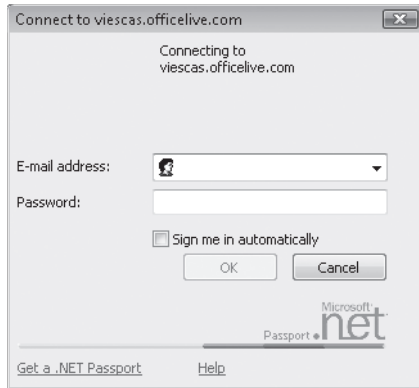


Figure 22-56 You might need to log on to your SharePoint site before proceeding.

After you log on to your SharePoint site, Access displays a Location dialog box showing the various document libraries, sites, and workspaces on the site, as shown in Figure 22-57. For our example, we chose to upload a copy of the database into the Shared Documents library in the InsideOut workspace, as shown in Figure 22-58.

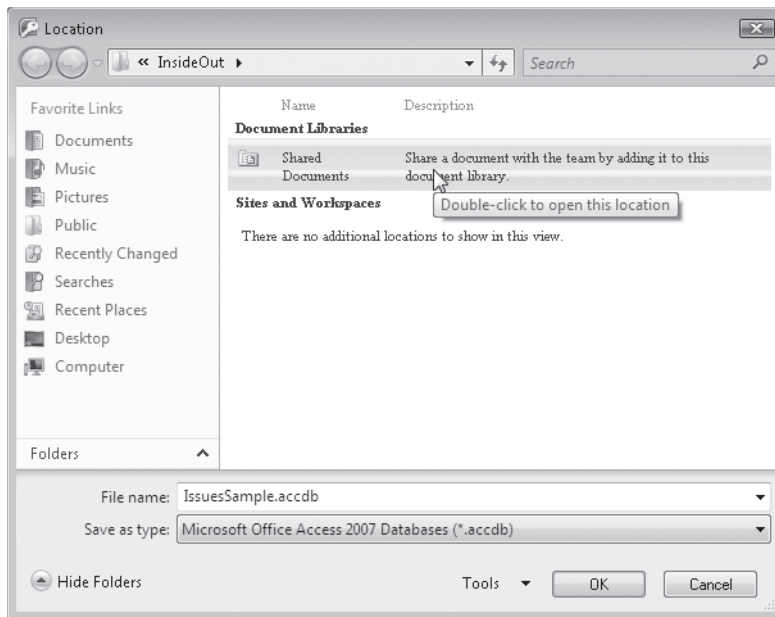


Figure 22-57 Select the document library where you want to save the database.

After you navigate to the correct folder in which to upload your database, click OK to continue. The Move To SharePoint Site Wizard now displays the folder where Access will save the database, as shown in Figure 22-59. Verify that the information is correct, and click Next to begin the process of moving your database.

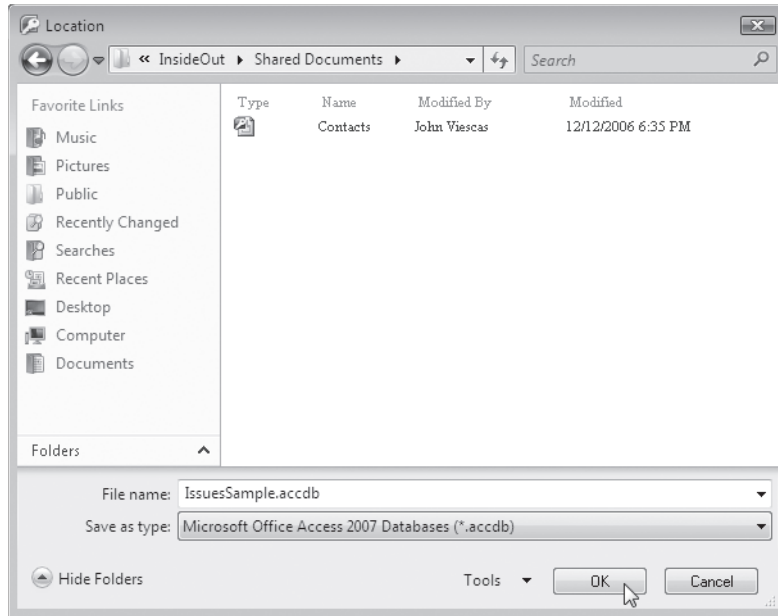


Figure 22-58 After selecting the document library in the workspace, click OK to save the database in that location.

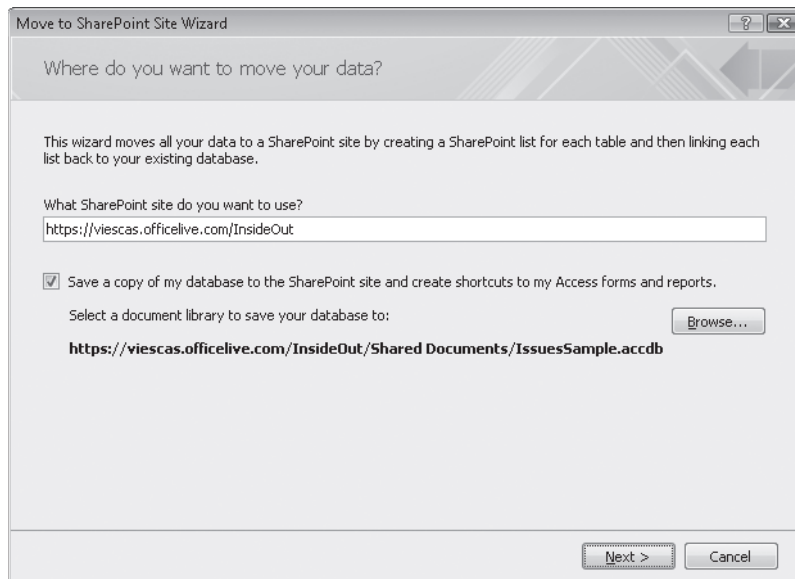


Figure 22-59 The wizard displays the location on the SharePoint site where the migrated database will be saved.

Access displays several progress screens as it creates new lists for the two tables, copies the data to the new lists, and moves a copy of the entire database to the InsideOut folder on our SharePoint site.

Note

If the data in a table that you're moving to Windows SharePoint Services closely matches one of the built-in Windows SharePoint Services templates, Access uses that. Otherwise, Access instructs Windows SharePoint Services to build a custom list.

After Access completes the migration process, the final page of the wizard confirms that the move was successful. You can select the Show Details check box to find out the actions taken and any error that occurred during the migration process. As you can see in Figure 22-60, Access successfully created two new lists on the SharePoint site—Contacts and Issues. Access always creates a backup of your database before beginning the migration process, and you can see the name and location of the database on this page of the wizard. You can also see the full address path to the location of your database on the SharePoint site. Finally, Access informs you that it created a log table of issues it encountered when moving the tables to the SharePoint site. Click Finish to close the wizard.

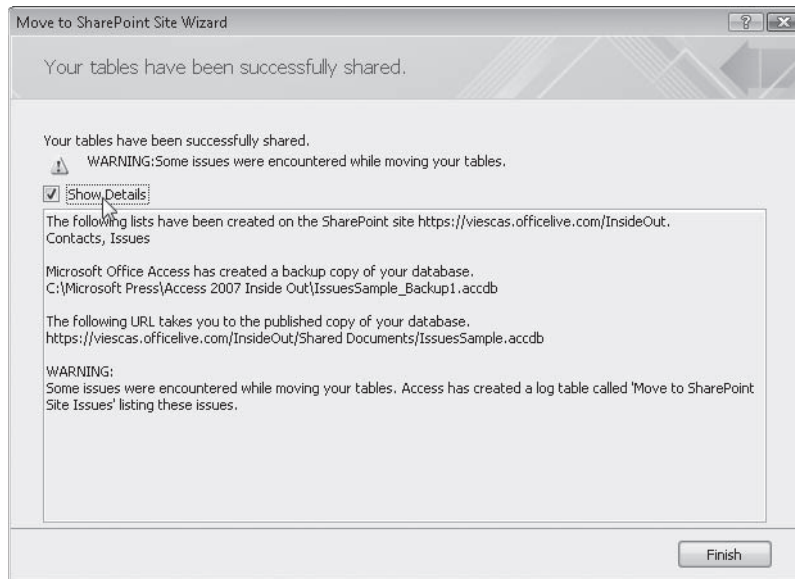


Figure 22-60 Select the Show Details check box to see any issues Access encountered during the migration process.

After you close the wizard, Access opens your new database and displays the startup form, Issue List, as shown in Figure 22-61. You can see in the Navigation Pane that Access created links to the new Contacts and Issues lists on the SharePoint site as well as the User Information List. The status bar notifies you that you are currently online with the SharePoint site. You'll also notice that the Message Bar displays a Publish Changes message, and Access created a new local table called Move To SharePoint Site Issues.

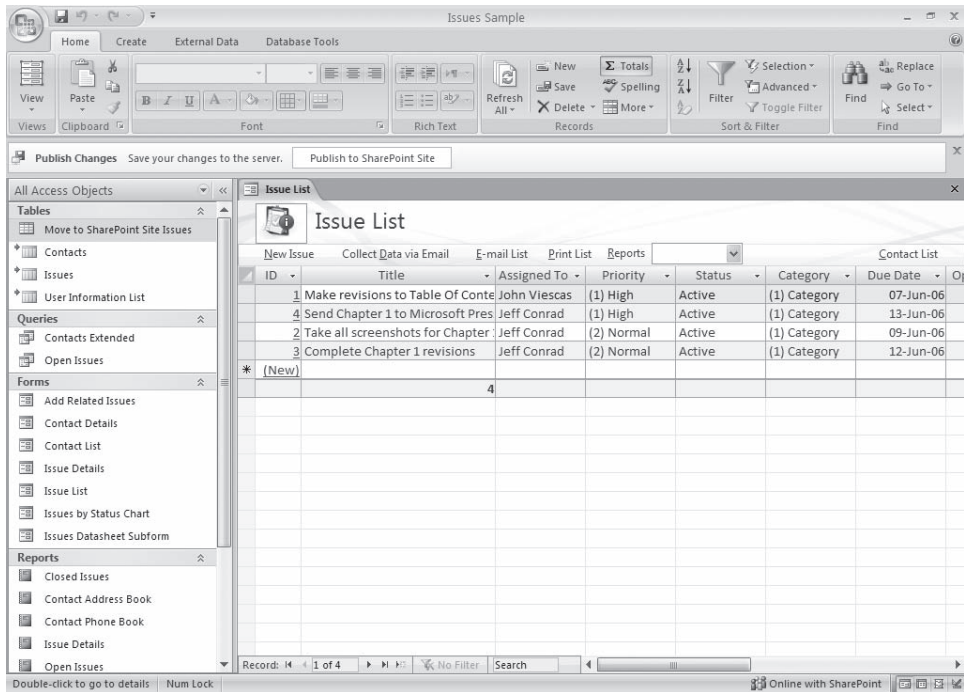


Figure 22-61 The database on your computer is now linked to the SharePoint site.

Close the Issue List form and then open the Move To SharePoint Site Issues table to see what problems Access encountered when moving your database. In Figure 22-62, we collapsed the Navigation Pane and expanded the column widths of the first two fields so that you can read them. Windows SharePoint Services Version 3 does not support referential integrity so Access created a log entry in this table for the three relationships that had referential integrity defined. Windows SharePoint Services Version 3 also does not support validation rules, so the Opened Date and Due Date fields will not have their validation rules enforced in the Windows SharePoint Services lists.

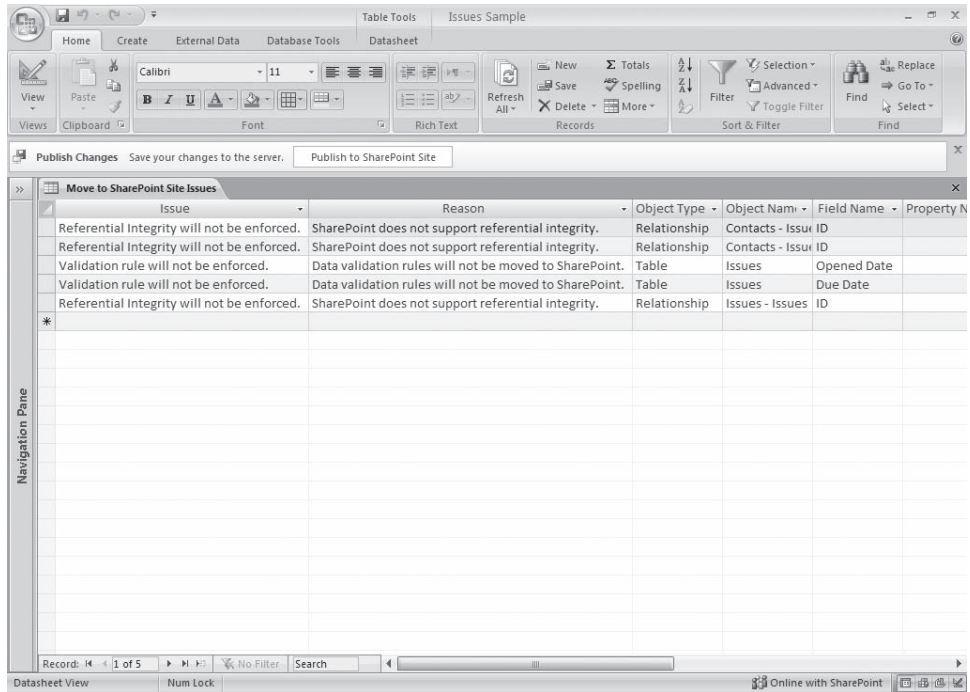


Figure 22-62 Access creates a log table for any problems it encounters when moving your tables to Windows SharePoint Services lists.

When you migrate an Access 2007 database to a SharePoint site, you need to be aware that Windows SharePoint Services does not support certain data types. You also need to be aware of the following issues when migrating an Access 2007 database to Windows SharePoint Services:

- Windows SharePoint Services does not support dates prior to 1900. You will not be able to move any data that contains dates prior to 1900. If you have a date/time field with some dates earlier than 1900, Access exports the column but Windows SharePoint Services leaves blanks in those records for that column.
- Windows SharePoint Services converts any new line characters in text fields to either a memo field or a Multiple Lines of Text field.
- Windows SharePoint Services does not support referential integrity, so any relationships that have this enforced are ignored when you move the table to a list.
- Windows SharePoint Services does not support cascading updates and cascading deletes, so these will not be applied to the Windows SharePoint Services lists. You will need to write VBA code to delete and update related records. You'll learn how to do this in Chapter 20.
- Windows SharePoint Services ignores any relationship where the primary key is not an integer or the relationship does not relate to the ID column.

- Windows SharePoint Services does not support default values for fields that are dynamic—such as Date(), which changes each day—and ignores these when moving your tables to lists. Windows SharePoint Services accepts only static default values such as numbers, text, and standard dates, which do not change.
- Windows SharePoint Services supports automatic numbering of fields only in a list for the ID column.
- Windows SharePoint Services does support any multi-field indexes in lists, and ignores these indexes when you move your data to a list.
- Windows SharePoint Services supports unique indexes only for the ID column, and ignores any other indexes when you move your data to a list.
- Windows SharePoint Services does not support data validation rules, and ignores these when you move your data to a list.
- Windows SharePoint Services converts any ReplicationID fields to Single Line of Text data types.
- Windows SharePoint Services converts any decimal fields to Number data types.

INSIDE OUT

Finding the Primary Key Data in a Windows SharePoint Services List

When you export a table to a new SharePoint list, you might not see the primary key data in the default view. If your primary key is an AutoNumber or Number data type, Windows SharePoint Services moves this data into a hidden _ID column in the new list. Windows SharePoint Services defaults to not displaying any hidden _ID columns in the default view. You'll need to modify the view in order to display this hidden column.

In Figure 22-63, you can see the Issues Sample database uploaded to the Shared Documents library in the InsideOut folder. You can also see that Access created new Contacts and Issues lists on the SharePoint site. Now that you have migrated the data to lists, other users who have the appropriate permissions can view, edit, and delete records through either the views on the SharePoint site or by opening the Access database in the Shared Documents library. If some of your users do not have Access 2007 installed, they can still view, edit, and delete records by using their browser.

Republish a Database to a Windows SharePoint Services Site

Regardless of whether you publish or move a database to a Windows SharePoint Services site, you might occasionally need to republish your database. In Figure 22-53 on page 47, you might have noticed a Publish To SharePoint Site button on the Message Bar after publishing a copy of the database to Windows SharePoint Services. Any changes you make to the data or database objects in the local copy of the Contacts database will not appear on the SharePoint site unless you republish these changes.

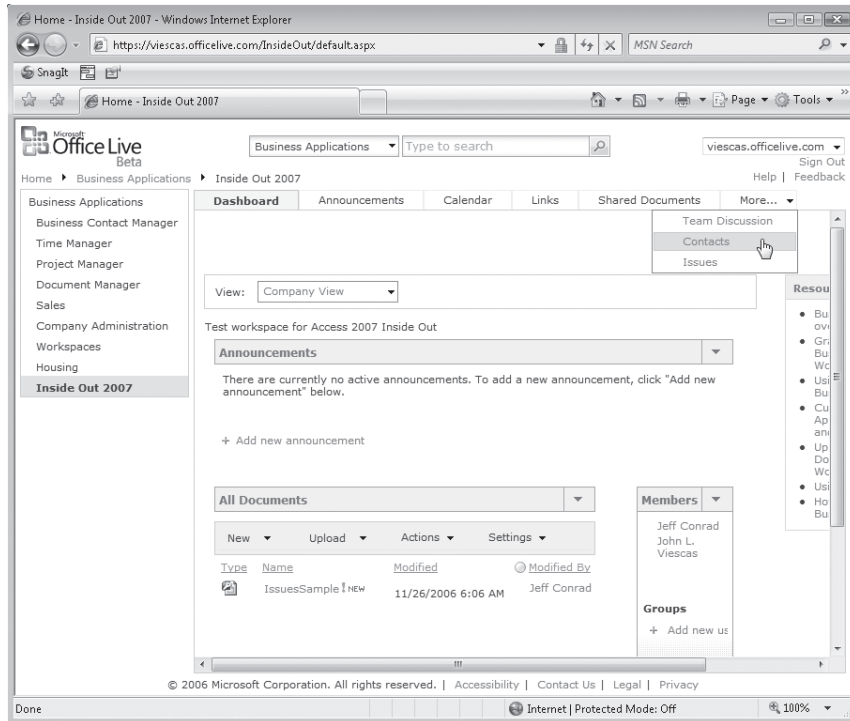


Figure 22-63 The Issues Sample database has now been migrated to the SharePoint site.

In Figure 22-61 in the previous section, you can see the same Publish To SharePoint Site button, but in a database that you moved to Windows SharePoint Services. When you move a database, Access 2007 modifies the local copy, replacing the tables with links to the SharePoint lists. Any changes you make to data using the local copy will appear in the shared lists on the SharePoint site. However, any changes you make to queries, forms, reports, macros, or modules must be republished to appear in the shared copy on the server.

In this case, we'll work with the worst-case example, the published Contacts database. We'll add some records and make a change to one of the database objects to show you how this process works. If you followed along and created a Contacts database and published it, reopen the database now. Add a couple of records to the Contacts table using the Contact List form, as shown in Figure 22-64.

After you enter the records, switch to Design view on the Contact List form by right-clicking the form's tab and clicking Design View on the shortcut menu. Change the caption of the label in the Form Header section to **Conrad Systems Development Contact List**, as shown in Figure 22-65. Close the form and save the changes you made.

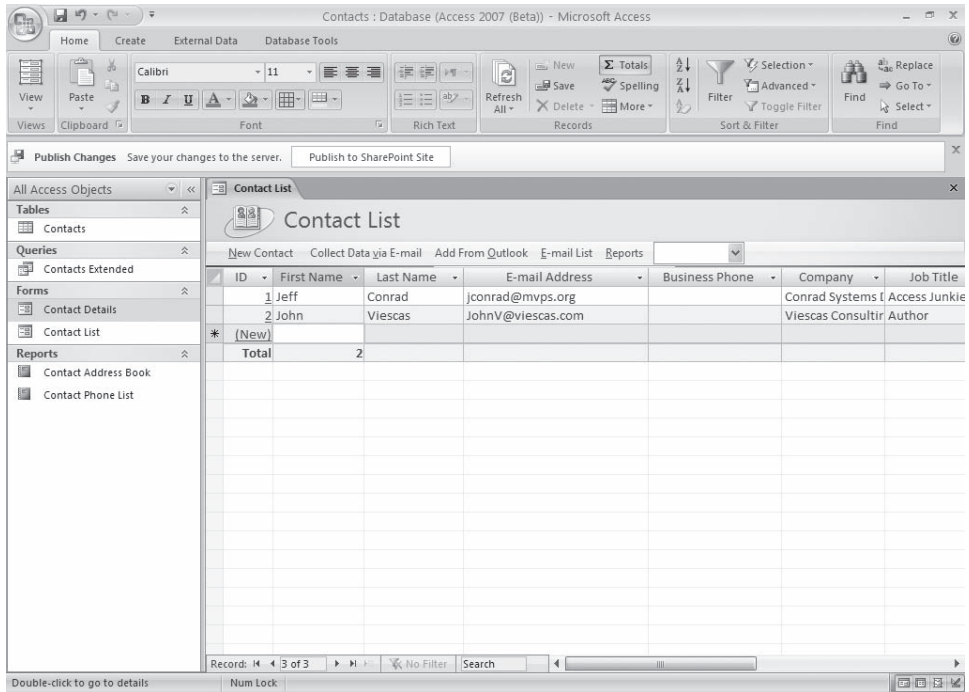


Figure 22-64 Add some records to the Contacts table for this example.

To republish these changes to the SharePoint site, click the Publish To SharePoint Site button on the Message Bar. (If you accidentally closed the Message Bar, you can reopen it by clicking the Database Tools tab, and then selecting the Message Bar check box in the Show/Hide group.) If you are prompted for your logon information by the SharePoint site, enter your user name and password and click OK to continue. Access remembers the specific folder in which you saved the database, as shown in Figure 22-66. If the correct folder is not showing, locate the proper document library and then click Publish.

Access prompts you that a Contacts database file already exists in the same location and asks if you want to overwrite the existing file. Click Yes to confirm the overwrite and Access republishes the revised database to the SharePoint site. After the republishing procedure is complete, Access reopens the database and shows the Contact List form.

Note

Use this same procedure for a database that you have moved to a SharePoint site, but you need to republish your database only when you have made a change to a query, form, report, macro, or module in your local copy of the database.

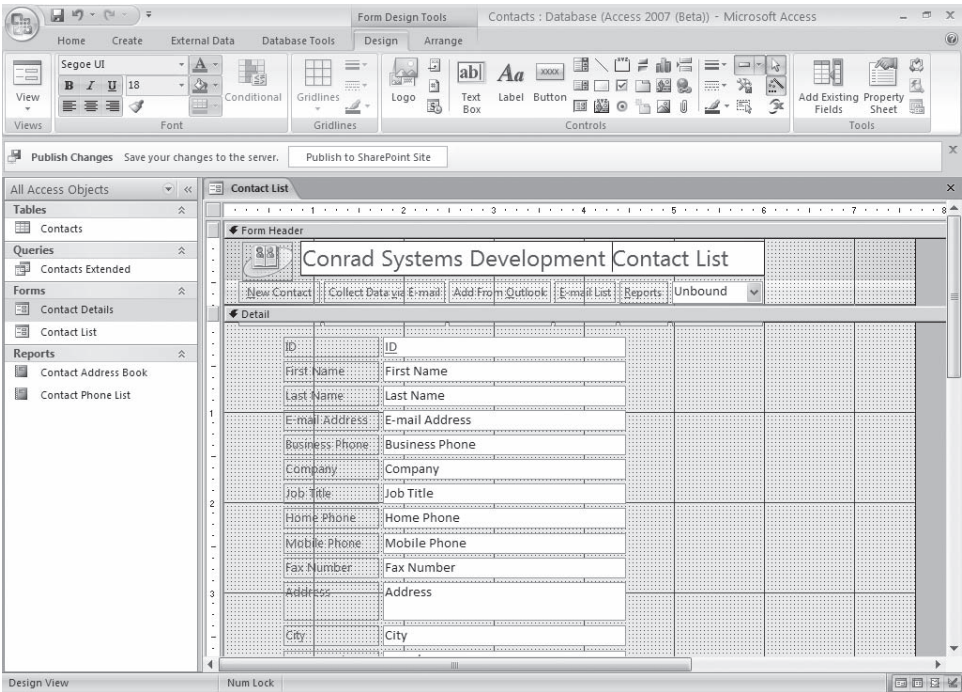


Figure 22-65 Change the label caption in the Form Header section.

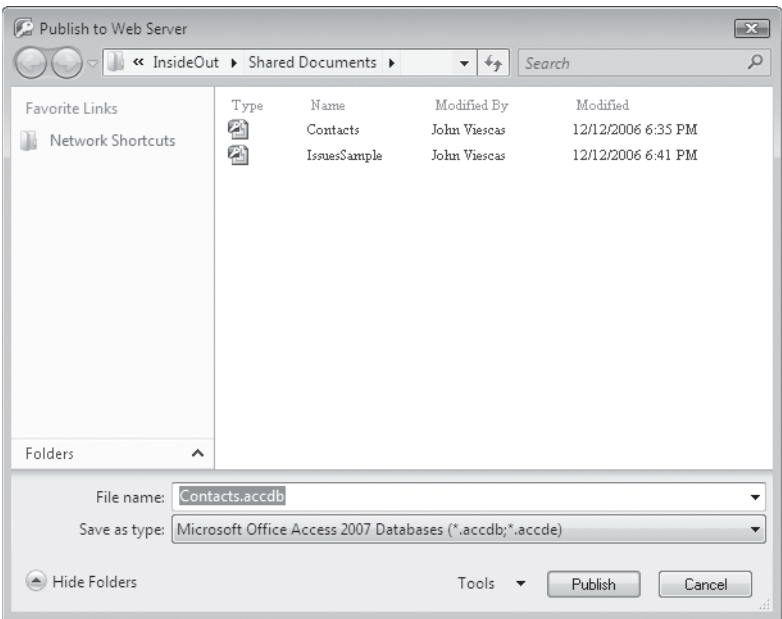


Figure 22-66 Navigate to the folder on the SharePoint site to republish the database changes.

Opening the Database from Windows SharePoint Services

Users with appropriate permissions can open a database directly from a Windows SharePoint Services document library using their browser. In this example, we'll open the Contacts database we republished in the previous section. If your local copy of the Contacts database is still open, close it now.

In Figure 22-67 you can see that we navigated to the Shared Documents library in the InsideOut folder on our test SharePoint site. You can double-click directly on the name of the Contacts database to open it in Access 2007. Alternatively, if you click the arrow next to the name of the Contacts database (you must point to this database to see the arrow), Windows SharePoint Services displays a list of options; click the Edit In Microsoft Office Access option to view this database using Access 2007. However, if you choose this option, Access downloads a copy to a temporary folder on your computer and opens it as read-only. This option works when all you want to do is edit data in a database that has been moved to a SharePoint site. But if the database has simply been published, you won't be able to do anything except browse the data. (We'll show you how to modify the data in a read-only database in just a moment.)

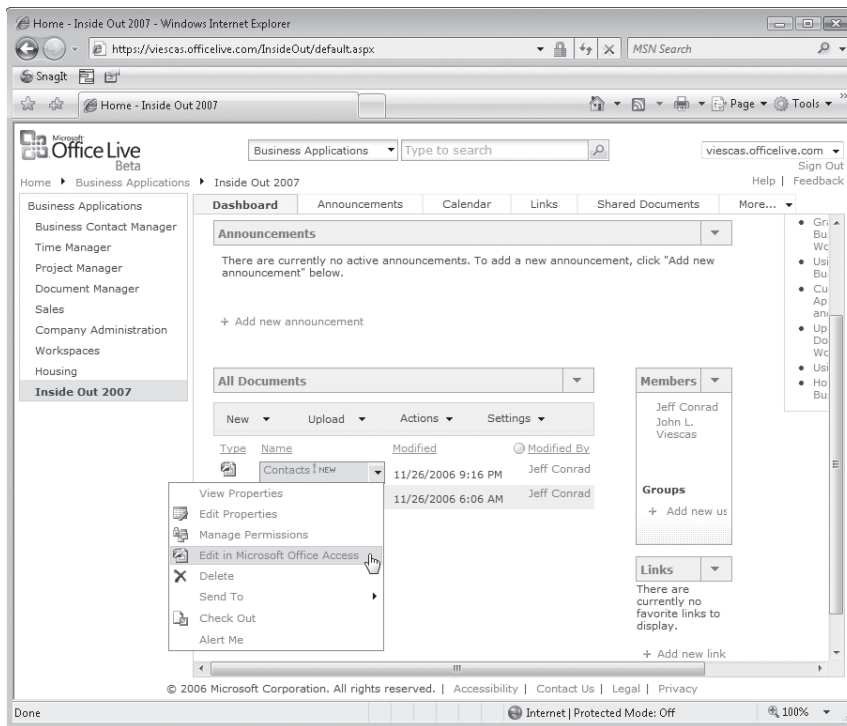


Figure 22-67 When you open a published Access 2007 database using Edit In Microsoft Office Access, your browser downloads and opens a read-only copy of the database.

In this case, you're opening a published database, so double-click the database name to open it. Windows Internet Explorer displays a File Download dialog box with a warning message that some files can be harmful to your computer, as shown in Figure 22-68.

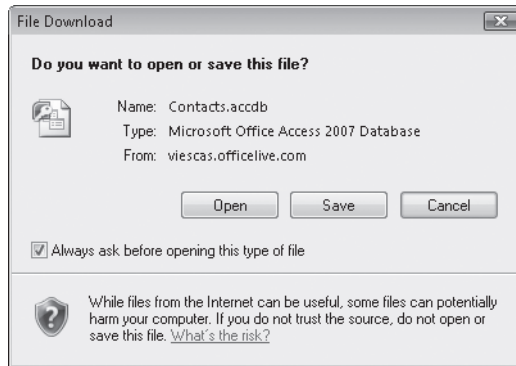


Figure 22-68 Internet Explorer asks if you want to open the database or save a copy for editing.

If you click Open, Internet Explorer downloads a copy of the database to a temporary folder on your local hard drive and then calls Access to open the file. If you choose this option, Access opens the database in read-only mode. (You cannot make any design changes to the objects or change any of the data in the tables if the database is read-only.) If the database had links to Windows SharePoint Services lists, you could change the data in any linked tables. If you only want to view data in the database, the Open option should work just fine for you. If you click Save, the Windows Save As dialog box opens, as shown in Figure 22-69. You can select a folder on your hard drive and save a copy of the database. In this case, Access does not open the database in read-only mode, so you can make changes to the data and objects. If you click Cancel, Windows SharePoint Services stops the download process.

TROUBLESHOOTING

Why can't I make any changes to my published database?

If you select the Edit In Microsoft Office Access option for a published Access 2007 database, your database opens in read-only mode. You can only view data in this situation. If you moved the database instead of publishing it, you'll be able to edit the data and database objects.

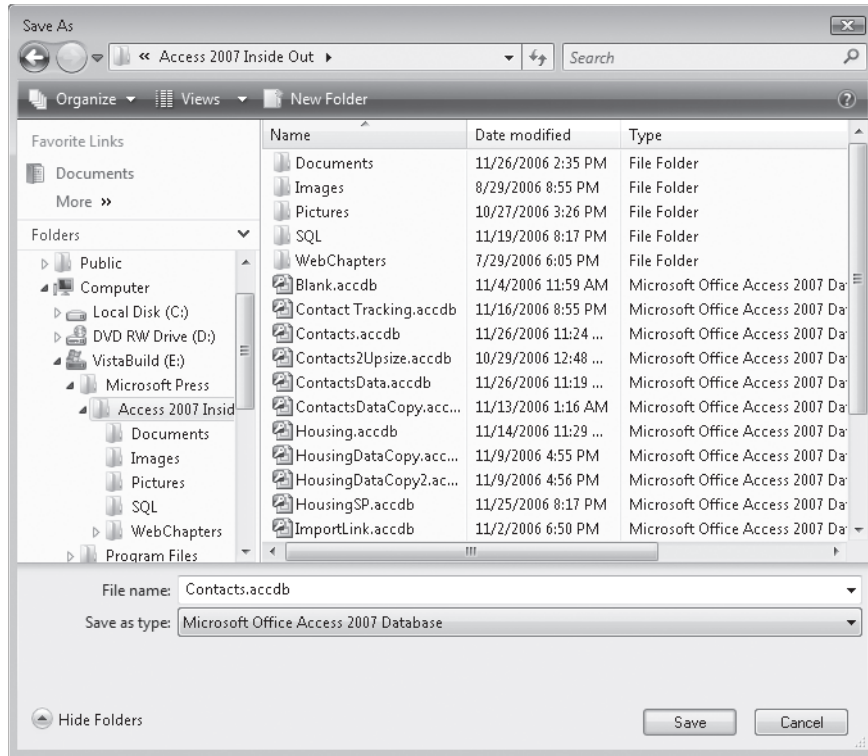


Figure 22-69 Select a folder to save a local copy of the database.

Either change the name of the database or save it in a different location than the Access 2007 Inside Out folder so as not to overwrite the existing Conrad Systems Contacts database—Contacts.accdb. Click the Save button in the File Download dialog box, navigate to a folder in which to save the database, and then click the Save button in the Save As dialog box to download a copy of the database from the SharePoint site. If necessary, click Close to close the Download Complete dialog box. Access opens the database and displays the Contact List form with our two records in the Contacts table, as shown in Figure 22-70. You can now view, edit, and delete records and make design-level changes to the database objects. Remember that in order to have the information reflected in the database on the SharePoint site, you will need to republish the database by clicking the Publish To SharePoint Site button on the Message Bar. Close this database after you are finished.

Note

If you save a copy of the database to an untrusted location, Access 2007 disables any harmful content in the database, including all Visual Basic code and certain macro actions. To avoid this, you should download the database to a trusted location.

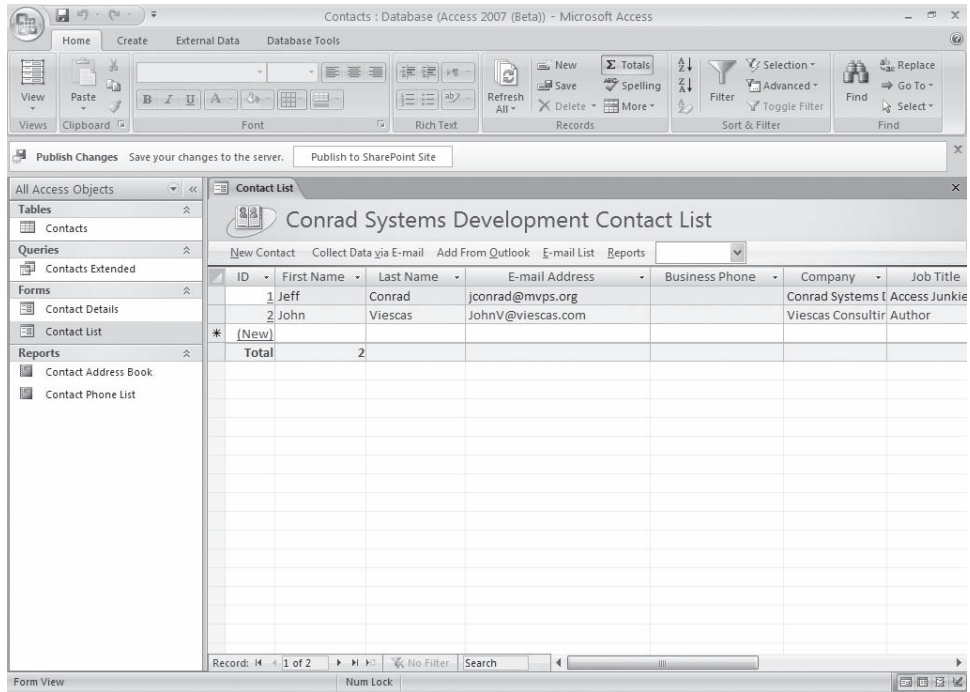


Figure 22-70 Use the Save option to download a local copy of the database for editing.

Working Offline

Occasionally, you might need to work with data stored in lists on a SharePoint site when you are disconnected. If your Windows SharePoint Services lists are stored on an internal server not accessible from the Internet, this could pose a problem if you need to view, edit, or delete records while away from your local intranet. Access 2007 and Windows SharePoint Services Version 3 allow you to work offline with data from the lists and then later synchronize your offline changes with the server after you reconnect.

Earlier in this chapter, you saw us move the Issues Sample database, which linked to lists on our test SharePoint site. You'll now see how we can take the data offline, make some changes, and later resolve any conflicts that might occur with data still on the server. In Access, open the Issues Sample database you migrated earlier in this chapter. (You might need to log on to the SharePoint site when reopening this database.) In Figure 22-71, you can see the links to the Contacts and Issues lists as well as to the User Information List table. The status bar indicates that we are online with our SharePoint site, and the Message Bar displays the Publish Changes message. Remember from earlier in this chapter that we can make changes to the data in the tables because we have links to the list in this database.

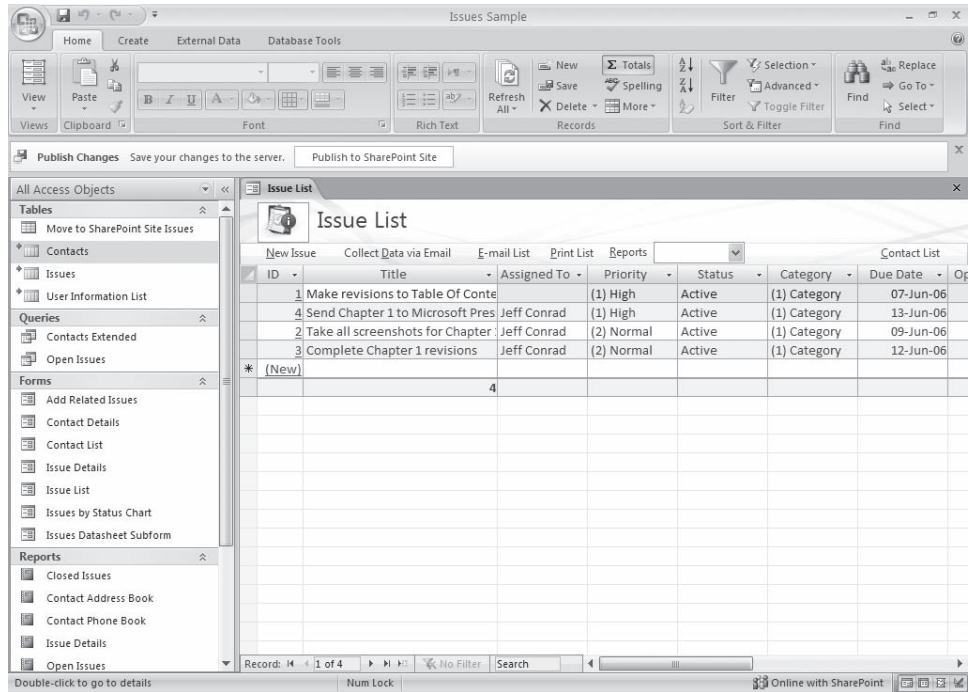


Figure 22-71 Reopen the Issues Sample database and verify that you are working online with the SharePoint site.

Disconnect from the SharePoint site by closing the Issue List form and then on the External Data tab of the Ribbon, in the SharePoint Lists group, clicking the Work Offline button, as shown in Figure 22-72. Access downloads a copy of all the data currently on the server and temporarily disconnects the active links to the Windows SharePoint Services lists. You might see Access display some progress screens for each list depending on how much data it needs to download.



Access changes the icon for the linked lists to give you a visual cue that your links are now disconnected from the SharePoint site. Access also changes the status bar message to Offline With SharePoint to indicate that you are now working offline, as shown in Figure 22-73. Now that you have a local copy of all the data, you can analyze the data with queries, view and edit data through forms, and run reports while disconnected from the server. You'll also probably see a performance increase because you are now working only with data stored locally in the database.

Open the Issue List form, and let's make some changes to a couple of the records. Change the status of the issue records with IDs of 1 and 4 from Active to Resolved, as shown in Figure 22-74. Also, add a new record to the Issues table using the Issue List form. In Figure 22-74, you can see that we added a record concerning Chapter 22. You might notice that Access has used a negative number for the ID value instead of a positive value. Access uses negative numbers for ID values when you are working offline.

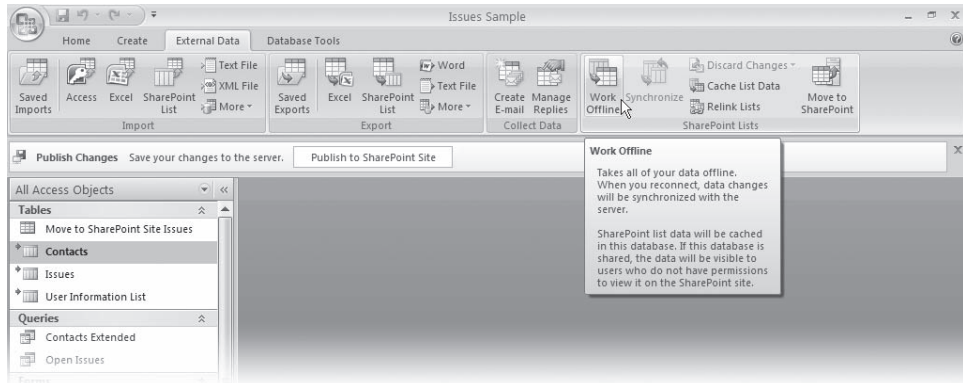
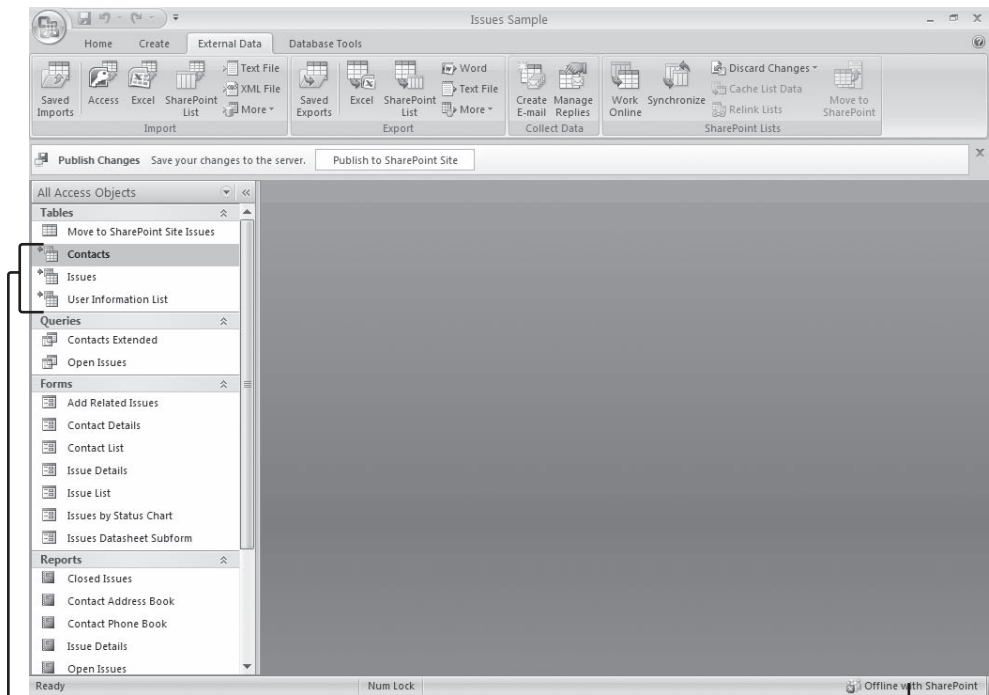


Figure 22-72 Click the Work Offline button to disconnect from the SharePoint site.



Links are disconnected from the Windows SharePoint Services site

Status bar message indicates you are working offline

Figure 22-73 Your database is now disconnected from the Windows SharePoint Services lists, but you can still edit the data.

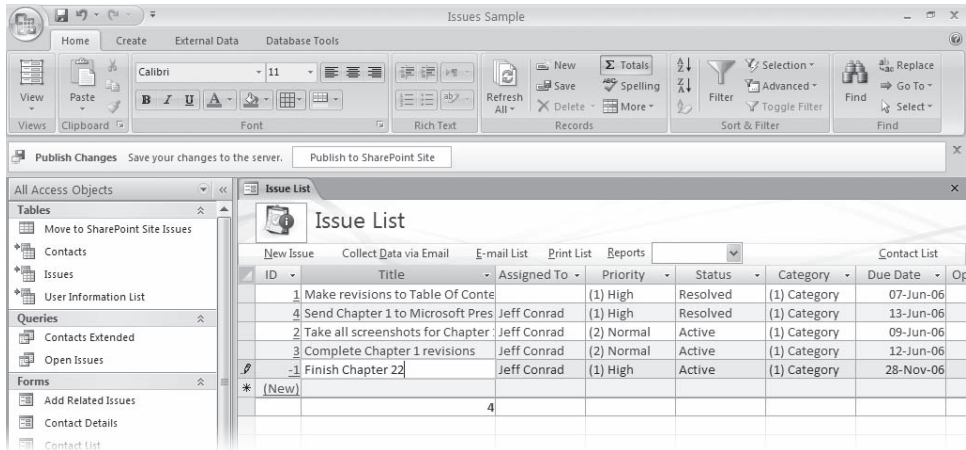


Figure 22-74 You can edit and add records while working offline.

After you make the changes to the records, close the Issue List form and then open the Issues table in Datasheet view. In Figure 22-75, you can see that Access flags all records edited or added while offline with a pencil icon in the record selector. When you reconnect to the network, Access looks for this flag to synchronize changes with the server. If you want to discard all changes you made to the records while offline, you can click the arrow to the right of the Discard Changes button in the SharePoint Lists group on the External Data tab and then click either Discard All Changes or Discard All Changes And Refresh. The latter option not only ignores all changes you made while you had the database offline but also refreshes the data from the SharePoint site.

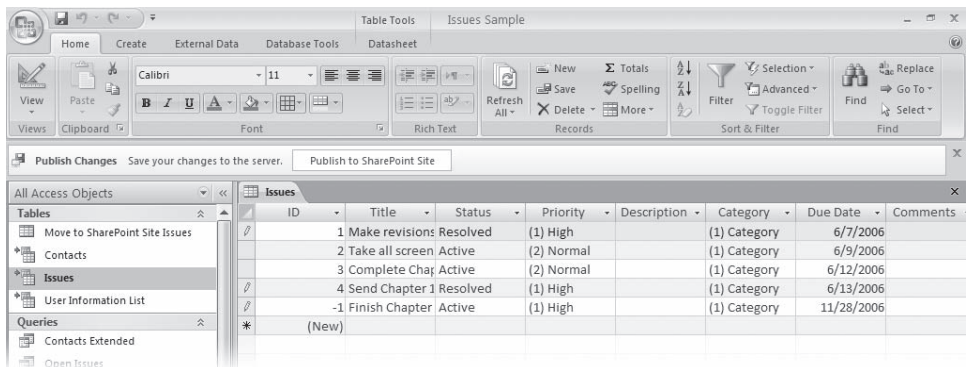
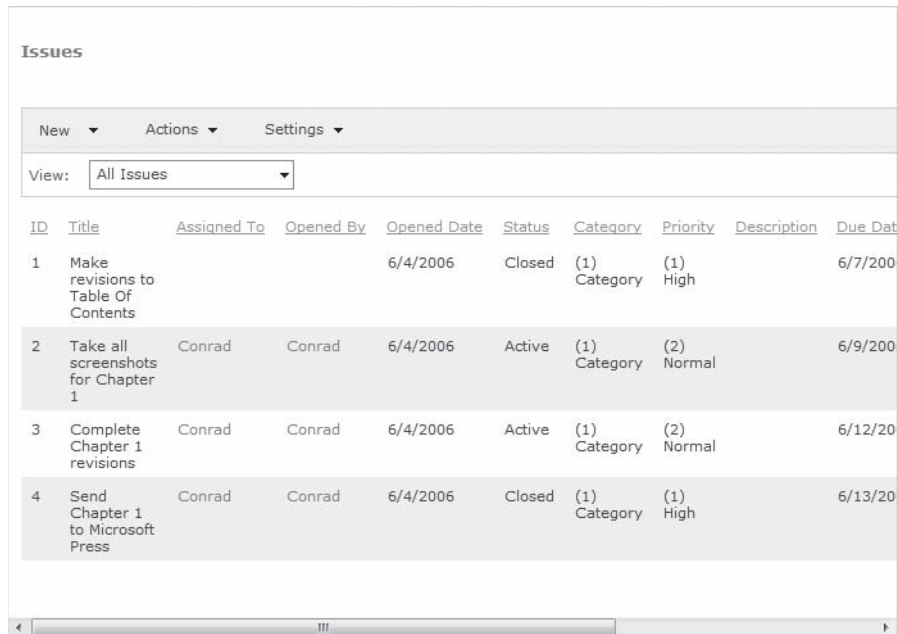


Figure 22-75 Access displays a pencil icon next to records that you changed while offline.

Synchronizing Changes After Working Offline

While you are disconnected from the server, it is possible that someone else might edit the same records you changed. As a result, you now have a conflict between your local copy of the data and the server data. Let's assume that while you were away from the office, someone else changed the status of the same two records from Active to Closed, but you changed them from Active to Resolved. In Figure 22-76, you can see within the browser window on the SharePoint site that the records with IDs of 1 and 4 were edited. (Someone else could also make changes through links from another database as well.)



Issues										
New ▾ Actions ▾ Settings ▾										
View: All Issues ▾										
ID	Title	Assigned To	Opened By	Opened Date	Status	Category	Priority	Description	Due Date	
1	Make revisions to Table Of Contents			6/4/2006	Closed	(1) Category	(1) High		6/7/200	
2	Take all screenshots for Chapter 1	Conrad	Conrad	6/4/2006	Active	(1) Category	(2) Normal		6/9/200	
3	Complete Chapter 1 revisions	Conrad	Conrad	6/4/2006	Active	(1) Category	(2) Normal		6/12/20	
4	Send Chapter 1 to Microsoft Press	Conrad	Conrad	6/4/2006	Closed	(1) Category	(1) High		6/13/20	

Figure 22-76 The data on the SharePoint site changed while you were offline.

To reconnect to the SharePoint site and synchronize the data, click the Work Online button in the SharePoint Lists group on the External Data tab, as shown in Figure 22-77. If you click the Synchronize button, Access attempts to resolve any data conflicts, updates any data that has been changed between the local copy and the server copy, but keeps the links disconnected from the server.

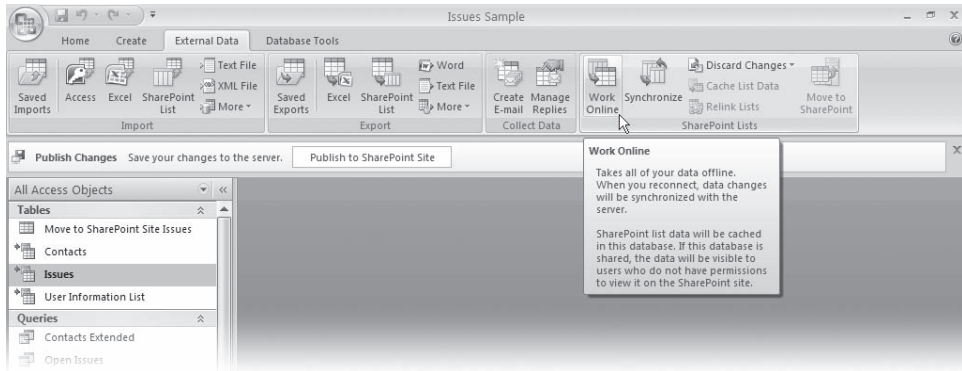


Figure 22-77 Click the Work Online button to reestablish links to the Windows SharePoint Services lists.

Access now attempts to reconnect the links to the lists on the SharePoint site, but it finds some data conflicts in the Issues table. If any conflicts exist between data in the local copy of the database and the data in the Windows SharePoint Services lists, Access displays the Resolve Conflicts dialog box, as shown in Figure 22-78. In this case, Access correctly spots that two records have data conflicts. The Resolve Conflicts dialog box has Previous and Next buttons in the upper-right corner. You can use these buttons to move back and forth between the records that have data conflicts. (These buttons appear dimmed if only one conflict is found in a table.) Access displays the number of conflicts it finds near the top of the dialog box. In our case Access shows a message of “Details – 1 of 2,” meaning two records have data conflicts.

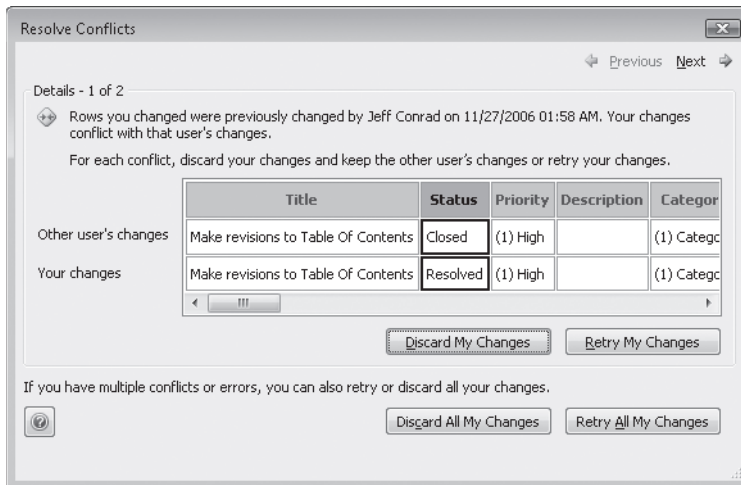


Figure 22-78 Access displays the Resolve Conflicts dialog box whenever data conflicts occur.

The Resolve Conflicts dialog box shows who changed the data on the server and the date and time it was changed. In the middle of the dialog box Access displays all the fields in the list, and highlights what the other user changed in the record on the SharePoint site as well as the changes you made to the same record. In our example, you can see that the Status field was changed to Closed on the server and we changed it to Resolved in our local copy of the data.

If you want to keep the changes that the other user made, click the Discard My Changes button. If you want to keep the changes you made to the record, click the Retry My Changes button. For each record conflict, you need to decide whether you want to keep your changes or discard them. If you want to discard all your data changes, click the Discard All My Changes button at the bottom of the dialog box. If you want to keep all your record changes, click the Retry All My Changes button. If you have additional data conflicts in other tables, you'll need to resolve those conflicts as well. (If two people from two locations try to resolve conflicts at the same time, the last user's changes are saved.) As you might recall, we added one new record to the Issues table. Access had no problems adding this record to the Windows SharePoint Services Issues list because there were no data conflicts. We want to keep the changes we made, so click the Retry All My Changes button. After the data conflicts are resolved, Access relinks your tables to the Windows SharePoint Services lists and changes the status bar message to indicate that you are back online. In Figure 22-79 you can see Access has completed the relinking process and opened the Issue List form.

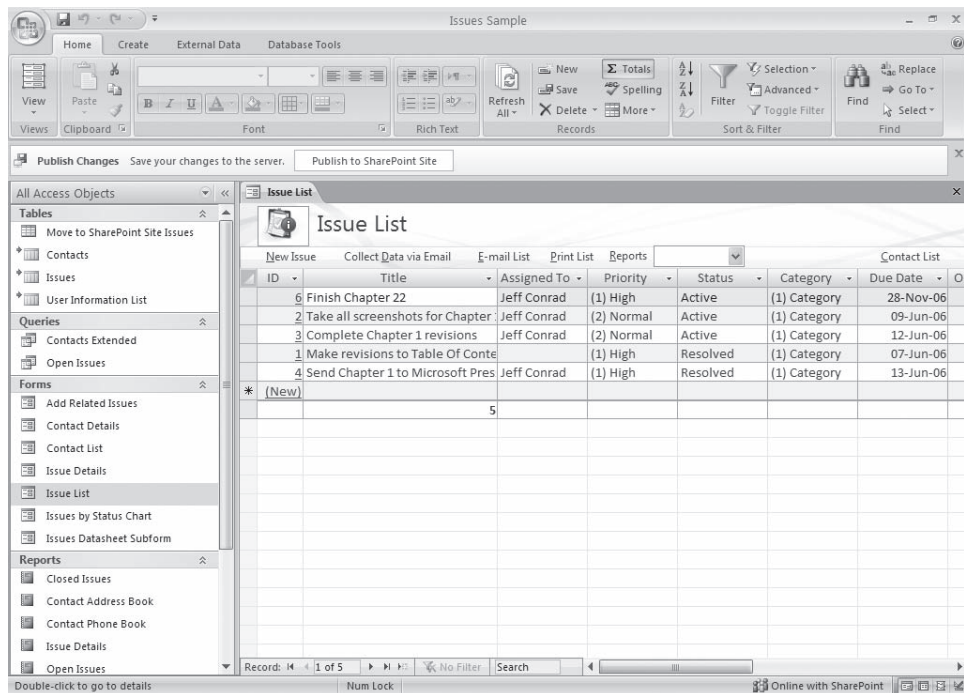


Figure 22-79 Access relinks the tables when you go back online.

Our record changes were accepted and uploaded to the SharePoint site and now show up in both our local copy of the database, in any database linked to the lists on the server, and in the lists on the server. In Figure 22-80 you can see all the updated data in the Issues list on the SharePoint site.

Issues									
New ▾ Actions ▾ Settings ▾									
View: All Issues ▾									
ID	Title	Assigned To	Opened By	Opened Date	Status	Category	Priority	Description	Due
1	Make revisions to Table Of Contents			6/4/2006	Resolved	(1) Category	(1) High		6/7/2006
2	Take all screenshots for Chapter 1	Conrad	Conrad	6/4/2006	Active	(1) Category	(2) Normal		6/9/2006
3	Complete Chapter 1 revisions	Conrad	Conrad	6/4/2006	Active	(1) Category	(2) Normal		6/11/2006
4	Send Chapter 1 to Microsoft Press	Conrad	Conrad	6/4/2006	Resolved	(1) Category	(1) High		6/11/2006
6	Finish Chapter 22	Conrad		11/27/2006	Active	(1) Category	(1) High		11/27/2006

Figure 22-80 The Issues list on the SharePoint site now includes all the changes we made while working offline.

You should now have a good grasp of working within the user interface of a Windows SharePoint Services Version 3 site. You have also learned how to leverage the collaborative benefits of Windows SharePoint Services with Access 2007.