Lab 7.1: Reading Information from an ODBC Database

Lab Overview

Objectives

After completing this lab, you will be able to:

- Create an ODBC System Data Source.
- Create an Internet Database Connector (IDC) file to read information from an ODBC data source.
- Create a HTML extension (HTX) file to format the data read from the data source.
- Call the IDC server extension from a hyperlink.

Scenario

In previous labs, you've learned some ways that you can transfer a table of information from a database into an HTML document: by using Internet Assistant for Excel or Internet Assistant for Access, and by simply typing the information into the HTML file. However, all of these solutions create a static picture of the database and must be re-created by the author each time the information in the database changes. Furthermore, none of these solutions allow the Web user to request information dynamically.

In this lab, you will use the Internet Database Connector server extension (Httpodbc.dll) and its helper files to dynamically create Web pages, from information in the Main Street Market database, for the Employee's Only page.

Lab Setup

This lab builds upon the Employee's Only page, EmpOnly.htm, that you were working with in Chapter 3. You can continue to edit those files, or copy the files from the \Labs\Lab07.1 directory.

If you need additional help with the lab, you can refer to solution files in the \Labs\Lab07.1\Solution directory.

This demonstration summarizes the exercises that you perform in this lab.

Estimated time to complete this lab: **30 minutes**

Exercises

The following exercises provide practice working with the concepts and techniques covered in this chapter.

Exercise 1: Create an ODBC System Data Source

In this exercise, you will create an ODBC System Data Source to connect to the Microsoft Access 95 Main Street Market database.

Exercise 2: Read Total Sales from Database

In this exercise, you will create the IDC and HTX files to read Sales information from the Main Street Market database. You will then add a jump from the Employee's Only page, in the Main Street Market Web site, to the IDC file.

Exercise 1: Create an ODBC System Data Source

The Internet Database Connector extension only works with ODBC data sources, and only System data sources.

This lab uses a Microsoft Access database. However, as a general rule, file-oriented data sources, such as Microsoft Access, won't work optimally in an Internet situation where potentially many requests are made at the same time. Client/server data sources, such as SQL Server, Oracle, Informix, and Sybase, are more appropriate for Internet uses.

Note The database used for the labs, MainSt.mdb, is actually the NorthWind.mdb sample database that ships with Microsoft Access 95.

➢ Install Microsoft Access ODBC Driver for Windows NT 4.0

If you are running Windows NT 4.0 for your Internet server, you need an updated ODBC driver for Microsoft Access 95.

1. Run Setup for the ODBC Driver Pack 3.0 from this compact disc.

Note Setup of the Microsoft ODBC Driver Pack will attempt to install a DLL that is used by the Mastering Internet Development application. Running Setup and Mastering Internet Development concurrently will result in a error that states that the DLL is being used by another application.

You can *start* Setup using the icon above. However, to *complete* installation, you must first exit the Mastering Internet Development application and choose Retry from the Setup dialog box. Alternatively, you can start Setup directly from the Mastering Internet Development CD by running D:\ media\tools\odbc\setup.exe.

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2. Select Custom to install only the Access OBDC driver.

   The ODBC Driver Pack 3.0 - Custom dialog appears.

3. Select the Desktop Drivers entry in the Options list, and then select Change Option.

4. In the list of Desktop Drivers, deselect all drivers except MS Access Driver and the Engine Components, then choose OK.

5. Deselect the SQLServer and Oracle entries in the Options list, then choose Continue.

6. Follow the directions for the rest of the steps of Setup.

   When the ODBC Driver Pack is done installing the necessary files, it starts the ODBC applet, which you will use in the next procedure.

➢ Create an ODBC System Data Source

1. If it isn't already open, open the ODBC applet from the Control Panel.

2. Choose the System DSN button.

3. Choose the Add button.

4. Select the Access 7.0 driver from the list box and click OK.

5. Fill in the driver dialog with the following information:

   Datasource Name: WebMainSt

   Database: \MID\Labs\MainSt.mdb

Important If your Internet server is on a different machine than the lab files, or if you didn't select the default installation directory for the Mastering Internet Development CD, create a C:\MID\Labs directory structure, and copy the MainSt.mdb database from the \Labs directory to this directory. Later labs require the database to be in this location.

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6. Choose OK to exit from the Access driver dialog.

7. Choose Close to exit from the System Data Source dialog.

8. Choose Close to exit from the Data Sources dialog.

9. Choose OK to complete the ODBC and DSN Setup.

Exercise 2: Read Total Sales from Database

The employees of Main Street Market need to retrieve accurate, timely information from the sales database. One piece of information they need is the total of all sales made by Main Street Market.

In this exercise, you will create the IDC and HTX files to retrieve the total sales from the Main Street Market database.

➢ **Register the IDC and HTX file types**

IDC and HTX files are not registered file types in Windows 95. To make creating and editing these files easier, create an association between the .IDC and .HTX extensions and the Notepad utility.

1. In the Windows Explorer, choose Options from the View menu.

2. Select the File Types tab.

3. Create a new file type for IDC files. Set the extension to **IDC**, the action to **open**, and the application to **Notepad.exe**.

   See Lab 3.2, Exercise 1: Creating an Image Map for more detailed directions on how to create a new file type.

4. Create a new file type for HTX files. Set the extension to **HTX**, the action to **open**, and the application to **Notepad.exe**.

➢ **Create an IDC file to read sales information**

1. Open a new file with Notepad.

2. Add the DataSource field, and set it equal to the name of the system ODBC data source you created in Exercise 1.

   Because Access databases don't have security built into them, you don't need to fill in the Username and Password fields in the IDC file.

3. Add the Template field, and set it equal to Sales.htx. You'll create this file in the next step.

4. Add an SQLStatement field, and set it equal to an SQL statement that will read all orders in the Order Details table and then total them.

The Order Details table has the following fields:

```
Order Details
OrderID
ProductID
UnitPrice
Quantity
Discount
```

The SQL statement should retrieve the Sum of the UnitPrice and Quantity fields from the [Order Details] table:

SELECT Sum(UnitPrice * Quantity)/100*100 AS Total FROM [Order Details]

Note Dividing the sum by 100 then multiplying by 100 creates a value with two decimal places.

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5. Save the IDC file as Sales.idc in the \Scripts directory of your Internet Server.

   If you are unsure of the syntax of the IDC file, look at the solution:

```
Datasource: WebMainSt
Template: Sales.htx
SQLStatement:
+ SELECT Sum([Order Details].UnitPrice * Quantity)/100*100 as Total
+ FROM [Order Details]
```

➢ **Create an HTX file to display the results**

1. Open a new file in Notepad.

2. Type the HTML tags to create a file that returns the total sales from the database. The resulting Web page should look like this:

Note The name of the record returned by the IDC file is Total. Add <%Total%> to the location in the HTML file where you want this value to appear.

If you are unsure of the syntax of the HTX file, look at the solution:

```
<HTML>
<HEAD>
<TITLE>Main Street Market Sales Information</TITLE>
</HEAD>
<BODY>
<H2>Main Street Market</H2>
<B>Total Sales = </B> $<%Total%>
</BODY>
</HTML>
```

3. Save the HTX file as Sales.htx in the \Scripts directory of your Internet Server.

➢ **Add a link from the Employees Only page**

1. Open the Employees Only page, EmpOnly.htm, in Internet Assistant for Word.

2. Create a link from the text "Total Sales" to Sales.idc in the /Scripts directory.

3. Save the file.

➢ **Test the link**

◆ Open the Employees Only page with Internet Explorer and click the Total Sales link.