17

T U T O R I A L

Accessing Microsoft Access Database

Running the applications with Microsoft Access Database

In this tutorial, you will learn how to run the ATM application and the Bookstore Web-based application with Microsoft Access database.

17.1 Configuring the Data Source for the ATM application

To run the ATM application with Microsoft Access database, you need first specify the data source using the ODBC administrative tool, which is available on all Windows platforms.

Configuring the data
source

1. ***Downloading the database file to your working directory.*** Download the Access version of the ATM database (`ATM.mdb`) from `www.deitel.com` and save it to `C:\SimplyJava\ATM` directory.

2. ***Opening the ODBC data source administrator.*** Open the **Control Panel** by selecting **Start > Settings > Control Panel**. In the **Control Panel** window, double click **Administrative Tools** in the list as in Fig. 17.1. In the **Administrative Tools** window, double click **Data Sources (ODBC)** in the list as in Fig. 17.2. The **ODBC Data Source Administrator** window appears (Fig. 17.3).
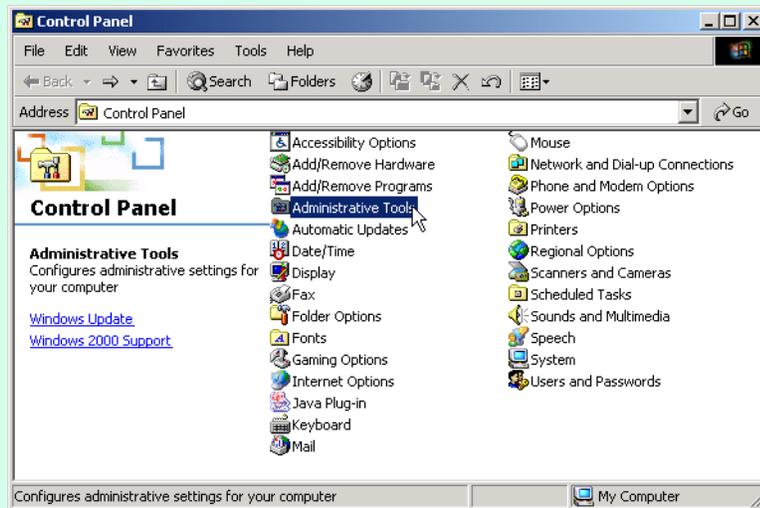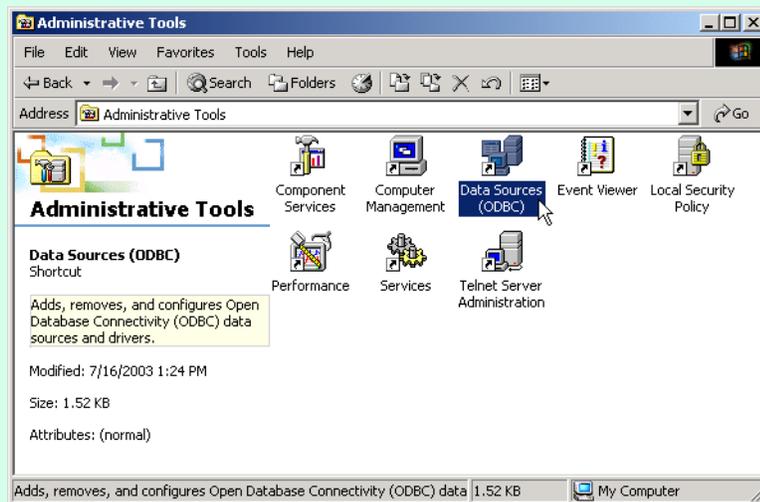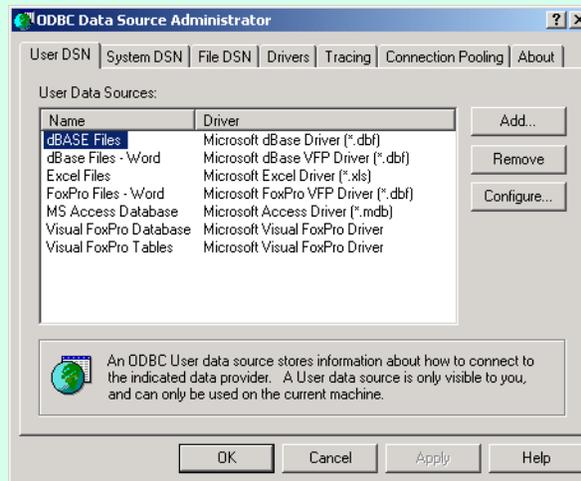

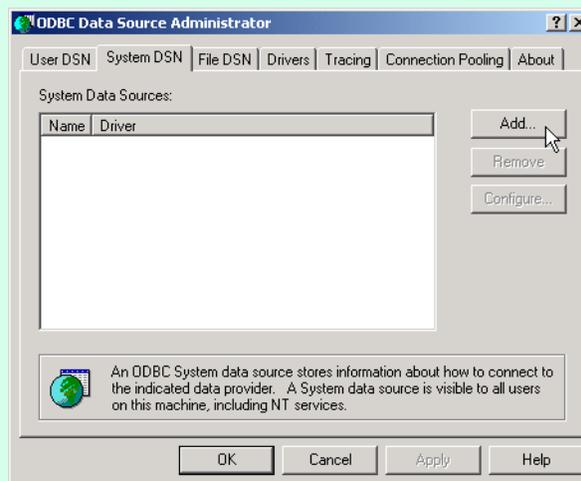**Figure 17.1**   Opening **Administrative Tools**.

Figure 17.2   Opening **ODBC**.

(cont.)

Figure 17.3   **ODBC Data Source Administrator** window.

3. ***Adding ATM.mdb to the Data Source.*** Select the **System DSN** tag and click the **Add...** button as in Fig. 17.4. The **Create New Data Source** window appears. Select the **Microsoft Access Driver (*.mdb)** and click the **Finish** button as in Fig. 17.5. The **ODBC Microsoft Access Setup** window appears. Enter ATM in the **Data Source Name:** JTextField and click the **Select...** button as in Fig. 17.6. The **Select Database** window appears. Find the ATM.mdb in the C:\SimplyJava\ATM directory and click the **OK** button as in Fig. 17.7. Click the OK button in **ODBC Microsoft Access Setup** window and the OK button in the **ODBC Data Source Administrator** window to close the administrator.

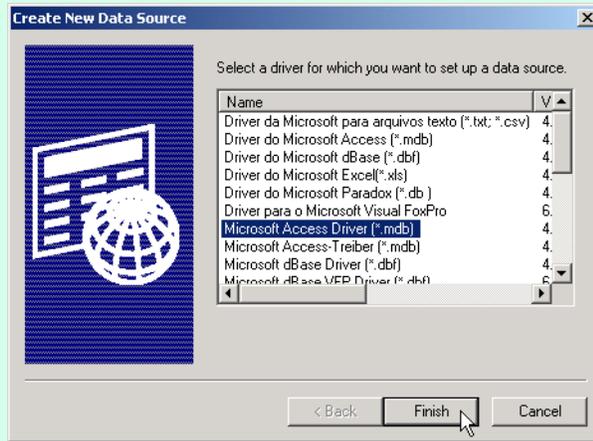**Figure 17.4**   Adding ATM.mdb to the data source.

(cont.)

Figure 17.5 Selecting database driver.

Figure 17.6 Setting up ODBC Microsoft Access.
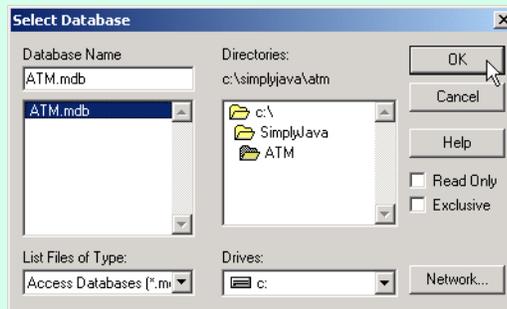

Figure 17.7 Selecting the database.

(cont.)

4. ***Opening the Command Prompt window and changing directories.*** Open the **Command Prompt** window by selecting **Start > Programs > Accessories > Command Prompt**. Change to your working directory by typing `cd C:\Examples\Tutorial26\CompletedApplication\ATM`.

5. ***Running the application.*** When your application compiles correctly, run it by typing `java ATM sun.jdbc.odbc.JdbcOdbcDriver jdbc:odbc:ATM`. The first command-line argument `sun.jdbc.odbc.JdbcOdbcDriver` specifies the database driver for the Access databases. The second command-line argument `jdbc:odbc:ATM` specifies the database location. If you use a name other than ATM in Fig. 17.6, say `test`, then the second command-line argument should be `jdbc:odbc:test`. Figure 17.8 shows the application running. Test the application as in Chapter 26.

Figure 17.8 Running the ATM application with Microsoft Access database.

6. ***Closing the application.*** Close your running application by clicking its close button.

7. ***Closing the Command Prompt window.*** Close the **Command Prompt** window by clicking its close button.

17.2 Configuring the Data Source for Exercises in Tutorial 26

To work on the exercises using the Access databases, you need to configure the data source for the exercises databases. Figure 17.9 lists the database names for each exercise in Tutorial 26. All these Access databases are available at `www.deitel.com`. After downloading these databases, add them to the ODBC data source as you did in the previous box.

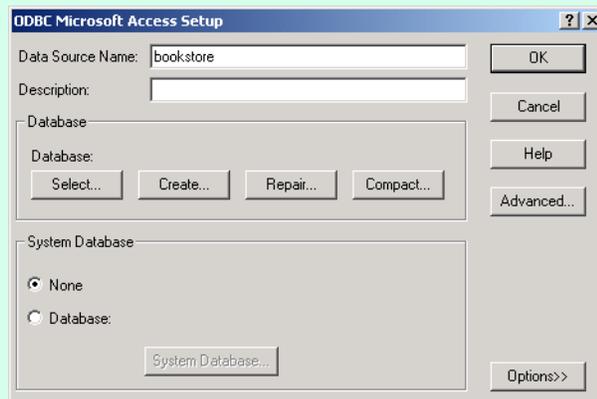| Exercise Number	Access Database Name
26.11	stocks.mdb
26.12	restaurant1.mdb
26.13	reservations.mdb
26.16	restaurant2.mdb

Figure 17.9 Databases for the exercises in Tutorial 26.

17.3 Running the Bookstore Web-based application

You can also run the Bookstore Web-based application with Access database.

Configuring the data source

1. ***Downloading the database file to your working directory.*** Download the Access version of the Bookstore database (bookstore.mdb) from www.deitel.com and save it to C:\SimplyJava\Bookstore directory.

2. ***Configuring the bookstore data source.*** Configure the bookstore data source as described in the previous box. Enter bookstore in the **Data Source Name:** JTextField in the **ODBC Microsoft Access Setup** window (Fig. 17.10).

Figure 17.10 Specifying data source name for bookstore database.

(cont.)

3. ***Copying the Bookstore application to the Tomcat webapps directory.***
Download the modified `Bookstore` application (a directory named book-
store) from www.deitel.com and save it to the
`C:\Program Files\Apache Group\Tomcat 4.1\webapps` (Fig. 17.11)
directory. [*Note*: If the `bookstore` directory already exist in the `webapps`
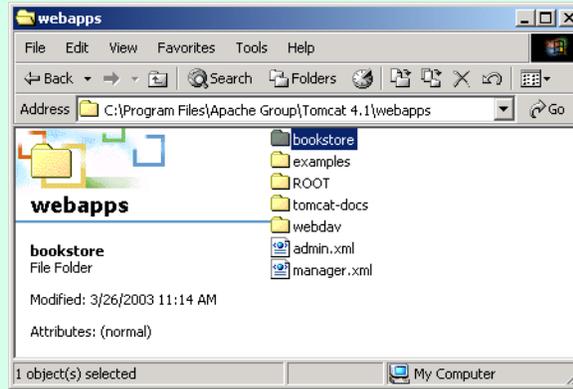directory, delete it first.]

Figure 17.11 Saving the `bookstore` directory to `webapps`.

4. ***Viewing the modified code.*** Figure 17.12 shows the changes (highlighted)
made to the `books.jsp`. Lines 36–37 is no longer needed. To keep the same
line number as the `bookstore` application for the Cloudscape database, lines
36–37 became comments. Line 40 passes the database driver for Access data-
base (`sun.jdbc.odbc.JdbcOdbcDriver`) to the `forName` method of `Class`.
Lines 43–45 connect to the bookstore database using the database URL
`jdbc:odbc:bookstore` (line 45). Same changes are made to `bookInforma-`
`tion.jsp` too (Fig. 17.13). Be aware of these changes when you build your
own `Bookstore` application using Access databases.

Commenting lines 36–37 ⎯⎯⎯

Changing the database driver ⎯⎯⎯

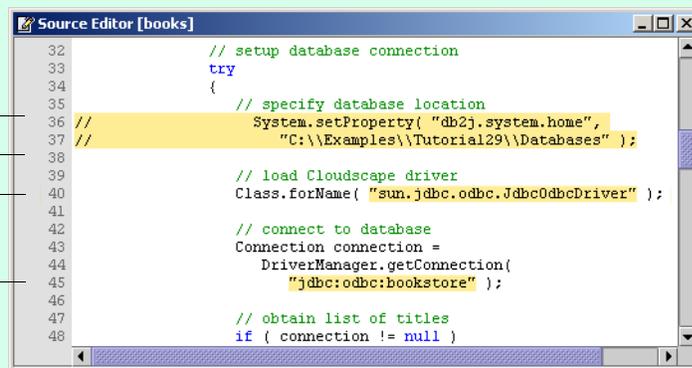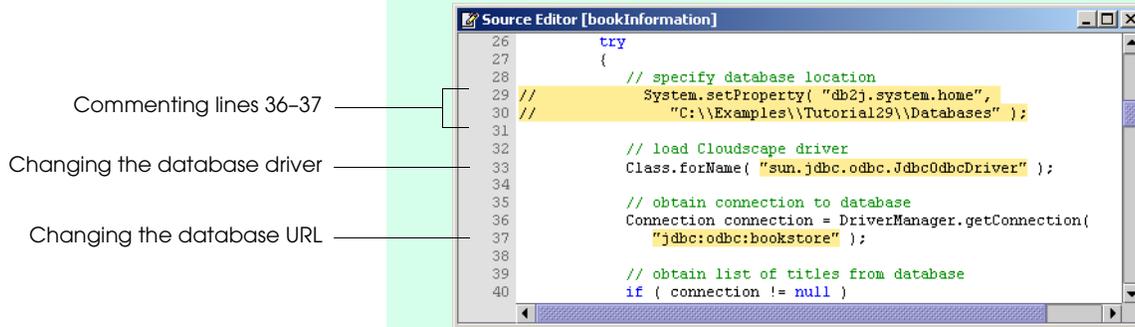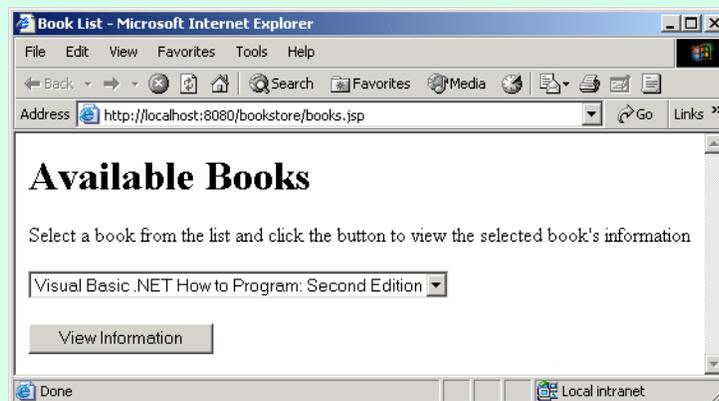Changing the database URL ⎯⎯⎯

Figure 17.12 Viewing modified `books.jsp`.

Figure 17.13   Viewing the modified `bookInformation.jsp`.

5. ***Starting Tomcat.*** To start Tomcat, click **Start > Programs > Apache Tomcat 4.1 > Start Tomcat**.

6. ***Running the application.*** Open a Web browser and enter the URL `http://localhost:8080/bookstore/books.jsp`. This will display the page of the **Bookstore** application that displays a list of the available books (Fig. 17.14). Test the application as described in Tutorial 29.

Figure 17.14   Running the ATM application with Microsoft Access database.

7. ***Closing the browser.*** Click the browser by clicking its close button.

17.4 Configuring the Data Source for Exercises in Tutorial 31

To work on the exercises using the Access databases, you need to configure the data source for the exercises databases. Figure 17.15 lists the database names for each exercise in Tutorial 31. All these Access databases are available at `www.deitel.com`. After downloading these databases, add them to the ODBC data source.

Exercise Number	Access Database Name
31.11	phonebook.mdb
31.12	statefacts.mdb
31.13	roadsigns.mdb

Figure 17.15   Databases for the exercises in Tutorials 29-32.