E

Installing the JDK and JDK Documentation

This appendix explains how to install the Java Development Kit (JDK) for the Windows operating system, and the JDK documentation. The JDK for Windows and the JDK documentation are included on the Student CD that comes with your textbook. If you do not have a Student CD, or you are using an operating system other than Windows, go to the end of this appendix for instructions on downloading the files from Sun Microsystems.

Installing the JDK for Windows from the Student CD

Step 1: On the Student CD you will find a folder named *JDK*, and inside that folder you will find an executable file with the following name:
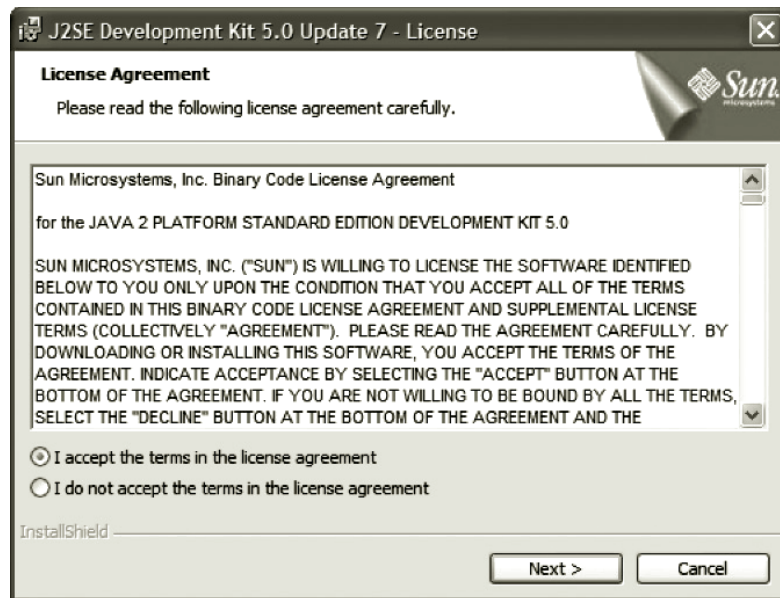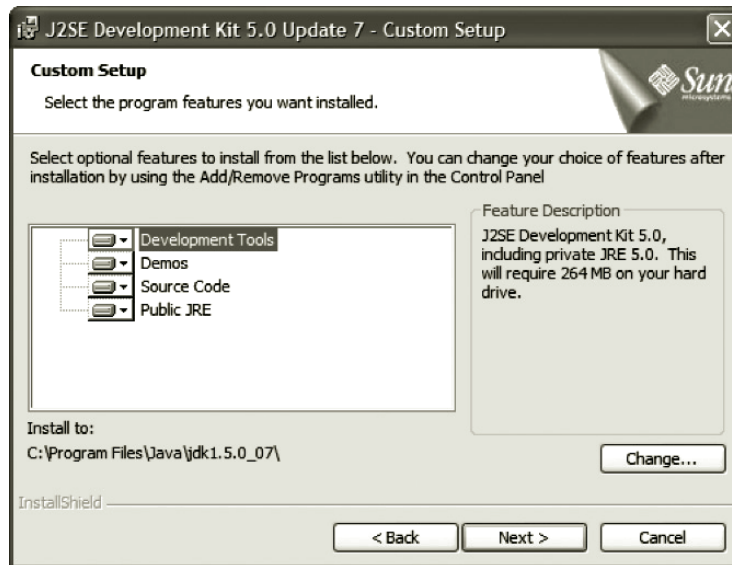
jdk-1_5_0_XX-windows-i586-p.exe

The *XX* in the filename will be the software's update number. For example, if the CD contains update 7, the *XX* in the filename will be 07.
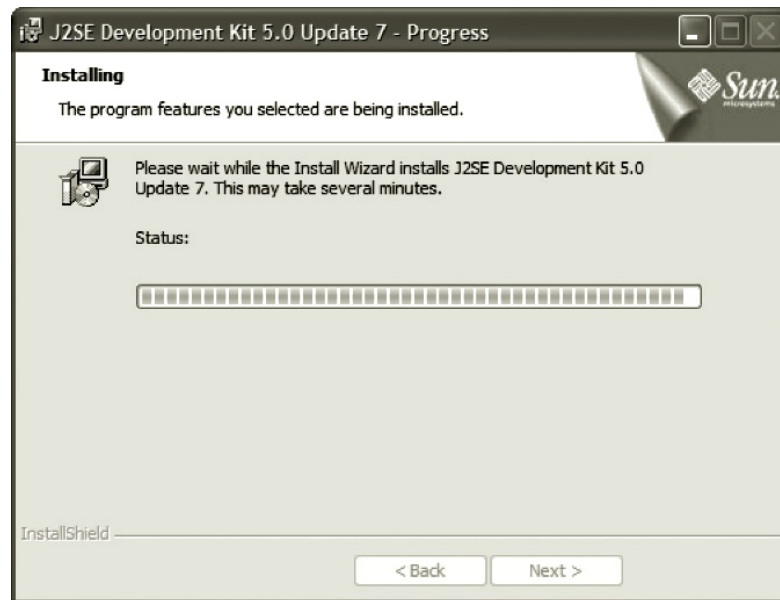
This file is an executable program that will install the Java™ 5 JDK for Windows on your computer. Run the file.

Step 2: A license agreement screen, such as the one shown in Figure E-1 will appear next. Read the agreement, then select *I accept the terms in the license agreement* and click the *Next* button.
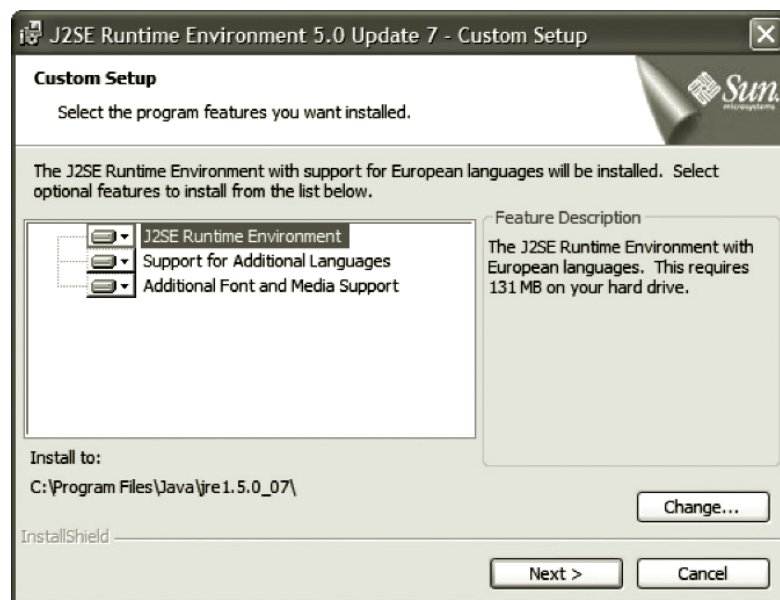
Step 3: A Custom Setup screen, such as shown in Figure E-2, appears next. Make sure *Development Tools* is selected, then click *Next*.

Figure E-1 License agreement screen

Figure E-2 Custom Setup screen

Step 4: A progress screen, such as shown in Figure E-3, appears next. As the development files are installed to your system, the progress bar will be updated, indicating the status of the installation. It may take several minutes for this part of the installation to complete.
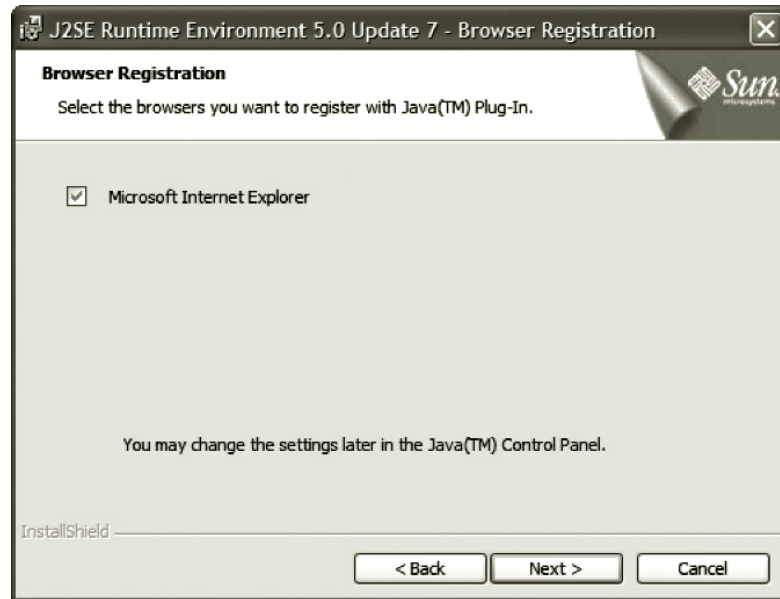
Figure E-3 Progress screen

Step 5: Once the files are installed, you will see the Custom Setup screen shown in Figure E-4. The Java Runtime Environment (JRE) will install next. Make sure *J2SE Runtime Environment* is selected, then click *Next*.

Figure E-4 Custom Setup screen

Step 6:   The Browser Registration screen, such as the one shown in Figure E-5, appears next. The browsers supported by Java that you have installed on your system will be listed. Make sure each browser that you use is selected and then click *Next*.

Figure E-5 Browser Registration screen

Step 7:   A progress screen, such as shown in Figure E-6, appears next. As the runtime environment files are installed to your system, the progress bar will be updated, indicating the status of the installation. It may take several minutes for this part of the installation to complete.

Step 8:   The screen shown in Figure E-7 should appear next, indicating that the installation is now complete. Click *Finish*.
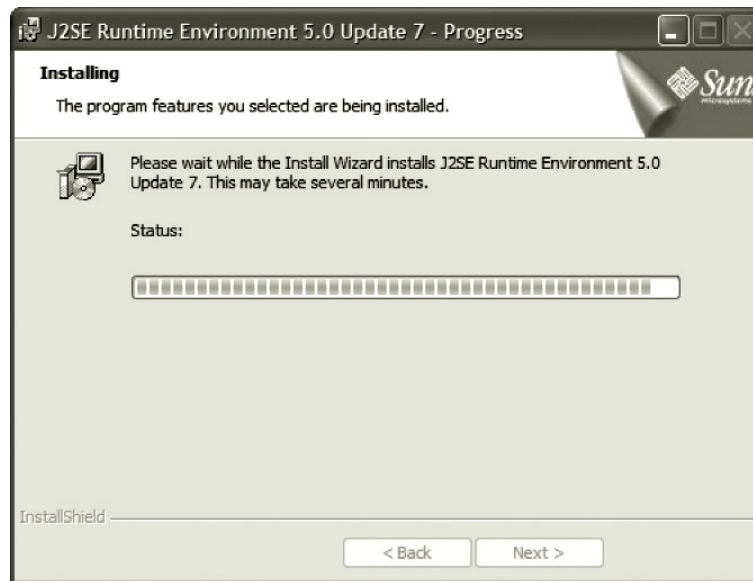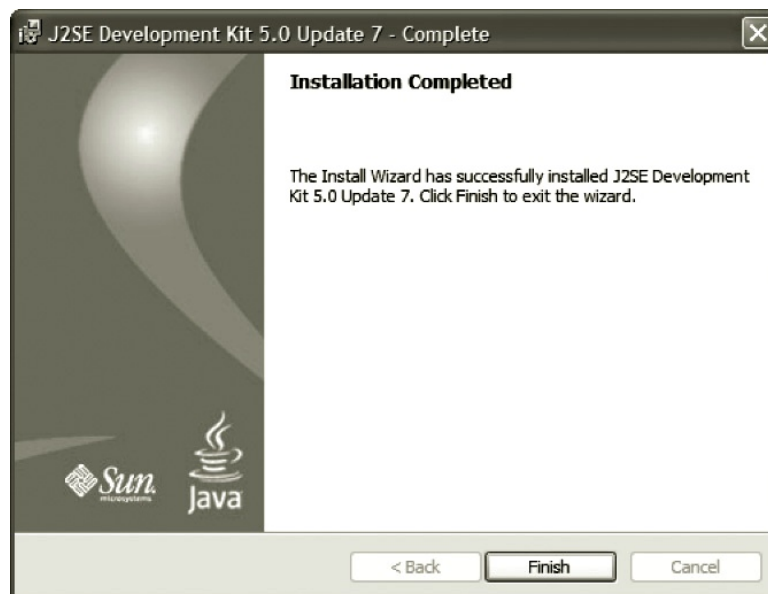
NOTE: For your reference, the JDK files will be installed to the following folder:

C:\Program Files\Java\jdk1.5.0_XX

The Java Runtime Environment files will be installed to the following folder:

C:\Program Files\Java\jre1.5.0_XX

The XX in both paths will be the software's update number.

Figure E-6 Progress screen

Figure E-7 Installation Completed

Setting the `Path` Environment Variable

If you plan to use the JDK command-line utilities to compile and run Java™ programs, you will probably want to edit the contents of the `Path` variable on your system. This will allow your system to find the JDK programs from any folder when you run them at the command-line.

The `Path` variable contains a list of folder paths, separated by semicolons. For example, the `Path` variable might contain the following string:

```
C:\windows\system;C:\games;C:\Program Files\MyPrograms
```

When you type the name of an executable file at the command-line and press Enter, the system will first look in the current folder for that file. If it can't find the file there, it will begin looking in the folders that are listed in the `Path` variable. To make it easy to execute the Java™ JDK utilities from the command-line, you should add the following path to the `Path` variable:

C:\Program Files\Java\jdk1.5.0_XX\bin

Be sure to replace the *XX* in the path with the software's update number.

This is the folder that contains the executable files for the version of the Java™ JDK installed from the Student CD. The procedure for adding this path to the `Path` variable depends on the version of Windows you are using.

Windows XP

Click the *Start* button, then click *Control Panel*, then double-click the *System* icon. (If you are running Windows XP in Category View, click *Performance and Maintenance* in the Control Panel, and then click the *System* icon.) Next, click the *Advanced* tab, and then click the *Environment Variables* button. In the *System Variables* list, scroll to the `Path` variable. Select the `Path` variable and click the *Edit* button. Add a semicolon to the end of the existing contents, then add the following path:

C:\Program Files\Java\jdk1.5.0_XX\bin

Be sure to replace the *XX* in the path with the software's update number.

Click the *OK* buttons until all of the dialog boxes are closed, and exit the control panel.

Windows 2000

Click the *Start* button, then click *Control Panel*, then double-click the *System* icon. Select the *Advanced* tab, and then click the *Environment Variables* button. In the *User Variables and System Variables* list, scroll to the `Path` variable. Select the `Path` variable and click the *Edit* button. Add a semicolon to the end of the existing contents, then add the following path:

C:\Program Files\Java\jdk1.5.0_XX\bin

Be sure to replace the *XX* in the path with the software's update number.

Click the *OK* buttons until all of the dialog boxes are closed, and exit the control panel.

Windows NT

Click the *Start* button, then click *Control Panel*, then double-click the *System* icon. Select the *Environment* tab. In the *User Variables and System Variables* list, scroll to the `Path` variable. Select the `Path` variable and click the *Edit* button. Add a semicolon to the end of the existing contents, then add the following path:

   C:\Program Files\Java\jdk1.5.0_XX\bin

Be sure to replace the *XX* in the path with the software's update number.

Click the *OK* buttons until all of the dialog boxes are closed, and exit the control panel.

Windows 98

Click the *Start* button, then click *Run*. In the *Run* dialog box, enter **sysedit** and click *OK*. This launches the system editor. One of the windows that will open will display the contents of the *AUTOEXEC.BAT* file. Go to that window and look for a line that reads something like:

   `Path="list of paths"`

where `list of paths` is a list of paths separated by semicolons. (The = symbol may or may not be there.) Add a semicolon to the end of the existing contents, then add the following path:

   C:\Program Files\Java\jdk1.5.0_XX\bin

Be sure to replace the *XX* in the path with the software's update number.

Exit the editor and reboot the system.

Windows ME

Click the *Start* button, then choose *Programs*, then *Accessories*, then *System Tools*, and then *System Information*. At the *Microsoft Help and Support* dialog box click the tools menu, then click *System Configuration*. Next, click the *Environment* tab. Select `Path` and then click the *Edit* button. Add a semicolon to the end of the existing contents, then add the following path:

   C:\Program Files\Java\jdk1.5.0_XX\bin

Be sure to replace the *XX* in the path with the software's update number.

Save the new contents and reboot the system.

Installing the Java™ JDK Documentation

The *JDK Documentation* folder on the Student CD contains a file with the following name: *jdk-1_5_0-doc.zip*

This file contains the Java™ JDK version 5.0 documentation. You can decompress the file with any utility that supports the zip file format. When you decompress the file, it will cre-

ate a *docs* folder, which will contain several other folders. It will also contain a file named *index.html*.

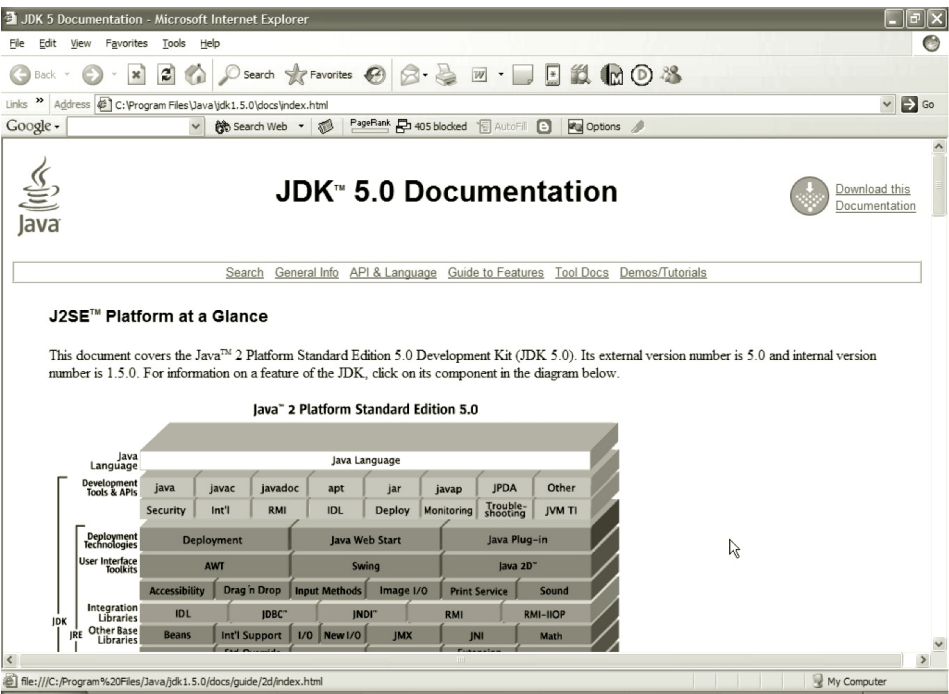Open the *index.html* file with your Web browser to view the documentation.

> **NOTE:** The JDK documentation can also be viewed online at the following address:
>
>   http://java.sun.com/j2se/1.5.0/docs/index.html

Although the documentation contains an abundant amount of information on the Java language and utilities, you will find yourself using the API documentation regularly. The API documentation contains information on all the classes in the Java Application Program Interface (API). The following steps guide you through the process of viewing the API documentation for the `Scanner` class.

Step 1: Open the documentation in your Web browser. (If you installed the documentation on your system, open the *index.html* file in the *docs* folder.) You will first see the screen shown in Figure E-8.
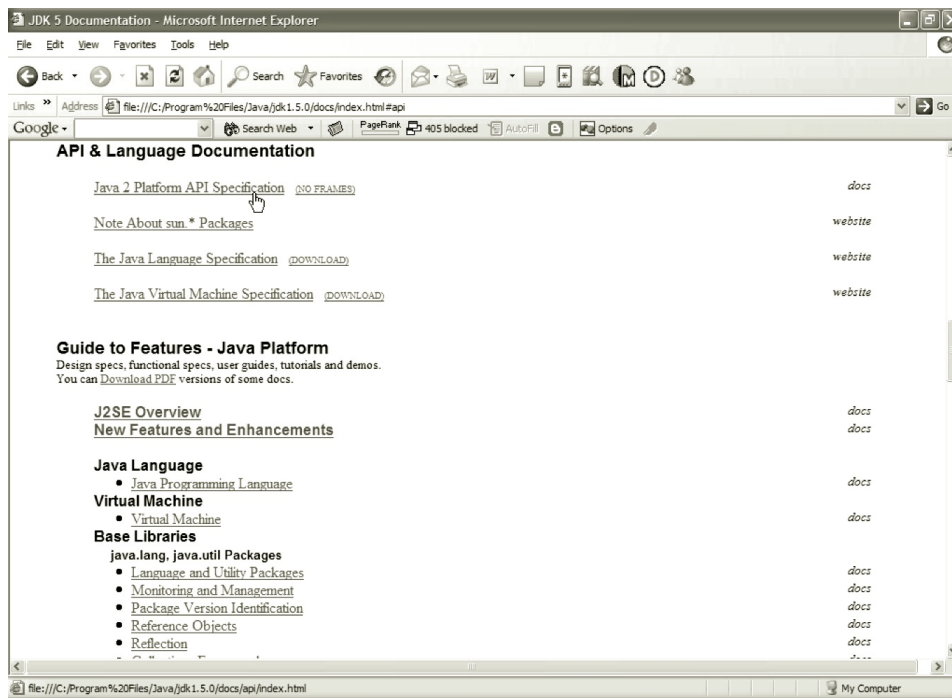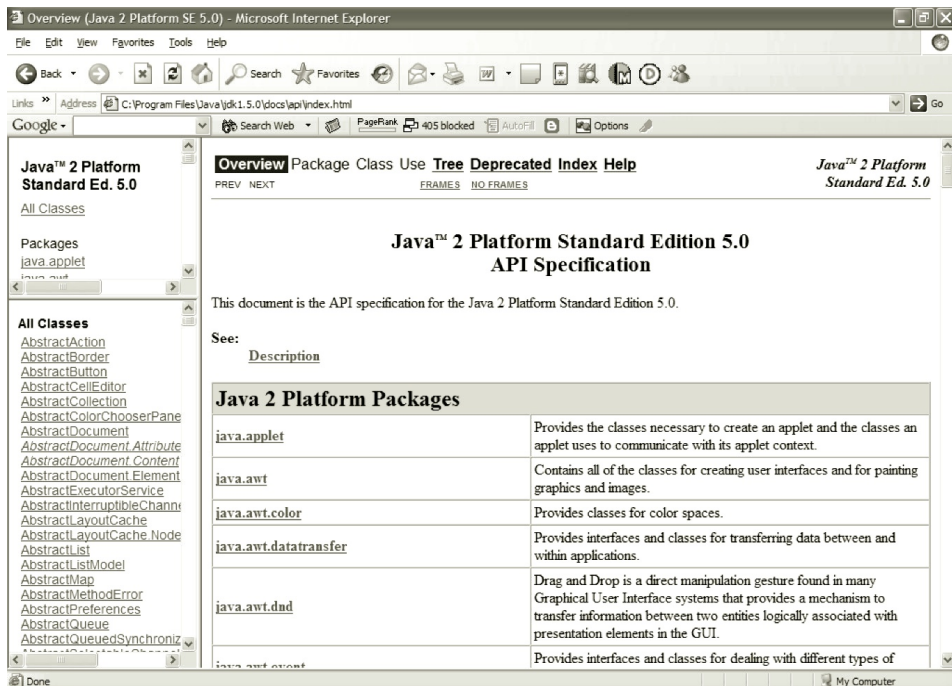
Figure E-8 JDK 5.0 Documentation opening screen

Step 2: Click the *API & Language* link near the top of the screen. You will see the screen shown in Figure E-9.
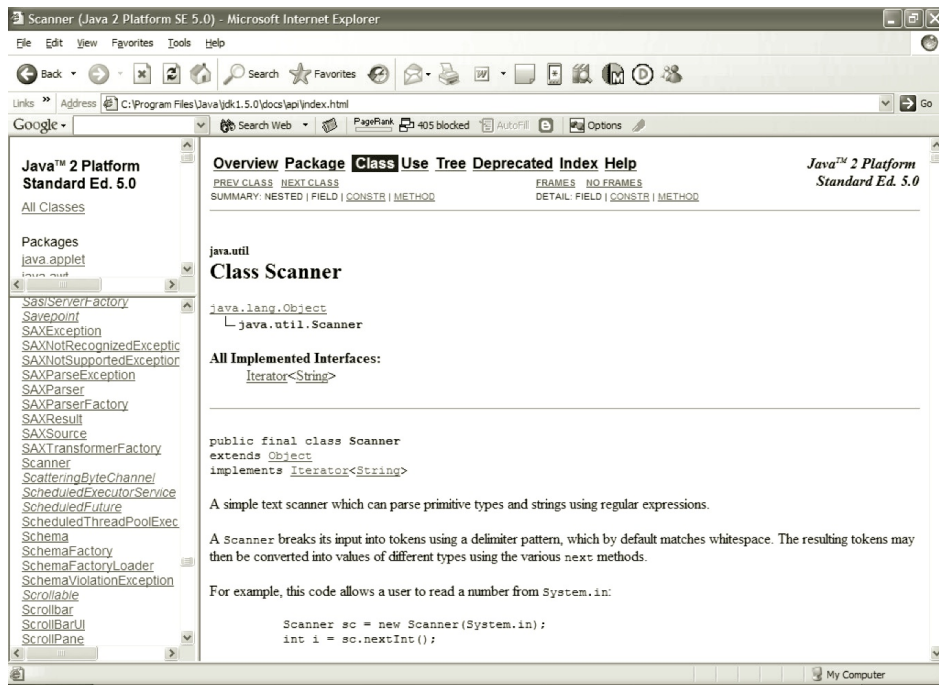
Step 3: Click the *Java 2 Platform API Specification* link near the top of the screen. You will see the screen shown in Figure E-10.

Figure E-9 Documentation screen

Figure E-10 API documentation screen

Step 4: In the leftmost pane you will see an alphabetically ordered list of all the classes and interfaces in the API. Scroll down in this list and click *Scanner*. You will see the screen shown in Figure E-11.

Figure E-11 Scanner class documentation

Step 5: From this screen you can navigate to any part of the Scanner class's documentation. For example, to view a list of the class's methods, click the *METHOD* link near the top of the page. To view a list of the class's constructors, click the *CONSTR* link. Explore these and other links to get a feel for the documentation.

Downloading the JDK from Sun Microsystems

The JDK is also available from Sun Microsystems for the Windows, Linux, and Solaris operating systems. To download the JDK from Sun, follow these instructions:

Step 1: Open your browser and go the following address:

```
http://java.sun.com/j2se/1.5.0/download.jsp
```

Step 2: On the page that opens, click *Download JDK*.

Step 3: A license agreement page displays next. Review the license agreement, if you wish, and then select *Accept License Agreement*.

Step 4: On the page that opens next you will see links to download the JDK for Windows, Solaris, or Linux. Select the appropriate file for your operating system, and save the file on your hard drive.

Step 5: Once the file is downloaded, run it. Follow the instructions outlined in this appendix to install the JDK.