



Using JBuilder 8

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This book may be ordered optionally with Borland JBuilder 8 Personal Edition. This tutorial guides you through the software and documentation installation in Windows. It also takes you through the process of entering, compiling, and running a Java program with JBuilder.

Obtaining an Activation File

Before installing JBuilder 8, you should obtain an activation file. The activation file is required the first time you run the software. To obtain the activation file, go to the Web site at the following URL:

http://borland.com/products/downloads/download_jbuilder.html

On the Web page, scroll to the section titled *Keys Only*. This section allows you to obtain activation files for various Borland JBuilder products. Click on the link for Personal version 8. Follow the instructions to set up a login account. Once you have set up a login account, you will receive an e-mail containing the activation file as an attachment. Save the activation file to your hard disk.

Copying the JBuilder Files from the CD

The JBuilder 8 Personal CD contains several files. For Windows, you will need to copy `jb8_windows.zip` and `jb8_docs.zip` to your hard disk. You can optionally copy the file `jb8samples.zip`, which contains example programs. Unzip the files into folders as shown in Figure J-1. The file `reg127.txt` is the activation file from Borland's e-mail.

Figure J-1 Files copied and unzipped



Installing JBuilder

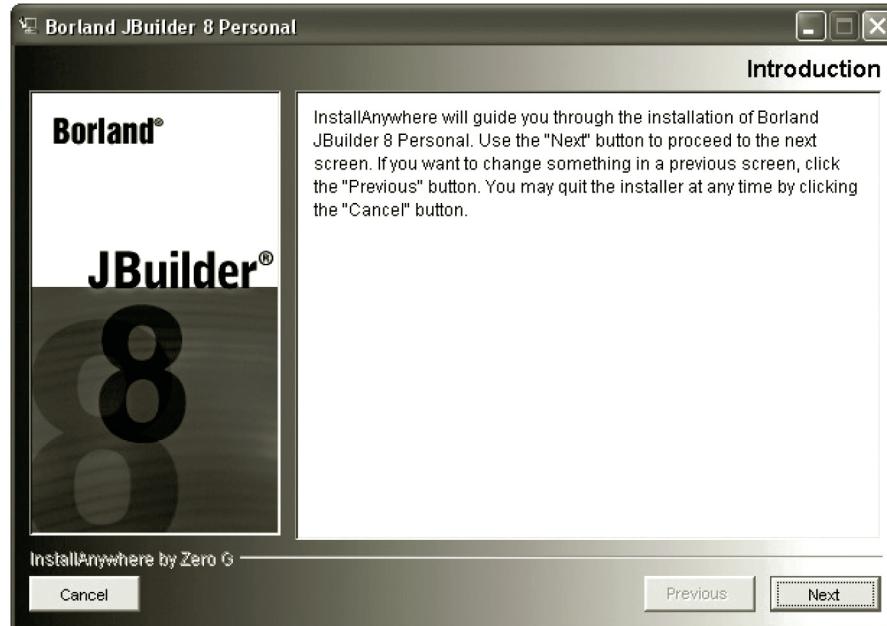
- Step 1:** Navigate to the `jb8_windows` folder where you unzipped the downloaded file.
- Step 2:** Double-click `per_install.exe` to start the installation program. You should see the screen shown in Figure J-2.
- Step 3:** If needed, change the default language for JBuilder 8, and then click OK.

Figure J-2 Starting dialog box



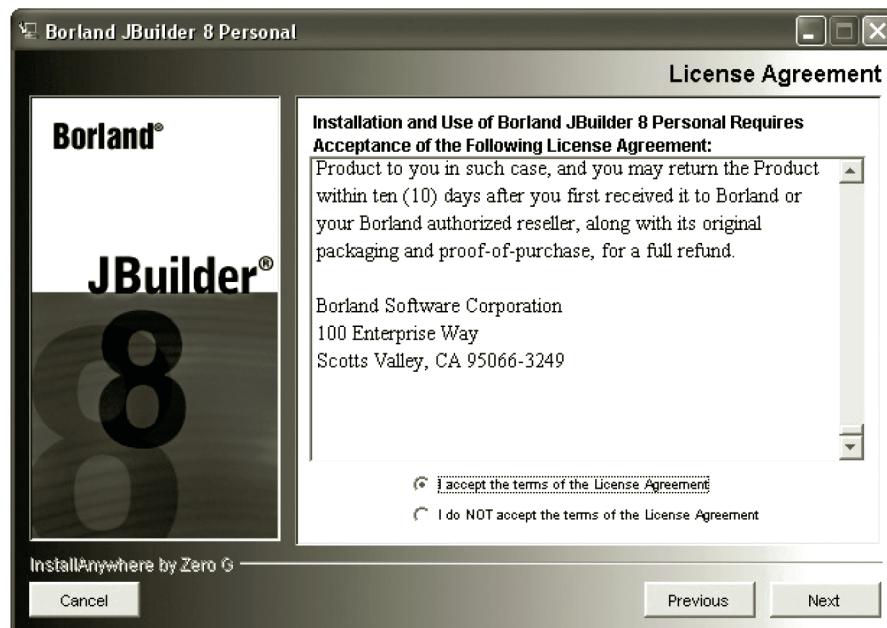
Step 4: Read the Introduction screen, shown in Figure J-3, and then click *Next*.

Figure J-3 *Introduction* screen



Step 5: Next you see the *License Agreement* screen shown in Figure J-4. Read and click to accept the license agreement, and then click *Next*.

Figure J-4 *License Agreement* screen

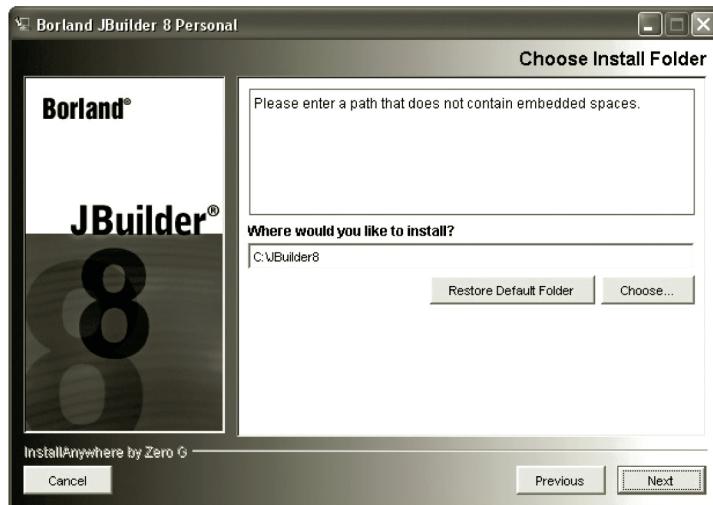


Step 6: The next screen is shown in Figure J-5. Select a directory in which to install JBuilder 8 installed, and then click *Next*.



WARNING! Do not choose a directory that contains spaces in its name. JBuilder will not run if the name of the directory in which it is installed contains spaces.

Figure J-5 Choose Install Folder screen



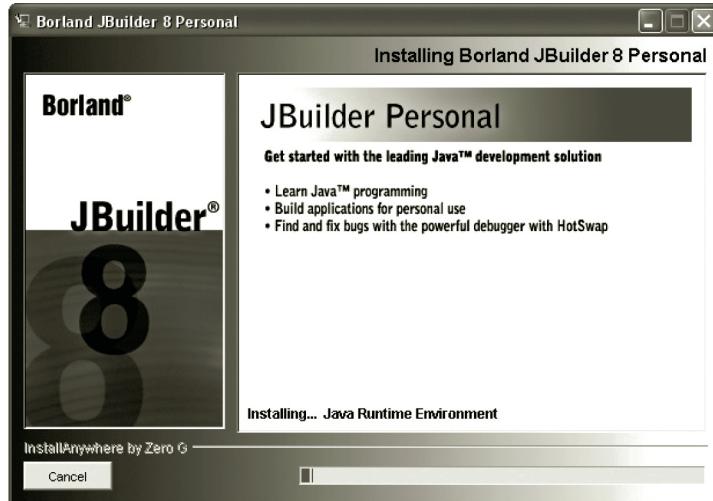
Step 7: Next you see the *Pre-Installation Summary* screen shown in Figure J-6. Review the summary and then click *Install* to begin the installation.

Figure J-6 Pre-Installation Summary screen



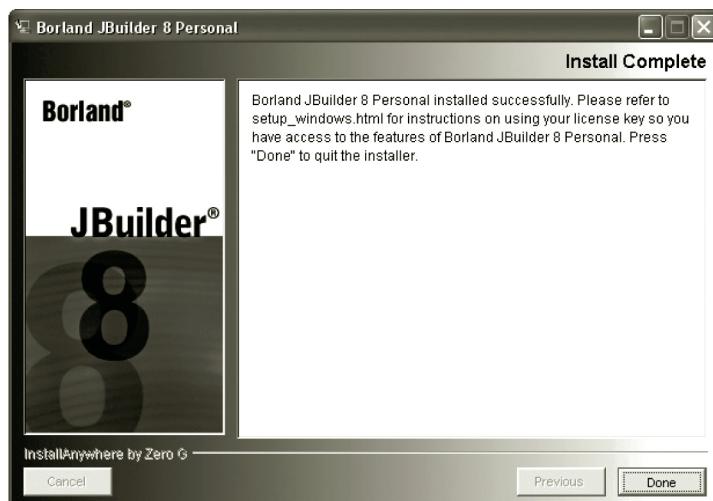
Step 8: The screen shown in Figure J-7 will be displayed while JBuilder installs.

Figure J-7 Installing



Step 9: When the installation program completes, you should see the screen shown in Figure J-8. Click *Done*.

Figure J-8 *Install Complete* screen



Installing JBuilder Documentation

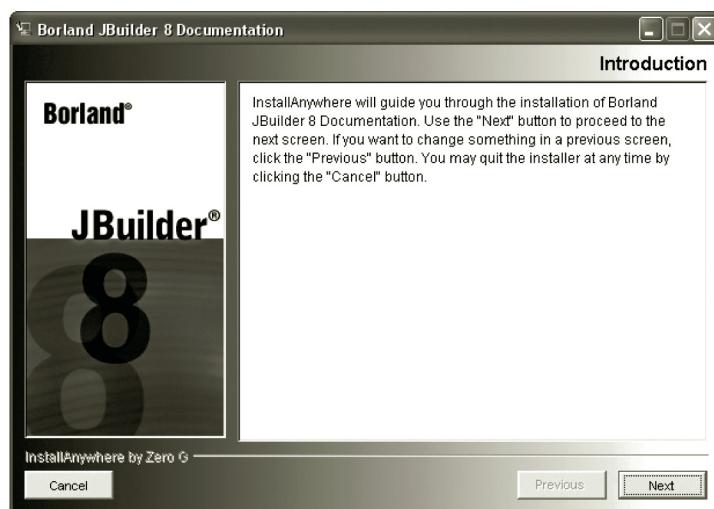
Step 1: When you unzip the `jb8docs.zip` file, a folder named `JB8docs` will be created. In the `JB8docs` folder, double click `doc_install.exe` to install the documentation. You should see the screen shown in Figure J-9. Change the language if necessary and click *OK*.

Figure J-9 Documentation installation screen



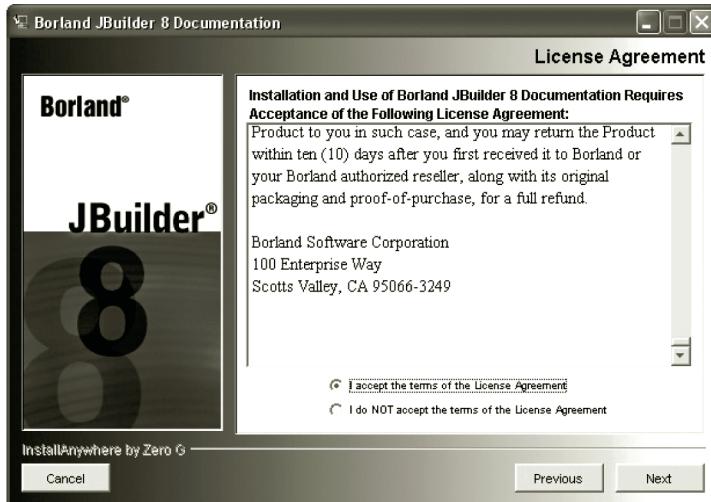
Step 2: Next you should see the *Introduction* screen shown in Figure J-10. Read the introduction and then click *Next*.

Figure J-10 *Introduction* screen



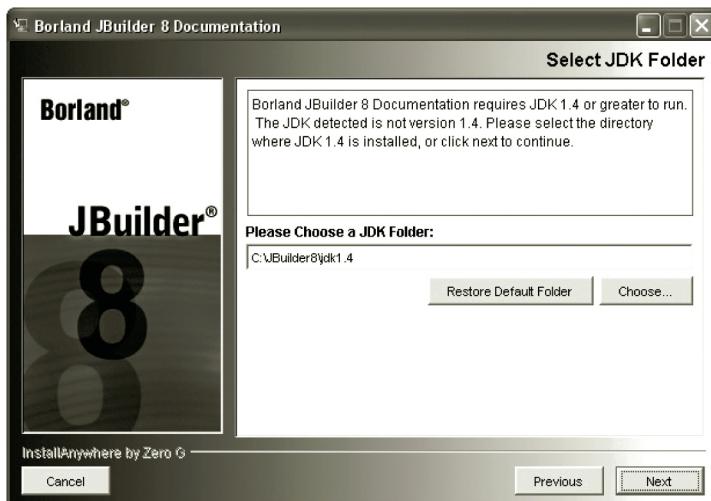
Step 3: Next you should see the *License Agreement* screen shown in Figure J-11. Read and click to accept the license agreement, and then click *Next*.

Figure J-11 License Agreement screen

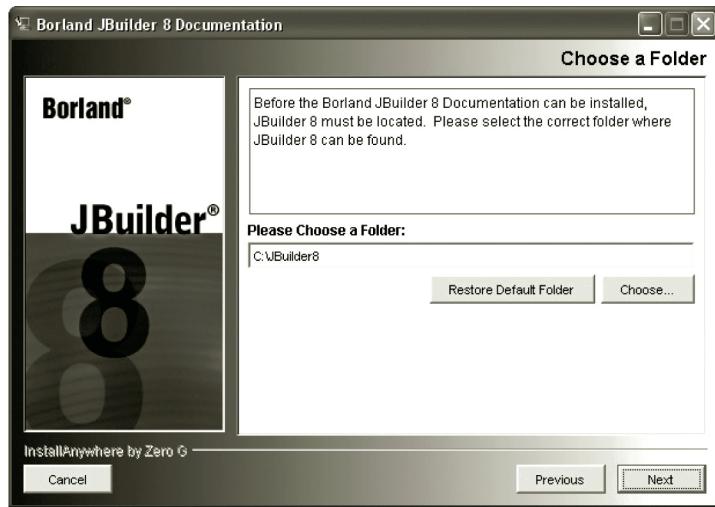


Step 4: The *Select JDK Folder* screen shown in Figure J-12 should appear next. If necessary, locate the folder on your system where the JDK1.4 is installed and then click *Next*.

Figure J-12 Select JDK Folder screen



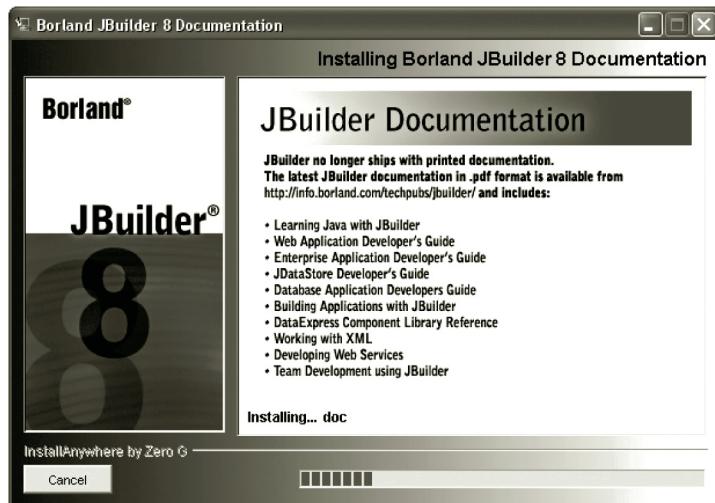
Step 5: You should see the *Choose a Folder* screen shown in Figure J-13 next. Identify a folder in which to install the documentation, and then click *Next*.

Figure J-13 Choose a Folder screen

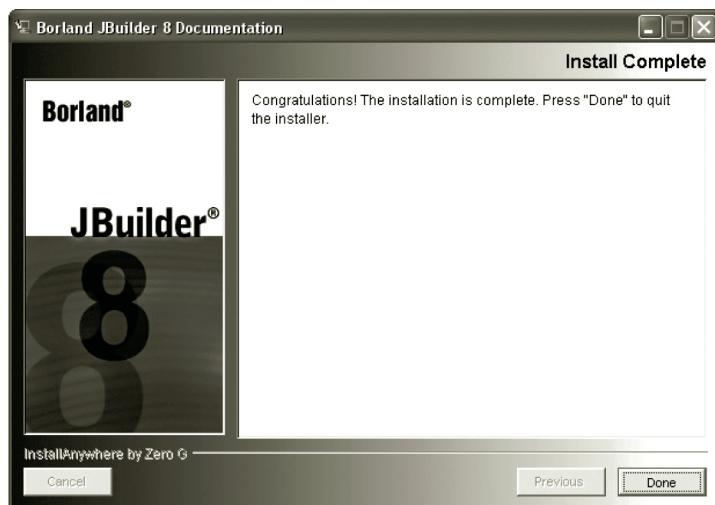
Step 6: Next you should see the *Pre-Installation Summary* screen shown in Figure J-14. Review the information and then click *Install*.

Figure J-14 Pre-Installation Summary screen

Step 7: You should see the screen shown in Figure J-15 while the documentation is installing.

Figure J-15 Installing

Step 8: When the installation is complete you should see the screen shown in Figure J-16. Click *Done*.

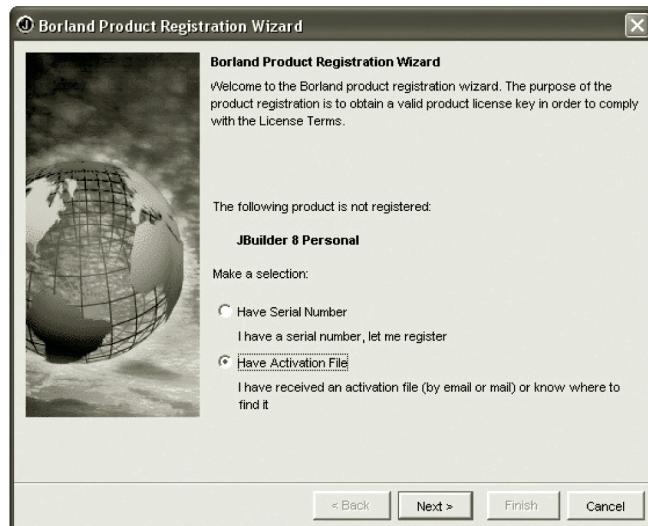
Figure J-16 Install Complete screen

Running JBuilder

Step 1: Click *Start | Programs | JBuilder | JBuilder 8 Personal* to open JBuilder.

Step 2: The first time through, you will see the screen shown in Figure J-17. This screen asks you to register your software. Click *Have Activation File* and then click *Next*.

Figure J-17 Registration screen



Step 3: In the screen shown in Figure J-18 locate the file containing the activation code from Borland, and then press *Next*.

Figure J-18 Import Activation File screen



Step 4: After the software is registered you should see the screen shown in Figure J-19. Click *Finish*.

Figure J-19 Registration complete

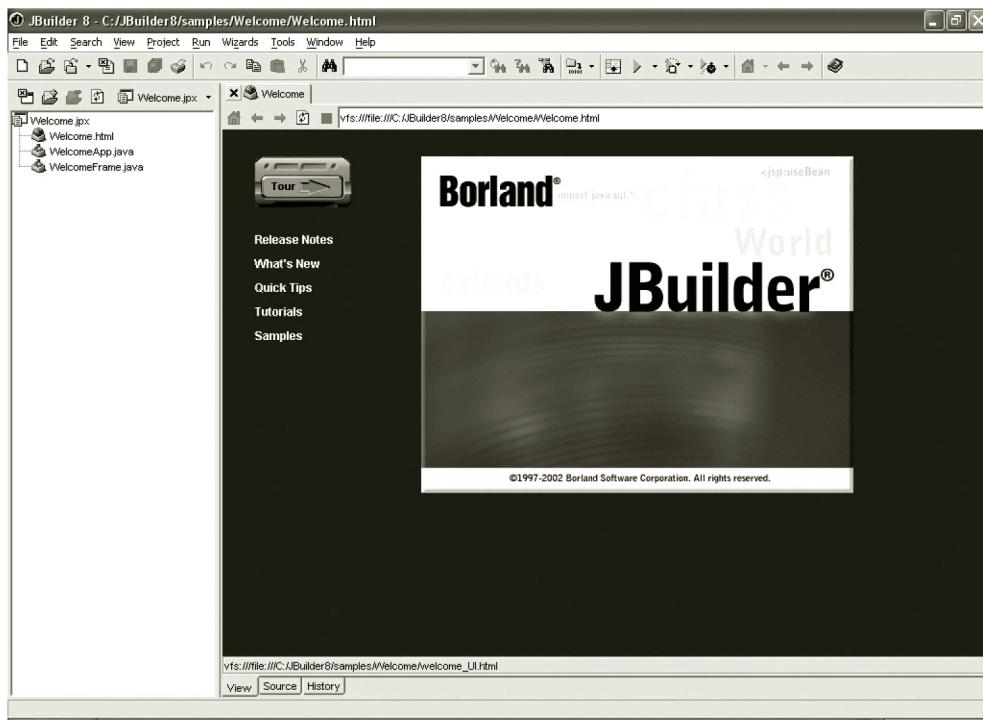
The JBuilder splash screen shown in Figure J-20 appears.

Figure J-20 JBuilder splash screen

Step 5: Next you should see the *Configure File Associations* screen shown in Figure J-21. Click **OK** to associate the selected file extensions with JBuilder.

Figure J-21 Configure File Associations screen

Step 6: Next, click *OK* or turn off the *Tip of the Day*. Finally, you see the JBuilder integrated development environment (IDE) shown in Figure J-22.

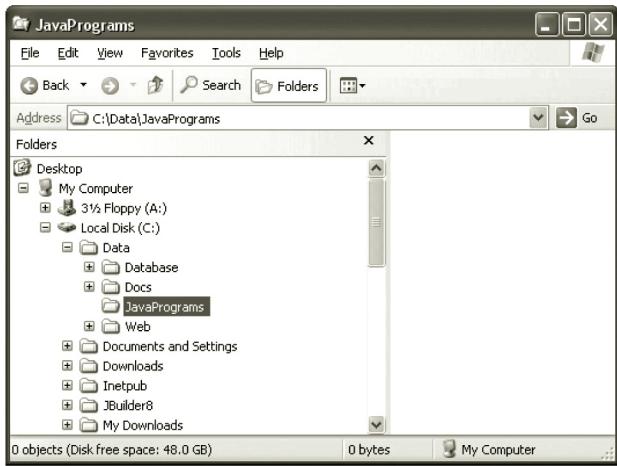
Figure J-22 JBuilder integrated development environment

Step 7: Click *File | Close Projects*, then click *All* and *OK* to close the sample *Welcome* project that is displayed in JBuilder. We will now create one from scratch.

A Word about Directories

You should create a directory where you will keep all of your Java programs. For example, you might create a subdirectory called `JavaPrograms` under `C:\Data` as shown in Figure J-23.

Figure J-23 Directory to hold Java programs



Creating a New JBuilder Project

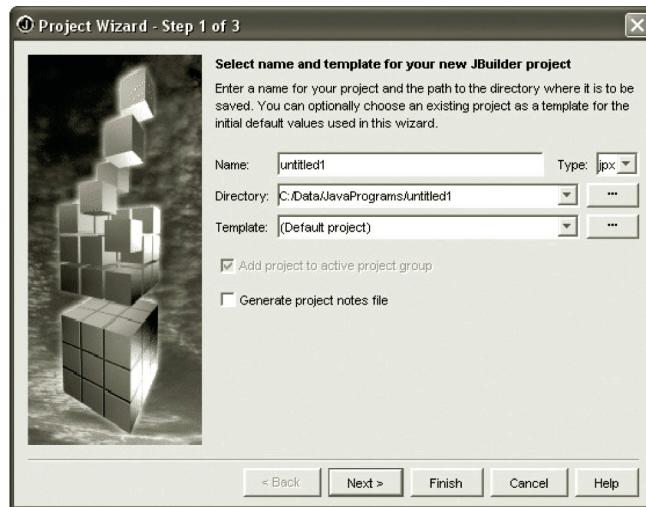
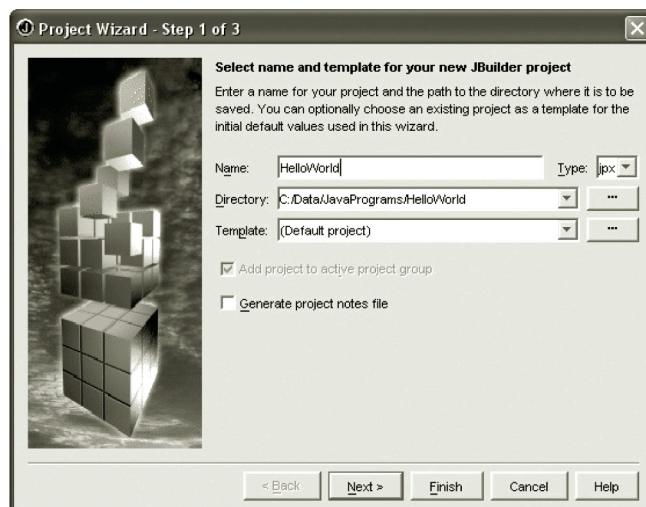
To write a Java program in JBuilder you must create a project for it. This involves setting a few paths that are critical for compiling and running your project. We will create a simple Java program that will print two lines of text. Let's call this project `HelloWorld`.

Naming the Project

Step 1: Click *File | New Project* to open a new project. The *Project Wizard* dialog box shown in Figure J-24 appears.

Step 2: Replace *Directory:* with the name of the folder you created to store all of your Java programs (i.e., `C:\Data\JavaPrograms`). You can either type in that directory name yourself, or click the ellipsis (...) button next to the *Directory:* field and navigate to that directory using the *Select Directory* dialog box that will appear.

Step 3: As shown in Figure J-25, replace the name of the project (originally shown as `untitled1`) with `HelloWorld`, or whatever the name of the project will be. Note that as you enter the name of the project, a new directory with that name will be created under your `JavaPrograms` directory to store the files for this project.

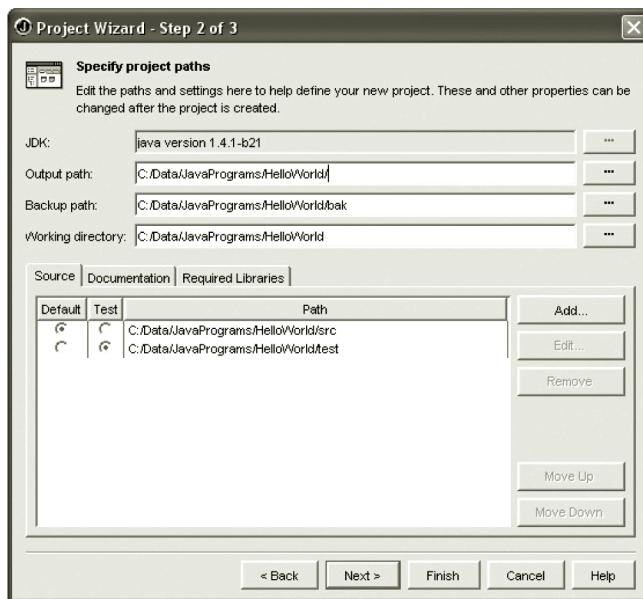
Figure J-24 Project Wizard dialog box, Step 1**Figure J-25** Names changed

Step 4: Click *Next*.

Setting Up Paths

The next dialog box, shown in Figure J-26, asks you to identify source, output, and other directories used by Java to compile and run your program. We recommend that you set the fields *Output Path* and *Working Directory* all to point to the project directory. Among other things, setting these paths in this way directs JBuilder to place the `.class` files (compiled classes) in the same directory.

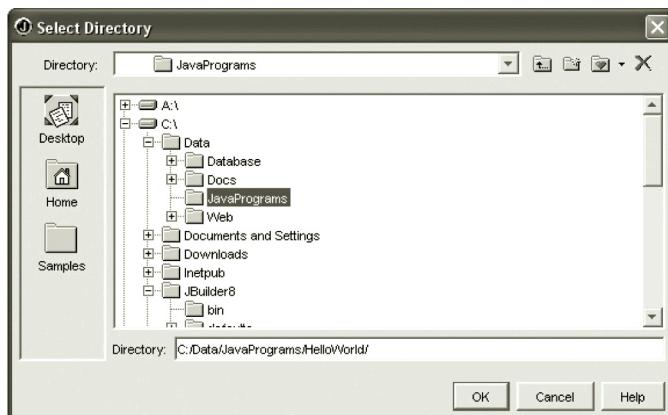
Step 1: To change the Output Path, remove `/classes` from the end of the *Output Path*: that is shown.

Figure J-26 Project Wizard dialog box, Step 2

Step 2: In the *Source* tab at the bottom of the dialog box, select the source path (identified as default by the selected radio button) and click *Edit* to edit this value so it also has the same directory as the project directory. (Remove /src from the end of this path name.)



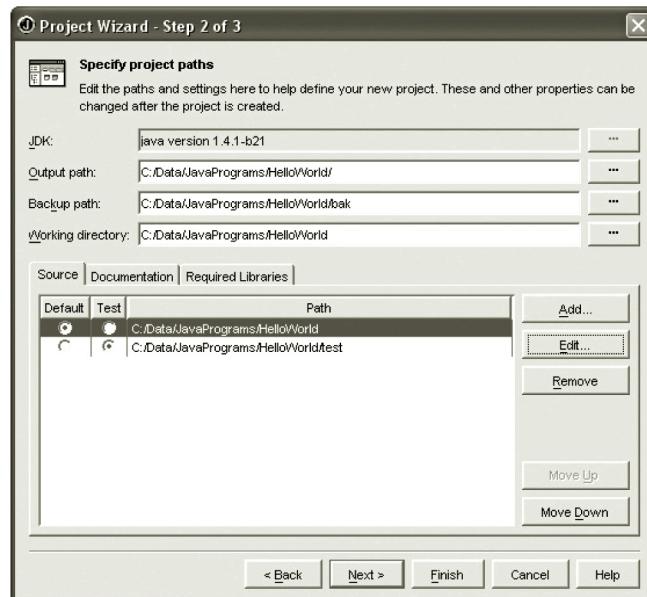
TIP: As you're creating a new project, the directory name (HelloWorld) won't appear in the *Select Directory* dialog box, so you will have to enter it yourself. Copy it from the *Output Path* above, and then paste it in the *Select Directory* dialog box, shown in Figure J-27.

Figure J-27 Select Directory dialog box

Step 3: At the message saying that the `c:/Data/JavaPrograms/HelloWorld/` directory doesn't exist, click OK to accept it anyway.

When you're done the dialog box should appear as shown in Figure J-28.

Figure J-28 Project Wizard, Step 2



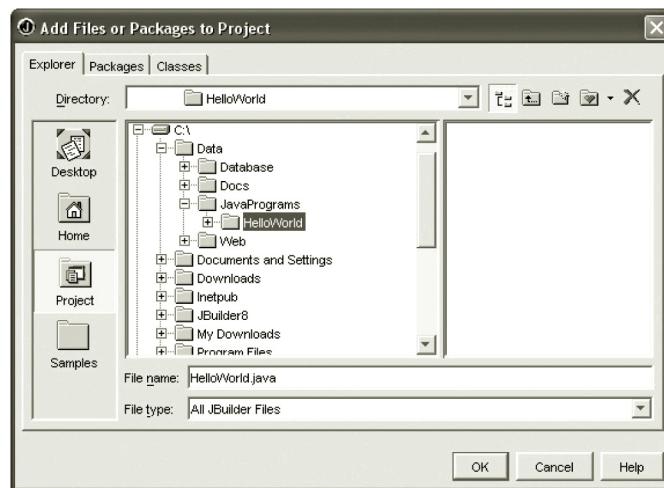
Step 4: Click *Finish*.

Add Java Code to the Project

A Java program is a collection of classes. Each class is defined in a separate `.java` source file and later compiled into a `.class` file.

To define a new class, you must first create a new `.java` file for it. A file must have the same name as the class it defines.

Step 1: To add a new file to the project, choose *Project | Add Files/Packages*. This will bring up a dialog box with a directory tree, as shown in Figure J-29. Select the project directory in it and enter `HelloWorld.java` in the filename field.

Figure J-29 Add Files or Packages to Project dialog box

Step 2: Click OK. Then click OK if prompted to create the selected file because it doesn't exist.

Step 3: The left-hand side window pane now shows project `HelloWorld.jpx` containing one file, `HelloWorld.java`. Double click on `HelloWorld.java` to open the (currently empty) file in the file content window.

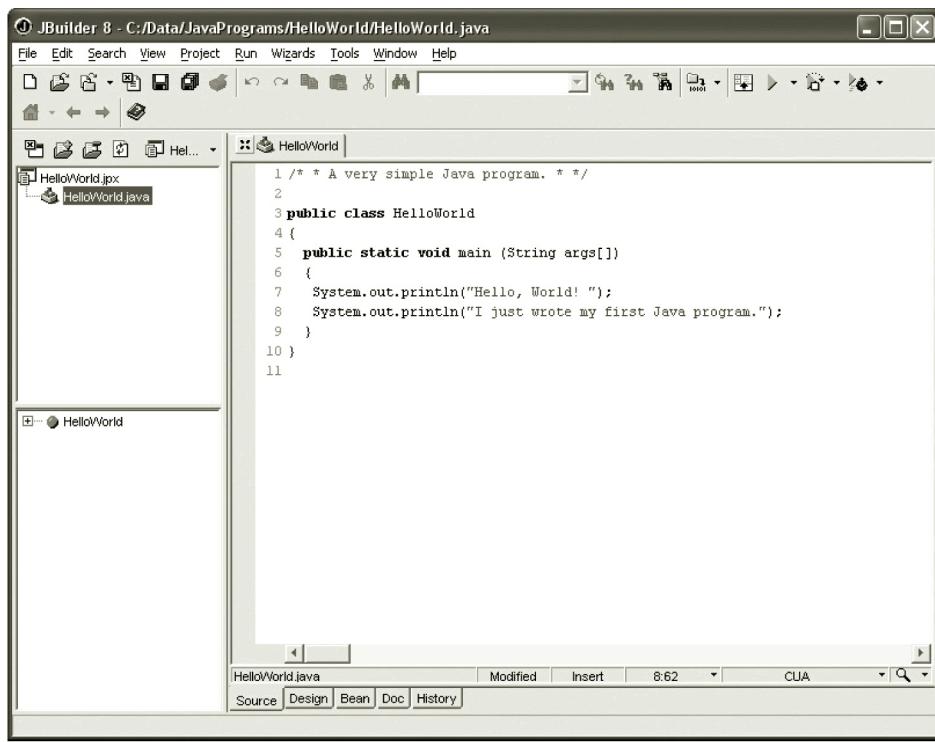
Step 4: Enter the program that follows:

```
/* * A very simple Java program. * */

public class HelloWorld
{
    public static void main (String args[])
    {
        System.out.println("Hello, World! ");
        System.out.println("I just wrote my first Java program.");
    }
}
```

Your screen should appear as shown in Figure J-30.

Step 5: Click *File | Save* to save the file or *File | Save All* to save the file and the project.

Figure J-30 Program entered

Compile and Run the Program

Step 1: To compile the program select *Project | Make Project*.

If your program compiles successfully, you will see a *Build Succeeded* message on the status bar on the bottom, left-hand corner of the JBuilder window.

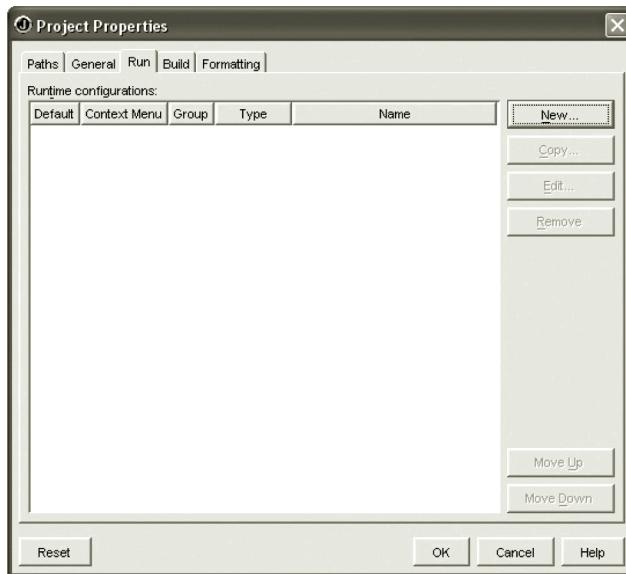
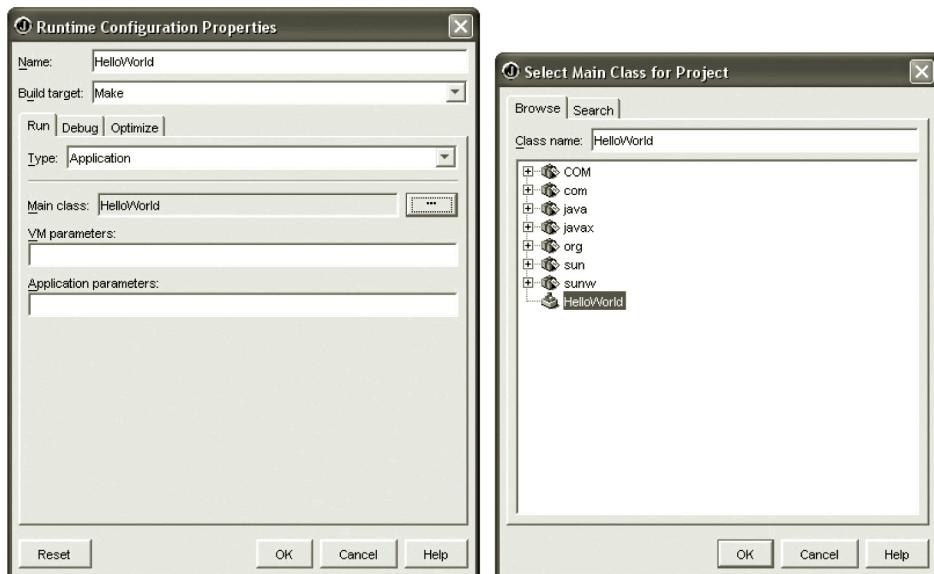
If the compiler detects syntax errors in the program, the error messages will appear in red on the JBuilder Message Pane.

Step 2: Once the Java program compiles successfully, you can run it.

To do so, either click the *Run Project* button on the menu bar, or select *Run | Run Project*; this will bring up the *Project Properties* dialog box when you try running your program for the first time. The dialog box is shown in Figure J-31. Before you can run a Java program you must specify a run configuration for the project.

Step 3: On the *Run* tab of the *Project Properties* dialog box, click *New* to create a new configuration. Enter a name for the configuration, replacing the default name (*Runtime Configuration 1*) that is shown.

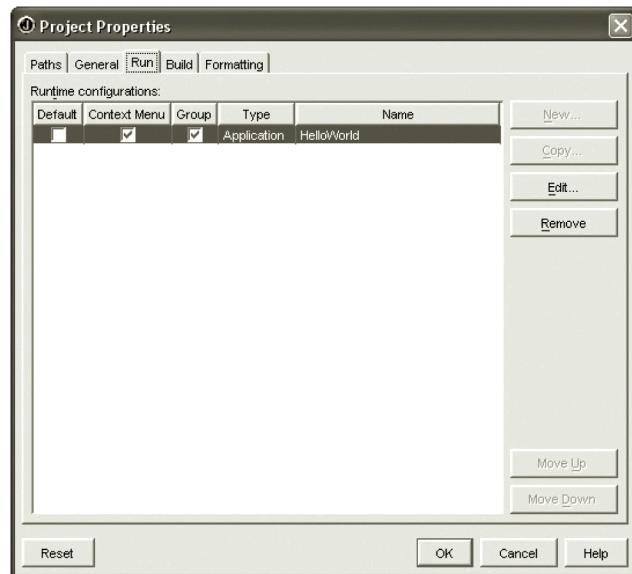
Step 4: Click the ellipsis button to the right of the *Main Class* field to see a list of classes that JBuilder has found, as shown in Figure J-32.

Figure J-31 Project Properties dialog box**Figure J-32** Select Main Class dialog box

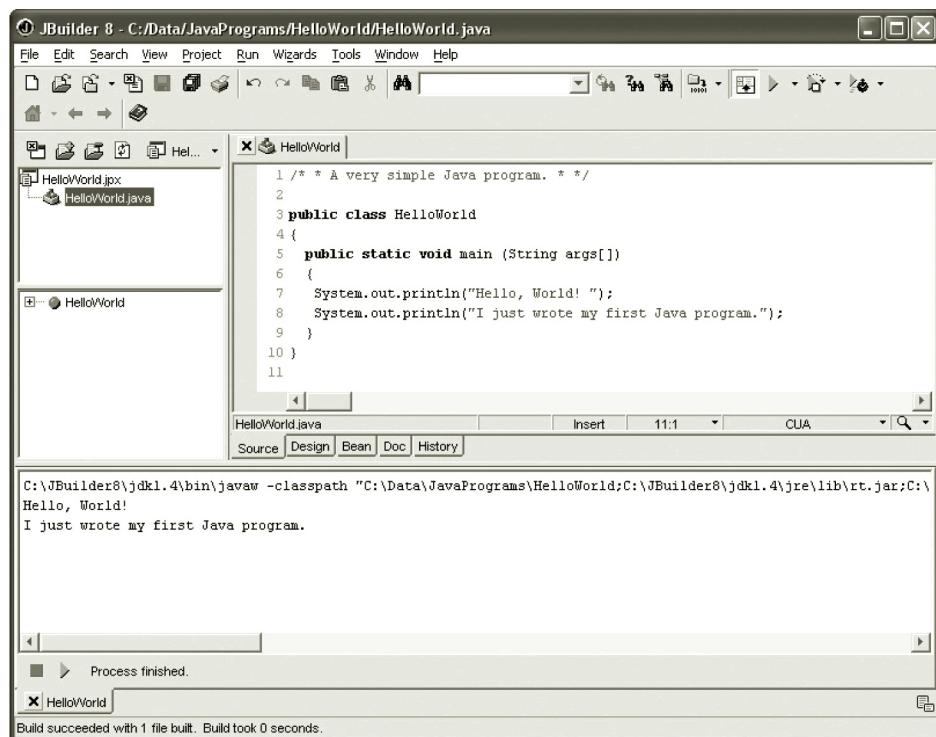
Step 5: Find and select class *HelloWorld* that you defined in `HelloWorld.java`.

Step 6: Click OK to close the *Select Main Class for Project* dialog box, and then click OK to close the *Runtime Configuration Properties* dialog box.

The summary configuration information will appear in the *Project Properties* dialog box, as shown in Figure J-33.

Figure J-33 Project Properties dialog box

Step 7: Click OK and run the program. As shown in Figure J-34, the *Process Pane* that appears at the bottom of the JBuilder environment displays the output.

Figure J-34 IDE with process pane shown

Step 8: Click *File | Save* to save the file, or *File | Close Projects* to close the project. The dialog box shown in Figure J-35 should appear. Click the check box next to the project name and click *OK*.

Figure J-35 *Close Projects* dialog box



TIP: To re-open an existing project, click *File | Open Project* and then select the *.jpx* file from the *Open Project* dialog box.