



Index

A

Abstract class, 116, 177
 Abstract Widget Toolkit (AWT), 165, 348–349
 Active files, 50
 Add Breakpoint option, 150
 Application resources, 242
 Application-specific code, 290
 Application widgets, 242
 Arguments, 212–213
 AspectJ editor, 26
 Asterisks, meaning of, 51
 Attributes, 42, 119, 290
 Attribute view, 26
 Auto-switch feature, 70

B

Bars, 24, 25
 Base folder, 208
 Base plug-in, 6
 Breakpoint, 129
 adding, 150
 modifying, 150
 removing, 150
 setting, 150–153
 Breakpoints view, 153
 Browser, 2
 Browser-based interface, 165, 347
 buildCommand element, 83
 Builds, 339–341
 buildSpec element, 47, 83
 Buttons, 15, 26, 43, **92–93**, **103**, 131, 147, 151, 156, **157**, 245, 266, 287

C

Called method, checking for errors in, 289
 Cascaded Style Sheets editor, 26
 CD-ROM drive, selecting, **13**
 C editor, 26
 C++ editor, 26
 Class
 adding, 175–177, 216–218, 259–261
 changing default documentation for, 118
 child of, 128
 creating, 115–118, 216–218, 259–261
 icon, 128
 modifying, 219–231
 reviewing the source code and generated class, 127–128
 running, 203–215, 232–241, 278–288, 302–304
 setting the fields for, **116**, **176**, **260**
 writing the code for, 119–126, 178–189, 262–267
 ClassNotFoundException error, 279
 Classpath, 74, 196
 adding JAR files to, 194–199, 279–285
 .classpath file, 78, 84–86
 Clever code, 289–290
 Close All perspectives option, **28**
 Closing
 perspectives, **28**, 103–104
 projects, **69**
 COBOL editor, 26
 Code
 application-specific, 290
 clever, 289–290

Note: Boldface numbers indicate illustrations.

Code (*continued*)

- importing source from CD, 121–126, 182–189, 224–231
- overwriting, 121, 125, 144, 188, 229
- reviewing, 214–215, 241–247, 288–289, 305–309
- setSize call, 215
- setText call, 215
- source entry, 119–121, 178–182, 219–223
- standard for JAVA, 214–215
- writing for a new class, 119–126, 178–189, 262–267

Collapse All button, **68**

Collapsing projects, 68, 76

Color object, 215, 242, 243

Command line, 115. *See also* Console

Comparing two files, 78–81

Configuration wizard, **132**

Console, 115, 134

- clearing, 167, **168**

Console view, 147, 152, 167

- spotting errors in, 205

Containers, 347, 350

Context-sensitive menu, bringing up, 40, 70

Copying a program

- importing source from a CD, 140–145
- opening the new file, 137–138
- source entry, 135–140

Counter, initializing, 135, 139

Count variable, modifying, 154–160

CREATE command, 290

createWidgets method, 244

Creating a folder, 40, 53–54

Creating a new project

- to hold the interface, 170–174
- in Java perspective, 70–76, 112–114
- in Resource perspective, 39–47

Creating a resource, 48–52

D

Database, adding, 7, 158, 249–309

- adding a new class, 259–261
- checklist for, 249–251
- conditions necessary for, 252
- importing an application, 268–275, 293–300
- installing HSQLDB, 253–258
- modifying JDBC constants, 276–277, 289, 301
- overview of, 251–252

- reviewing the code, 288–291, 305–309
- running a class, 278–288, 302–304
- writing class code, 262–267

Debugging. *See* Running and debugging

Debug pane, 102

Debug perspective, 99–105, 151–153

- checklist for, 99
- closing, 103–104
- icon, 102, 104
- opening, 100–103
- uses of, 99

Debug tool button, **92**, 151

Debug view, 152–153, 156

Default editor, 46

Default menu, 40

Default package, 116, 117, 177, 218, 261

Default perspective, 24, 37. *See also* Resource perspective

Defaults

- changing, 76, 118
- configuration, 132, **133**
- restoring, 95

Disk space, required, 1

Display object, 215, 242, 243

Display view, 152, 153

DLL, 6, 175, 203, 350

Docking, 58–64, 81–82, 95

Docking cursor, 58, 60

doExit method, 245, 246

doFind method, 245, 308

Downloading, 2, 9, 311–322, 335–345. *See also* Installing Eclipse

Dragging, 55, 58–59, 82

Drag icon, 55

DROP command, 290

Dropdown symbols, 131, 151

E

Eclipse

- builds and releases, 339–341

- downloading, 335–345

- evolution of, vii

- installing, 9–21

- minimum requirements for, 1–3

- overview of, 5–6

- tutorial, 32–34

- upgrading, 239

- \$ECLIPSE file, 208
 - \$ECLIPSEINST file, 16, 197, 208
 - Eclipse Platform, 32, 67, 70
 - Eclipse Workbench User Guide, 23, 31–34
 - Editing, side-by-side, 58–64. *See also* Docking
 - Editor panels, tabs, 38, 50, 51, 58
 - Editors, 25, 26, 38
 - Editor view, 152
 - Eiffel editor, 26
 - Ellipsis dots, meaning of, 31, 49
 - Eraser icon, 167
 - Error bar, 191
 - Errors
 - in called methods, 289
 - ClassNotFoundException, 279
 - description of, **194**
 - fixing, 190–202
 - indications of, 189, 191, 205, 245
 - JDBC, 290
 - UnsatisfiedLink, 207, 210, 214, **235**, 239
 - Event-dispatching loop, 215, 247, 347–348
 - Events, 244
 - Exceptions, 290, 306
 - Exclamation points, meaning of, 200
 - Expanding
 - an error, 234
 - a folder, **56–57**
 - a project, 45–47, 74, 78, 80, 173
 - a view, 147, 205–206
 - Expressions view, 153
 - External JAR file, 194, 196–199, **281**
 - Extract button, 15
- F**
- Fields, **116**, **176**, 244, **260**
 - File/New/Project... option, 170
 - File/Properties menu, 194
 - Files
 - active, 50
 - .classpath, 78, 84–86
 - closing, 83
 - comparing two, 78–81
 - copying, 135–137
 - creating, 40, 48–52
 - expanding, 127
 - moving, 54–57
 - .project, 45–46, **47**, 69, 78
 - specifying location of, 122–123, 184, 270, 294, 344
 - File/Save... option, 51
 - File system option, 183, 268, **269**, 293, **294**
 - Final class, 116, 177
 - Finish button, 43
 - Folders
 - base, 208
 - creating, 40, 53–54
 - expanding, **56–57**
 - install, 208
 - moving files into, 54–57
 - plugins, 197–198
 - source, 185, **186**
- G**
- getDescription method, 245, 308
 - Getting Started hyperlink, 34
 - getString method, 291
 - Global resources, 242
 - Gold releases, 339, 340
 - Graphical user interface (GUI), 6, 347–351
 - Green ball icon, 128
 - GridLayout object, 244
- H**
- HelloHSQL class
 - creating, 259–261
 - importing the application, 268–275, 293–300
 - modifying the JCBC constants, 276–277, 301
 - opening the imported version, **275**
 - reviewing the code, 288–292
 - running, 278–288
 - writing the code for, 262–267
 - Hello project
 - class, creating in, 115–118
 - compared with Simple project, 78–81
 - creating, 70–73
 - expanding, 74, 78
 - HelloSWT class
 - creating, 175–177
 - fixing import errors in, 190–202
 - running, 203–215
 - writing code for, 178–200
 - HelloWorld program
 - creating, 115–118
 - launch configuration, accessing, 147

Note: Boldface numbers indicate illustrations.

HelloWorld program (*continued*)
 reviewing the source and generated class,
 127–128
 running, 131–134
 writing code for, 119–126
 HelloWorld2 program
 creating, 135–145
 running, 146–149
 Help menu, 31
 Hierarchy view, 94–95, 96
 HSQLDB engine, 3, 7, 354
 creating a new class using, 259–261
 documentation, 256
 installing, 253–258

I

Icons
 class, 128
 Debug perspective, 102, 104
 drag, 55
 eraser, 167
 exclamation points, 200
 green ball, 128
 IDE, 19, 20
 Java perspective, 73
 light bulbs, 200
 perspectives and, 102
 red S, 128
 Resource perspective, 77
 running man, 128, 167
 save, 51, 266
 shortcut (for starting Eclipse), 18, 20
 IDE. *See* Integrated Development Environment
 IDE icon, 19, 20
 Import errors, fixing, 190–202
 Import feature, 120, 121
 Import screen, 183
 Import wizard, 122
 Inquire class
 importing the application, 293–300
 modifying JDBC constants, 301
 reviewing code, 305–309
 running, 302–304
 Install folder, 208
 Installing Eclipse, 9–21
 checklist for, 10
 extracting files from WinZip, 11–17

prerequisites for, 9
 running Eclipse, 18–21
 specifying drive location, 16
 Installing HSQLB, 253–258
 Integrated Development Environment (IDE), xiv, 5,
 70, 77, 86, 116, 177
 iSeries database, 353
 Item Number field, 241

J

JAR file, 74–76, 86, 174, 277
 adding to classpath, 194–199, 279–285
 external, 194, 196–199, 281
 Java Application option, 132, 146
 Java Browsing perspective, 67
 Java Build Path properties sheet, 280
 Java Database Connectivity (JDBC)
 constants, modifying, 276–277, 289, 301
 error reporting, 290
 ResultSet method, 291
 shutdown steps, 292
 standard code for, 288–291
 standard import command, 288
 syntax, 291
 Java Development Tooling (JDT), 5, 70
 components of, 67
 overview of, 6
 Java editor, 26
 Java perspective, 65–97, 152
 checklist for, 65–66
 closing previous projects, 68–69
 creating a new project, 70–76, 112–114
 exploring, 90–97
 Hierarchy view, 94, 95, 96
 Icon, 73
 opening, 109–111
 overview of, 67
 Package Explorer view, 94, 96, 97
 and Resource perspective compared, 90
 reviewing from the Resource perspective, 77–89
 source files in, 127
 switching to, 159, 160
 Java runtime environment (JRE), installing, 9,
 311–322
 checklist for, 312
 vs. SDK, 313
 typical install, 320–321

JavaServer Pages editor, 26
 Java Toolkit, 252
 Java Type Hierarchy perspective, 67
 Java.util.Hashtable import, 241
 Java Virtual Machine (JVM), 3, 74, 207
 downloading, 311–322
 JDBC. *See* Java Database Connectivity
 JFace, 165
 JTOpen driver, 291, 353, 354
 JUnit, 132
 JVM arguments, 212, **213**

L

Labels, 244
 Launch configurations
 access to, 147
 creating, 204, 232, 302
 modifying, 210–211, 237
 screen, 132
 \$LIBPATH file, 208, 238
 Libraries tab, 196, 280
 Light bulb icons, meaning of, 200
 Linux, running Eclipse on, 2, 3, 9, 203, 313, 350
 Linux GTK, 2
 Linux Motif, 2
 Listeners, 244, 245, 347, 350
 Literal string, 135
 Loops, 135, 139
 changing, 154–160

M

Macintosh, running Eclipse on, 2, 9
 Main menu bar, 37, 90–91, 100, 110–111, 203
 main method, 117, 118, 128, 177, 247, 261
 Main tool bar, 92, **93–94**, 151
 Menu bar, 25, 28, 29
 Merging split panels, 61–64
 Microsoft Internet Explorer (version 6), 2
 Milestones, 340
 Minus sign, meaning of, 76
 Mirrors, 337–338
 Mn builds, 340
 Modifying
 a breakpoint, 150
 JDBC constants, 276–277, 289, 301
 launch configurations, 210–211, 237
 a program, 139–140

 a variable, 154–160
 Move... option, 55
 Moving files into a folder, 54–57
 My Downloads folder, 335

N

Name conflict, 136
 Native library
 adding, 207–214, 237–239
 and Eclipse upgrades, 239
 need for, 350
 Native method, 207, 233
 Native piece, 6. *See also* DLL; Shared library
 Natures element, 47, 83
 Navigation perspectives, 99. *See also* Java perspective; Resource perspective
 Navigator view, 24, 25, 26, 39–40, **52**, 68
 New file, opening, 137–138
 New File wizard, **49**
 New Folder wizard, **54**
 New Java Class tool, **93**
 New Java Package tool, **93**
 New Java Project tool, **93**
 New Project wizard, **41**, 42, 71, 113
 New Scrapbook Page tool, **93**

O

100% Pure Java, 353
 Object Technology Inc. (OTI), 6
 Opening a perspective, 29, **30**, 100–103
 Open Perspective option, **29**
 Open Source project, 253, 353
 Open Type tool, **94**
 Operating system
 problems with, 348–349
 recommended for Eclipse, 1, 2
 Oracle, 277
 OS 9, 2
 OS X, 2
 Outline view, 73, 118, 128, 152
 Overwriting code, 121, 125, 144, 188, 229

P

Package, 116, 117
 Package Explorer view, 94, **96**, **97**, 128, 189
 uncluttering, 191–193

Note: Boldface numbers indicate illustrations.

- Packages tab, 67
 - Panels, 24, 25–26, 347
 - Pascal editor, 26
 - Password, 252, 277, 289
 - PDE. *See* Plug-In Development Environment
 - Perspective bar, 25, 77, 88, 102, 159
 - Perspectives. *See also* Debug perspective; Java perspective; Resource perspective
 - auto-switch feature, 70
 - closing, **28**, 103–104
 - default, 24, 37
 - defined, 24
 - icons, 102
 - identifying, 109
 - navigation, 99
 - opening, 29, **30**, 100–103
 - purpose of, 35
 - switching, 73, 77, 88, **89**, 100–102, 110–111, 159–160
 - Plug-In Development Environment (PDE), 5, 67, 70
 - Plug-ins, 5, 6, 26, 47, 70, 74
 - Plugins folder, 197–198
 - Plus sign, meaning of, 44, 56, **74**, 127
 - PostgreSQL, 7, 277, 354
 - Preferences option, 76
 - Project, simple, 42–47, 78–83
 - Project description, 47
 - .project file, 45–46, **47**, 69, 78
 - Prompt class
 - creating, 216–218
 - modifying, 219–231
 - reviewing code, 241–247
 - running, 232–241
 - Properties dialog, accessing, 194, **195**
 - Public class, 116, 177, 242, 261
 - Public method, 128
 - Python editor, 26
- R**
- RAM, required, 1, 2
 - RCn builder, 340
 - Red s icon, 128
 - Refactor menu, viewing, 91–**92**
 - Releases, 339–341
 - Resource disposal, 241, 247
 - Resource perspective, 35–64, 76–77, **110**
 - checklist for, 35–36
 - closing the welcome window, 38
 - creating a folder, 53–54
 - creating a project, 39–47
 - creating a resource, 48–52
 - as default perspective, 37
 - empty, **30**
 - icon, 77
 - and Java perspective compared, 90
 - limitations of, 77
 - moving files into a folder, 54–57
 - reviewing Java perspective from, 77–89
 - side-by-side editing, 58–64
 - uses of, 48, 65
 - Resources
 - creating, 48–52
 - defined, 24
 - manipulating, 48
 - ResultSet method, 291
 - Resume tool button, **103**, 156, **157**
 - RPG editor, 26
 - Run button, 131
 - Run menu, 203
 - Running and debugging, 129–160
 - breakpointing a program, 150–153
 - checklist for, 129–130
 - copying the program, 134–145
 - modifying a variable and continuing, 154–160
 - running the copied program, 146–149
 - running the program, 131–134
 - Running man icon, 128, 167
 - Run... option, **131**, 146, 211
 - Runtime characteristics, setting, 132
 - Runtime environment, adding the native library to, 207–214
 - Runtime switch, adding, 207–208
 - Run tool button, **93**, 147, 151, 287
- S**
- SAP DB, 353, 354
 - SAPDB driver, 291
 - Save icon, 51, **266**
 - Save tool button, 266
 - Saving
 - a file, 51–52
 - source code, **120**, 140, **181**, **222**, **266**
 - Screen resolution, recommended, 1
 - Scribble, meaning of, 191

- Scrollable, updatable cursors, 353–354
 - Security, 2
 - Selecting Window/Close Perspective, 103–104
 - setLayout method, 244
 - setSize call, 215
 - setText call, 215
 - Shared library, 6, 203, 350
 - Shell object, 215, 242, 243, 246
 - Shortcut icon, 18, 20
 - show method, 247
 - Side-by-side editing, 58–64. *See also* Docking
 - SideSteps, explanation of, 3, 311
 - Simple program, creating, 107–128
 - checklist for, 107–108
 - creating a new class, 115–118
 - creating the Java project, 112–114
 - opening the Java perspective, 109–111
 - reviewing the source and the generated class, 127–128
 - writing code for the new class, 119–126
 - Simple project, 42
 - creating, 42–44
 - expanding, 45–47, 80
 - and .project file compared, 78–83
 - Simple text file, creating, 48
 - Source code, saving, **120**, 140, **181**, **222**, **266**
 - Source files
 - copying, 135–137
 - expanding, 127
 - Source folder, 185, **186**
 - SourceForge, 252
 - Source menu, viewing, **91**
 - Source option, 91
 - Splash screen, **20**
 - Split screen, 58, 81–82. *See also* Docking
 - SQLCLASS field, 277
 - SQL engine, 3, 7, 251–252, 353–354
 - modifying JDBC constants for, 276–277
 - SQLException, 290
 - SQLPWD field, 277
 - SQLURL field, 277
 - SQLUSER field, 277
 - Stacked views, 95
 - Standard main method, 117, 177, 261
 - Standard Widget Toolkit (SWT), xiii, 2, 6–7, 133, 165, 347, 350–351
 - Startup screen, **20**
 - Static method, 128
 - Status bar, 25
 - Step List.txt file, 49–50, 69
 - Steps, explanation of, xiv, 3–4
 - Steps folder
 - creating, 53–55
 - expanding, **56–57**
 - moving file into, 55–56
 - Step with Filters/Step Debug tool button, **103**
 - Superclass, 116, 177
 - Swing, 7, 165, 347, 348–349, 351
 - SWT project
 - adding a new class, 175–177, 216–218
 - creating, 170–172
 - expanding, 173
 - fixing import errors, 190–202
 - modifying a new class, 219–231
 - running the class, 203–215, 232–241
 - window, **213**
 - writing code for the class, 178–189
 - Syntax errors, 26
- T**
- Tabs (editor), 38, 50, 51, 58
 - Task list, 26
 - Tasks view, 26, 134, 191, 200
 - Templates, modifying, 118
 - Text editor, 25
 - Text file, creating, 48–52
 - Thick client interface, 165, 347
 - Third-party editors, 26
 - Threads, 153, 215
 - Tiling, 58. *See also* Docking
 - Title bar, 25, 73, 109
 - Tool bar, 25, 37
 - Toolbar buttons, 26, 131
 - Tool tips, 68, 92
 - Triangle, meaning of, 29
 - Try/catch block, 289, 290, 292, 306
 - Tutorial. *See* Workbench, User Guide
- U**
- UnsatisfiedLinkError, 207, 210, 214, **235**, 239
 - Use folder names checkbox, 16
 - User ID, 252, 277, 289
 - User interface, 161–247
 - adding a new class, 175–177, 216–218
 - checklist for, 161–164

Note: Boldface numbers indicate illustrations.

User interface (*continued*)

- components, creating, 244
- creating a new project to hold, 170–174
- fixing import errors, 190–202
- modifying the class, 219–231
- overview of, 165
- reviewing the code, 241–247
- running the class, 203–215, 232–241
- writing the class code, 178–189

V

Value

- changing, 155–156
- checking the validity of, 241, 303–304

Variable, modifying, 154–160

Variables view, 153, **154**

Views, 25, 26

- attribute, 26
 - Breakpoints, 153
 - Console, 147, 152, 167, 205
 - Debug, 152–153, 156
 - defined, 25, 26
 - Display, 152, 153
 - Editor, 152
 - expanding, 147, 205–206
 - Expressions, 153
 - Hierarchy, 94–**95**, **96**
 - Navigator, 24, 25, 26, 39–40, **52**, 68
 - Outline, 73, 118, 128, 152
 - Package Explorer, 94, **96**, **97**, 128, 189, 192–**193**
 - restoring, 86, 148, 207, 236
 - stacked, 95
 - switching, 94–95
 - Tasks, 26, 134, 191, 200
 - toolbars and, 26
 - Variables, 153, **154**
- View-specific toolbar button, 26
- Visual Age for Java (VAJ), 6, 67
- VM arguments, 212

W

- Warning messages, 200–202, 286
- WebSphere Development Studio client, 26
- Welcome screen, **32**, **33**

closing, 38

- as an editor, 38
- getting to, 27–31

Welcome wizard, **31**

Widgets, 242, 347, 350

Window/Close Perspective option, 103, **104**

Window/Preferences option, 76

Window/Reset perspective, 95

Windows command line, starting, 208, 238

WinZip utility, 9, 254

- extracting files from, 11–17, 208, 253–258

installing, 323–333

Wizards, 31, 41–42

configuration, **132**

import, 122

New File, **49**New Folder, **54**New Project, **41**, 42, 71, 113Welcome, 30, **31**Workbench, **21**, 23–34, **37**, 156after importing source code, **189**

bars, 24, 25

checklist for using, 23

cleaning up, 68–69, 166–169

components of, 24

empty, **29**, **39**in Java perspective, **90**

manipulating resources within, 48–52

Packages tab, 67

panels, 24, 25–26

perspective, 24

resources, 24

User Guide, 23, 32–34

welcome display, 24, 27–31

X & Z

XML files, 47

ZIP file, 9, 65

- extracting files from, 11–17, 208, 253–258