Advanced Java Programming

What You Will Learn 1

Getting to Know the Swing Package 2
- Comparing Swing and the AWT 2
- Working with Swing Packages 3
- Understanding Swing Components 3

Creating a Top-Level Container 6
- Importing the Swing Package 6
- Defining the Frame Class 6
- Setting up the Frame 7
- Testing Your Application 11

Working with Swing Components 13
- Creating New Component Objects 13
- Creating a Container 16
- Adding Components to the Container 17
- Setting Up the Content Pane 18
- Customizing GUI Components 20

Exercise 1 21

Handling User Events 23
- Working with the AWT's Listener Interfaces 23
- Implementing the ActionListener Interface 24
- Registering the Listener on a Component 25
- Writing the Event-Handling Code 26
- Handling Events from Multiple Sources 29
- Handling Window Events 31
- Using an Adapter Class 33

Exercise 2 36

Handling Exceptions 37
- Understanding the try...catch Syntax 37
- Using a Predefined Exception Message 38
- Including a finally Block 39
- Handling Multiple Exceptions 39

Laying Out Your Interface Effectively 40
- Using FlowLayout 41
- Finding the Frame's Preferred Size 41
- Setting a Component's Preferred Size 41
- Using Absolute Positioning (Optional) 42

Using GridLayout 43
Setting Borders 45
Using BorderLayout (Optional) 46
Using Multiple Layouts to Create a Sophisticated Interface 48

Exercise 3 60

Creating a Format Dialog Box 61
Changing Text Color 63
Using Radio Buttons to Change Foreground Color 64
Working with Fonts 69
Using Check Boxes to Change Font Style 70
Using a Slider to Change Font Size 72
Using a Combo Box to Change the Font Name 75

Exercise 4 79

Creating a Text Editor 81
Working with Menus 83
Setting Up Toolbars 85
Working with Text Areas 88
Creating Custom Dialog Boxes 91

Exercise 5 95

Working with Input and Output 96
Reading from Files 96
Writing to Files 99
Using the JFileChooser Class 101

Appendix A: Java Programming Reference Books 107

Appendix B: Solutions to Exercises 1-5 108