

Contents



	Prefaceix
CHAPTER 1	Getting Started	1
	About the Java Technology	2
	How Will Java Technology Change My Life?	7
	First Steps (Win32)	8
	First Steps (UNIX/Linux)	16
	First Steps (MacOS)	24
	A Closer Look at HelloWorld	32
	Questions and Exercises	41
	Code Samples	43
CHAPTER 2	Object-Oriented Programming Concepts	45
	What Is an Object?	46
	What Is a Message?	48
	What Is a Class?	49
	What Is Inheritance?	52
	What Is an Interface?	54
	How Do These Concepts Translate into Code?	55
	Summary	61
	Questions and Exercises	62
	Code Samples	63
CHAPTER 3	Language Basics	65
	Variables	67
	Operators	76
	Expressions, Statements, and Blocks	94
	Control Flow Statements	99
	Code Samples	117

CHAPTER 4	Object Basics and Simple Data Objects	119
	The Life Cycle of an Object	120
	Characters and Strings	132
	Numbers	149
	Arrays	165
	Code Samples	174
CHAPTER 5	Classes and Inheritance	177
	Creating Classes	178
	Managing Inheritance	204
	Implementing Nested Classes	218
	Code Samples	224
CHAPTER 6	Interfaces and Packages	227
	Creating and Using Interfaces	228
	Creating and Using Packages	234
	Code Samples	242
CHAPTER 7	Handling Errors Using Exceptions	243
	What Is an Exception?	244
	The Catch or Specify Requirement	245
	Catching and Handling Exceptions	246
	Specifying the Exceptions Thrown by a Method	255
	How to Throw Exceptions	255
	Runtime Exceptions—The Controversy	260
	Advantages of Exceptions	260
	Summary of Exceptions	265
	Questions and Exercises	266
	Code Samples	268
CHAPTER 8	Threads: Doing Two or More Tasks at Once	269
	What Is a Thread?	271
	Using the Timer and TimerTask Classes	273
	Customizing a Thread's run Method	277
	The Life Cycle of a Thread	281
	Understanding Thread Priority	286
	Synchronizing Threads	291
	Grouping Threads	301
	Summary of Threads	307
	Questions and Exercises	309
	Code Samples	310

CHAPTER 9	I/O: Reading and Writing	313
	Overview of I/O Streams	314
	Using the Streams	318
	Object Serialization	334
	Working with Random Access Files	340
	And the Rest . . .	345
	Summary of Reading and Writing	346
	Questions and Exercises	346
	Code Samples	348
CHAPTER 10	User Interfaces That Swing	351
	Overview of the Swing API	352
	Your First Swing Program	353
	Example Two: SwingApplication	356
	Example Three: CelsiusConverter	361
	Example Four: LunarPhases	364
	Example Five: VoteDialog	368
	Layout Management	375
	Threads and Swing	378
	Visual Index to Swing Components	381
	Summary	387
	Questions and Exercises	388
	Code Samples	390
APPENDIX A	Common Problems and Their Solutions	391
	Getting Started Problems	391
	General Programming Problems	396
	Applet Problems	397
	User Interface Problems	399
APPENDIX B	Internet-Ready Applets	407
	Overview of Applets	409
	AWT Components	419
	Taking Advantage of the Applet API	423
	Practical Considerations of Writing Applets	442
	Finishing an Applet	454
	Swing-Based Applets	457
	Code Samples	463

APPENDIX C	Collections	467
	Introduction	468
	Interfaces	470
	Implementations	508
	Algorithms	515
	Custom Implementations	520
	Interoperability	523
APPENDIX D	Deprecated Thread Methods	527
	Why Is <code>Thread.stop</code> Deprecated?	527
	Why Are <code>Thread.suspend</code> and <code>Thread.resume</code> Deprecated?	530
	What about <code>Thread.destroy</code> ?	533
	Why Is <code>Runtime.runFinalizersOnExit</code> Deprecated?	534
APPENDIX E	Reference	535
	Java Programming Language Keywords	535
	Operator Precedence	536
	The <code><APPLET></code> Tag	537
	POSIX Conventions for Command Line Arguments	539
	Integrated Development Environments	540
	Path Help	540
	Index	545

