

图书基本信息

书名：《Java语言》

13位ISBN编号：9787302083030

10位ISBN编号：7302083037

出版时间：2004-4

出版社：清华大学出版社

作者：萨维特

页数：942

版权说明：本站所提供下载的PDF图书仅提供预览和简介以及在线试读，请支持正版图书。

更多资源请访问：www.tushu000.com

前言

This book was designed to be used in a first course in programming and computer science. It covers programming techniques, as well as the basics of the Java programming language. It is suitable for courses as short as one quarter or as long as one full academic year. No previous programming experience is required, nor is any mathematics, other than a little high school algebra. The book can also be used for a course designed to teach Java to students who have already had another programming course, in which case the first few chapters can be assigned as outside reading. (For students who have had previous programming experience in C or C++, there is an appendix that explains some of the differences between Java and C or C++.) All of the code in the book has been tested with Java 2 from Sun Microsystems (version 1.4). To be fully compatible with the material presented, the Java used in your class should be version 1.4 or higher. The coverage of Java was carefully arrived at by class testing and is a concise, accessible introduction for beginners.

Changes in This Edition If you have not used the second edition of this text, you can skip this subsection. If you have used the second edition, this subsection will tell you how this third edition differs from that edition. For instructors, the transition from the second edition of the text to this third edition is easy: You can teach the same course, with basically the same topics presented, in the same order and with only very minor changes in the material covered.

内容概要

《Java语言：计算机科学与程序设计》是由著名作者Walter Savitch编写的，主要介绍了Java 程序设计，对Java语言的主要特点和应用编程进行了全面讲述。《Java语言：计算机科学与程序设计》最显著的特点是，作者采用通俗易懂的方式，结合Java语方，介绍了各种基本编程技术，阐述了面向对象编程技术与计算机科学的各种概念。《Java语言：计算机科学与程序设计》每章后附本章小结，并提供了测试题和答案、编程项止练习，以帮助学生对所知识的掌握，提高学生的实际编程能力。《Java语言：计算机科学与程序设计》配套光盘包含了范例程序代码和相应软件。

《Java语言：计算机科学与程序设计》可作为计算机科学及相关专业的Java程序设计教材，也是Java开发人员的很好参考书。

作者简介

作者：(美国)萨维特 (Walter Savitch)

CHAPTER 1 Introduction to Computers and Java Objectives Prerequisites 1.1 Computer Basics Hardware and Memory Programs Programming Languages and Compilers Java Byte-Code Linking 1.2 Designing Programs Object-Oriented Programming Encapsulation Polymorphism Inheritance If You Know Some Other Programming Language Algorithms Reusable Components Testing and Debugging Gotcha: Coping with "Gotchas" Gotcha: Hidden Errors 1.3 A Sip of Java History of the Java Language Applets A First Java Application Program Compiling a Java Program or Class Running a Java Program Preview Examples of Applets (Optional) Chapter Summary Answers to Self-Test Questions Programming Projects

CHAPTER 2 Primitive Types, Strings, and Console I/O Objectives Prerequisites 2.1 Primitive Types and Expressions Variables Java Identifiers Gotcha: Java Is Case-Sensitive Primitive Types Assignment Statements Specialized Assignment Operators Simple Input and Output Number Constants Assignment Compatibilities Type Casting Java Tip: Type Casting a Character to an Integer Programming Tip: Initialize Variables Gotcha: Imprecision in Floating-Point Numbers Arithmetic Operators Parentheses and Precedence Rules Case Study: Vending Machine Change Increment and Decrement Operators More about the Increment and Decrement Operators 2.2 The Class String String Constants and Variables Concatenation of Strings Classes String Methods String Processing Escape Characters The Unicode Character Set 2.3 Keyboard and Screen I/O Screen Output Input Using Savitch In More Input Methods Gotcha: readInt and readDouble Programming Tip: Echo Input 2.4 Documentation and Style Programming Tip: Use Meaningful Names for Variables Documentation and Comments Indenting Named Constants Chapter Summary Answers to Self-Test Questions Programming Projects

CHAPTER 3 Flow of Control Objectives Prerequisites 3.1 Branching Statements The if-else Statement Introduction to Boolean Expressions Gotcha: Using == with Strings Programming Tip: Alphabetical Order Nested Statements and Compound Statements Java Tip: Matching else and if Multibranch if-else Statements Programming Example: Assigning Letter Grades The switch Statement Gotcha: Omitting a break Statement The Conditional Operator (Optional) 3.2 Java Loop Statements while Statements Java Tip: A while Loop Can Perform Zero Iterations The do-while Statement Programming Example: Bug Infestation Gotcha: Infinite Loops The for Statement the Comma in for Statements (Optional) Gotcha: Extra Semicolon in a Loop Statement Java Tip: Choosing a Loop Statement The break Statement in Loops Gotcha: Misuse of break Statements The exit Method 3.3 Programming with Loops The Loop Body Initializing Statements Ending a Loop Programming Example: Nested Loops Programming Tip: Avoid Declaring Variables in a Loop Body Loop Bugs Tracing Variables 3.4 The Type boolean Boolean Expressions and Boolean Variables Programming Tip: Naming Boolean Variables Precedence Rules Input and Output of Boolean Values Case Study: Using a Boolean Variable to End a Loop Chapter Summary Answers to Self-Test Questions Programming Projects

CHAPTER 4 Defining Classes and Methods Objectives Prerequisites 4.1 Class and Method Definitions Class Files and Separate Compilation Instance Variables Using Methods void Method Definitions Methods That Return a Value Java Tip: Use of return in void Methods The this Parameter Local Variables Blocks Gotcha: Variables Declared in a Block Java Tip: Declaring Variables in a for Statement Parameters of a Primitive Type Gotcha: Use of the Terms Parameter and Argument Summary of Class and Method Definition Syntax 4.2 Information Hiding and Encapsulation Information Hiding Programming Tip: Parameter Names Are Local to the Method Precondition and Postcondition Comments Java Tip: Assertion Checks The public and private Modifiers Programming Tip: Instance Variables Should Be private Programming Example: A Purchase Class Encapsulation Automatic Documentation with javadoc UML Class Diagrams 4.3 Objects and Reference Variables of a Class Type and Objects Gotcha: Use of = and == with Variables of a Class Type Java Tip: Define an equals Method for Your Classes Programming Example: A Species Class Boolean-Valued Methods Class Parameters Comparing Class Parameters and Primitive-Type Parameters Chapter Summary Answers to Self-Test Questions Programming Projects

CHAPTER 5 More About Objects and Methods Objectives Prerequisites 5.1 Programming with Methods Methods Calling Methods Programming Tip: Make Helping Methods Private Java Tip: Make the compiler Happy Gotcha: Null Pointer Exception 5.2 Static Methods and Static Variables Static Methods Gotcha: Invoking a Nonstatic Method Within a Static Method Java Tip: You Can Put a main in Any Class Static Variables (Optional) The Math Class Integer, Double, and Other Wrapper Classes 5.3 Designing

MethodsCase Study: Formatting OutputTop-Down DesignTesting Methods5.4 OverloadingOverloading
 BasicsProgramming Example: A Pet ClassGotcha: Overloading and Automatic Type ConversionGotcha: You
 Cannot Overload on the Basis of the Returned TypeProgramming Example: A Class for Money5.5
 ConstructorsDefining ConstructorsProgramming Tip: You Can Use Other Methods in a ConstructorGotcha:
 Omitting the Default ConstructorGotcha: Many Wrapper Classes Have No Default Constructor5.6 Information
 Hiding RevisitedGotcha: Privacy Leaks5.7 PackagesPackages and importingPackage Names and
 DirectoriesGotcha: Not Including the Current Directory in Your Class PathName ClashesChapter
 SummaryAnswers to Self-Test QuestionsProgramming ProjectsCHAPTER 6 ArraysObjectivesPrerequisites6.1
 Array BasicsCreating and Accessing ArraysArray DetailsProgramming Tip: Use Singular Array NamesThe length
 Instance VariableJava Tip: Array Indices Start with ZeroProgramming Tip: Use a for Loop to Step Through an
 ArrayGotcha: Array Index Out of BoundsInitializing Arrays6.2 Arrays in Classes and MethodsCase Study: Sales
 ReportIndexed Variables as Method ArgumentsEntire Arrays as Method ArgumentsArguments for the Method
 mainGotcha: Use of = and == with ArraysMethods That Return Arrays6.3 Programming with Arrays and
 ClassesProgramming Example: A Specialized List ClassPartially Filled ArraysSearching an ArrayGotcha: Returning
 an Array Instance Variable6.4 Sorting ArraysSelection SortOther Sorting Algorithms6.5 Multidimensional
 ArraysMultidimensional-Array BasicsMultidimensional-Array Parameters and Returned ValuesImplementation of
 Multidimensional ArraysBagged Arrays (Optional)Programming Example: Employee Time RecordsChapter
 SummaryAnswers to Self-Test QuestionsProgramming ProjectsCHAPTER 7
 InheritanceObjectivesPrerequisites7.1 Inheritance BasicsProgramming Example: A Person ClassDerived
 ClassesOverriding Method DefinitionsOverriding Versus OverloadingThe final ModifierGotcha: Use of Private
 Instance Variables from the Base ClassProgramming Tip: Assume That Your Coworkers Are MaliciousGotcha:
 Private Methods Are Not InheritedUML Inheritance Diagrams7.2 Programming with InheritanceConstructors in
 Derived ClassesThe this Method (Optional)Call to an Overridden MethodProgramming Example: Multilevel
 Derived ClassesA Subtle Point About Overloading and Overriding (Optional)Java Tip: You Cannot Use Multiple
 supersProgramming Tip: An Object Can Have More than One TypeProgramming Tip: "Is a" and "Has a"
 RelationsThe Class ObjectCase Study: Character GraphicsAbstract ClassesInterfaces (Optional)7.3 Dynamic
 Binding and PolymorphismDynamic BindingType Checking and Dynamic BindingDynamic Binding with
 toStringPolymorphismJava Tip: A Better equals Method (Optional)Chapter SummaryAnswers to Self-Test
 QuestionsProgramming ProjectsCHAPTER 8 Exception HandlingObjectivesPrerequisites8.1 Basic Exception
 HandlingExceptions in JavaPredefined Exception ClassesArrayIndexOutOfBoundsException (Alternative
 Ordering)8.2 Defining Exception ClassesDefining Your Own Exception ClassesJava Tip: Preserve getMessage
 When You Define Exception ClassesProgramming Tip: When to Define an Exception Class8.3 Using Exception
 ClassesDeclaring Exceptions (Passing the Buck)Exceptions That Do Not Need To Be CaughtThe AssertionError
 Class (Optional)Multiple Throws and CatchesJava Tip: Catch the More Specific Exception FirstProgramming Tip:
 Exception Handling and Information HidingGotcha: Overuse of ExceptionsProgramming Tip: When to Throw
 an ExceptionGotcha: Nested try-catch BlocksThe finally Block (Optional)Rethrowing an Exception
 (Optional)Case Study: A Line-Oriented CalculatorChapter SummaryAnswers to Self-Test QuestionsProgramming
 ProjectsCHAPTER 9 Streams and File I/OObjectivesPrerequisites9.1 An Overview of Streams and File I/OThe
 Concept of a StreamWhy Use Files for I/O?Differences between Text Files and Binary Files9.2 Text-File
 I/OText-File Output with PrintWriterGotcha: A try Block Is a BlockGotcha: Overwriting a FileJava Tip:
 Appending To a Text FileJava Tip: Use toString for Text-File OutputText-File Input with
 BufferedReaderProgramming Example: Reading a File Name from the KeyboardJava Tip: Using Path NamesThe
 StringTokenizer ClassJava Tip: Testing for the End of a Text FileThe Classes FileReader and
 FileOutputStreamUnwrapping the Class Scanner9.3 The File ClassUsing the File Class9.4 Basic Binary-File
 I/OOutput to Binary Files, Using ObjectOutputStreamSome Details about writeUTF (Optional)Reading Input
 from a Binary File, Using ObjectInputStreamGotcha: Using ObjectInputStream with a Text FileGotcha: Defining a
 Method to Open a StreamThe EOFException ClassGotcha: Forgetting to Check for the End of a FileGotcha:
 Checking for the End of a File in the Wrong WayThe Classes FileInputStream and
 FileOutputStreamProgramming Example: Processing a File of Binary Data9.5 Object I/O with Object

Streams Binary I/O of Class Objects Gotcha: Exceptions, Exceptions, Exceptions The Serializable Interface Gotcha: Mixing Class Types in the Same File Array Objects in Binary Files Chapter Summary Answers to Self-Test Questions Programming Projects CHAPTER 10 Dynamic Data Structures Objectives Prerequisites 10.1 Vectors Using Vectors Programming Tip: Adding to a Vector Gotcha: Vector Elements Are of Type Object Comparing Vectors and Arrays Gotcha: Using capacity Instead of size Java Tip: Use trimToSize to Save Memory Gotcha: Using the Method clone Java Tip: Newer Collection Classes (Optional) 10.2 Linked Data Structures Linked Lists Gotcha: Null Pointer Exception Gotcha: Privacy Leaks Inner Classes Node Inner Classes Iterators Programming Tip: Internal and External Iterators Exception Handling with Linked Lists Variations on a Linked List Other Linked Data Structures Chapter Summary Answers to Self-Test Questions Programming Projects CHAPTER 11 Recursion Objectives Prerequisites 11.1 The Basics of Recursion Case Study: Digits to Words How Recursion Works Gotcha: Infinite Recursion Recursive versus Iterative Definitions Recursive Methods That Return a Value 11.2 Programming with Recursion Programming Tip: Ask Until the User Gets It Right Case Study: Binary Search Programming Tip: Generalize the Problem Programming Example: Merge Sort——A Recursive Sorting Method Chapter Summary Answers to Self-Test Questions Programming Projects CHAPTER 12 Window Interfaces Using Swing Objectives Prerequisites 12.1 Background GUIs——Graphical User Interfaces Event-Driven Programming 12.2 Basic Swing Details Gotcha: Save All Your Work before Running a Swing Program Programming Example: A Simple Window Java Tip: Ending a Swing Program Gotcha: Forgetting to Program the Close-Window Button Gotcha: Forgetting to Use getContentPane More about Window Listeners Size Units for Screen Objects More on setVisible Programming Example: A Better Version of Our First Swing Program Programming Example: A Window with Color Some Methods of the Class JFrame Layout Managers 12.3 Buttons and Action Listeners Programming Example: Adding Buttons Buttons Action Listeners and Action Events Gotcha: Changing the Parameter List for actionPerformed Interfaces Java Tip: Code a GUI's Look and Actions Separately The Model-View——Controller Pattern Java Tip: Use the Method setActionCommand 12.4 Container Classes The JPanel Class The Container Class Java Tip: Guide for Creating Simple Window Interfaces 12.5 Text I/O for GUIs Text Areas and Text Fields Programming Example: Labeling a Text Field Inputting and Outputting Numbers Programming Example: A GUI Adding Machine Catching a NumberFormatException on Chapter Summary Answers to Self-Test Questions Programming Projects CHAPTER 13 Applets and HTML CHAPTER 14 More Swing

章节摘录

插图：

编辑推荐

《Java语言:计算机科学与程序设计(第3版)》是由清华大学出版社出版的。

精彩短评

1、貌似再没有最新的版本出来，不过真的是本满不错的JAVA书~~~老外写的计算机类书籍总是很有爱，你看那前言，还有每个章节的引入多用心啊

精彩书评

1、我在网上书城购买的这本书，看内容很不错！买回来时可高兴了。但是自己看起来很吃力，想找同学教教自己，但是大家都在学习，抽不出时间教我。后来隔壁宿舍的一个同学偶然提起说：他学计算机是在一个叫猎豹网校上面学的。我赶紧百度搜一下，呵，真的是琳琅满目啊，好多计算机课程，太全面了。推荐给大家，希望对大家有帮助！

版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:www.tushu000.com