

Preface to the Student

You are about to begin your study of data structures and algorithm analysis, probably in your second software development course as a computer science major. In your prerequisite course, you probably focused on the design and coding of simple classes and on Java basics: primitive types; constants and variables; assignment, conditional, and looping statements; argument passing; simple input and output; arrays; and fundamental Java classes like `String`. This second course will be more abstract and more focused.

This book will probably give you your first exposure to rigorous computer science. Gone are your days of speed-reading, highlighter in hand. Technical material must be read, and reread, slowly and word for word. Each chapter of this book is short but should nonetheless require several to many hours of reading. You should find yourself reading a paragraph or a page several times before moving on to the next. As you read, you should write thoughtful notes and make every effort to internalize definitions and techniques. The end-of-chapter exercises are designed to broaden and deepen your understanding of the material. You will make the ideas your own only by applying them. After all, doing particular things with ideas is their entire point.

As you read the code examples, you will surely have questions about Java that this book does not answer, for this book is not a Java reference. You should attempt to answer your questions by consulting Java reference material, like Sun's SDK documentation, and by writing short investigatory programs. Being able to use reference material effectively is a very important skill for the information technology professional and is essential for mastering the content of this text.

