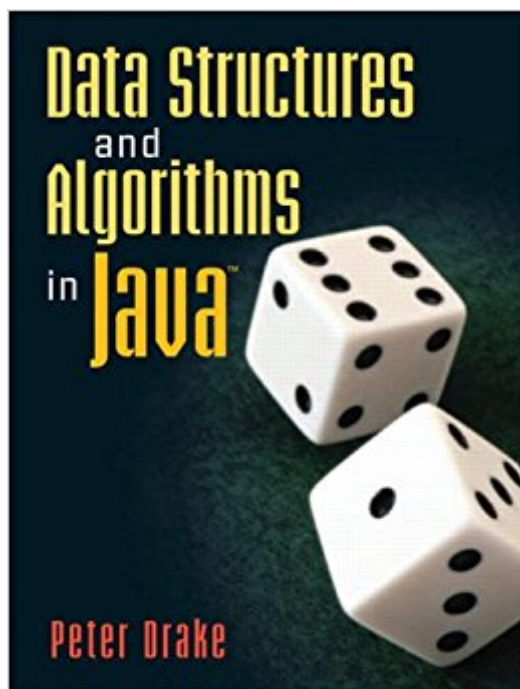The book was found

Data Structures And Algorithms In Java

Synopsis

This new book provides a concise and engaging introduction to Java and object-oriented programming with an abundance of original examples, use of Unified Modeling Language throughout, and coverage of the new Java 1.5. Addressing critical concepts up front, the book's five-part structure covers object-oriented programming, linear structures, algorithms, trees and collections, and advanced topics. KEY FEATURES: Data Structures and Algorithms in Java takes a practical approach to real-world programming and introduces readers to the process of crafting programs by working through the development of projects, often providing multiple versions of the code and consideration for alternate designs. The book features the extensive use of games as examples; a gradual development of classes analogous to the Java Collections Framework; complete, working code in the book and online; and strong pedagogy including extended examples in most chapters along with exercises, problems and projects. For readers and professionals with a familiarity with the basic control structures of Java or C and a precalculus level of mathematics who want to expand their knowledge to Java data structures and algorithms. Ideal for a second undergraduate course in computer science.

Book Information

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Customer Reviews

Peter Drake is Assistant Professor of Computer Science at Lewis & Clark College in Portland, Oregon. He holds a BA in English from Willamette University, an MS in Computer Science from Oregon State University, and a PhD in Computer Science and Cognitive Science from Indiana

University. His research involves writing programs to play the ancient Chinese game of Go.

Bought for a class. Its an informative book with really good examples. Great for the average student learning.

This book tries to illustrate some of the intermediate subjects in java in a light yet practical way. The author does a good job of giving a basic explanation for such things as binary trees and node structures. Unfortunately, some of the layout is difficult to follow (program code broken up over several pages, and you rarely see the whole program start to finish). Still, I think the base approach is sound and the code illustration is decent overall.

Enjoyed the book. Will be able to use in my classroom!

Drake wastes little time in getting to his subject. You are expected to already know at least the rudiments of Java. Hopefully of version 1.5, which is the current major release of Java. The numerous code snippets in the text are drawn from this version. Because it has a very extensive set of native classes that implement many of the structures covered by the book.The text can be read at one or both of two levels. Firstly, you might already be well familiar with such ideas as linked lists, hash tables, trees, graphs, sorting, searching etc. Perhaps from other languages. What you are looking for is a comprehensive description of how these are expressed or can be expressed in Java.The other level is where you need to learn the data structures and algorithms for the first time. Here, there is a stark contrast with Knuth's classic "Art of Computer Programming". That is a far more advanced text. But the relevant difference in our context is that Knuth requires you to write all the code yourself, in some language. Whereas Drake demonstrates how, right out of the box with Java 1.5, you get so much already implemented, for free. The latter is not figurative. The Java 1.5 distribution is made freely available by Sun.It should also be said that this book will still be germane when 1.5 is superseded by future versions of Java. You can safely expect that those versions will be supersets of the functionality used in this book, based on the prior history of the major Java versions and how each differed from its predecessor.

I used this book in a CS2 course I taught in the spring 2009 semester. Overall, I think it is one of the better Java-based CS2 textbooks out there.Strengths:+ conceptual and technical content are of high quality+ relatively concise for an undergraduate text+ good balance between using Java collections

and implementing one's own+ good introduction to algorithms and complexity+ correct use of genericsWeaknesses:- inheritance is a distraction at this level; focus should be on implementing interfaces- missed opportunity to introduce some basic design patterns; examples: discusses Iterator but doesn't explain what problem it solves, what forces it reconciles; doesn't talk about Strategy in conjunction with ordering or sorting- no enums- examples not minimal enough for my taste- plain print qualityIn conclusion, it's a tossup between this text and Duane Bailey's free one. I'm not sure when I get to teach CS2 again, but might give Bailey's a try so I can compare the two in action.

I would like to start out by saying I loved this book at first. The first few chapters are well done; the concepts at the beginning are well explained and detailed. However, as one progresses into more complex ideas you would expect longer, more detailed explanations to compensate; but that's not the case here. Complex ideas are sometimes given ONE paragraph. A short explanation is good enough for what an 'int' is, but not for complex algorithms or how to analyze them. As I progress, the book becomes an index of concepts I need to look up online or in other books, rather than a source of information.Far too brief without being concise in many areas. More (and varied) examples, with diagrams/flow-charts/pictures, and connections to other concepts would have made this book much more palatable.

You can find all of the source code and errata for this book here:[...](I am the author. I hope it will not be seen as overhyping to rate my own book at 5 stars, but I couldn't find a way to post this information outside of a review, nor to post a review without giving a rating.)

The explanations are good but the examples are too thick and hard to follow if you haven't known the language that long.

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