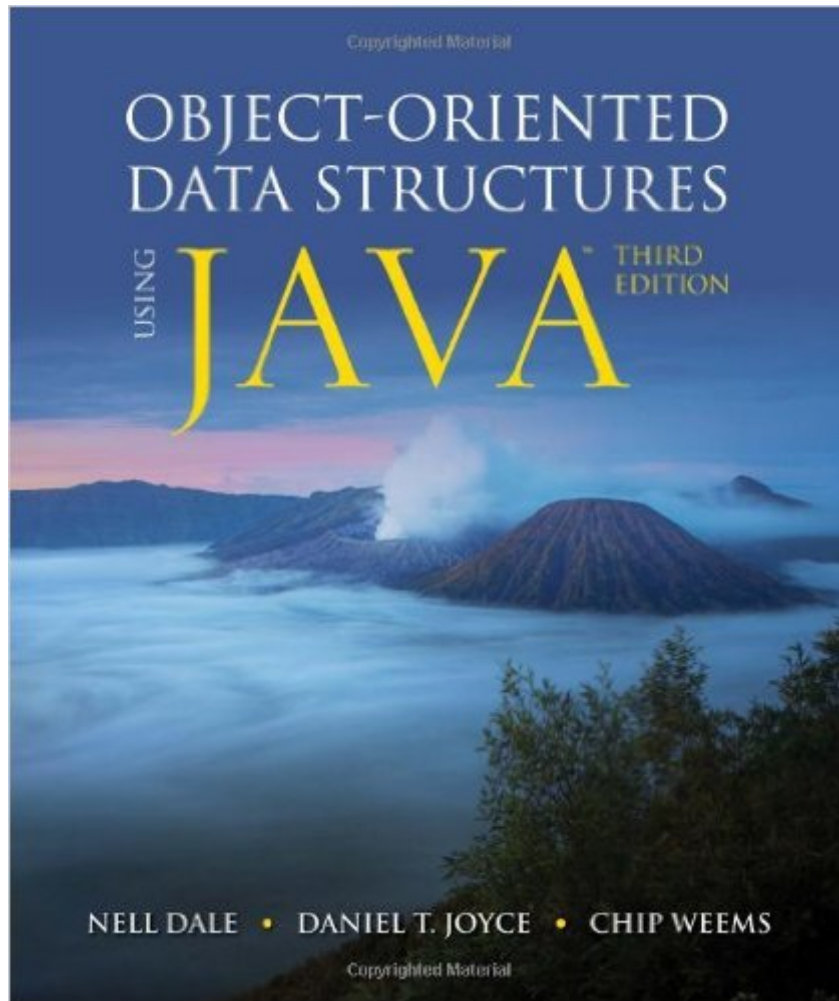# Object-Oriented Data Structures Using Java

Synopsis

Continuing the success of the popular second edition, the updated and revised Object-Oriented Data Structures Using Java, Third Edition is sure to be an essential resource for students learning data structures using the Java programming language. It presents traditional data structures and object-oriented topics with an emphasis on problem-solving, theory, and software engineering principles. Beginning early and continuing throughout the text, the authors introduce and expand upon the use of many Java features including packages, interfaces, abstract classes, inheritance, and exceptions. Numerous case studies provide readers with real-world examples and demonstrate possible solutions to interesting problems. The authors' lucid writing style guides readers through the rigor of standard data structures and presents essential concepts from logical, applications, and implementation levels. Key concepts throughout the Third Edition have been clarified to increase student comprehension and retention, and end-of-chapter exercises have been updated and modified. New and Key Features to the Third Edition: -Includes the use of generics throughout the text, providing the dual benefits of allowing for a type safe use of data structures plus exposing students to modern approaches. -This text is among the first data structures textbooks to address the topic of concurrency and synchonization, which are growing in the importance as computer systems move to using more cores and threads to obtain additional performance with each new generation. Concurrency and synchonization are introduced in the new Section 5.7, where it begins with the basics of Java threads. -Provides numerous case studies and examples of the problem solving process. Each case study includes problem description, an analysis of the problem input and required output, and a discussion of the appropriate data structures to use. -Expanded chapter exercises allow you as the instructor to reinforce topics for your students using both theoretical and practical questions. -Chapters conclude with a chapter summary that highlights the most important topics of the chapter and ties together related topics. Instructor Resources: -Answers to the exercises in the text -Glossary of terms -PowerPoint Lecture Outlines -Test bank

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Customer Reviews

This textbook was mandatory for me to buy for my Data Structures course in college. This is an okay textbook. It is a decent secondary source as long as your professor is good at teaching, luckily for me, that is the case.A lot of the examples that are given to explain certain data structures are long winded and do not help at all. They are generally over complicated and are hard to understand. Also they also seem to contradict a lot of the common and more popular uses of java at times, which can be frustrating. My last gripe with this textbook is that it just decides to almost completely disregard Iterators, which are quite important to understand.The definitions are pretty solid, however, and so this book is a solid secondary source. It will help partially confused on a topic, but it is hard to fully grasp a topic just from this textbook, in my opinion. I would recommend professors to try to find a better alternative to this one.

I teach a graduate level data structures course at a Big 10 university, and reviewed this text over the summer to use in my course. The text covers all the basics - lists, linked lists, hashes, graphs, trees, and all with good OO foundations. In my review, this book hit on all cylinders. However, I am looking at it with many, many years experience in teaching and in data structures, and frankly made the mistake of 'skimming' the book to make sure that everything I wanted to cover was in there.Then class started...The book, while going through all the motions, fails to execute well. Diagrams have mistakes in them, algorithms are wrong, code samples don't work... I have had to do quite a bit of damage control with my class, and will not be using this book next term. I now have guilt that my students were stuck paying for this book, and can't sell it back for students in future terms.(A note to faculty - the supporting material is... OK. The test banks are mediocre, and also have errors in them, and the lecture materials contain all the errors also found in the book)So, the bottom line: All the basics are there, but this is not a winning book. Perhaps the second edition will be better?

Forced to buy this book for a data structures in Java class.This textbook is far too wordy for its own

good. Author tries to be witty by explaining something incorrectly for a page and then stating "Oops, I lied, this is actually how its done:"When I am trying to learn something I don't want to be given confusing explanations. Chapters have long winded walls of text that never seem to cut to the point - rarely is anything put into simple terms.The assignments inside the book are not too great either - they tend to have vague directions and without instructor clarification it is very difficult to work with this book unless you are already well versed with the author's specific implementations of the data structures covered. The directions are vague enough that you will end up writing code that has already been provided by the author.For such an expensive textbook, it leaves a lot to be desired.

For learning how to program using abstract data types (ADT's) within Java you could maybe do a whole lot worse? This book gives you a good conceptual understanding of all the ADT's which exist within Java (Stacks, Queues, Trees, Linked-lists, etc.), but as far as actually teaching you how to code using them it fails IMHO. Reading this book alone will not get you any closer to tackling the programming problems it assigns, but it does give you a decent human understanding how data structures function / behave within Java. Unless you are tasked to use this book for a course I would probably pass on it.

This book is a snooze. I have only read the first 3 and a half chapters so far, but this textbook is idiotic. They draw out topics unnecessarily long. It's a joke that it takes them so many sentences to explain simple concepts. Despite their tendency to draw things out, there is an amazing lack of actual useful code examples in the book. The practice of slowly building upon English pseudocode until they finally show you an example in Java is ridiculous and upsetting. They do this for the most simple blocks of code--which is pointless. Just show me the code, then explain. Chances are I get the code and then can skip the explanation. There is no need for use of pseudocode for code as simple as that presented in chapters 1-3. And no need to devote whole paragraphs to methods that return the instance variables and other straightforward stuff. No.

This book covers the essential concepts, but doesn't do a good job explaining them. The examples generally do a poor job illustrating the ideas and methods. Frequently the book is too wordy and makes simple concepts seem hard to understand. The illustrations are average, but the text to describe them usually isn't very good. Some of the exercises are good, but other just ask you to spit back definitions from the chapter.

The first thing that a computer science student studies is usually a programming language that becomes the foundation for future studies. Most of the programming exercises he works on are chosen to illustrate programming techniques. The book presumes that the student knows at least the basic principles of the Java language. In learning the language the student has written several programs. But he has not begun to approach real world problems that usually involve the processing of some kind of data. The main theme of the book is to familiarize the student with the techniques and procedures that have been developed to ease the processing of different types of data.There were some complaints about errors found in the first edition. While this is regrettable, it is almost impossible to produce a book of 800+ pages without some errors creeping through the editing process. Most of the errors have been fixed. But there are still a few, one that I found more amusing rather than serious was in the address of the website dedicated to the book. It's a com domain, and the com is left off of the given address. Oh well, I certainly couldn't write a program 800 pages long that would be completely bug free.

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