The book was found

Algorithms In C++, Parts 1-4: Fundamentals, Data Structure, Sorting, Searching, Third Edition

[Book cover image]

Download Free (EPUB, PDF)
Synopsis

Robert Sedgewick has thoroughly rewritten and substantially expanded and updated his popular work to provide current and comprehensive coverage of important algorithms and data structures. Christopher Van Wyk and Sedgewick have developed new C++ implementations that both express the methods in a concise and direct manner, and also provide programmers with the practical means to test them on real applications. Many new algorithms are presented, and the explanations of each algorithm are much more detailed than in previous editions. A new text design and detailed, innovative figures, with accompanying commentary, greatly enhance the presentation. The third edition retains the successful blend of theory and practice that has made Sedgewick’s work an invaluable resource for more than 250,000 programmers! This particular book, Parts 1n4, represents the essential first half of Sedgewick’s complete work. It provides extensive coverage of fundamental data structures and algorithms for sorting, searching, and related applications. Although the substance of the book applies to programming in any language, the implementations by Van Wyk and Sedgewick also exploit the natural match between C++ classes and ADT implementations. Highlights Expanded coverage of arrays, linked lists, strings, trees, and other basic data structures Greater emphasis on abstract data types (ADTs), modular programming, object-oriented programming, and C++ classes than in previous editions Over 100 algorithms for sorting, selection, priority queue ADT implementations, and symbol table ADT (searching) implementations New implementations of binomial queues, multiway radix sorting, randomized BSTs, splay trees, skip lists, multiway tries, B trees, extendible hashing, and much more Increased quantitative information about the algorithms, giving you a basis for comparing them Over 1000 new exercises to help you learn the properties of algorithms Whether you are learning the algorithms for the first time or wish to have up-to-date reference material that incorporates new programming styles with classic and new algorithms, you will find a wealth of useful information in this book.

Book Information

Paperback: 752 pages
Publisher: Addison-Wesley Professional; 3 edition (July 23, 1998)
Language: English
ISBN-10: 0201350882
Product Dimensions: 7.8 x 1.7 x 9.2 inches
Shipping Weight: 2.8 pounds (View shipping rates and policies)
If you’re looking for an exhaustive, upto-date reference/textbook for fundamental, searching and sorting algorithms, then this is one of the very best available. Sedgewick has split his popular book into two volumes, with Graph algorithms being shifted to the second volume. Moreover, many advanced topics like computational geometry, fft, number theoretic algorithms etc, which were introduced in the previous edition, seem to be missing now - so the breadth of coverage seems to have reduced, which is a pity. However, the depth has increased instead - i doubt that even Knuth covers more sorting algorithms ! In particular, there are several recent algorithms and data structures which are treated in greater detail here than by Knuth. Of course, Knuth analyses all the algorithms he presents in rigorous and exhaustive detail, which this book doesn’t. Moreover, the book has many new algorithms and presents the state of the art in sorting and searching algorithms, giving it a distinct advantage over the older books. Sedgewick makes it very clear in the preface that the emphasis is on the practical importance of the algorithms, so esoteric algorithms which are important ‘only in theory’ may find no mention. Also the emphasis is more on the design of algorithms than on their analysis. The number of (exercise!!) problems has multiplied manifold in this edition to become more than most competing textbooks. Problems are graded by difficulty level to help you choose the ones relevant to your needs. The exposition is clear and authoritative - Prof. Sedgewick is a leading authority in the field of algorithms and a student of Donald Knuth.

Download to continue reading...
