SECOND EDITION

Algorithms

Robert Sedgewick

The second edition of this best-selling text has been thoroughly revised, maintaining an orientation toward algorithms that are of practical use. While most books cover a standard repertoire of introductory material, this book describes a variety of algorithms in each of a number of areas of interest, including sorting, searching, string-processing, geometric, graph, and mathematical algorithms.

The treatment of analysis of algorithms is more fully developed and more rigorous than in the first edition. When appropriate, analytic results are discussed to illustrate why certain algorithms are preferred, and in some cases, the relationship of the practical algorithms being discussed to purely theoretical results is described.

The algorithms are expressed in terms of concise implementations in Pascal, so that readers can both appreciate their fundamental properties and test them on real programs.

New to this edition:

- Six new chapters presenting fundamental concepts, including a brief introduction to data structures, have been added.
- Throughout the book, "properties" sections encapsulate specific information on the performance characteristics of algorithms.
- Hundreds of detailed, innovative figures have been added, clearly demonstrating how important algorithms work.

Surveying the most important algorithms in use today, *Algorithms, Second Edition* emphasizes fundamental techniques, providing readers with the tools to confidently implement, run, and debug useful algorithms. This book may be useful for self-study, or as a reference for people engaged in the development of computer systems or applications programs.

About the Author

Robert Sedgewick is the William O. Baker Professor of Computer Science and Chairman of the Computer Science Department at Princeton University. He received a Ph.D. from Stanford University, producing a dissertation on Quicksort under the supervision of Donald E. Knuth. Professor Sedgewick is an internationally recognized authority on the analysis of algorithms, and is an editor of *Journal of the ACM*, *Algorithmica*, and *Journal of Algorithms*.

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