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JAMES A. STORER, "AN INTRODUCTION TO DATA STRUCTURES AND ALGORITHMS", BIRKHÄUSER BOSTON, C/O SPRINGER-VERLAG, NEW YORK, 2002

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This book deals with one of the most challenging subjects of Computer Science. A lot of universities from the whole world are using such books during preparing their students in Computer Sciences. One of the most famous of these books is Introduction to Algorithms written by T. H. Cormen, C. E. Leiserson, R. L. Rivest, and C. Stein from MIT. So, what is new in this book, written by James A. Storer, from the Department of Computer Science of the Brandeis University, USA?

First of all it is a wonderful support for students who are attending accompanying lectures on data structures and algorithms. Except for the introduction, exercises, and notes for each chapter, page breaks have been put in manually and the format corresponds to a lecture style with ideas presented in "digestible" page-size quantities.

Algorithms are presented with pseudo-code, not programs from a specific language, let the reader to implement them in which language he or she whish to do it.

Whole the book can be cut in some parts in order to "construct" courses for different kind of interests. A first course on data structures and algorithms may be based on Chapters 1 through 4 (RAM model, Lists, Induction and Recursion and Trees), along with portions of Chapter 5 (Algorithm Design), the first half of Chapter 6 and 12 (Hashing and Graphs) and with parts of Chapter 11 (Strings). Chapters 1 through 4 cover more elementary material, and at a slower pace, the concise style of this book makes it important, that the teachers provide motivation, discuss exercises, and assign homework. For upper class undergraduates the course can essentially start with the Chapter 5, where are presented algorithm design techniques divide and conquer, dynamic programming, randomization, greedy algorithms, graph algorithms etc. This study can be continued with contents of Chapter 7 (Heaps), of Chapter 8 (Balanced Trees), 9 (Sets over a Small Universe) and Chapter 12 (Discrete Fourier Transform).

There is no chapter on sorting. Instead, sorting is used in many examples, which include bubble sort, merge sort, tree sort, heap sort, quick sort, and several parallel

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sorting algorithms. There is no chapter on NP-completeness. Formal treatment of complexity issues like this is left to a course on the theory of computation.

The last chapter presents the PRAM model for parallel computation. The basic concepts presented in the chapter can provide a foundation for further study on specific practical architectures.

The book contains a rich Appendix of Common Sums, a bibliography with more than 600 entries and Index. Unfortunately the bibliography's entries are not numbered and are not referred in the text.

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