Book Reviews

JAY-LOUISE WELDON
Data Base Administration

In the preface, Ms Weldon states that in the abundance of database literature, especially books, there is a dearth of database administration. This book will help fill that gap admirably. In order not to deter the prospective reader, let me first dispose of the few minor criticisms. As so many academic authors tend to do, she compiles more references than most readers would have time to pursue. The serious reader can readily access ACM and BCS journals anyway. Again, like most US (and Administration)

C.JAY-LOUISE WELDON

abundance of database literature, especially admirably. In order not to deter the prospective books, there is a dearth of database adminis-

tation. The writer and query language. These were men-
tioned in an appendix and mentioned as special in the text, are not adequately distinguished from ‘standard’ Pascal, so that someone learning from the book would be less aware than he should be of which parts of it are not transferable to other systems. In any case, the speed of progress of the book makes it unsuitable as a first text in programming, although its starting point suggests that the author intends it to be usable as such.

P. GROGONO
Programming in Pascal with Pascal/1000
Addison-Wesley, Reading, Massachusetts, 1981. 379pp. £5.95.

This book is in essence a reprint of the author’s earlier Programming in Pascal (Addison-Wesley, 1980) with interpolations on the additional features of the Hewlett-Packard Pascal/1000 compiler.

There is much that is good about this book. It includes a reasonable first introduction to ideas of proper testing and formal verification; it advocates both explicitly and by example a clean and disciplined style of program decomposition and program coding; it includes examples of Pascal used for commercial DP problems as well as the more usual numerical and symbol processing applications.

Unfortunately there are also a number of weaknesses. First, and least significant, there is a very large number of trivial but annoying misprints in the text, suggesting that the proofreading was perfunctory. More important is the organization and presentation of material. The special features of Pascal/1000, although listed in an appendix and mentioned as special in the text, are not adequately distinguished from ‘standard’ Pascal, so that someone learning from the book would be less aware than he should be of which parts of it are not transferable to other systems. In any case, the speed of progress of the book makes it unsuitable as a first text in programming, although its starting point suggests that the author intends it to be usable as such.

The first few programs are almost without exception incorrect, in that they fail when presented with null input; there is no need for this, since the author could easily have introduced WHILE rather than REPEAT as his first looping construct.

On the whole, the book is best suited for an experienced programmer wishing to learn Hewlett-Packard Pascal; such a user might, however, be equally well served by any of the many other Pascal texts now available, together with a Pascal/1000 reference manual.

C. D. F. MILLER
Leeds

L. B. KOVACS
Combinatorial Methods of Discrete Programming

The subject matter of this book deals variously with integer programming, dynamic programming and other combinatorial problems which arise in optimization. The contents of the twelve chapters are: Models of discrete programming, Implicit enumeration methods, Branch and bound algorithms, Dynamic programming, A modified dual algorithm, A modified additive algorithm, Branch decomposition, Modified filter method, Heuristics, Set covering problem, Combinatorial algorithms and Recent directions of research. I cannot speak too authoritatively on the contents but I get the impression that it is an up-to-date survey of developments in many branches of discrete programming, both East and West, yet written in a unified form and including some new contributions from the author. The earlier chapters introduce the better known material, including a particularly useful chapter on model problems—knapsack, travelling salesman, fixed charge etc. Also I liked Chapter 12 on recent developments in the subject. I feel that one could learn a lot about the subject from the book with only a reasonably working knowledge of linear programming and matrix algebra. The book is very clearly written, readable, has a nice blend of theory and practice, and should appeal to both the academic and the user. There are frequent numerical examples and the book could well be a useful text book at senior undergraduate or more likely postgraduate level. I am particularly impressed with the standard of typesetting and binding which is not at all inferior to the Western product. Assuming the UK price is the equivalent of $25, it is very reasonably priced by current standards.

R. FLETCHER
Dundee

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