

53[X, Z].—IVAN FLORES, *Computer Software, Programming Systems for Digital Computers*, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1965, x + 493 pp., 24 cm. Price \$12.00.

One of the problems of writing in a rapidly developing field such as computer science is obsolescence. The problem is aggravated in this case by the recent introduction of a 'third generation' of computers by the large manufacturers. The blurb in the Preface of this book begins "here is an advanced programming book which builds software before your very eyes. . .," but no consideration is given to compilers, multiprogramming, multiprocessing, or timesharing. The book is actually devoted to a detailed description of an assembler and a batch-type operating system for a hypothetical machine of the 7090 class.

The choice of a hypothetical machine and system rather than an existing one is questionable, and is only justifiable if it allows the author to improve the treatment in some way. Unfortunately, there is little of novelty in this book apart from what can only be described as the author's idiosyncrasies.

For example, the word 'transfer' is used for transfer of information instead of control, and 'list-processing' is used in connection with instruction loops, almost as though the author knew it was an 'in' word, but was unaware of its meaning. But when the author fails to make clear the difference between macros and subroutines, and confuses compilation with assembly-time calculation, the situation becomes more serious.

Certain parts of the book, mainly those describing the I/O control structure, could be of interest, but the reader's time would be better spent in a study of FAP and IBSYS.

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54[X, Z].—F. H. GEORGE, *An Introduction to Digital Computing*, Pergamon Press, New York, 1966, xiii + 276 pp., 20 cm. Price \$4.50.

This is an unusual text on digital computing in that it is written for "programmed instruction." The reader is asked to read some text and questions are asked about the contents of the material covered. Depending upon the answer given the reader is directed to another page. This is fine in principle but, unfortunately, much time may be spent in flipping pages.

If this were the only fault of the book it would not be of great consequence, but actually, even the reader who correctly answers each question never really gets anywhere apart from learning that a computer is composed of a memory, a register, instructions and numbers. He is presented with material which can better be covered in a very elementary "straight" manner and he would probably be better off saving his thumb work for programming. At no point in the text is the reader introduced to programming in the more meaningful sense of the word.

The text is more suitable to the junior grades of an elementary school rather

than for 18–19 year old high school and college students who served as the author's validation group.

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55[X, Z].—FREDERIC STUART, *Introductory Computer Programming*, John Wiley and Sons, Inc., New York, 1966, xi + 155 pp., 24 cm. Price \$5.95.

If it were not for the fact that this book is devoted entirely to the description of two uncommon brands of FORTRAN programming, NCE* and AFIT,† it would serve as a useful guide to learning FORTRAN. There are a great number of useful examples geared towards statistics and the questions listed in the exercises are well posed. However, the differences between these two forms of IBM 1620 FORTRAN and the commonly used FORTRAN I, II and IV are sufficiently great to keep the prospective programmer from learning these versions which would be unacceptable on the majority of the scientific computers in general use today.

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* NCE = Newark College of Engineering.

† AFIT = Air Force Institute of Technology.