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REWIND B
REWIND C
REWIND V
P = A
H = M
D = 1
SP = 0
GO TO 40
10 IF (SP) 240,240,20
20 P = STACK(SP)
H = STACK(SP-1)
D = STACK(SP-2)
SP = SP - 3
CALL RWDF(P)
30 IF (P.EQ.A) GO TO 40
Q = A
IF (P.EQ.B) GO TO 50
R = B
GO TO 60
40 Q = B
50 R = C
60 S = (D+H-1)/2
70 DO 80 I = 1,1000
80 REG(I) = 0
IF (S-D) 90,100,100
90 R = V
GO TO 140
100 STACK(SP+1) = S+1
STACK(SP+2) = H
STACK(SP+3) = R
SP = SP+3
IF (S.GT.D) GO TO 110

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Q = V
GO TO 120
110 STACK(SP+1) = D
STACK(SP+2) = S
STACK(SP+3) = Q
SP = SP+3
120 DO 130 I = D,S
J = NLIST(I)
130 REG(J) = 1
140 S = S+1
DO 150 I = S,H
J = NLIST(I)
150 REG(J) = DISJ(2,REG(J))
160 READ (P) NS,VS
IF (EOFTST(P,J)) 170,230,230
170 L = REG(VS)
IF (L) 160,160,180
180 GO TO (190,210,200),L
190 WRITE (Q) NS,VS
GO TO 220
200 WRITE (Q) NS,VS
210 WRITE (R) NS,VS
220 REG(NS) = DISJ(REG(NS),L)
GO TO 160
230 IF (H.GT.D) END FILE Q
END FILE R
CALL RWDF(P)
GO TO 10
240 END FILE V
REWIND V
RETURN
END

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Book review

Interactive Computing in BASIC, by P. C. Sanderson, 1973; 161 pages. (Butterworths, £4.00 hard cover, £2.00 paperback)

In a London bookshop I recently counted no less than ten different textbooks on programming in BASIC. That BASIC has attracted such attention from authors is perhaps the greatest possible tribute to this rapidly-growing language, which is surely the most commonly used in interactive computing.

Mr. Sanderson's is the latest then in an already long line of books which deal with this subject. In many ways it is no better nor worse than the others, and any criticisms I make of it could be equally well applied elsewhere.

The book can be divided into three main sections: firstly an introductory section which deals with computing, flowcharting, programming languages, etc. in a fairly standard manner; secondly the main body of the text which introduces BASIC; and finally a chapter that deals with the conversion of BASIC programs to FORTRAN.

My first criticism of this book is that, like many others, it has a definite numerical bias. This seems unfortunate since BASIC is a true general-purpose language, many implementations having powerful facilities for non-numeric work. However string-handling

and character manipulation receive only a cursory treatment here. Another fault seems to be that many of the examples given in the text are trivial, thus there is a definite shortage of genuine case-studies which are surely necessary for beginners. Also some parts of BASIC are given very sketchy treatment (e.g. The BASIC editor and command language), while other essential parts are omitted (e.g. file-handling). Finally I feel that the chapter introducing FORTRAN is unnecessary; BASIC is arguably a more powerful and sophisticated language than FORTRAN, and anyone with a comprehensive implementation of BASIC at their disposal need have little recourse to FORTRAN. In any case, one chapter is insufficient to state the case for FORTRAN.

The main difficulty for anyone attempting a book such as this, must be the problem of dialects. So many different versions of BASIC are now implemented that it must be tempting for authors to gloss over those areas where there is the greatest variation. Mr. Sanderson does at least include a brief chapter highlighting the differences between several implementations; however a proposed standard for BASIC has now been published, and wise authors will base their texts on this in future.

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