Errata in first printing of "Implementing software for Non-Numeric Applications," by W. M. Waite

p. 11 Line 2:


p. 18 line 10

germain should be germane

Exercise 1.2:

\[Ax^2+BX+C=0\]

Exercise 1.5:

(a) CAR((X,Y))
(b) CDR((A.(B.C)))
(c) CAR(CDR(((A,B).(C,D))))

p. 25 Line 3 of character set:

+ -* / ( ) . , '

p. 26 Figure 2.3:

The CDR field of the base register NIL should be empty:

\[
\text{NIL: } \begin{array}{c|c}
0 & 1 \\
\hline
\end{array}
\]

p. 28 Table 2.3:

Immediate 'A The internal ....

p. 29 Second line of last paragraph:

... and hence they would almost

p. 30 Table 2.4:

Immediate

p. 30 Last line of Sect. 2.2:

... found in Appendix B.
p. 31 Last line of example:
   \texttt{HIT, CAR E = 'X.} Set the CAR field.

p. 36 Second line of example:
   \texttt{GETIN, READ INPUT.} Read next input line.

p. 38 Lines 3 and 4:
   \ldots subroutine, "TO \texttt{(READ) IF CAR C NE NIL,}" jumps
   conditionally to \ldots

p. 38 Fig. 2.7(a). Last two lines:
   \texttt{TO READ1 IF (INPUT) = 00.} If normal completion
   \texttt{TO EOF.}

p. 38 Fig. 2.7(b), two lines preceding \texttt{GETOUT}:
   \texttt{TO READ1 IF (INPUT) = 00.} IF normal completion
   \texttt{TO EOF.}

p. 40 Fifteenth line from bottom:
   "Appendix 2" should be "Appendix B."

p. 41 Fifth line of last paragraph:
   indicated by \texttt{(FREE) = NIL.}

p. 62 Second line of last paragraph:
   In Figure 3.11 the stack...

p. 66 Figure 3.14
   \texttt{NIL: 0 0 should be NIL: 1 0}

p. 67 Sixth line from the bottom:
   \ldots of Figure 3.14(a), as desired.

p. 74 Figure 3.17:
   \texttt{ELOK, (RESULT) - (FREE).} Obtain an element from free

p. 74 Figure 3.17, last line:
   \texttt{EXIT GETNEW.} Return to caller.

p. 75 Exercise 3.5:
   \texttt{(A,B,C,D,E)}
Last two lines of second paragraph:
defined as an asterisk followed by any string of letters, digits and asterisks. Examples of ...

First example:
\[
def \text{LINEAR}(R) := \text{if NULL}(R) \text{ then } \ast \text{TRUE else ATOM}(\text{CAR}(R))\]

Lines 19 and 20:
... undefined if S is an atom other than < >.

First line of Sect. 4.4:
... presented in Appendix C. It can ...

Line 18:
... association must be dynamic because ...

end of second paragraph

Appendix 3 should be Appendix C

7 lines from bottom

Appendix 3 should be Appendix C

Fourth line of Fig. 4.16:
\[
\text{STAR, CAR Z - '}. \text{ Replace asterisk with space.}\]

Twelfth line of Fig. 4.16:
\[
\text{TO GOTCH IF (CHAR) NE '}. \text{ Make sure we have a significant}\]

Line 1:
\[
element \text{then would have been read but ...}\]

Sixteenth line of Fig. 4.19 should begin with a period.
This period should line up vertically with the B of BVARS and the F of FIXDEF.
p. 113 Fig. 4.20:

```
A
```

```
X
```

p. 114 Exercise 4.2(a), second line:

levels. For example,

p. 115 Exercise 4.3, second line:

appears in Appendix c and Figure 4.16.)

p. 119 In Fig. 5.2, delete "=B", "=B' and "=A".

p. 120 First example:

```
def SECOND(R) := CAR(CDR(R));
```

p. 122 Fig. 5.3:

(b) Input to HELP which is almost equivalent to (a)

p. 129 Line 2:

... using this function. (It is ...)

p. 129 Fig. 5.6(a), second line:

```
(FIND,(LAMBDA,(A,B,C),(FIND2,A ))),
```

p. 129 ( missing before FIND in Fig. 5.6a

p. 129 Fig. 5.6(a) lines 5,6:

```
((AND,(LIST,(ATOM,(CAR,A)),(ATOM,(CDR,A)))),
 (AND,(LIST,(EQ,(CAR,A),B),(EQ,(CAR,A),C)))),
```
p. 130 Fig. 5.7(a) lines 5,6:

\[(\text{AND}, (\text{LIST}, (\text{ATOM}, (\text{CAR}, A)), (\text{ATOM}, (\text{CDR}, A))))],

\[(\text{AND}, (\text{LIST}, (\text{EQ}, (\text{CAR}, A), B), (\text{EQ}, (\text{CDR}, A), C))))\]

p. 138 Second example, second line:

\[(\text{COND}, (e \ , e \ ), \ldots , (e \ , e \ ))\]

p. 147 Line 9:

assignment statements \((\text{RESULT}) = \text{CAR} \ X\) and \((\text{RESULT}) = \text{CDR} \ X\).

p. 151 Fig. 5.20 line 10:

\(Y = \text{CDR} \ Z, \ \text{CDR} \ Z = \text{CAR} \ Z\).

p. 151 Fig. 5.20 line 13:

\(Z = Y, \ X = \text{CDR} \ X\).

p. 159 Line 7:

... within an element.

p. 164 Fig. 6.5:

AVSL

[Diagram image]

0 0 1

0

1
p. 173 Delete line 2 of Figure 6.15
p. 173 Fig. 6.15 line 5: 
(PRED) = (RET).
p. 176 Sixth line from the bottom:

a block of length 2 are zero; two blocks...
p. 182 Fig. 6.22 second line from the bottom:

TO MOVER IF (BKSI7)NE 00.
p. 214 Fig. 7.9(b):

\[ \text{Diagram of P3} \]
p. 223 Figure 7.14

In box C1 the third occurrence of Bo is written with a zero instead of an "O".

In box D1 the same thing happens to the second occurrence of TO.

Since tests F4 and C4 have the same outcomes, the arrow emanating from box F4 could point to C4 and just leave out F4.
p. 233 Line 5:

...discussed in Chapter 3
p. 240 Fig. 8.2(b) line 4:

Pattern length must not exceed LS-LO = 9
p. 300 Fig. 8.48:

The value of ARBNO(P) in SNOBOL4.
p. 300 Figure 8.48:

title ARBNO
p. 303 Exercise 8.4:

General is in Chapter 5

p. 325 First line of Fig. 9.7b:

INCR $.

p. 326 First line of Fig. 9.8b:

TO $$ IF C$R $ = C$R $.

p. 336 First word of the second line of the fourth paragraph should be: perform

p. 339 Table 9.2 heading of third column:

Character Used in This Chapter

p. 339 First line of Table 9.2: Period missing in column 3.

It should line up vertically with the $-sign.

p. 347 Figure 9.20b:

'IODR should be "IODR. The same mistake occurs in Figures 9.23 (p. 349) and 9.24a (p. 350).

p. 350 Fifth line of Figure 9.24a should not be underlined.

p. 378 First line:

TRANSFORMATION 8 YIELDS integer

p. 378 Last line:

Source end-of-line flag

p. 379ff is a bad place for Figure A.6 - it breaks up the description of the control characters.

p. 404 Page heading:

404 STAGE2

p. 406 Card F410G021:

...IREAD AND ICNTL ...

This is a difficult change to make, since it is on a photographic plate.
p. 423 Card FLBM0063:
    REWIND '.

p. 434 Card FLD10026:
    FLG* = *CHANGED PTR FIELD.

p. 447 Card STG20237:
    MOVE THE DIGITS TO THEIR DESTINATION
    There should be no vertical space between cards
    STG20237 and STG20238.

p. 462 Insert the following line after DIMENSION and before READ:
    JOUT = 7
    The J should line up vertically with the D of DIMENSION
    and R of READ.

p. 464 There should be a vertical space between lines 11 and 12.

p. 464 Figure B.2:
    The references to Figures A2.3 and A2.4 should be
    references to Figures B.3 and B.4.

p. 465 Figure B.3:
    The i:0 decision should have exits of > and <:

    >
    i:0
    <

p. 493 HELP0191:
    1 = '1, 2 = '2, TO ERROR. INVALID SEPARATOR

p. 509 First column:
    SNOBOL5 should be SNOBOL4

p. 500 HELP0625
    (NIL) = 01, TO ADV1. RESET BUFFER AND GO ON
The table is only moved if a collision is imminent, and when it is moved it goes as far forward as possible. You should be able to convince yourself that only one table entry will every be moved into a given word, and hence an upper bound on the number of moves which must be performed is the number of words in memory.

p. 188, Second paragraph:

After the moving of all blocks has been completed, the break table may be in two pieces. More important, it may no longer be in order. (There seems to be no way to preserve the order of the table and at the same time guarantee the linear asymptotic behavior of the algorithm.) Thus the table must be consolidated and sorted before the relocation phase begins.