

Errata for Compiler Construction - Principles and Practice by Kenneth C. Louden

Fourth Printing and Above

Last modified Friday, 22-Jul-2005 21:50:55 PDT

Page 23

Figure 1.4, line 6: "if $x > 0$ then" should appear as "if $0 < x$ then".

Page 25

8th line from the bottom: "LDA 1,20(1) load 20+R1 into R0" should appear as "LDA 1,20(1) load 20+R1 into R1".

Page 45

Line 12: "We can try to write out a definition for $\sim(\mathbf{ab})$ using..." should appear as "We can try to write out a definition for $(\sim(\mathbf{ab}))^*$ using ...".

Page 53

Last line: "Figure 2.4" should appear as "Figure 2.2".

Page 54

2nd paragraph, line 2 (middle of the page): "Section 2.2.4:" should appear as "Section 2.2.3:".

Page 59

Example 2.11, first diagram: The top-most backward transition (from state 7 to state 2) is missing its label. It should be labelled with epsilon.

Page 70

Line 9: There should be no break in the arrow labelled a from state S to state \check{S}'_a (and the latter S should have a flat bar above it, but I couldn't find the Unicode for that).

Page 74

Example 2.19, line 1: "Example 2.1 (Section 2.3.2)" should appear as "Example 2.10 (Section 2.3.2)".

Page 76

2nd figure: The DONE state should be double-lined, since it is an accepting state.

Page 82

Line 19 (middle of the page) and 4th line from the bottom: "Section 2.2.4" should appear as "Section 2.2.3".

Page 88

3rd line below the code of Example 2.23: "Section 2.2.4" should appear as "Section 2.2.3".

3rd and 4th lines from the bottom: "This will be discussed further in Section 2.6.4" should appear as "This will be discussed further shortly".

Page 116

Footnote, line 2: "See Section 3.2.7" should appear as "See Section 3.6.3".

Page 140

Exercise 3.13, line 7: "grammar as (- 34 (* 3 42))." should appear as "grammar as (- 34 (* 3 42))."; in other words, the trailing period should not be in code font (and is not part of the expression).

Page 155

Figure 4.3, line 3: "**while** the top of the parsing stack \neq \$ **and** the next input token \neq \$ **do**" should appear as "**while** the top of the parsing stack \neq \$ **do**".

Figure 4.3, line 10: "**and** the next input token is terminal a " should appear as "**and** the next input token is a (a terminal or \$)".

Page 159

Figure 4.3: Insert at the bottom of the pseudocode, inside the i -loop but outside the j -loop, the following line: "remove, if necessary, immediate left recursion involving A_i ".

Page 177

7th line from the bottom: "results in no further changes. Thus, we have computed the Follow sets" should appear as "results in Follow(stmt) = { ; , \$ }, and a third pass results in no further changes. Thus, we have computed the Follow sets".

5th line from the bottom: "Follow(stmt) = { ; }" should appear as "Follow(stmt) = { ; , \$ }".

Page 185

Line 6: "**if not** (token in synchset) **then**" should appear as "**if not** (token in { (, number }) **then**".

Line 7: "term (synchset) ;" should appear as "term (synchset \cup { + , - }) ;".

Line 10: "term (synchset) ;" should appear as "term (synchset \cup { + , - }) ;".

Line 18: "if not (token in synchset) then" should appear as "if not (token in { (, number }) then".

Page 285

Example 6.15, line 6 of the pseudocode: "temp := EvalWithBase (right child of T);" should appear as "temp := EvalWithBase (right child of T, base);".

Page 286

Line 2: "attribution" should appear as "attribute".

Page 290

Definition of the L-attributed property: The equations for the inherited attributes $X_i.a_j$ must have the additional property that only inherited attributes of X_0 may appear in the f_{ij} .

Lines 3 and 4 below the definition: "Given an L-attributed grammar in which the inherited attributes do not depend on the synthesized attributes, a recursive-descent parser..." should appear as "Given an L-attributed grammar, a recursive-descent parser...".

Page 310

Line 20 (middle of the page): "both an inherited attribute *symtab*, ..." should appear as "both an inherited attribute *symtab*, ...".

Page 329

Figure 6.22: The following line is missing from the list of grammar rules, and should be added at the end of the list:

$$exp \rightarrow exp + exp \mid exp \text{ or } exp \mid exp \mid exp \mid num \mid true \mid false \mid id$$

Page 331

10th line from the bottom: "typeError encounters this error type..." should appear as "type-error encounters this error type...".

Page 355

Line 9 (below Figure 7.5): "external variable x and makes a further call $f(1)$, which sets m to 2 and y to 1, result-" should appear as "external variable x and makes a further call $f(1)$, which sets m to 1 and y to 0, result-".

Page 359

The Calling Sequence: A sixth step needs to be added to the list of steps when a procedure is called: "6. Allocate space on the stack for local variables by appropriate adjustment of the sp."

Page 362

Ada code at the top of the page, line 3: `procedure Sum` should appear as `function Sum`.

Ada code at the top of the page, line 6: `temp: Int_Array(low..high);` should appear as `i: INTEGER;`.

First line below the Ada code: "(Note the local variable `temp` which also has unpredictable size.)" should be deleted.

Page 400

4th line from the bottom (excluding footnote): "greatest common divisor of two integers, which ..." should appear as "factorial of an integer, which ...".

Page 405

4th and 5th lines from the bottom: remove the discussion of the `sbi` instruction (it has already been discussed).

Page 427

Lines 5 and 10: `lod field_offset(x,j)` should appear as `ldc field_offset(x,j)`.

Page 428

Line 2: `lod field_offset(*p,lchild)` should appear as `ldc field_offset(*p,lchild)`.

Page 433

2nd line above Section 8.4.4: `lod FALSE` should appear as `ldc FALSE`.

Page 455

3rd line from the bottom: "a given by $a = d + \text{reg}[r]$ " should appear as "a given by $a = d + \text{reg}[s]$ ".

Page 458

Line 6: `2: LDC 1,1,0 r1 = 1` should appear as `2: LDC 1,1(0) r1 = 1`.

Line 7: `3: LDC 2,1,0 r2 = 1` should appear as `3: LDC 2,1(0) r2 = 1`.