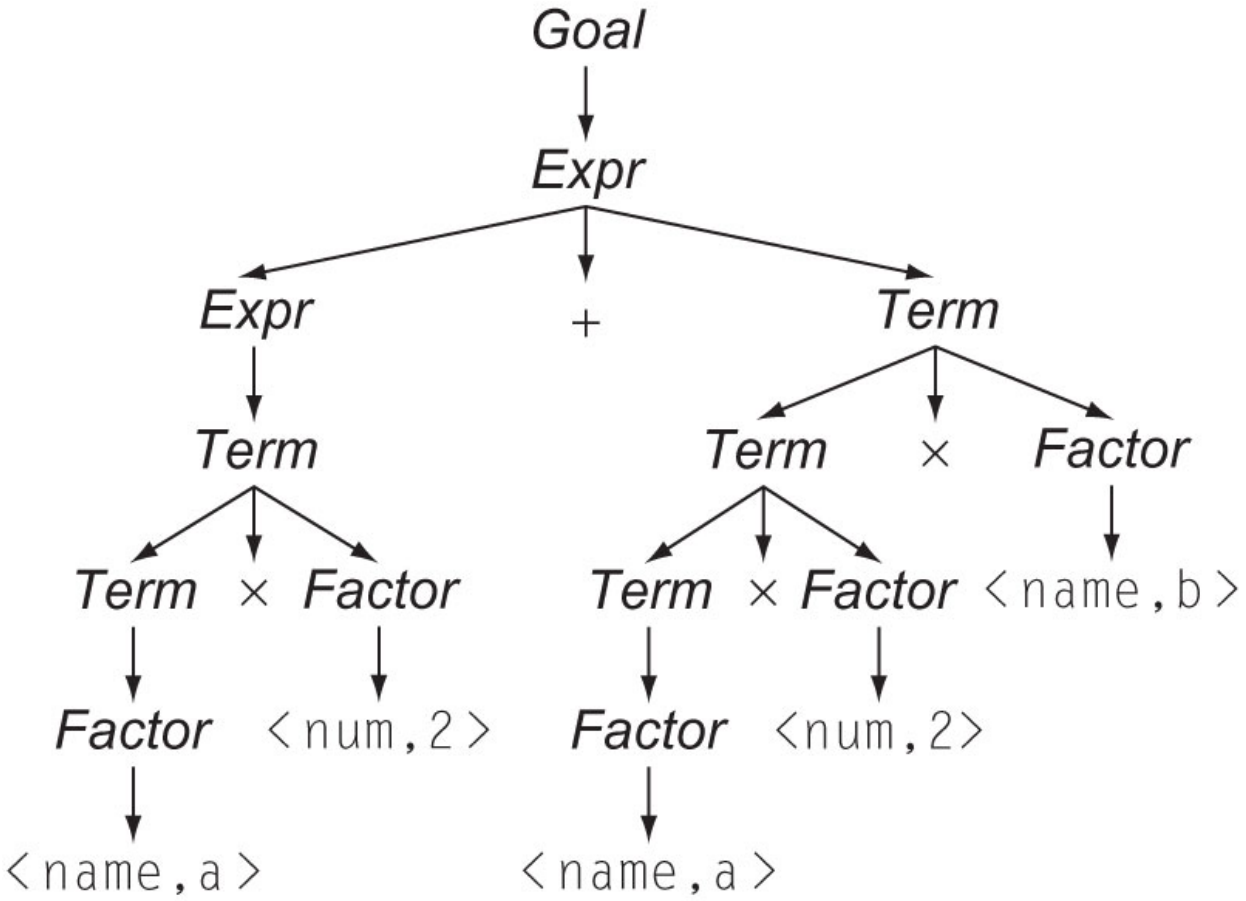
Engineering a Compiler
2nd Edition

Chapter 5

Intermediate Representations

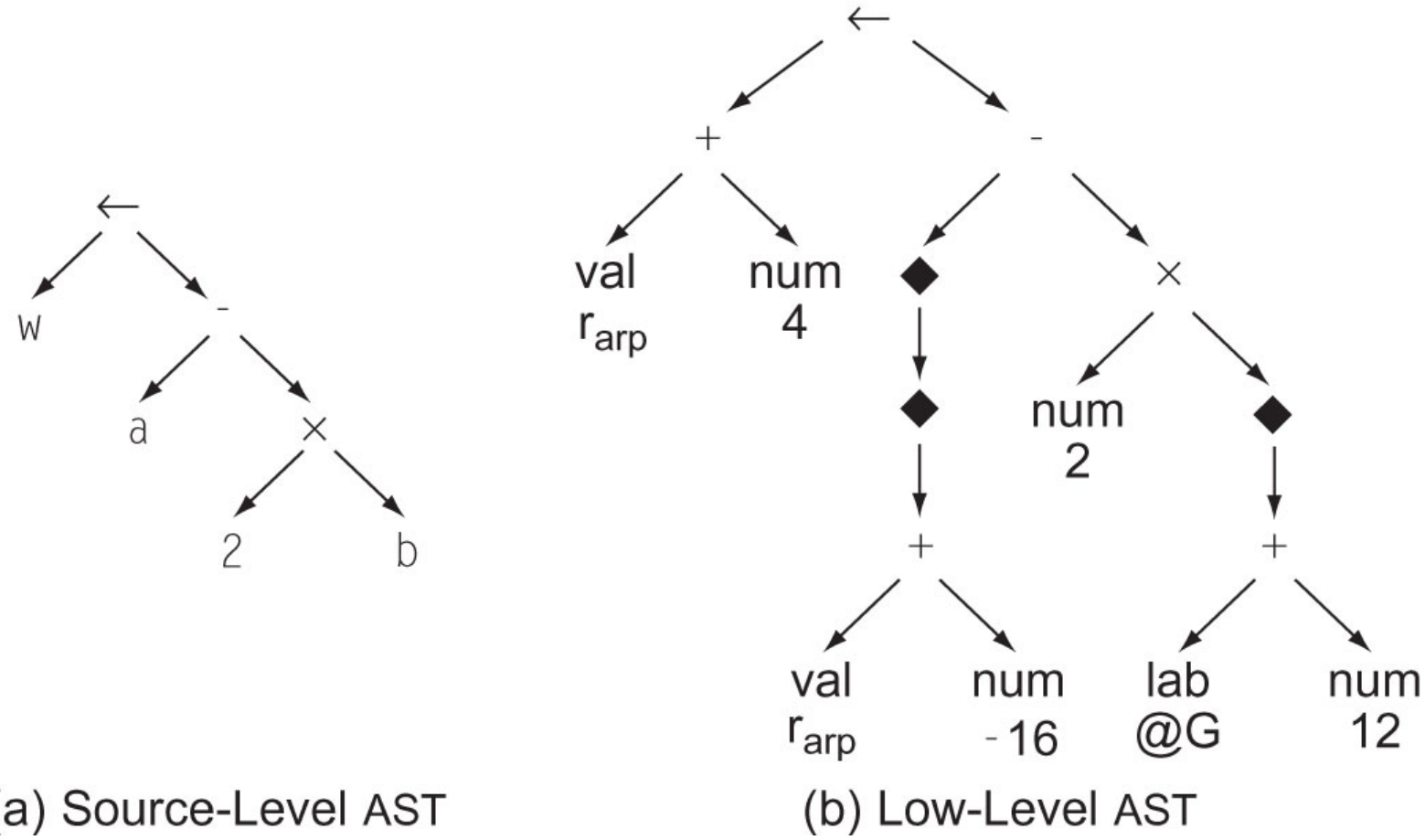
Copyright © 2011, Elsevier Inc. All rights Reserved

Figure 5.1



Copyright © 2011, Elsevier Inc. All rights Reserved

Figure 5.2

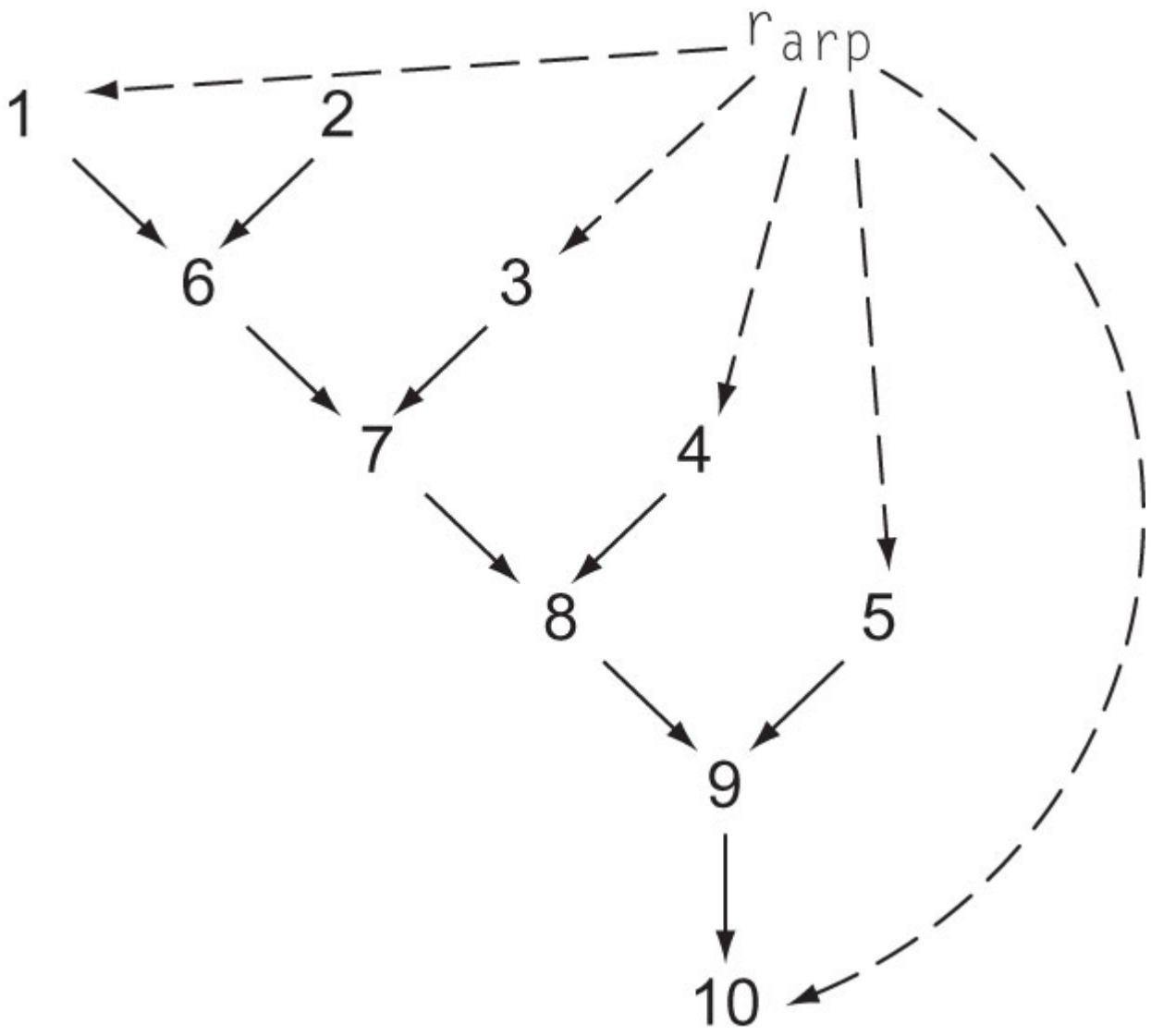


(a) Source-Level AST

(b) Low-Level AST

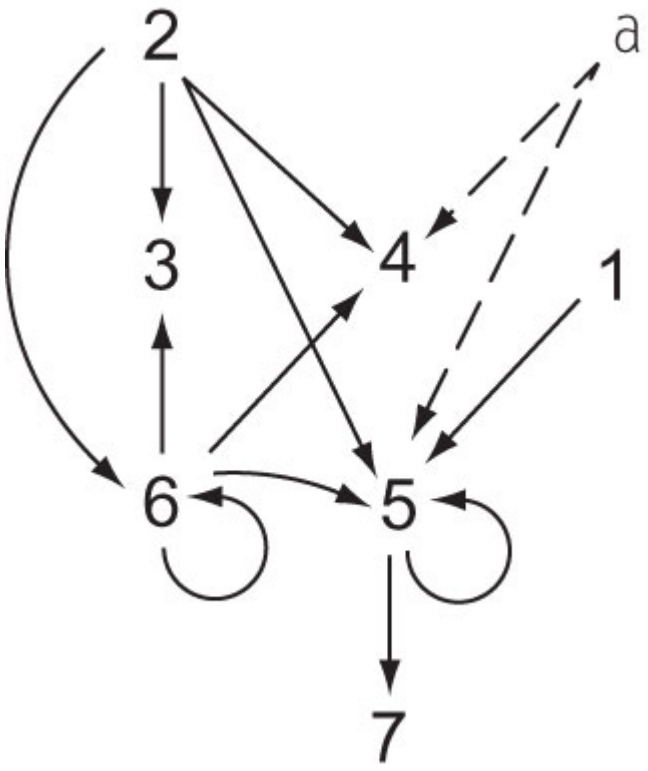
Copyright © 2011, Elsevier Inc. All rights Reserved

Figure 5.3



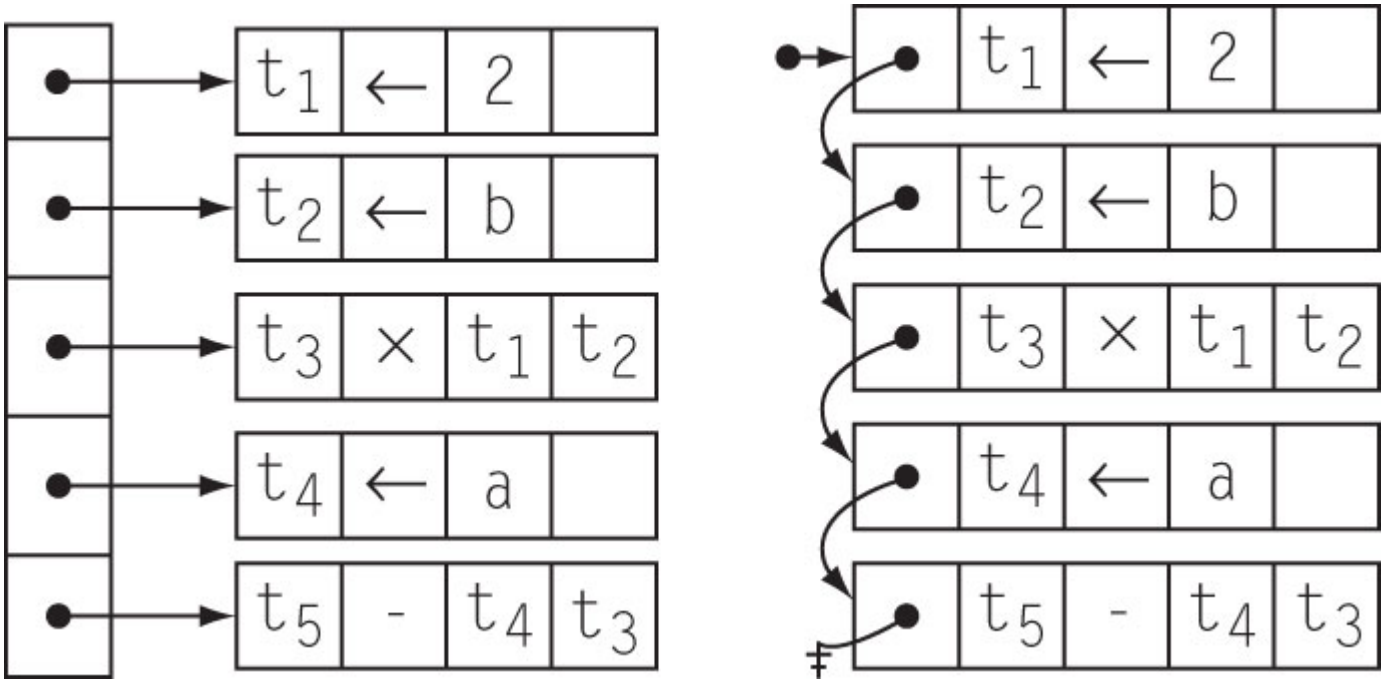
Copyright © 2011, Elsevier Inc. All rights Reserved

Figure 5.4



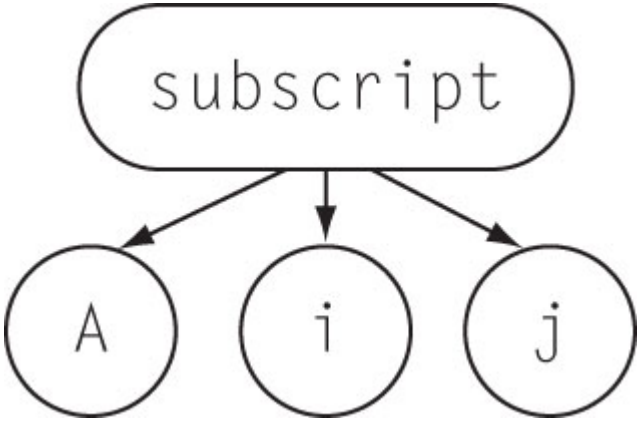
Copyright © 2011, Elsevier Inc. All rights Reserved

Figure 5.5



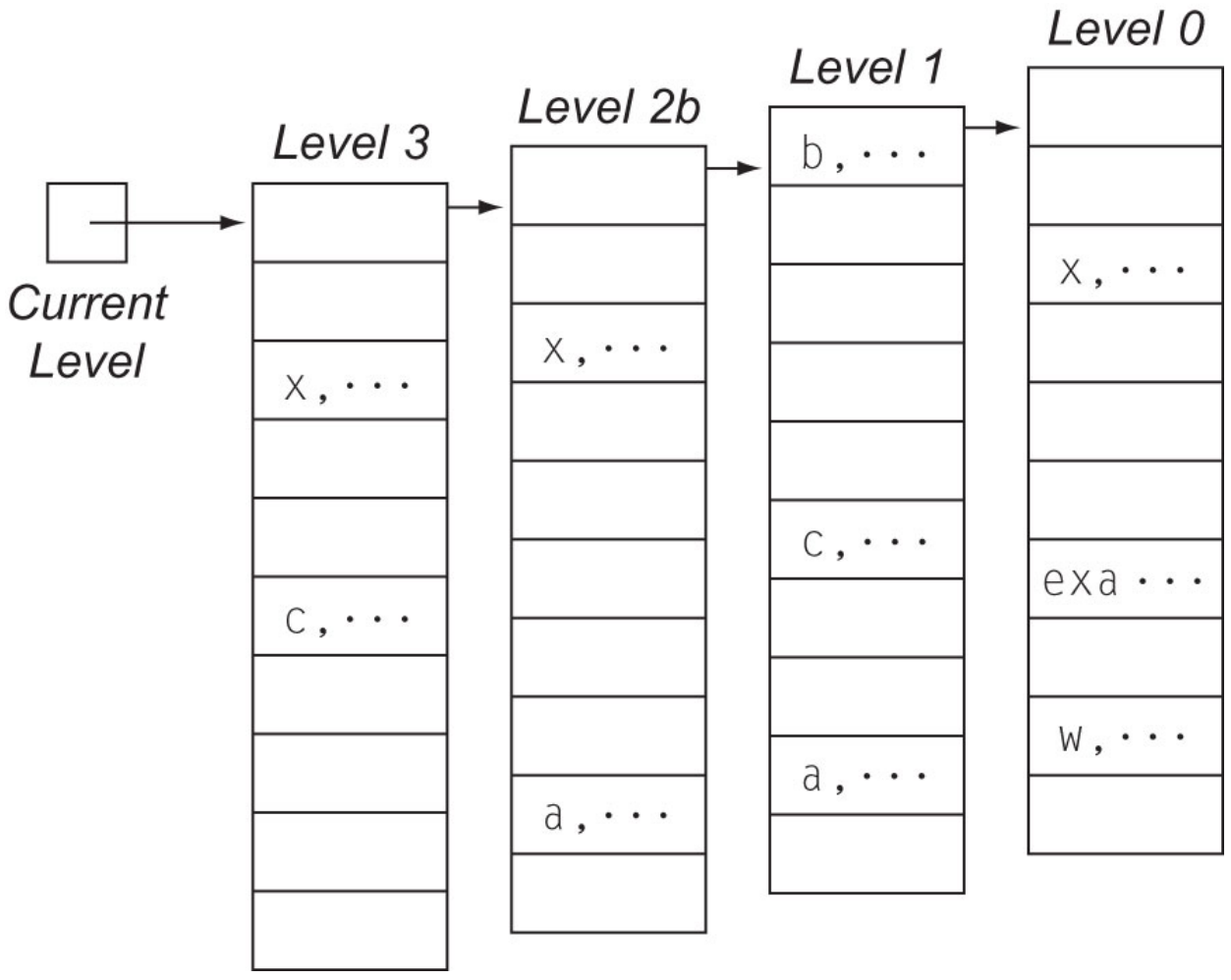
Copyright © 2011, Elsevier Inc. All rights Reserved

Figure 5.8



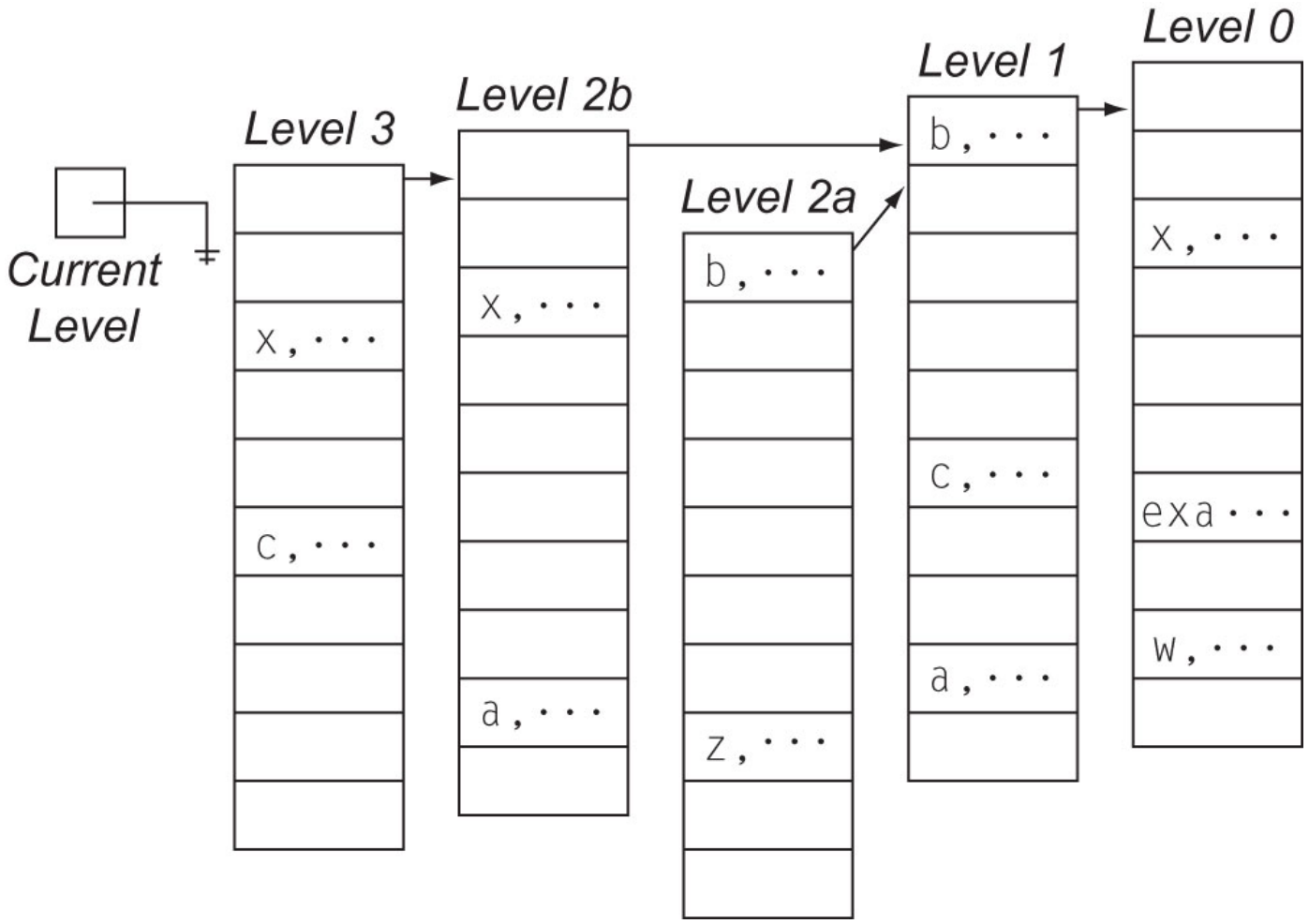
Copyright © 2011, Elsevier Inc. All rights Reserved

Figure 5.11



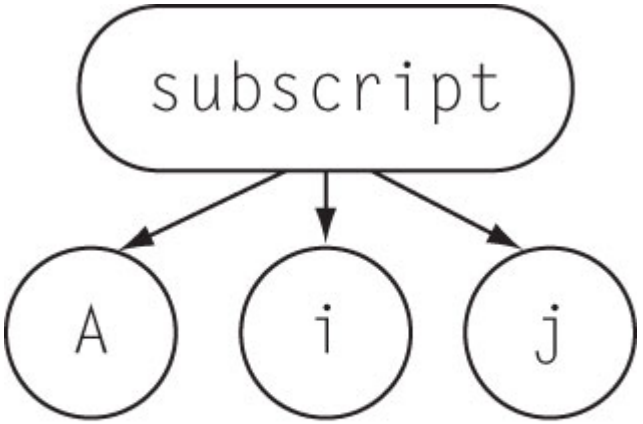
Copyright © 2011, Elsevier Inc. All rights Reserved

Figure 5.12



Copyright © 2011, Elsevier Inc. All rights Reserved

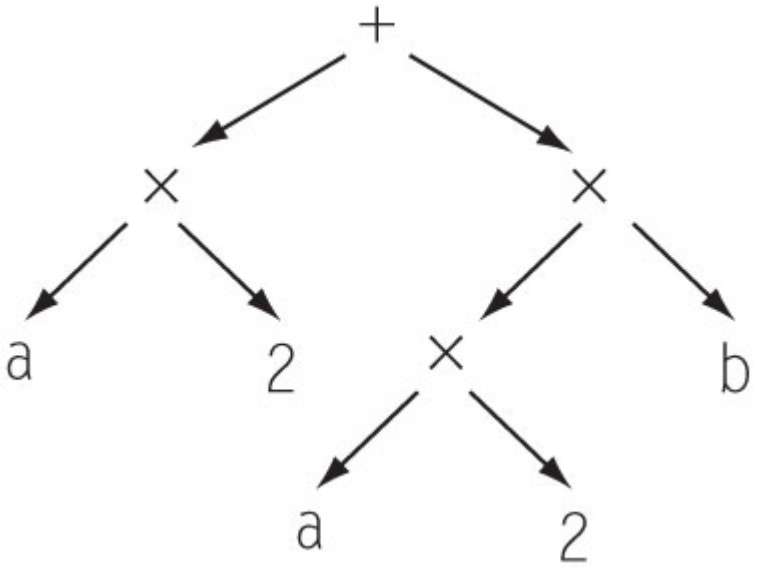
Un - Figure 5.1



Source-Level Tree

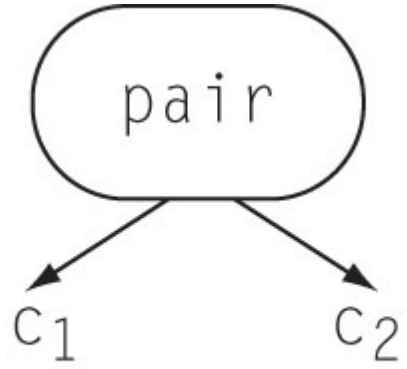
Copyright © 2011, Elsevier Inc. All rights Reserved

Un - Figure 5.2



Copyright © 2011, Elsevier Inc. All rights Reserved

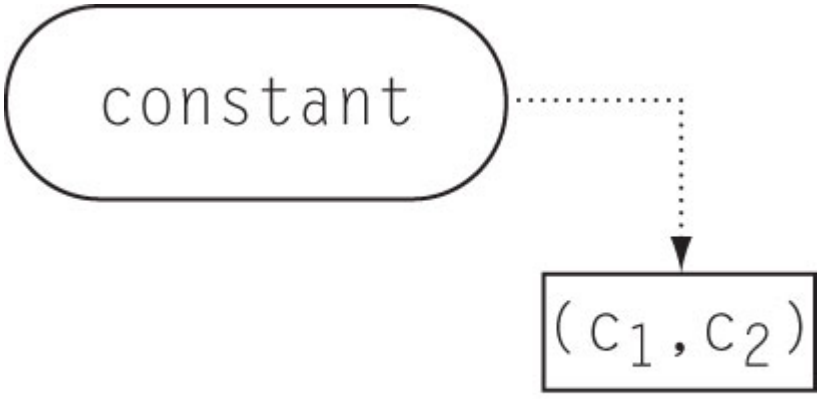
Un - Figure 5.3a



AST Designed for Editing

Copyright © 2011, Elsevier Inc. All rights Reserved

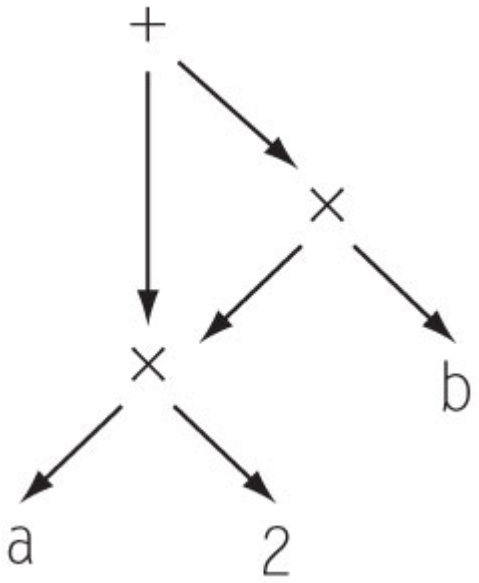
Un - Figure 5.3b



AST for Compiling

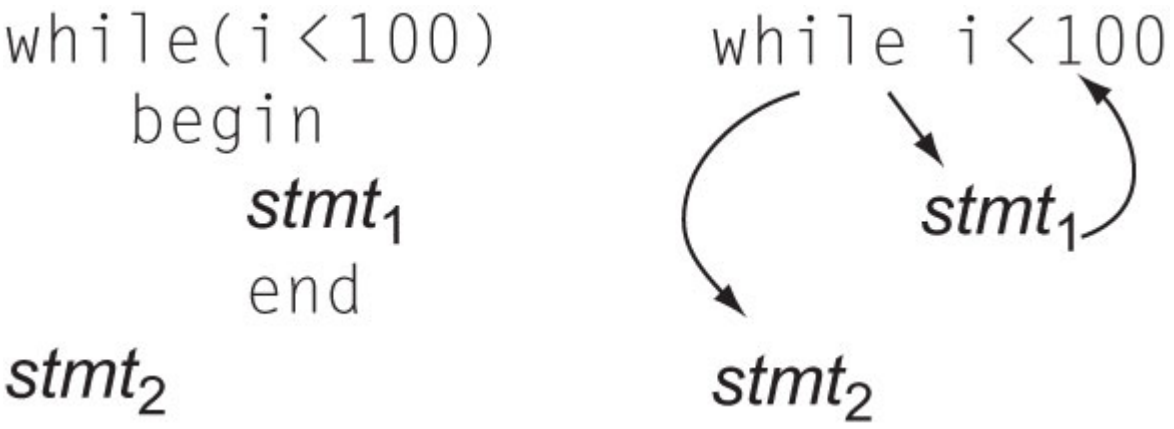
Copyright © 2011, Elsevier Inc. All rights Reserved

Un - Figure 5.4



Copyright © 2011, Elsevier Inc. All rights Reserved

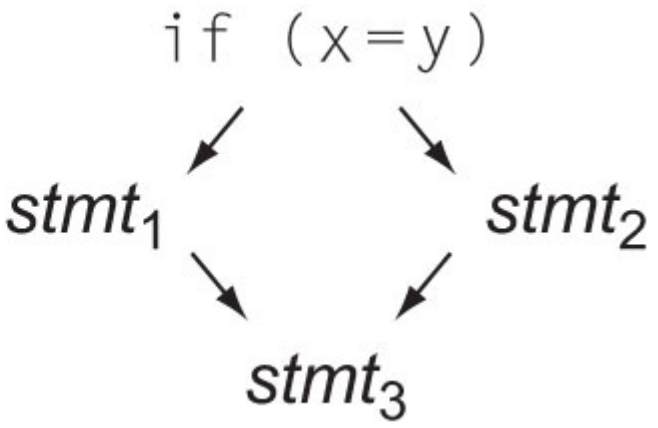
Un - Figure 5.5



Copyright © 2011, Elsevier Inc. All rights Reserved

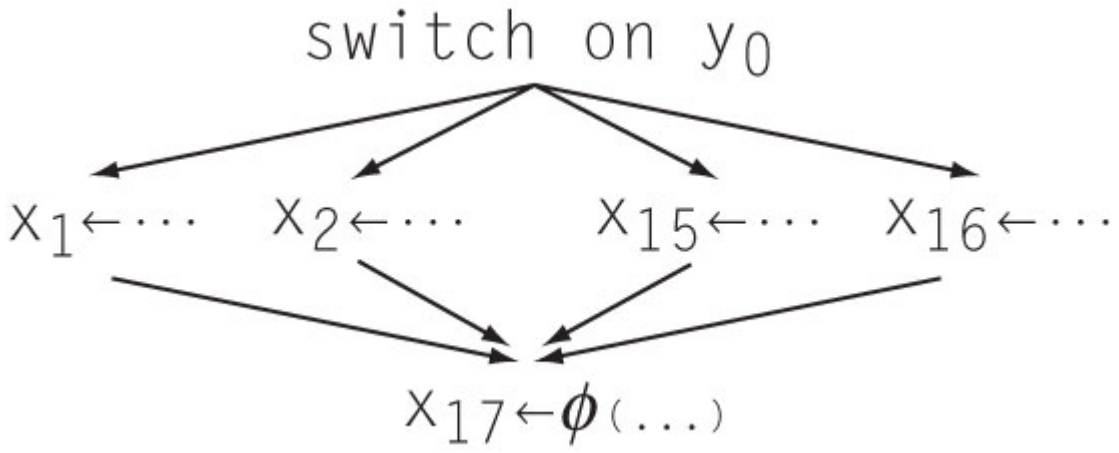
Un - Figure 5.6

```
if (x=y)
    then stmt1
    else stmt2
stmt3
```



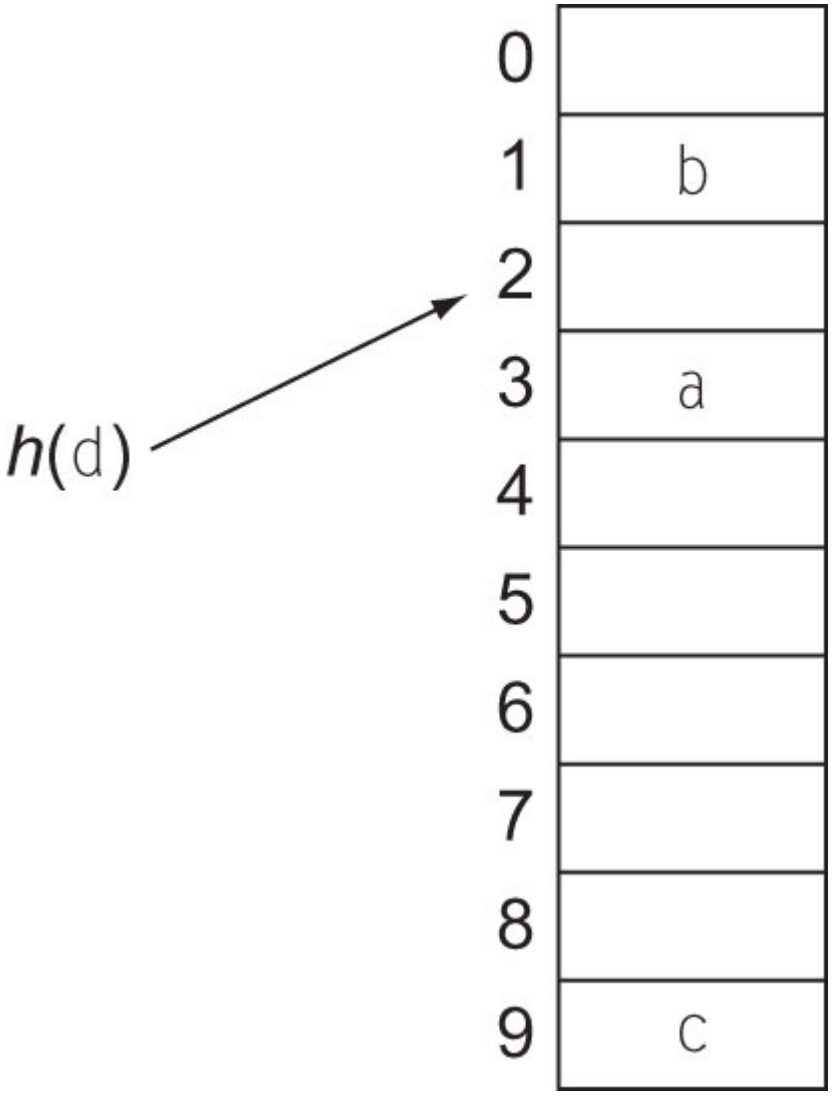
Copyright © 2011, Elsevier Inc. All rights Reserved

Un - Figure 5.7



Copyright © 2011, Elsevier Inc. All rights Reserved

Un - Figure 5.8



Copyright © 2011, Elsevier Inc. All rights Reserved