

Werkcollege Compilerconstructie
Woensdag 28 oktober 2015

1. (Derived from Exercise 6.7.1(a) from the book)

Consider the following boolean expression:

`a==b && (c==d || e==f)`

- (a) Construct the parse tree for the boolean expression.
- (b) Use the translation scheme of Fig. 6.43 to annotate the parse tree. Give the resulting translation of the boolean expression into three-address code.
You may assume that the address of the first instruction generated is 100.

2. (Extension of Exercise 6.7.1(a) from the book)

Consider the following ‘program’:

`{ if (a==b && (c==d || e==f)) x=1; y=x+1; }`

- (a) Construct the parse tree for the program.
- (b) Use the translation scheme of Fig. 6.43 and Fig. 6.46 to annotate the parse tree. Give the resulting translation of the program into three-address code.
You may assume that the address of the first instruction generated is 100.