Programmation Avancée et Compilation 2001
(Exercises)

9 Name Analysis

Keywords 9

Give short explanations of the following keywords:

Scope (Name Analysis 5), *symbol table* (Name Analysis 6ff).

Exercise 17

Consider the following class definition:

```
class A {
   int x;
   int f (int x) {
            int y;
            String z;
            /***/
            x = x + 1;
            int y;
            return x;
   }
}
```

(a) Give a graphical representation of the symbol table (Scope and Symbol objects) at /∗∗∗/.

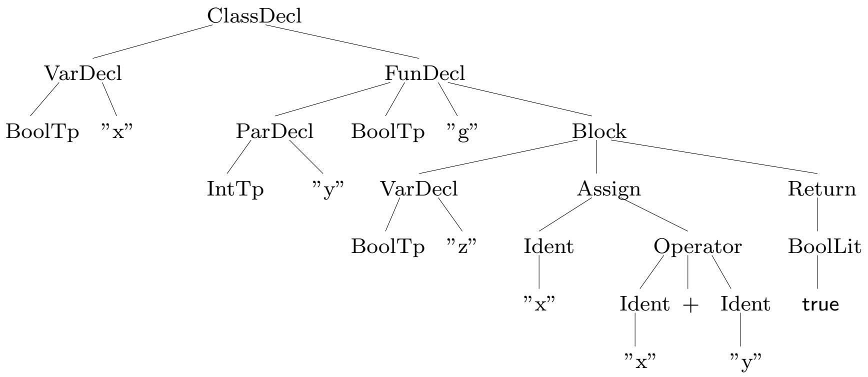
(b) In the line below /∗∗∗/, the identifier x in x = x + 1 is looked up during name analysis. Which x is considered?

(c) Yet another line below, **int** y is declared. What happens at this point of name analysis?

Exercise 18

Consider the following program as well as the abstract syntax-tree generated from it during parsing:

```
class B {
   boolean x;
   boolean g(int y) {
            boolean z;
            /***/
            x = x + y;
            return true;
   }
}
```



(a) Give a graphical representation of the symbol table (Scope and Symbol objects) at /∗∗∗/.

(b) Add attributes to the syntax-tree describing the symbols computed during name-analysis.