

## Apéndice B Documentación Parser

### Gramática en EBNF

1.  $\text{program} \rightarrow \text{declaration-list}$
2.  $\text{declaration-list} \rightarrow \text{declaration} \{ \text{declaration} \}$
3.  $\text{declaration} \rightarrow \text{var-declaration} \mid \text{fun-declaration}$
4.  $\text{var-declaration} \rightarrow \text{type-specifier ID} [ \text{¥} [ \text{NUM ¥} ] ] ;$
5.  $\text{type-specifier} \rightarrow \text{int} \mid \text{void}$
6.  $\text{fun-declaration} \rightarrow \text{type-specifier ID ¥} ( \text{params ¥} ) \text{compound-stmt}$
7.  $\text{params} \rightarrow \text{param-list} \mid \text{void}$
8.  $\text{param-list} \rightarrow \text{param} \{ , \text{param} \}$
9.  $\text{param} \rightarrow \text{type-specifier ID} [ \text{¥} [ \text{¥} ] ]$
10.  $\text{compound-stmt} \rightarrow \text{¥} \{ \text{local-declarations statement-list ¥} \}$
11.  $\text{local-declarations} \rightarrow \{ \text{var\_declaration} \}$
12.  $\text{statement-list} \rightarrow \{ \text{statement} \}$
13.  $\text{statement} \rightarrow \text{expression-stmt}$   
 $\quad \mid \text{compound-stmt}$   
 $\quad \mid \text{selection-stmt}$   
 $\quad \mid \text{iteration-stmt}$   
 $\quad \mid \text{return-stmt}$
14.  $\text{expression-stmt} \rightarrow [ \text{expression} ] ;$
15.  $\text{selection-stmt} \rightarrow \text{if ¥} ( \text{expression ¥} ) \text{compound\_stmt} [ \text{else compound\_stmt} ]$
16.  $\text{iteration-stmt} \rightarrow \text{while ¥} ( \text{expression ¥} ) \text{compound\_stmt}$
17.  $\text{return-stmt} \rightarrow \text{return} [ \text{expression} ] ;$
18.  $\text{expression} \rightarrow \{ \text{var} = \} \text{simple-expression}$
19.  $\text{var} \rightarrow \text{ID} [ \text{¥} [ \text{expression ¥} ] ]$
20.  $\text{simple-expression} \rightarrow \text{additive-expression} [ \text{relop additive-expression} ]$
21.  $\text{relop} \rightarrow < = \mid < \mid > \mid > = \mid == \mid !=$
22.  $\text{additive-expression} \rightarrow \text{term} \{ \text{addop term} \}$
23.  $\text{addop} \rightarrow + \mid -$
24.  $\text{term} \rightarrow \text{factor} \{ \text{mulop factor} \}$
25.  $\text{mulop} \rightarrow * \mid /$
26.  $\text{factor} \rightarrow \text{NUM} \mid ( \text{expression} ) \mid \text{call} \mid \text{var}$
27.  $\text{call} \rightarrow \text{ID} ( \text{args} )$
28.  $\text{args} \rightarrow \text{arg-list} \mid \epsilon$
29.  $\text{arg-list} \rightarrow \text{expression} \{ , \text{expression} \}$