

1.  $\langle \text{prolog} \rangle \rightarrow \text{require } t\_string \langle \text{prog} \rangle$
2.  $\langle \text{prog} \rangle \rightarrow \text{global id : function ( } \langle \text{arg\_T} \rangle \text{ ) } \langle \text{ret\_T} \rangle \langle \text{prog} \rangle$
3.  $\langle \text{prog} \rangle \rightarrow \text{function id ( } \langle \text{arg} \rangle \text{ ) } \langle \text{ret\_T} \rangle \langle \text{stmt} \rangle \text{ end } \langle \text{prog} \rangle$
4.  $\langle \text{prog} \rangle \rightarrow \text{id ( } \langle \text{param} \rangle \text{ ) } \langle \text{prog} \rangle$
5.  $\langle \text{prog} \rangle \rightarrow \text{EOF}$
6.  $\langle \text{arg\_T} \rangle \rightarrow \langle \text{type} \rangle \langle \text{next\_arg\_T} \rangle$
7.  $\langle \text{arg\_T} \rangle \rightarrow \epsilon$
8.  $\langle \text{next\_arg\_T} \rangle \rightarrow , \langle \text{type} \rangle \langle \text{next\_arg\_T} \rangle$
9.  $\langle \text{next\_arg\_T} \rangle \rightarrow \epsilon$
10.  $\langle \text{ret\_T} \rangle \rightarrow : \langle \text{type} \rangle \langle \text{next\_ret\_T} \rangle$
11.  $\langle \text{ret\_T} \rangle \rightarrow \epsilon$
12.  $\langle \text{next\_ret\_T} \rangle \rightarrow , \langle \text{type} \rangle \langle \text{next\_ret\_T} \rangle$
13.  $\langle \text{next\_ret\_T} \rangle \rightarrow \epsilon$
14.  $\langle \text{arg} \rangle \rightarrow \text{id : } \langle \text{type} \rangle \langle \text{next\_arg} \rangle$
15.  $\langle \text{arg} \rangle \rightarrow \epsilon$
16.  $\langle \text{next\_arg} \rangle \rightarrow , \text{id : } \langle \text{type} \rangle \langle \text{next\_arg} \rangle$
17.  $\langle \text{next\_arg} \rangle \rightarrow \epsilon$
18.  $\langle \text{type} \rangle \rightarrow \text{integer}$
19.  $\langle \text{type} \rangle \rightarrow \text{number}$
20.  $\langle \text{type} \rangle \rightarrow \text{string}$
21.  $\langle \text{type} \rangle \rightarrow \text{nil}$
22.  $\langle \text{stmt} \rangle \rightarrow \text{if } \langle \text{expr} \rangle \text{ then } \langle \text{stmt} \rangle \text{ else } \langle \text{stmt} \rangle \text{ end } \langle \text{stmt} \rangle$
23.  $\langle \text{stmt} \rangle \rightarrow \text{while } \langle \text{expr} \rangle \text{ do } \langle \text{stmt} \rangle \text{ end } \langle \text{stmt} \rangle$
24.  $\langle \text{stmt} \rangle \rightarrow \text{local id : } \langle \text{type} \rangle \langle \text{def\_var} \rangle \langle \text{stmt} \rangle$
25.  $\langle \text{stmt} \rangle \rightarrow \text{return } \langle \text{expr} \rangle \langle \text{next\_expr} \rangle \langle \text{stmt} \rangle$
26.  $\langle \text{stmt} \rangle \rightarrow \text{id } \langle \text{fork\_id} \rangle \langle \text{stmt} \rangle$
27.  $\langle \text{stmt} \rangle \rightarrow \epsilon$
28.  $\langle \text{def\_var} \rangle \rightarrow = \langle \text{one\_assign} \rangle$
29.  $\langle \text{def\_var} \rangle \rightarrow \epsilon$
30.  $\langle \text{one\_assign} \rangle \rightarrow \text{id ( } \langle \text{param} \rangle \text{ )}$
31.  $\langle \text{one\_assign} \rangle \rightarrow \langle \text{expr} \rangle$
32.  $\langle \text{param} \rangle \rightarrow \langle \text{param\_val} \rangle \langle \text{next\_param} \rangle$
33.  $\langle \text{param} \rangle \rightarrow \epsilon$
34.  $\langle \text{param\_val} \rangle \rightarrow \text{id}$
35.  $\langle \text{param\_val} \rangle \rightarrow \langle \text{term} \rangle$
36.  $\langle \text{term} \rangle \rightarrow t\_string$

37.  $\langle \text{term} \rangle \rightarrow \text{t\_integer}$
38.  $\langle \text{term} \rangle \rightarrow \text{t\_number}$
39.  $\langle \text{term} \rangle \rightarrow \text{nil}$
40.  $\langle \text{next\_param} \rangle \rightarrow , \langle \text{param\_val} \rangle \langle \text{next\_param} \rangle$
41.  $\langle \text{next\_param} \rangle \rightarrow \varepsilon$
42.  $\langle \text{next\_expr} \rangle \rightarrow , \langle \text{expr} \rangle \langle \text{next\_expr} \rangle$
43.  $\langle \text{next\_expr} \rangle \rightarrow \varepsilon$
44.  $\langle \text{fork\_id} \rangle \rightarrow ( \langle \text{param} \rangle )$
45.  $\langle \text{fork\_id} \rangle \rightarrow \langle \text{next\_id} \rangle$
46.  $\langle \text{next\_id} \rangle \rightarrow , \text{id} \langle \text{next\_id} \rangle$
47.  $\langle \text{next\_id} \rangle \rightarrow = \langle \text{mult\_assign} \rangle$
48.  $\langle \text{mult\_assign} \rangle \rightarrow \text{id} ( \langle \text{param} \rangle )$
49.  $\langle \text{mult\_assign} \rangle \rightarrow \langle \text{expr} \rangle \langle \text{next\_expr} \rangle$

[illegible]

1.  $E \rightarrow i$   
 2.  $E \rightarrow ( E )$   
 3.  $E \rightarrow \# E$   
 4.  $E \rightarrow E + E$   
 5.  $E \rightarrow E - E$

6.  $E \rightarrow E * E$   
 7.  $E \rightarrow E / E$   
 8.  $E \rightarrow E // E$   
 9.  $E \rightarrow E .. E$   
 10.  $E \rightarrow E > E$

11.  $E \rightarrow E < E$   
 12.  $E \rightarrow E >= E$   
 13.  $E \rightarrow E <= E$   
 14.  $E \rightarrow E == E$   
 15.  $E \rightarrow E \sim E$

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LEGENDA:

< - insert to stack with shift

> - reduction

= - insert to stack

e - error

s - special case (end of expression)