

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)