GRAMMAR

1. PROGRAM -> OTHERFUNC MAINFUNC
2. MAINFUNC -> TK_GAP_KEYWORD TK_FLOWERL_DELIMITER STMTS TK_FLOWERR_DELIMITER
3. OTHERFUNC -> FUNCTION OTHERFUNC
4. OTHERFUNC -> ''
5. FUNCTION -> TK_FUNCTION_IDENTIFIER TK_FLOWERL_DELIMITER INPUT_PAR OUTPUT_PAR TK_SEM_DELIMITER STMTS TK_FLOWERR_DELIMITER
6. INPUT_PAR -> TK_INPUT_KEYWORD TK_PARAMETER_KEYWORD TK_SQL_DELIMITER PARAMETER_LIST TK_SQR_DELIMITER
7. OUTPUT_PAR -> TK_OUTPUT_KEYWORD TK_PARAMETER_KEYWORD TK_SQL_DELIMITER PARAMETER_LIST TK_SQR_DELIMITER
8. OUTPUT_PAR -> ''
9. PARAMETER_LIST -> DATA_TYPE TK_IDENTIFIER REMAINING_LIST
10. DATA_TYPE -> TK_INT_KEYWORD
11. DATA_TYPE -> TK_REAL_KEYWORD
12. DATA_TYPE -> TK_STRING_KEYWORD
13. REMAINING_LIST -> TK_COMMA_DELIMITER PARAMETER_LIST
14. REMAINING_LIST -> ''
15. STMTS -> STMT STMTS
16. STMTS -> ''
17. STMT -> DECLSTMT
18. STMT -> LOOPSTMT
19. STMT -> ASSIGNSTMT
20. STMT -> FUNCALSTMT
21. STMT -> IOSTMT
22. STMT -> CONDSTMT
23. STMT -> RETSTMT
24. DECLSTMT -> TK_INT_KEYWORD TK_IDENTIFIER TK_SEM_DELIMITER
25. DECLSTMT -> TK_REAL_KEYWORD TK_IDENTIFIER TK_SEM_DELIMITER
26. DECLSTMT -> TK_STRING_KEYWORD TK_IDENTIFIER TK_SEM_DELIMITER
27. ASSIGNSTMT -> TK_IDENTIFIER TK_ASSIGN_OPERATOR ARITHEXP TK_SEM_DELIMITER
28. ARITHEXP -> TERM EXPPRIME
29. EXPPRIME -> LOWPOP TERM EXPPRIME
30. EXPPRIME -> ''
31. TERM -> FACTOR TERMPRIME
32. TERMPRIME -> HIGHPOP FACTOR TERMPRIME
33. TERMPRIME -> ''
34. FACTOR -> TK_OP_DELIMITER ARITHEXP TK_CL_DELIMITER
35. FACTOR -> VAR
36. HIGHPOP -> TK_MUL_OPERATOR
37. HIGHPOP -> TK_DIV_OPERATOR
38. LOWPOP -> TK_PLUS_OPERATOR
39. LOWPOP -> TK_MINUS_OPERATOR
40. VAR -> TK_IDENTIFIER
41. VAR -> TK_INTEGER_LITERAL
42. VAR -> TK_FLOATING_POINT_LITERAL

43. VAR -> TK_STRING_LITERAL
44. LOOPSTMT -> TK_LOOP_KEYWORD TK_OP_DELIMITER BOOLEXP
    TK_CL_DELIMITER TK_FLOWERL_DELIMITER STMTS TK_FLOWERR_DELIMITER
45. BOOLEXP -> TK_OP_DELIMITER BOOLEXP TK_CL_DELIMITER LOGOP
    TK_OP_DELIMITER BOOLEXP TK_CL_DELIMITER
46. BOOLEXP -> TK_IDENTIFIER RELOP VAR
47. BOOLEXP -> TK_INTEGER_LITERAL RELOP VAR
48. BOOLEXP -> TK_FLOATING_POINT_LITERAL RELOP VAR
49. BOOLEXP -> TK_STRING_LITERAL RELOP VAR
50. RELOP -> TK_LT_OPERATOR
51. RELOP -> TK_LE_OPERATOR
52. RELOP -> TK_EQ_OPERATOR
53. RELOP -> TK_GE_OPERATOR
54. RELOP -> TK_GT_OPERATOR
55. LOGOP -> TK_LOGICAL_AND_KEYWORD
56. LOGOP -> TK_LOGICAL_OR_KEYWORD
57. CONDSTMT -> TK_IF_KEYWORD BOOLEXP TK_FLOWERL_DELIMITER
    STMTS TK_FLOWERR_DELIMITER CONDSTMTPRIME
58. CONDSTMTPRIME -> TK_ELSE_KEYWORD TK_FLOWERL_DELIMITER
    STMTS TK_FLOWERR_DELIMITER
59. CONDSTMTPRIME -> ''
60. IOSTMT -> TK_READ_KEYWORDTK_OP_DELIMITER TK_IDENTIFIER
    TK_CL_DELIMITER TK_SEM_DELIMITER
61. IOSTMT ->
    TK_WRITE_KEYWORD_KEYWORD_KEYWORD_KEYWORD_KEYW
    ORD_KEYWORD TK_OP_DELIMITER VAR TK_CL_DELIMITER
    TK_SEM_DELIMITER
62. FUNCALSTMT -> OUTPUT_PARAM TK_FUNCTION_IDENTIFIER INPUT_PARAM
    TK_SEM_DELIMITER
63. OUTPUT_PARAM -> TK_SQL_DELIMITER IDLIST TK_SQR_DELIMITER
    TK_ASSIGN_OPERATOR
64. INPUT_PARAM -> TK_SQL_DELIMITER IDLIST TK_SQR_DELIMITER
65. IDLIST -> TK_IDENTIFIER MOREID
66. MOREID -> TK_COMMA_DELIMITER IDLIST
67. MOREID -> ''
68. RETSTMT -> TK_RETURN_KEYWORDOPRESTMT TK_SEM_DELIMITER
69. OPRESTMT -> TK_SQL_DELIMITER IDLIST TK_SQR_DELIMITER
70. OPRESTMT -> ''