SEMANTIC ANALYZER INFERENCE RULES AND SCOPE ORDER FOR SYMB TABLE LIST STRUCTURES

S' -> program
program -> declaration_list
declaration_list -> declaration_list declaration
declaration_list -> declaration
declaration -> var_declaration
declaration -> fun_declaration
var_declaration -> type_specifier ID
SEMICOLON
var_declaration -> type_specifier ID LBRACK
NUM RBRACK SEMICOLON type_specifier ->
INT
type_specifier -> VOID
fun_declaration -> type_specifier ID LPAREN
params RPAREN compound_stmt params ->
param_list
params -> VOID
param_list -> param_list COMA param
param_list -> param
param -> type_specifier ID
param -> type_specifier LBRACK RBRACK
compound_stmt -> LCURLY local_declarations
statement_list RCURLY local_declarations ->
local_declarations var_declaration
local_declarations -> <empty>
statement_list -> statement_list statement
statement_list -> <empty>
statement -> expression_stmt
statement -> compound_stmt
statement -> selection_stmt
statement -> iteration_stmt
statement -> return_stmt

expression_stmt -> expression SEMICOLON
expression_stmt -> SEMICOLON
selection_stmt -> IF LPAREN expression RPAREN
statement
selection_stmt -> IF LPAREN expression RPAREN
statement ELSE statement iteration_stmt ->
WHILE LPAREN expression RPAREN statement
return_stmt -> RETURN SEMICOLON
return_stmt -> RETURN expression SEMICOLON
expression -> var EQUALS expression
expression -> simple_expression
var -> ID
var -> ID LBRACK expression RBRACK
simple_expression -> additive_expression relop
additive_expression simple_expression ->
additive_expression
relop -> LTHANEQ
relop -> LTHAN
relop -> GTHAN
relop -> GTHANEQ
relop -> EQUALTO
relop -> NOTEQUALTO
additive_expression -> additive_expression addop
term
additive_expression -> term
addop -> PLUS
addop -> MINUS
term -> term mulop factor
term -> factor
mulop -> TIMES
mulop -> DIVIDE
factor -> LPAREN expression RPAREN
factor -> ID
factor -> NUM

Voids	2

Declars	1

Expressions	0
Vars	
Stmt List	
Compound_ Stmt	
Stmts…	
Local_Declarations	
Arg List	

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