UPPERCASE = TERMINAL Alejandro Sherman
lowercase = nonterminal

prog_start -> functions

functions -> function functions | epsilon

function -> FUNCTION ident SEMICOLON BEGIN_PARAMS declarations END_PARAMS BEGIN_LOCALS declarations END_LOCALS BEGIN_BODY statements END_BODY

declarations -> declaration SEMICOLON declarations | epsilon

declaration -> identifiers COLON INTEGER | identifiers COLON ARRAY L_SQUARE_BRACKET NUMBER R_SQUARE_BRACKET OF INTEGER

identifiers -> ident | ident COMMA identifiers

ident -> IDENT

statements -> statement SEMICOLON | statement SEMICOLON statements

statement -> go_var | go_if | go_while | go_do | go_read | go_write | go_break | go_return

go_var -> var ASSIGN expression

go_if -> IF bool_exp THEN statements ENDIF | IF bool_exp THEN statements ELSE statements ENDIF

go_while -> WHILE bool_expr BEGINLOOP statements ENDLOOP

go_do -> DO BEGINLOOP statements ENDLOOP WHILE bool_exp

vars -> var | var COMMA vars

go_read -> READ vars

go_write -> WRITE vars

go_break -> BREAK

go_return -> RETURN expression

bool_exp -> relation_and_exp | bool_exp OR relation_and_exp

relation_and_exp -> relation_exp | relation_exp AND relation_exp

relation_exps -> relation_exp | NOT relation_exp

relation_exp -> expression comp expression | TRUE | FALSE | L_PAREN bool_exp R_PAREN

comp -> EQ | NEQ | LT | GT | LTE | GTE

expression -> multiplicative_expression ADD multiplicative_expression | multiplicative_expression SUB multiplicative_expression | multiplicative_expression

multiplicative_expression -> term MULT term | term DIV term | term MOD term | term

term -> var | SUB var | NUMBER | SUB NUMBER | L_PAREN expression R_PAREN | SUB L_PAREN expression R_PAREN | ident L_PAREN expressions R_PAREN

expressions -> expression | expression COMMA expressions | epsilon

var -> ident | ident L_SQUARE_BRACKET expression R_SQUARE_BRACKET