Start symbol: program

Non-terminals: program, decllist, cmpdstmt, stmtlist, declaration, declaration, type, cmpdstmt, stmt, simplstmt, assignstmt, expression, term, factor, iostmt, structstmt, ifstmt, whilestmt, condition, relation

Terminals: int, boolean, char, [, ], {, }, (, ), ;, +, \*, <-, - if, while, /, else, <, <=, ==, !=, >=, >

Production rules:

program -> decllist ";" cmpdstmt

declaration -> type identifier

decllist -> declaration | declaration ";" decllist

type -> "char" | "char[" noconst "]" | "int" | "int[" noconst "]" | "boolean" | "boolean [" noconst "]"

cmpdstmt -> "{" stmtlist "}"

stmtlist -> stmt | stmt ";" stmtlist

stmt -> simplstmt | structstmt

simplstmt -> assignstmt | iostmt

assignstmt -> identifier "<-" expression

expression -> term | term “+” expression | term “-“ expression

term -> factor | factor “\*” term | factor “/” term

factor -> number | identifier | “(“expression”)”

iostmt -> "read (" identifier ")" | "write (" expression ")"

structstmt -> cmpdstmt | ifstmt | whilestmt

ifstmt -> "if" "(" condition ")" stmt "else" stmt | "if" "(" condition ")" stmt

whilestmt -> "while" "(" condition ")" stmtlist

condition -> expression relation expression | expression

relation -> "<" | "<=" | "==" | "!=" | ">=" | ">"

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