program = {statement}

statement = (declaration|assign\_statement|if\_statement|while\_statement|return\_statement|for\_statement|io\_statement)

statement\_list = statement | statement ";" statement\_list

expression = expression “+” term | expression - term | term

term = term “\*” factor | term “/” factor | factor

factor = "(" expression ")" | identifier | const

io\_statement = "input" "(" identifier ")" | "print" "(" identifier ")" ";"| "print" "(" const ")" ";"

simple\_type = "int" | "string" | "char" | "boolean"

array\_declaration = "array" " "simple\_type" " identifier "[" "]"

declaration=simple\_type " " identifier | array\_declaration ";"

--- (simple\_type " " identifier | array\_declaration) ";" ---

assign\_statement = identifier "=" expression ";"

while\_statement = "while" "(" condition ")" "{" {statement\_list} "}"

if\_statement = "if" "(" condition ")" "{" {statement\_list} "}" ["else" "{" {statement\_list} "}"]

return\_statement = "return" expression ";"

for\_statement = "for" for-header "{" {statement\_list} "}" ";"

for\_header = "(" "int" assign\_statement ";" condition ";" assign\_statement ")"

condition = expression relation expression

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