

Gramática Simplificada da Linguagem GF

PROGRAM -> FUNCTIONS MAINFUNC

FUNCTIONS -> 'funDecl' 'id' PARAMS RETURNTYPE BLOCK
FUNCTIONS

FUNCTIONS -> ϵ

MAINFUNC -> 'main' 'paramBeg' 'paramEnd' TYPE BLOCK

PARAMS -> 'paramBeg' LISTPARAMS 'paramEnd'

LISTPARAMS -> TYPE NAME

LISTPARAMS -> LISTPARAMS 'commaSep' TYPE NAME

LISTPARAMS -> ϵ

TYPE -> 'typeInt'

TYPE -> 'typeFloat'

TYPE -> 'typeBool'

TYPE -> 'typeChar'

TYPE -> 'typeString'

TYPE -> 'typeEmpty'

TYPE -> 'typeNull'

RETURNTYPE -> TYPE

RETURNTYPE -> TYPE 'arrayBeg' 'arrayEnd'

NAME -> 'id'

NAME -> 'id' 'arrayBeg' EXPR 'arrayEnd'

NAME -> 'id' 'arrayBeg' 'arrayEnd'

BLOCK -> 'blockBeg' CMDS 'blockEnd'

CMDS -> CMDS CMD

CMDS -> CMD

CMD -> DECL 'endLine'

CMD -> 'id' ASSG 'endLine'
CMD -> 'id' 'arrayBeg' EXPR 'arrayEnd' ASSG 'endLine'
CMD -> 'id' FUNCCALL 'endLine'
CMD -> PRINT 'endLine'
CMD -> READ 'endLine'
CMD -> IFELSE
CMD -> WHILE
CMD -> REPEAT
CMD -> RETURN 'endLine'

DECL -> 'varDecl' TYPE NAME

ASSG -> 'opAssign' VALUE

VALUE -> ARRAY

VALUE -> EXPR

ARRAY -> 'arrayValBeg' ELEMENTS 'arrayValEnd'

ELEMENTS -> EXPR

ELEMENTS -> ELEMENTS 'commaSep' ELEMENTS

CONSTANT -> 'constNumInt'

CONSTANT -> 'constNumFloat'

CONSTANT -> 'constBool'

CONSTANT -> 'constChar'

CONSTANT -> 'constString'

FUNCCALL -> 'paramBeg' LISTPARAMSCALL 'paramEnd'

LISTPARAMSCALL -> PARAMITEM

LISTPARAMSCALL -> LISTPARAMSCALL 'commaSep'

LISTPARAMSCALL

PARAMITEM -> CONSTANT

PARAMITEM -> NAME

PARAMITEM -> NAME FUNCCALL

PRINT -> 'cmdPrint' 'paramBeg' MESSAGE 'paramEnd'

READ -> 'cmdRead' 'paramBeg' NAME 'paramEnd'

MESSAGE -> 'constString'

MESSAGE -> NAME

MESSAGE -> MESSAGE 'opConcat' MESSAGE

IFELSE -> IF ELIF ELSE

IF -> 'cmdIf' 'paramBeg' EXPR 'paramEnd' BLOCK

ELIF -> 'cmdElif' 'paramBeg' EXPR 'paramEnd' BLOCK ELIF

ELIF -> ϵ

ELSE -> 'cmdElse' BLOCK

ELSE -> ϵ

WHILE -> 'cmdWhile' 'paramBeg' EXPR 'paramEnd' BLOCK

REPEAT -> 'cmdRepeat' REPEATPARAM 'cmdIn' 'paramBeg'

REPEATPARAM 'commaSep' REPEATPARAM 'commaSep' REPEATPARAM
'paramEnd' BLOCK

REPEATPARAM -> 'id'

REPEATPARAM -> 'constNumInt'

RETURN -> 'cmdReturn' CONSTANT

RETURN -> 'cmdReturn' NAME

EXPR -> EXPR 'arrayBeg' EXPR 'arrayEnd'

EXPR -> EXPR 'arrayBeg' EXPR 'arrayEnd' 'opRel' EXPRADD

EXPR -> EXPROR

EXPROR -> EXPROR 'opOr' EXPRAND

EXPROR -> EXPRAND

EXPRAND -> EXPRAND 'opAnd' EXPREQUALS

EXPRAND -> EXPREQUALS

EXPREQUALS -> EXPRREL 'opEquals' EXPRREL
EXPREQUALS -> EXPRREL

EXPRREL -> EXPRADD 'opRel' EXPRADD
EXPRREL -> EXPRADD

EXPRADD -> EXPRADD 'opAditiv' EXPRAMULT
EXPRADD -> EXPRAMULT

EXPRAMULT -> EXPRAMULT 'opMult' EXPRUN
EXPRAMULT -> EXPRUN

EXPRUN -> 'opUnaryNeg' EXPRUN
EXPRUN -> EXPRPARAM

EXPRPARAM -> 'paramBeg' EXPR 'paramEnd'
EXPRPARAM -> EXPRVALUES

EXPRVALUES -> 'id'
EXPRVALUES -> 'constNumInt'
EXPRVALUES -> 'constNumFloat'
EXPRVALUES -> 'constBool'
EXPRVALUES -> 'constChar'
EXPRVALUES -> 'constString'