

UNIVERSIDADE FEDERAL DE ALAGOAS

Trabalho de compiladores: Toco

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1 Gramática

Listing 1: Exemplo estrutural de um programa Toco

```
Program = LDecl

LDecl = Ldecl Decl
LDecl = Decl

Decl = DeclVar
Decl = DeclFun

DeclVar = 'var' Type 'id' Atr ';'
DeclVar = 'var' Type 'id' '[' ExpArit ']' Atr ';'

Atr = '=' ExpConcat
Atr = epsilon

DeclFun = 'fun' TypeF 'id' '(' LParam ')' '{' LSent '}'

TypeF = 'void'
TypeF = Type

Type = 'boolean'
Type = 'float'
Type = 'int'
Type = 'char'
Type = 'string'

LParam = LParam ',' Param
LParam = Param

Param = Type 'id' '[' ']'
Param = Type 'id'
Param = epsilon

LSent = LSent Sent
Sent = DeclVar
Sent = Command
```

```

Command = 'continue' ';'
Command = 'break' ';'
Command = 'id' '[' ExpArit ']' Atr ';'
Command = 'id' '(' LArg ')' ';'
Command = 'id' Atr ';'
Command = Print ';'
Command = Read ';'
Command = For
Command = While
Command = If
Command = Return

LArg = LArg ',' Arg
Arg = ExpConcat
Arg = epsilon

Print = 'print' '(' ExpConcat ')'

Read = 'read' '(' LParamR ')'

LParamR = LParamR ',' ParamR
LParamR = ParamR

ParamR = 'id'

For = 'for' 'id' 'in' ExpArit 'to' ExpArit Step '{LSent}'

Step = 'step' ExpArit
Step = epsilon

While = 'while' '(' ExpBool ')' '{LSent}'

If = 'if' '(' ExpBool ')' '{LSent}' Else

Else = 'else' '{LSent}'
Else = epsilon

Return = 'return' ExpConcat ';'
Return = epsilon

```

```

ExpConcat = ExpConcat '++' ExpBool
ExpConcat = ExpBool

ExpBool = ExpBool 'opr_log' TermBool
ExpBool = TermBool

TermBool = '!' TermBool
TermBool = TermBool 'opr_rel' ExpArit
TermBool = ExpArit

ExpArit = ExpArit 'opa_adi' TermArit
ExpArit = TermArit

TermArit = TermArit 'opa_mult' ExpLim
TermArit = ExpLim

ExpLim = ExpLim 'opa_lim' FatArit
ExpLim = FatArit

FatArit = 'id' '(' LParam ')'
FatArit = 'id' '[' ExpArit ']'
FatArit = 'opa_neg' FatArit
FatArit = '(' ExpBool ')'
FatArit = 'id'
FatArit = 'cte_int'
FatArit = 'cte_float'
FatArit = 'cte_char'
FatArit = 'cte_cad_ch'
FatArit = 'cte_bool'

```
