```
Gramática LL(1) SPL

S = 'func' LDeclFunc 'end' 'int' 'main' '(' LDeclArgs ')' '{' FuncBody '}'

LDeclFunc = DeclFunc LDeclFunc
LDeclFunc = &

DeclFunc = Decl '(' LDeclArgs ')' '{' FuncBody '}'

LDeclArgs = Decl LDeclArgsT
LDeclArgs = &
LDeclArgsT = ',' Decl LDeclArgsT
LDeclArgsT = &

FuncBody = 'decl' LDecl 'end' LInstruc

LDecl = Decl ';' LDecl
LDecl = &

Decl = Type tkId
Decl = 'array' Type '[' ArrDeclNum ']' tkId

ArrDeclNum = 'int'
ArrDeclNum = &

LInstruc = Instruc LInstruc
LInstruc = &

Instruc = tkId Arr AtrbFun ';'
Instruc = 'while' '(' Es ')' '{' LInstruc '}'
Instruc = 'for' '(' tkId ':' Es ',' Es ')' '{' LInstruc '}'
Instruc = 'return' Value ';'
Instruc = 'if' '(' Es ')' '{' LInstruc '}' CondElse

Arr = '[' Es ']'

AtrbFun = '=' Es
AtrbFun = '(' LArgs ')'

CondElse = 'else' '{' LInstruc }
CondElse = &

Es = Eb Esr
Esr = '#' Eb Esr
Esr = &

Eb = Tb Ebr
Ebr = '|' Tb Ebr
Ebr = &

Tb = Fb Tbr
Tbr = '&' Fb Tbr
Tbr = &

Fb = '!' Fb
Fb = Ei

Ei = Ec Eir
Eir = Opi Ec
Eir = &

Ec = Ea Ecr
Ecr = Opc Ea
Ecr = &
```

```
Ea = Er Ear
Ear = Opa Er Ear
Ear = &

Er = Ta Err
Err = '%' Ta Err
Err = &

Ta = Fa Tar
Tar = Opm Fa Tar
Tar = &

Fa = '~' Fa
Fa = '(' Es ')'
Fa = Value

LArgs = Es LArgsT
LArgs = &
LArgsT = ',' Es LArgsT
LArgsT = &

Value = tkId Valuer
Value = cInt
Value = cFloat
Value = cChar
Value = cString
Value = cBool

Valuer = '[' Es ']'
Valuer = '(' LArgs ')'

Type = 'int'
Type = 'float'
Type = 'string'
Type = 'char'
Type = 'bool'
```