Gramática LM - LL1 EBNF

MODULE = (1) FUNCTIONS MAIN

FUNCTIONS = (2) 'ID' PARAMS RETURNTYPE ESCOPE FUNCTIONS
        | (3) ε

MAIN = (4) 'MAIN' 'OP' 'CP' 'VOID' ESCOPE

PARAMS = (5) 'OP' PARAMSEXT

PARAMSEXT = (6) 'CP'
        | (7) LISTPARAMS 'CP'

LISTPARAMS = (8) TYPE NAME LISTPARAMSEXT

LISTPARAMSEXT = (9) 'SPTR' LISTPARAMS
        | (10) ε

TYPE = (11) 'INT'
        | (12) 'BOOL'
        | (13) 'CHAR'
        | (14) 'STRING'
        | (15) 'FLOAT'

RETURNTYPE = (16) 'VOID'
        | (17) TYPE RETURNTYPEEXT

RETURNTYPEEXT = (18) 'OB' 'CB'
        | (19) ε

NAME = (20) 'ID' NAMEEXT

NAMEEXT = (21) 'OB' EA 'CB'
        | (22) ε

ESCOPE = (23) 'OK' COMMANDS 'CK' 'SCO'

COMMANDS = (24) CMD 'SCO' COMMANDS
        | (25) ε

CMD = (26) DECLARATION
        | (27) 'ID' CMDEXT
        | (28) PRINT

```
        | (29) READ
        | (30) IFELSE
        | (31) WHEN
        | (32) REPEATER
        | (33) RETURN


DECLARATION = (34) TYPE NAME

CMDEXT = (35) ATTRIBUTION
           | (36) FUNCTIONCALL

ATTRIBUTION = (37) NAMEEXT 'ATR' VALUE

VALUE = (38) ARRAY
        | (39) EA

ARRAY = (40) 'OB' ARRAYEXT

ARRAYEXT  = (41) ELEMENTS 'CB'
             | (42) 'CB'
ELEMENTS = (43) CONSTANT ELEMENTSEXT

ELEMENTSEXT  = (44) 'SPTR' ELEMENTS
                 | (45) ε

FUNCTIONCALL = (46) 'OP' FUNCTIONCALLEXT

FUNCTIONCALLEXT = (47) LISTPARAMSCALL 'CP'
                    | (48) 'CP'

LISTPARAMSCALL = (49) PARAMITEM LISTPARAMSCALLEXT

LISTPARAMSCALLEXT = (50) 'SPTR' LISTPARAMSCALL
                       | (51) ε

PARAMITEM  = (52) CONSTANT
               | (53) NAME

PRINT = (54) 'PRINT' 'OP' MESSAGE PRINTEXT  'CP'

PRINTEXT = (55) 'SPTR' NAME PRINTEXT
           | (56) ε

MESSAGE = (57) 'CTESTRING' MESSAGEEXT
           | (58) NAME MESSAGEEXT
```

MESSAGEEXT = (59) 'CONCAT' MESSAGE
             | (60) ε

READ = (61) 'READ' 'OP' READEXT 'CP'

READEXT = (62) NAME READEXTR

READEXTR = (63) 'SPTR' READEXT
           | (64) ε

IFELSE = (65) IF ELIF ELSE

IF = (66) 'IF' 'OP' EB 'CP' 'OK' COMMANDS 'CK'

ELIF = (67) 'ELIF' 'OP' EB 'CP' 'OK' COMMANDS 'CK' ELIF
       | (68) ε

ELSE = (69) 'ELSE' 'OK' COMMANDS 'CK'
       | (70) ε

WHEN = (71) 'WHEN' 'OP' EB 'CP' 'OK' COMMANDS 'CK'

REPEATER = (72) 'REPEATER' 'OP' 'ID' ATTRIBUTION 'SCO' PARAMITEM 'SCO'
PARAMITEM 'CP' 'OK' COMMANDS 'CK'

RETURN = (73) 'RETURN' RETURNEXT

RETURNEXT = (74) CONSTANT
            | (75) NAME

EB = (76) TB EBR

EBR = (77) 'OR' TB EBR
      | (78) ε

TB = (79) FB TBR

TBR = (80) 'AND' FB TBR
      | (81) ε

FB = (82) 'NOT' FB
     | (83) EA EREL

EREL = (84) 'ORC' EA
       | (85) 'ORE' EA

EA = (86) TA EAR

EAR = (87) 'OPA' TA EA
     | (88) ε

TA = (89) PA TAR

TAR = (90) 'OPM' PA TAR
      | (91) ε

PA = (92) FA PAFAT

PAFAT = (93) 'OPE' PA
        | (94) ε

FA = (95) 'OPU' FA
     | (96) 'OP' EB 'CP'
     | (97) CONSTANT
     | (98) ID

ID = (99) 'ID' IDFAT

IDFAT = (100) 'OB' EA 'CB'
        | (101) FUNCTIONCALL
        | (102) ε

CONSTANT = (103) 'CTEINT'
           | (104) 'CTEFLOAT'
           | (105) 'CTEBOOL'
           | (106) 'CTECHAR'
           | (107) 'CTESTRING'