

## Gramática Linguagem Module (LL1) EBNF

MODULE = (1) FUNCTIONS MAIN

FUNCTIONS = (2) 'tID' PARAMS RETURNSTYPE ESCOPE FUNCTIONS | (3)  $\epsilon$

MAIN = (4) 'tMAIN' 'tOP' 'tCP' tEMPTY ESCOPE

PARAMS = (5) 'tOP' PARAMSEXT

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

LISTPARAMS = (8) TYPE NAME LISTPARAMSEXT

LISTPARAMSEXT = (9) 'tSPTR' LISTPARAMS | (10)  $\epsilon$

TYPE = (11) 'tINT' | (13) 'tBOOL' | (14) 'tCHAR' | (15) 'tSTRING' | (16) 'tFLOAT'

RETURNSTYPE = (17) 'tEMPTY' | (18) TYPE RETURNSTYPEEXT

RETURNSTYPEEXT = (19) 'tOB' 'tCB' | (20)  $\epsilon$

NAME = (21) 'tID' NAMEEXT

NAMEEXT = (22) 'tOB' 'EXPRESSION' 'tCB' | (23)  $\epsilon$

ESCOPE = (24) 'tOK' COMMANDS 'tCK' 'tSCO'

COMMANDS = (25) CMD 'tSCO' COMMANDS | (26)  $\epsilon$

CMD = (27) DECLARATION | (28) 'tID' CMDEXT | (29) SHOW | (30) READ |  
(31) IFELSE | (32) WHEN | (34) REPEATER | (35) RETURN

DECLARATION = (36) TYPE NAME

CMDEXT = (37) ATTRIBUTION | (38) FUNCCALL

ATTRIBUTION = (39) NAMEEXT 'tATR' VALUE

VALUE = (40) ARRAY | EXPRESSION

ARRAY = (41) 'tOB' ARRAYEXT

ARRAYEXT = (42) ELEMENTS 'tCB' | (43) 'tCB'

ELEMENTS = (44) CONSTANT ELEMENTSEXT

ELEMENTSEXT = (45) 'tSPTR' ELEMENTS | (46)  $\epsilon$

CONSTANT = (47) 'tCTEINT' | (48) 'tCTEFLOAT' | (49) 'tCTEBOOL' | (50) 'tCTECHAR' | (51) 'tCTESTRING'

EXPRESSION (Ver Gramática de Expressões)

FUNCTIONCALL = (52) 'tOP' LISTPARAMSCALL 'tCP'

LISTPARAMSCALL = (53) PARAMITEM LISTPARAMSCALLEXT

LISTPARAMSCALLEXT = (54) 'tSPTR' LISTPARAMSCALL | (55)  $\epsilon$

PARAMITEM = (56) CONSTANT | (57) NAME

SHOW = (58) 'tSHOW' 'tOP' MESSAGE 'tCP'

MESSAGE = (59) 'tCTESTRING' MESSAGEEXT | (60) NAME MESSAGEEXT

MESSAGEEXT = (61) 'tCONCAT' MESSAGE | (62)  $\epsilon$

READ = (63) 'tREAD' 'tOP' NAME 'tCP'

IFELSE = (64) IF ELIF ELSE

IF = (65) 'tIF' 'tOP' EXPRESSION 'tCP' 'tOK' COMMANDS 'tCK'

ELIF = (66) 'tELIF' 'tOP' EXPRESSION 'tCP' 'tOK' COMMANDS 'tCK' ELIF | (67)  $\epsilon$

ELSE = (68) 'tELSE' 'tOK' COMMANDS 'tCK' | (69)  $\epsilon$

WHEN = (70) 'tWHEN' 'tOP' EXPRESSION 'tCP' 'tOK' COMMANDS 'tCK'

REPEATER = (72) 'tREPEATER' 'tOP' ATTRIBUTION 'tSCO' EXPRESSION 'tSCO'  
EXPRESSION 'tCP' 'tOK' COMMANDS 'tCK'

RETURN = (73) 'tRETURN' RETURNEXT

RETURNEXT = (74) CONSTANT | (75) NAME