Ion Iulia-Andreea
831
https://github.com/iuliaaion

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Laborator 4

Starting from the BNF description of the minilanguage syntax, construct the context free grammar (cfg) for parsing

G = (N,Σ,P,S)

N = { if, the, else, while, do, for, to, space, {, }, =, *, /, +, -, ; , array, bool, char, int, double, nr, of, read, write}

Σ = { I, D, T, A, TYPE, C, L, S, M, X, E, R, F, IO, U, IF, WHILE, FOR, COND, REL}

S = I

P : I -> ID | ID,I
D -> S space T
T -> TYPE | A
A -> array[nr]of TYPE
TYPE -> bool | char | int | double

C -> {L}
L -> S | S;L
S -> M | U
M -> X | Y
X -> ID=E

E -> E+R | E-R | R
R -> R*F | R/F | F
F -> (E) | ID

IO -> read(ID) | write(ID)
U -> C | IF | WHILE | FOR
IF -> if COND then S [else S]
WHILE -> while COND do S
FOR -> for COND to NR | ID do S
COND -> E RELATION E
RELATION -> < | <= | == | != | >= | >