

Group No

$G \rightarrow "PROGRAM" \text{ ID } ; "VAR" \vee H "BEGIN" B "END" .$
 $H \rightarrow "FUNCTION" \text{ ID } ; T ; "VAR" \vee H "BEGIN" B$
 $\quad \quad \quad "END" ; H$
 $V \rightarrow \lambda$
 $\quad \quad \quad \text{ID} ; T ; V$
 $\quad \quad \quad \rightarrow \lambda$
 $T \rightarrow "INTEGER"$
 $\quad \quad \quad \rightarrow "BOOLEAN"$
 $B \rightarrow \text{ID} ; E B$
 $\quad \quad \quad \rightarrow "RETURN"$
 $\quad \quad \quad \rightarrow \lambda$
 $E \rightarrow S C$
 $C \rightarrow "=" S$
 $\quad \quad \quad \rightarrow \lambda$
 $S \rightarrow F R$
 $R \rightarrow "*" F R$
 $\quad \quad \quad \rightarrow "AND" F R$
 $F \rightarrow "(" E ")"$
 $\quad \quad \quad \rightarrow \text{ID} A$
 $\quad \quad \quad \rightarrow \text{NUM}$
 $\quad \quad \quad \rightarrow \text{TRUE}$
 $\quad \quad \quad \rightarrow \text{FALSE}$
 $A \rightarrow "(" ")"$
 $\quad \quad \quad \rightarrow \lambda$

Tabela de simboluri:

Name - identifier
(numerical)

`skip = { 1, integer
 2, boolean }`

$$\text{m_desc_id} = \text{ref} + \text{tip}$$

$$T_{\text{ref}} = \begin{cases} 30, & \text{pt. 1000r.} \\ 40, & \text{pt. 100f.} \end{cases}$$

~~ext~~ : 41 fct. core
intsource and.

[$\text{imto} \downarrow \text{oldtab} \downarrow \text{idm} \downarrow \text{value} \uparrow \text{newtab}$]

[$\text{from} \downarrow \text{tab symb} \downarrow \text{idm} \downarrow \text{value}$]

[$\text{open} \downarrow \text{old tab} \uparrow \text{newtab}$] asociază tabelei de simbol. mul. lexical current

Program principal: mul. lexical 0

Fieci decl. în prog. principal: mul. 1

$\text{id} \uparrow \text{idm}$ idm nr. unic asociat de manager identificator

$\vee \downarrow \text{oldtab} \uparrow \text{newtab}$

$\text{H} \downarrow \text{tab symb} \uparrow \text{newtab}$

$\text{T} \uparrow \text{type}$

$\text{B} \downarrow \text{tab symb} \downarrow \text{type R}$

$\text{E} \downarrow \text{tab symb} \uparrow \text{type}$

$G \rightarrow \text{"PROGRAM"} \text{ id} \uparrow \text{idm} ; \text{"VAR"} \vee \downarrow \text{empty tab} \uparrow \text{var tab} \text{ H} \downarrow \text{var tab}$

bodytab "BEGIN" $\text{B} \downarrow \text{body tab} \downarrow \text{body R} \text{ "END"} ;$

[empty tab $\leftarrow \emptyset$; body R $\leftarrow 0$]

$\text{H} \downarrow \text{tab In} \uparrow \text{tab Out} \rightarrow \text{"FUNCTION"} \text{ id} \uparrow \text{idm} ; \text{T} \uparrow \text{type} ;$

[$\text{imto} \downarrow \text{tab In} \downarrow \text{idm} \downarrow \text{type} + 40 \uparrow \text{next tab}$]

[$\text{open} \downarrow \text{next tab} \uparrow \text{func tab}$]

"VAR" $\vee \downarrow \text{func tab} \uparrow \text{var tab}$

$\text{H} \downarrow \text{var tab} \uparrow \text{body tab}$

"BEGIN" $\text{B} \downarrow \text{body tab} \downarrow \text{type} \text{ "END"} ;$

$\text{H} \downarrow \text{new tab} \uparrow \text{tab Out}$

$\vee \downarrow \text{tab In} \uparrow \text{tab Out} \rightarrow [\text{tab Out} \leftarrow \text{tab In}]$

$\rightarrow \text{id} \uparrow \text{idm} ; \text{T} \uparrow \text{type} ;$

[$\text{imto} \downarrow \text{tab In} \downarrow \text{idm} \downarrow \text{type} + 30 \uparrow \text{tab next}$]

$\vee \downarrow \text{tab next} \uparrow \text{tab Out}$

$\rightarrow [\text{tab Out} \leftarrow \text{tab In}]$

$\text{T} \uparrow \text{type} \rightarrow \text{"INTEGER"} [\text{type} \leftarrow 1]$

$\rightarrow \text{"BOOLEAN"} [\text{type} \leftarrow 2]$

$\text{B} \downarrow \text{tab symb} \downarrow \text{type R} \rightarrow \text{id} \uparrow \text{idm} ; = \text{E} \downarrow \text{tab symb} \uparrow \text{type}$

[from \downarrow tabSymbol \downarrow idn \uparrow value Id]

[value Id . dir . no == 3 , type == type Id - 30]

B \downarrow tabSymbol \downarrow type R

\rightarrow " RETURN " E \downarrow tabSymbol \uparrow type

[type == type R]

\rightarrow [type R == 0]

{ Consultation 20 Mai , ora 15^{oo} sala 112 }

E \downarrow tabSymbol \uparrow type \rightarrow S \downarrow tabSymbol \uparrow type C \downarrow tabSymbol \downarrow ctype \uparrow type

C \downarrow tabSymbol \downarrow typeIn 1 typeOut \rightarrow "=" S \downarrow type symb \uparrow type

[ctype == typeIn ; typeOut \leftarrow 2]

S \downarrow symb \uparrow type \rightarrow F \downarrow tabSymbol \uparrow type R \downarrow tabSymbol \downarrow type \rightarrow [typeOut \leftarrow typeIn]

R \downarrow tabSymbol \downarrow type \rightarrow "*" F \downarrow tabSymbol \uparrow ftype R \downarrow tabSymbol \downarrow ftype

[type == ftype ; ftype == 1]

\rightarrow " AND " -- -

[-- ftype == 2]

\rightarrow ;

F \downarrow tabSymbol \uparrow type \rightarrow "(" E \downarrow tabSymbol \uparrow type ")"

\rightarrow id \uparrow idn [from \downarrow tabSymbol \downarrow idn \uparrow value Id]

\curvearrowright A \uparrow valueId \uparrow type

\rightarrow NUM \uparrow value [type \leftarrow 1]

\rightarrow " TRUE " [type \leftarrow 2]

\rightarrow " FALSE " [type \leftarrow 2]

A \downarrow valueId \uparrow type \rightarrow "(" ")" [valueId . dir . no == 4 ; type \leftarrow valueId - 40]

\rightarrow [valueId . dir . no == 3 ; type \leftarrow valueId - 30]