

PROG \rightarrow STAT EOF

terminals:

STATLIST \rightarrow STAT STATLISTP

STATLISTP \rightarrow STAT STATLISTP $\mid \epsilon$

STAT \rightarrow (STATP)

STATP \rightarrow = ID EXPR \mid

COND BEXPR STAT ELSEOPT \mid

WHILE BEXPR STAT \mid

DO STATLIST \mid

PRINT EXPRLIST \mid

READ ID

ELSEOPT \rightarrow (ELSE STAT) $\mid \epsilon$

BEXPR \rightarrow (BEXPRP)

BEXPRP \rightarrow RELOP EXPR EXPR

EXPR \rightarrow NUM \mid ID \mid (EXPRP)

EXPRP \rightarrow + EXPRLIST \mid - EXPR EXPR \mid * EXPRLIST \mid / EXPR EXPR

EXPRLIST \rightarrow EXPR EXPRLISTP

EXPRLISTP \rightarrow EXPR EXPRLISTP $\mid \epsilon$

CALCOLO FIRST

$$\text{FIRST}(\text{PROG}) = \text{FIRST}(\text{STAT}) = \{ (\}$$

$$\text{FIRST}(\text{STATLIST}) = \text{FIRST}(\text{STAT}) = \{ (\}$$

$$\text{FIRST}(\text{STATUSTP}) = \text{FIRST}(\text{STAT}) = \{ (\}$$

$$\text{FIRST}(\text{STAT}) = \{ (\}$$

$$\text{FIRST}(\text{STATP}) = \{ \text{ID}, \text{and}, \text{while}, \text{do}, \text{print}, \text{read} \}$$

$$\text{FIRST}(\text{ELSEOPT}) = \{ (\}$$

$$\text{FIRST}(\text{BEXPR}) = \{ (\}$$

$$\text{FIRST}(\text{BEXPRP}) = \{ \text{RELOP} \}$$

$$\text{FIRST}(\text{EXPR}) = \{ \text{NUM}, \text{ID}, (\}$$

$$\text{FIRST}(\text{EXPRP}) = \{ +, -, *, / \}$$

$$\text{FIRST}(\text{EXPRLIST}) = \text{FIRST}(\text{EXPR}) = \{ \text{NUM}, \text{ID}, (\}$$

$$\text{FIRST}(\text{EXPRLISTP}) = \text{FIRST}(\text{EXPR}) = \{ \text{NUM}, \text{ID}, (\}$$

CALCOLO FOLLOW:

$$\text{EOF} \in \text{FOLLOW}(\text{PROG})$$

$$\text{EOF} \in \text{FOLLOW}(\text{STAT})$$

$$\text{FOLLOW}(\text{STATLIST}) \subseteq \text{FOLLOW}(\text{STATLISTP})$$

$$\text{FIRST}(\text{STATUSTP}) \in \text{FOLLOW}(\text{STAT})$$

$$\{) \} \in \text{FOLLOW}(\text{STATP})$$

$$\text{FOLLOW}(\text{STATP}) \subseteq \text{FOLLOW}(\text{EXPR})$$

$$\text{FIRST}(\text{STAT}) \subseteq \text{FOLLOW}(\text{BEXPR})$$

$$\text{FIRST}(\text{ELSEOPT}) \subseteq \text{FOLLOW}(\text{STAT})$$

$$\text{FIRST}(\text{STAT}) \subseteq \text{FOLLOW}(\text{BEXPRP})$$

$$\text{FOLLOW}(\text{STATP}) \subseteq \text{FOLLOW}(\text{STATUSTP})$$

$$\text{FOLLOW}(\text{STATP}) \subseteq \text{FOLLOW}(\text{EXPRLIST})$$

$$\{) \} \in \text{FOLLOW}(\text{STAT})$$

$$\{) \} \in \text{FOLLOW}(\text{BEXPRP})$$

$$\{) \} \in \text{FOLLOW}(\text{EXPRP})$$

$$\text{FOLLOW}(\text{EXPRP}) \subseteq \text{FOLLOW}(\text{EXPRUST})$$

		FOLLOW
PROG		\$
STAT		\$, (,)
STATLIST)
STATUSTP)
STATP)
EXPR), NUM, ID, (
BEXPR		(
ELSEOPT)
EXPRLIST)

$\text{FIRST}(\text{EXPR}) \subseteq \text{FOLLOW}(\text{EXPR})$

BEXPRP)

$\text{FIRST}(\text{EXPRLIST}) \subseteq \text{FOLLOW}(\text{EXPR})$

EXPRP)

$\text{FOLLOW}(\text{EXPRLIST}) \subseteq \text{FOLLOW}(\text{EXPRLISTP})$

$\text{FOLLOW}(\text{STATUST}) \subseteq \text{FOLLOW}(\text{STATUSTP})$

EXPRLISTP)

$\text{FOLLOW}(\text{STAMP}) \subseteq \text{FOLLOW}(\text{ELSEOPT})$

$\text{guide}(\text{PROG} \rightarrow \text{STAT EOF}) = \{ () \}$

$\text{guide}(\text{STATUST} \rightarrow \text{STAT STATUSTP}) = \{ () \}$

$\text{guide}(\text{STATUSTP} \rightarrow \text{STAT STATUSTP}) = \{ () \}$

$\text{guide}(\text{STATUSTP} \rightarrow \epsilon) = \{) \}$

$\text{guide}(\text{STAT} \rightarrow (\text{STAMP})) = \{ () \}$

$\text{guide}(\text{STAMP} \rightarrow \text{ID EXPR}) = \{ \text{ID} \}$

$\text{guide}(\text{STAMP} \rightarrow \text{and BEXPR STAT ELSEOPT}) = \{ \text{and} \}$

$\text{guide}(\text{STAMP} \rightarrow \text{while BEXPR STAT}) = \{ \text{while} \}$

$\text{guide}(\text{STAMP} \rightarrow \text{do STATUST}) = \{ \text{do} \}$

$\text{guide}(\text{STAMP} \rightarrow \text{print EXPRLIST}) = \{ \text{print} \}$

$\text{guide}(\text{STAMP} \rightarrow \text{read ID}) = \{ \text{read} \}$

$\text{guide}(\text{ELSEOPT} \rightarrow (\text{else STAT})) = \{ () \}$

$\text{guide}(\text{ELSEOPT} \rightarrow \epsilon) = \{) \}$

$\text{guide}(\text{BEXPR} \rightarrow (\text{BEXPRP})) = \{ () \}$

$\text{guide}(\text{BEXPRP} \rightarrow \text{relop EXPR EXPR}) = \{ \text{relop} \}$

$\text{guide}(\text{EXPR} \rightarrow \text{NUM}) = \{ \text{NUM} \}$

$\text{guide}(\text{EXPR} \rightarrow \text{ID}) = \{ \text{ID} \}$

$\text{guide}(\text{EXPR} \rightarrow (\text{EXPRP})) = \{ () \}$

$\text{guide}(\text{EXPRP} \rightarrow + \text{EXPRLIST}) = \{ + \}$

$\text{guide}(\text{EXPRP} \rightarrow - \text{EXPR EXPR}) = \{ - \}$

$\text{guide}(\text{EXPRP} \rightarrow * \text{EXPRLIST}) = \{ * \}$

$\text{guida}(\text{EXPRP} \rightarrow / \text{EXPR} \text{EXPR}) = \{ /\}$

$\text{guida}(\text{EXPRUST} \rightarrow \text{EXPR} \text{EXPRUSTP}) = \{ \text{NUM}, \text{ID}, (\}$

$\text{guida}(\text{EXPRUSTP} \rightarrow \text{EXPR} \text{EXPRUSTP}) = \{ \text{NUM}, \text{ID}, (\}$

$\text{guida}(\text{EXPRUSTP} \rightarrow \epsilon) = \{) \}$