

- Grammatica da modificare -

$\langle \text{prog} \rangle ::= \langle \text{statlist} \rangle \text{ EOF}$

$\langle \text{statlist} \rangle ::= \langle \text{stat} \rangle \langle \text{statlistp} \rangle$

$\langle \text{statlistp} \rangle ::= ; \langle \text{stat} \rangle \langle \text{statlistp} \rangle \mid \epsilon$

$\langle \text{stat} \rangle ::= \text{assign} \langle \text{assignlist} \rangle$

$\mid \text{print} (\langle \text{exprlist} \rangle)$

$\mid \text{read} (\langle \text{idlist} \rangle)$

$\mid \text{for} (\langle \text{forp} \rangle) \text{ do } \langle \text{stat} \rangle$

$\mid \text{if} (\langle \text{bexpr} \rangle) \langle \text{stat} \rangle \langle \text{ifp} \rangle \text{ end}$

$\mid \{ \langle \text{statlist} \rangle \}$

$\langle \text{forp} \rangle ::= \text{ID} := \langle \text{expr} \rangle ; \langle \text{bexpr} \rangle$

$\mid \langle \text{bexpr} \rangle$

$\langle \text{ifp} \rangle ::= \text{else } \langle \text{stat} \rangle \mid \epsilon$

$\langle \text{assignlist} \rangle ::= [\langle \text{expr} \rangle \text{ to } \langle \text{idlist} \rangle] \langle \text{assignlistp} \rangle$

$\langle \text{assignlistp} \rangle ::= [\langle \text{expr} \rangle \text{ to } \langle \text{idlist} \rangle] \langle \text{assignlistp} \rangle \mid \epsilon$

$\langle \text{idlist} \rangle ::= \text{ID} \langle \text{idlistp} \rangle$

$\langle \text{idlistp} \rangle ::= , \text{ID} \langle \text{idlistp} \rangle \mid \epsilon$

$\langle \text{bexpr} \rangle ::= \text{RELOP} \langle \text{expr} \rangle \langle \text{expr} \rangle$

$\langle \text{expr} \rangle ::= + (\langle \text{exprlist} \rangle)$

$\mid - \langle \text{expr} \rangle \langle \text{expr} \rangle$

$\mid * (\langle \text{exprlist} \rangle)$

$\mid / \langle \text{expr} \rangle \langle \text{expr} \rangle$

$\mid \text{NUM}$

$\mid \text{ID}$

$\langle \text{exprlist} \rangle ::= \langle \text{expr} \rangle \langle \text{exprlistp} \rangle$

$\langle \text{exprlistp} \rangle ::= , \langle \text{expr} \rangle \langle \text{exprlistp} \rangle \mid \epsilon$

FIRST e FOLLOW della grammatica modificata

Non terminali	Produzione	Guida
<prog>	<statlist> EOF	assign print read for if {
<statlist>	<stat> <statlistp>	assign print read for if {
<statlistp>	; <stat> <statlistp>	;
	ϵ	EOF }
<stat>	assign <assignlist>	assign
	print (<exprlist>)	print
	for (<forp>) do <stat>	for
	if (<bexpr>) <stat> <ifp> end	if
	{ <statlist> }	{
<forp>	ID := <expr> ; <bexpr>	ID
	<bexpr>	RELOP
<ifp>	else <stat>	ELSE
	ϵ	assign print read for if {
<assignlist>	[<expr> to <idlist>] <assignlistp>	[
<assignListp>	[<expr> to <idlist>] <assignlistp>	[
<idlist>	ID <idlistp>	ID
	, ID <idlistp>	,
	ϵ)]
<bexpr>	RELOP <expr> <expr>	RELOP
<expr>	+ (<exprlist>)	+
	- <expr> <expr>	-
	* (<exprlist>)	*
	/ <expr><expr>	/
	NUM	NUM
	ID	ID
<exprlist>	<expr><exprlist>	+ - * / NUM ID
<exprlistp>	, <expr> , <exprlistp>	,
	ϵ)