

program \rightarrow Program IDtoken ; declist block;
declist \rightarrow dec | declist dec | ϵ
dec \rightarrow vardec | procdec | funcdec
type \rightarrow Int | Real | Bool
iddec \rightarrow IDtoken | IDtoken := exp
idlist \rightarrow iddec | idlist , iddec
vardec \rightarrow type idlist ;
procdec \rightarrow Procedure IDtoken (paramdecs) declist block ;
funcdec \rightarrow Function IDtoken (paramdecs) : type declist block ;
paramdecs \rightarrow paramdec | paramdecs ; paramdec
paramdec \rightarrow type paramlist
paramlist \rightarrow IDtoken | paramlist , IDtoken
block \rightarrow Begin stmtlist End | stmt
stmtlist \rightarrow stmt | stmtlist ; stmt
lvalue \rightarrow IDtoken

stmt \rightarrow lvalue $:=$ exp

| If exp Then block

| If exp Then block Else block

| While exp Do block

| For lvalue $:=$ exp To exp Do block

| For lvalue $:=$ exp Downto exp Do block

| Case exp caseelement End

| Return exp

| exp

exp \rightarrow exp And Then exp

| exp Or Else exp

| exp + exp

| exp - exp

| exp * exp

| exp / exp

| (exp)

| exp relop exp

| INTtoken | REALtoken | True | False | lvalue

| IDtoken (explist)

caseelement \rightarrow INTtoken : block ;

| caseelement INTtoken : block ;

explist \rightarrow exp | explist , exp

relop \rightarrow .GT. | .GE. | .NE. | .EQ. | .LT. | .LE.