

Prog	:	program	ID	OPTRIP	GlobDecls	ModList	MainMod	CLTRIP
GlobDecls	:	ε		global	OPBRACE	DeclList	CLBRACE	
DeclList	:	Declaration		DeclList	Declaration			
Declaration	:	Type	ElemList	SCOLON				
Type	:	int		float		char		logic
ElemList	:	Elem		ElemList	COMMA	Elem		
Elem	:	ID		ID	OPBRAK	DimList	CLBRAK	
DimList	:	INTCT		DimList	COMMA	INTCT		
ModList	:	ε		ModList	Module			
Module	:	ModHeader	ModBody					
ModHeader	:	FuncHeader		ProcHeader				
FuncHeader	:	Type	function	ID	OPPAR	CLPAR		
		Type	function	ID	OPPAR	ParamList	CLPAR	
ProcHeader	:	procedure	ID	OPPAR	CLPAR			
		procedure	ID	OPPAR	ParamList	CLPAR		
ParamList	:	Parameter		ParamList	COMMA	Parameter		
Parameter	:	Type	ID					
ModBody	:	LocDecls	Stats					
LocDecls	:	ε		local	OPBRACE	DeclList	CLBRACE	
MainMod	:	main	ModBody					
Stats	:	statements	CompStat					
CompStat	:	OPBRACE	StatList	CLBRACE				
StatList	:	ε		StatList	Statement			
Statement	:	CompStat		IfStat		WhileStat		RepeatStat
		ForStat		ReadStat		WriteStat		AssignStat
		CallStat		ReturnStat		SCOLON		
IfStat	:	if	Expression	then	Statement	ElseStat		
ElseStat	:	ε		else	Statement			
WhileStat	:	while	Expression	do	Statement			

RepeatStat	:	repeat	Statement	while	Expression	SCOLON
ForStat	:	for	Variable	init	Expression	while Expression new Expression do Statement
ReadStat	:	read	OPPAR	ReadList	CLPAR	SCOLON
ReadList	:	Variable		ReadList	COMMA	Variable
WriteStat	:	write	OPPAR	WriteList	CLPAR	SCOLON
WriteList	:	WriteElem		WriteList	COMMA	WriteElem
WriteElem	:	STRING		Expression		
CallStat	:	call	ID	OPPAR	CLPAR	SCOLON
		call	ID	OPPAR	ExprList	CLPAR SCOLON
ReturnStat	:	return	SCOLON		return	Expression SCOLON
AssignStat	:	Variable	ASSIGN	Expression	SCOLON	
ExprList	:	Expression		ExprList	COMMA	Expression
Expression	:	AuxExpr1		Expression	OR	AuxExpr1
AuxExpr1	:	AuxExpr2		AuxExpr1	AND	AuxExpr2
AuxExpr2	:	AuxExpr3		NOT	AuxExpr3	
AuxExpr3	:	AuxExpr4		AuxExpr4	RELOP	AuxExpr4
AuxExpr4	:	Term		AuxExpr4	ADOP	Term
Term	:	Factor		Term	MULTOP	Factor
Factor	:	Variable		INTCT		FLOATCT CHARCT
		true		false		NEG Factor
		OPPAR	Expression	CLPAR		FuncCall
Variable	:	ID		ID	OPBRAK	SubscrList CLBRAK
SubscrList	:	AuxExpr4		SubscrList	COMMA	AuxExpr4
FuncCall	:	ID	OPPAR	CLPAR		ID OPPAR ExprList CLPAR