

***Bold** - Non-terminal

// **Program**

Program -> **Function** **Program** | ϵ

// **Function**

Function -> "function" "identifier" " ," "beginparams" **Declarations** "endparams" "beginlocals"
Declarations "endlocals" "beginbody" **Statement** "endbody"

// **Declaration**

Declarations -> **Declaration** " ," **Declarations** | ϵ

Declaration -> **Identifiers** : array [number] of integer | **Identifiers** : integer

// **Identifiers**

Identifiers -> identifier | identifier , **Identifiers**

// **Statement**

Statements -> **Statement** ; **Statements** | **Statement** ;

Statement -> **Var** " :=" **Expression** |

 "if" **Bool-Exp** "then" **Statements** **ElseStatement** "endif" |

 "While" **Bool-Exp** "beginloop" **Statements** "endloop" |

 "Do" "beginloop" **Statements** "endloop" "while" **Bool-Expr** |

 "Foreach" "identifier" "in" "identifier" "beginloop" **Statements** "endloop" |

 "Read" **Vars** |

 "Write" **Vars** |

 "Continue" |

 "Return" **Expression**

ElseStatement -> "else" **Statements** | ϵ

// **Bool-Expr**

Bool-Expr -> **Relation-And-Expr** | **Relation-And-Expr** or **Bool-Expr**

// **Relation-And-Expr**

Relation-And-Expr -> **Relation-Expr** | **Relation-Expr** and **Relation-And-Expr**

// **Relation-Expr**

Relation-Expr -> not **Relation-Expr1** | **Relation-Expr1**

Relation-Expr1 -> **Expression** Comp **Expression** |

 True |

 False |

 (**Bool-Expr**)

// Comp

Comp -> "==" |
" < > " |
" < " |
" > " |
" < = " |
" > = " |

// Expression

Expressions -> **Expression** , **Expressions** |
Expression |
 ϵ

Expression -> **Multiplicative-Expr** |
Multiplicative-Expr + **Expression** |
Multiplicative-Expr - **Expression**

// Multiplicative-Expr

Multiplicative-Expr -> **Term** |
Term * **Multiplicative-Expr** |
Term / **Multiplicative-Expr** |
Term % **Multiplicative-Expr**

// Term

Term -> - **Var** |
Var |
number |
- number |
- (**Expression**) |
(**Expression**) |
Identifier (**Expressions**)

// Var

Var -> "identifier" | "identifier" "[" **Expression** "]"
Vars -> **Var** | **Var** , **Vars**