

$\langle Program \rangle ::= \langle Declarations \rangle \langle Body \rangle$

$\langle Body \rangle ::= \text{'BEGIN'} \langle InstructionList \rangle \text{'END'}$

$\langle Declaration \rangle ::= \langle id \rangle$
 $\quad | \langle id \rangle \text{'['} \langle num \rangle \text{'}'}$
 $\quad | \langle id \rangle \text{'['} \langle num \rangle \text{'}' '['} \langle num \rangle \text{'}'}$

$\langle Declarations \rangle ::= \text{'VAR'} \langle DeclarationsList \rangle \text{';'}$

$\langle DeclarationsList \rangle ::= \langle Declaration \rangle$
 $\quad | \langle DeclarationsList \rangle \text{' ,' } \langle Declaration \rangle$

$\langle Term \rangle ::= \langle id \rangle$
 $\quad | \langle num \rangle$
 $\quad | \langle id \rangle \text{'['} \langle ExpAdditiv \rangle \text{'}'}$
 $\quad | \langle id \rangle \text{'['} \langle ExpAdditiv \rangle \text{'}' '['} \langle ExpAdditiv \rangle \text{'}'}$
 $\quad | \text{'('} \langle Exp \rangle \text{'}'}$
 $\quad | \text{'NOT'} \langle Exp \rangle$

$\langle Variable \rangle ::= \langle id \rangle$
 $\quad | \langle id \rangle \text{'['} \langle ExpAdditiv \rangle \text{'}'}$
 $\quad | \langle id \rangle \text{'['} \langle ExpAdditiv \rangle \text{'}' '['} \langle ExpAdditiv \rangle \text{'}'}$

$\langle ExMultipl \rangle ::= \langle Term \rangle$
 $\quad | \langle ExMultipl \rangle \text{'*'} \langle Term \rangle$
 $\quad | \langle ExMultipl \rangle \text{'/' } \langle Term \rangle$
 $\quad | \langle ExMultipl \rangle \text{'\%'} \langle Term \rangle$
 $\quad | \langle ExMultipl \rangle \text{'AND'} \langle Term \rangle$

$\langle ExpAdditiv \rangle ::= \langle ExMultipl \rangle$
 $\quad | \langle ExpAdditiv \rangle \text{'+' } \langle ExMultipl \rangle$
 $\quad | \langle ExpAdditiv \rangle \text{'-'} \langle ExMultipl \rangle$
 $\quad | \langle ExpAdditiv \rangle \text{'OR'} \langle ExMultipl \rangle$

$\langle Exp \rangle ::= \langle ExpAdditiv \rangle$
 $\quad | \text{'('} \langle ExpAdditiv \rangle \text{'>' } \langle ExpAdditiv \rangle \text{'}'}$
 $\quad | \text{'('} \langle ExpAdditiv \rangle \text{'<' } \langle ExpAdditiv \rangle \text{'}'}$
 $\quad | \text{'('} \langle ExpAdditiv \rangle \text{'>=' } \langle ExpAdditiv \rangle \text{'}'}$
 $\quad | \text{'('} \langle ExpAdditiv \rangle \text{'<=' } \langle ExpAdditiv \rangle \text{'}'}$
 $\quad | \text{'('} \langle ExpAdditiv \rangle \text{'==' } \langle ExpAdditiv \rangle \text{'}'}$
 $\quad | \text{'('} \langle ExpAdditiv \rangle \text{'!=' } \langle ExpAdditiv \rangle \text{'}'}$

$\langle Attribution \rangle ::= \langle Variable \rangle \text{'=' } \langle ExpAdditiv \rangle$

$\langle \text{Instruction} \rangle$::= $\langle \text{Attribution} \rangle$ ‘;’
| ‘READ’ $\langle \text{Variable} \rangle$ ‘;’
| ‘WRITE’ $\langle \text{ExpAdditiv} \rangle$ ‘;’
| ‘WRITE’ $\langle \text{string} \rangle$ ‘;’
| ‘IF’ ‘(’ $\langle \text{Exp} \rangle$ ‘)’ ‘{’ $\langle \text{InstructionsList} \rangle$ ‘}’
| ‘IF’ ‘(’ $\langle \text{Exp} \rangle$ ‘)’ ‘{’ $\langle \text{InstructionsList} \rangle$ ‘}’ ‘ELSE’ ‘{’ $\langle \text{InstructionsList} \rangle$ ‘}’
| ‘WHILE’ ‘(’ $\langle \text{Exp} \rangle$ ‘)’ ‘{’ $\langle \text{InstructionsList} \rangle$ ‘}’
| ‘DO’ ‘{’ $\langle \text{InstructionsList} \rangle$ ‘}’ ‘WHILE’ ‘(’ $\langle \text{Exp} \rangle$ ‘)’ ‘;’

$\langle \text{InstructionList} \rangle$::= $\langle \text{Instruction} \rangle$
| $\langle \text{InstructionList} \rangle$ $\langle \text{Instruction} \rangle$