

$\langle \text{letter} \rangle ::= a \mid \dots \mid z \mid A \mid B \mid \dots \mid Z$
 $\langle \text{digit} \rangle ::= 0 \mid \dots \mid 9$
 $\langle \text{underscore} \rangle ::= _$
 $\langle \text{operator} \rangle ::= + \mid - \mid * \mid / \mid = \mid == \mid < \mid <= \mid > \mid >= \mid !=$
 $\langle \text{separator} \rangle ::= () \mid \{ \} \mid ; \mid \text{space} \mid ,$
 $\langle \text{reserved_word} \rangle ::= \text{Integer} \mid \text{String} \mid \text{ArrayList} \mid \text{Do} \mid \text{While} \mid \text{For} \mid \text{Const} \mid \text{Program} \mid \text{Const} \mid \text{Read} \mid \text{Print}$
 $\langle \text{identifier} \rangle ::= \langle \text{letter} \rangle \mid \langle \text{letter} \rangle \langle \text{identifier} \rangle \mid \langle \text{underscore} \rangle \langle \text{identifier} \rangle \mid \langle \text{letter} \rangle \langle \text{sequenceOfCharacters} \rangle \mid \langle \text{underscore} \rangle \langle \text{sequenceOfCharacters} \rangle$
 $\langle \text{sequenceOfCharacters} \rangle ::= \langle \text{letter} \rangle \mid \langle \text{digit} \rangle$
 $\langle \text{no} \rangle ::= \langle \text{digit} \rangle \mid \langle \text{digit} \rangle \langle \text{no} \rangle$
 $\langle \text{noconst} \rangle ::= + \langle \text{no} \rangle \mid - \langle \text{no} \rangle \mid \langle \text{no} \rangle$
 $\langle \text{character} \rangle ::= \langle \text{letter} \rangle \mid \langle \text{digit} \rangle \mid \langle \text{underscore} \rangle$
 $\langle \text{char} \rangle ::= \langle \text{letter} \rangle \mid \langle \text{digit} \rangle$
 $\langle \text{string} \rangle ::= \langle \text{char} \rangle \langle \text{string} \rangle$
 $\langle \text{conststring} \rangle ::= \text{"} \langle \text{string} \rangle \text{"}$
 $\langle \text{program} \rangle ::= \text{"VAR"} \langle \text{decllist} \rangle \text{";" } \langle \text{cmpdstmt} \rangle \text{"."}$
 $\langle \text{decllist} \rangle ::= \langle \text{declaration} \rangle \mid \langle \text{declaration} \rangle \text{";" } \langle \text{decllist} \rangle$
 $\langle \text{declaration} \rangle ::= \langle \text{identifier} \rangle \text{":" } \langle \text{type} \rangle$
 $\langle \text{type1} \rangle ::= \text{boolean} \mid \text{char} \mid \text{Integer} \mid \text{Float}$
 $\langle \text{listOfDeclarations} \rangle ::= \text{"Array"} \text{"[" } \text{nr } \text{"]"} \text{"Of"} \langle \text{type1} \rangle$
 $\langle \text{type} \rangle ::= \langle \text{type1} \rangle \mid \langle \text{listOfDeclarations} \rangle$
 $\langle \text{cmpdstmt} \rangle ::= \text{"BEGIN"} \langle \text{statementList} \rangle \text{"END"}$
 $\langle \text{statementList} \rangle ::= \langle \text{statement} \rangle \mid \langle \text{statement} \rangle \text{";" } \langle \text{statementList} \rangle$
 $\langle \text{statement} \rangle ::= \langle \text{simpleStatement} \rangle \mid \langle \text{structuredStatement} \rangle$

$\langle \text{simpleStatement} \rangle ::= \langle \text{assignStatement} \rangle \mid \langle \text{IOStatement} \rangle$
 $\langle \text{assignStatement} \rangle ::= \langle \text{identifier} \rangle "=" \langle \text{expression} \rangle$
 $\langle \text{expression} \rangle ::= \langle \text{expression} \rangle "+" \langle \text{term} \rangle \mid \langle \text{term} \rangle \mid \langle \text{expression} \rangle "-" \langle \text{term} \rangle$
 $\langle \text{term} \rangle ::= \langle \text{term} \rangle "*" \langle \text{factor} \rangle \mid \langle \text{term} \rangle "/" \mid \text{factor}$
 $\langle \text{factor} \rangle ::= (\langle \text{expression} \rangle) \mid \langle \text{identifier} \rangle$
 $\langle \text{IOStatement} \rangle ::= "READ" (\langle \text{identifier} \rangle) \mid "WRITE" (\langle \text{identifier} \rangle)$
 $\langle \text{structuredStatement} \rangle ::= \langle \text{cmpdstmt} \rangle \mid \langle \text{ifStatement} \rangle \mid \langle \text{whileStatement} \rangle$
 $\langle \text{ifStatement} \rangle ::= "WHETHER" (\langle \text{condition} \rangle) "EXECUTE" \{ \langle \text{statement} \rangle \}$
 $"OTHERWISE" \{ \langle \text{statement} \rangle \}$
 $\langle \text{whileStatement} \rangle ::= "WHILE" (\langle \text{condition} \rangle) "DO" \langle \text{statement} \rangle$
 $\langle \text{condition} \rangle ::= \langle \text{expression} \rangle \langle \text{relation} \rangle \langle \text{expression} \rangle$
 $\langle \text{relation} \rangle ::= < \mid \leq \mid = \mid \neq \mid < > \mid \geq \mid >$