

4 - PROCEDURE STATEMENTS

4.7.1. Syntax.

$\langle \text{actual parameter} \rangle ::= \langle \text{variable identifier} \rangle | \langle \text{expression} \rangle |$
 $\langle \text{array identifier} \rangle | \langle \text{procedure identifier} \rangle | \langle \text{label identifier} \rangle$
 $\langle \text{parameter delimiter} \rangle ::= , | \langle \text{letter string} \rangle : ($
 $\langle \text{actual parameter list} \rangle ::= \langle \text{actual parameter} \rangle | \langle \text{actual parameter list} \rangle$
 $\langle \text{parameter delimiter} \rangle \langle \text{actual parameter} \rangle$
 $\langle \text{actual parameter part} \rangle ::= \langle \text{empty} \rangle | (\langle \text{actual parameter list} \rangle)$
 $\langle \text{procedure statement} \rangle ::= \langle \text{procedure identifier} \rangle \langle \text{actual parameter part} \rangle$
 procedure

4. .2. Examples

Examples of procedure statements (Cf.)

B (x + 3, R (Z, 2.8), HADES)

B (x + 3, R (Z, 2.8)) EXIT : (HADES)

B (x + 3, W) GO TO : (HADES)

~~S (x) GO TO : (x, y)~~

Hint: 1) Gegen procedure inden ; en anden

4. .3. Semantics.

A procedure statement serves to invoke a procedure compound (Cf...).

The execution is effected as though the values or names respectively of all formal parameters listed in the formal part of the procedure declaration heading were replaced throughout the procedure compound by the values or the names respectively of the actual parameters in the corresponding positions in the procedure statement.

The correspondence between the actual parameter and the formal one is by list position, i. e. list position defines correspondents. The treatment of the correspondents is determined by the name list associated with the formal parameter list in the procedure heading. A name is taken if the corresponding formal parameter appears in the name list : otherwise the value is taken. A procedure statement B is only defined if the correspondents are compatible, i. e. when the correspondent is specified by value or name respectively that the types or kinds respectively correspond. The value or name -whichever is indicated- of each of the actual parameters is substituted appropriately in the procedure compound -including declarations- according to the following prescription : if specification is made by name, the name of the actual parameter is substituted for all occurrences of the corresponding formal parameter in the procedure compound. If specification is made by value, the value of the actual parameter is assigned to the corresponding formal parameter as an initialisation of the procedure compound. ~~If the parameter is a label by assignment is made the same as replacement.~~ If the parameter is an array, the consequences of mismatch of the dimensions of the correspondents are undefined.

substitution.