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..... PROCEDURE DECLARATIONS

..... .1. Syntax.

⟨formal parameter⟩ :: = ⟨variable identifier⟩ | ⟨array identifier⟩ |
⟨procedure identifier⟩ | ⟨label identifier⟩

⟨formal parameter list⟩ :: = ⟨formal parameter⟩ |
⟨formal parameter list⟩ ⟨parameter delimiter⟩
⟨formal parameter⟩

⟨formal parameter part⟩ :: = ⟨empty⟩ | (⟨formal parameter list⟩)

⟨name list⟩ :: = ⟨formal parameter list⟩

⟨name part⟩ :: = ⟨empty⟩ | name (⟨formal parameter list⟩)

⟨procedure heading⟩ :: = ⟨procedure identifier⟩ ⟨formal parameter part⟩
⟨name part⟩

~~⟨procedure heading⟩ :: = ⟨procedure formal part⟩ |~~
~~⟨procedure heading⟩ ⟨procedure formal part⟩~~

~~⟨procedure heading list⟩ :: = ⟨procedure heading⟩ | ⟨procedure heading list⟩~~
~~⟨procedure heading⟩~~

⟨procedure compound⟩ :: = ~~⟨label⟩~~ ⟨compound statement⟩ | ~~begin~~ ⟨code⟩

~~⟨procedure compound set⟩ :: = ⟨procedure compound⟩ |~~
~~⟨procedure compound set⟩ ⟨procedure compound⟩~~

⟨procedure declaration⟩ :: = ⟨procedure heading⟩ ⟨procedure compound⟩

..... .2. Examples.

Examples of procedure heading and procedure heading list :

B (a, b, c) name (¢)c
B (a, b) EXIT:(¢) name (¢)
B (a) RESULT OF B:(b) GO TO:(¢) name (¢)

~~C (a, b, c) name (¢), R (d, e), S (a, b, c) name (b)~~

..... .3. Semantics

A procedure declaration defines a procedure compound ~~set, one element of~~ which may be involved by a procedure statement, by which is meant : The procedure compound is executed after a formal parameter transformation is effected according to the rules specified in section 4. .3.

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considered to be completion of upon the

A procedure, upon execution, is terminated ~~after execution of the last lexicographic wise statement of~~ the procedure compound.

The procedure declaration consists of a ~~heading~~ procedure headings, ~~called~~ which consists of a procedure identifier, called the name of the procedure followed by a parenthesized list of its formal parameters called the formal parameter part, followed again by the name part, which is the parenthesized list of those formal parameters which are specified to the procedure compound (see below) by their names. The name part may be empty in which case also the formal parameter part may be empty. The heading is followed by a procedure compound ~~or each element of~~ which is ~~a double compound statement~~, the procedure compound. ~~To each procedure identifier in the procedure heading list there exists precisely one procedure compound, the label of which is that procedure identifier.~~

delimiter procedure

the

The formal parameter part and the name part may each be written as a simple list between parentheses, but optional information can be conveyed by separating the list in parenthesized lists separated by a , ~~or by a letter~~ string followed by : .

If in a procedure compound there is at least one assignment of a value to the procedure identifier, the value of the procedure is the value of the procedure identifier upon exit from the execution of the procedure compound.

If a procedure is an operand of an expression the value of the procedure is used as the value of the operand.

A procedure compound may be described as code, i.e. written in a language other than ALGOL 60. Thus, the use of procedure declarations may have the effect of adding new primitives to ALGOL 60.