IFTHENELSE (Estonia)

The sample program traces the execution of the lines of this procedure beginning with the first line and following recursively all the possible THEN and ELSE labels (if we start from RETURN commands, the possibility of cycling can remain undiscovered).

The cycling is detected when the same line is executed for the second time.

From the beginning all the variables of the procedure get different values starting with 1. Following THEN branch by some *X=Y* the variable with a bigger value (and all the variables equal to it) gets the value of other member of the equality, i.e. this value disappears.

Following ELSE branch corresponding inequality *X<>Y* is memorised in *Negations*, and the variables cannot be made equal later.

In both cases it has been checked that the new choice does not contradict the inequalities and equalities fixed earlier.

The *Foundres* memorises the results of RETURN commands and/or cycling received already by some combination of values.

There might be more than one correct answer to the input data of this problem. Therefore, the testing program is included into the floppy.

The program *Tester* (given in the file TESTENG.PAS) was used for analysing the output of students' programs: discovering missing variables, variables evaluated more than once, checking whether the values from output really give the stated RETURN value (or cycling).