NAME

CUTEST_cdimen − CUTEst tool to get the number of variables and constraints involved.

SYNOPSIS

CALL CUTEST_cdimen(status, input, n, m)

For real rather than double precision arguments, instead

CALL CUTEST_cdimen_s(...)

and for quadruple precision arguments, when available,

CALL CUTEST_cdimen_q(...)

DESCRIPTION

The CUTEST_cdimen subroutine discovers how many variables and constraints are involved in the problem decoded from a SIF file by the script *sifdecoder*.

The problem under consideration is to minimize or maximize an objective function $f(x)$ over all $x \in R^n$ subject to general equations $c_i(x) = 0$, $(i \in 1, \ldots, m_E)$, general inequalities $c_i^l \leq c_i(x) \leq c_i^u$, $(i \in m_E + 1, \ldots, m)$, and simple bounds $x^l \leq x \leq x^u$. The objective function is group-partially separable and all constraint functions are partially separable.

ARGUMENTS

The arguments of CUTEST_cdimen are as follows

status [out] - integer
the outputr status: 0 for a succesful call, 1 for an array allocation/deallocation error, 2 for an array bound error, 3 for an evaluation error,

input [in] - integer
the unit number for the decoded data; the unit from which OUTSDIF.d is read,

n [out] - integer
the number of variables for the problem,

m [out] - integer
the total number of general constraints.

AUTHORS

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SEE ALSO

CUTEst: a Constrained and Unconstrained Testing Environment with safe threads,
N.I.M. Gould, D. Orban and Ph.L. Toint,
Computational Optimization and Applications **60**:3, pp.545-557, 2014.

CUTEr (and SifDec): A Constrained and Unconstrained Testing Environment, revisited,
N.I.M. Gould, D. Orban and Ph.L. Toint,
ACM TOMS, **29**:4, pp.373-394, 2003.

CUTE: Constrained and Unconstrained Testing Environment,
I. Bongartz, A.R. Conn, N.I.M. Gould and Ph.L. Toint,
ACM TOMS, **21**:1, pp.123-160, 1995.

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