NAME

CUTEST_cdimohp − CUTEst tool to determine the number of nonzeros needed to store the product of the Hessian matrix of the objective function with a specified vector for the problem decoded from a SIF file by the script *sifdecoder*.

SYNOPSIS

CALL CUTEST_cdimohp(status, nnzohp)

For real rather than double precision arguments, instead

CALL CUTEST_cdimohp_s(...)

DESCRIPTION

The CUTEST_cdimohp subroutine determines the number of nonzero elements required to store the product of the Hessian matrix of the objective function with a specified vector for the problem decoded into OUTSDIF.d in the constrained minimization case.

The problem under consideration is to minimize or maximize an objective function $f(x)$ o ver 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_cdimohp 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,

nnzohp [out] - integer

the total number of nonzero entries required to store the product of the objective Hessian with a vector.

AUTHORS

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SEE ALSO

CUTEst: a Constrained and Unconstrained Testing Environment with safe threads for mathematical optimization,
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,
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sifdecoder(1).