NAME

CIDH – CUTEr tool to evaluate the Hessian of a problem function.

SYNOPSIS

CALL CIDH(N, X, IPROB, LH1, H)

DESCRIPTION

The CIDH subroutine evaluates the Hessian matrix of either the objective function or a constraint function for the problem decoded into OUTSDIF.d at the point X, and possibly its gradient in the constrained minimization case. The matrix is stored as a dense matrix.

ARGUMENTS

The arguments of CIDH are as follows

N [in] - integer
the number of variables for the problem,

X [in] - real/double precision
an array which gives the current estimate of the solution of the problem,

IRPOB [in] - integer
the number of the problem function to be considered. If IPROB = 0, the Hessian of the objective function will be evaluated, while if IPROB = i > 0, that of the i-th constraint will be evaluated,

LH1 [in] - integer
the actual declared size of the leading dimension of H (with LH1 no smaller than N),

H [out] - real/double precision
a two-dimensional array which gives the value of the required Hessian matrix.

AUTHORS

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SEE ALSO

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, TOMS, **21**:1, pp.123-160, 1995.