NAG Library Function Document nag_ip_mps_free (h02bvc)

1 Purpose

nag ip mps free (h02bvc) frees the memory allocated by nag ip mps read (h02buc).

2 Specification

3 Description

nag_ip_mps_free (h02bvc) should be used in conjunction with nag_ip_mps_read (h02buc), which reads data for an integer programming problem from an MPSX file, allocates several arrays, and populates them with the data contained in the file. nag_ip_mps_free (h02bvc) is a utility provided for the convenient freeing of this memory. It should be called in order to conserve memory which is no longer required, e.g., following a call to nag_ip_bb (h02bbc) (which may be used to solve the problem defined by the MPSX file). Any memory not freed will, of course, be freed when your program terminates.

nag_ip_mps_free (h02bvc) can be used to free a subset of the allocated arrays by passing null pointers for those arguments which you do not wish to free.

4 References

None.

5 Arguments

1: **a** – double **

Input/Output

On entry: the nonzeros of the constraint matrix A, to be freed. If \mathbf{a} or \mathbf{a} is a null pointer, no action is taken.

On exit: if a is not null, *a is set to the null pointer.

2: **bl** – double **

Input/Output

On entry: the lower bounds of the problem variables and general constraints, to be freed. If **bl** or ***bl** is a null pointer, no action is taken.

On exit: if **bl** is not null, ***bl** is set to the null pointer.

3: **bu** – double **

Input/Output

On entry: the upper bounds of the problem variables and general constraints, to be freed. If **bu** or ***bu** is a null pointer, no action is taken.

On exit: if **bu** is not null, ***bu** is set to the null pointer.

4: intvar – Nag Boolean **

Input/Output

On entry: the indicators as to which are the integer variables in the problem, to be freed. If intvar or *intvar is a null pointer, no action is taken.

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On exit: if intvar is not null, *intvar is set to the null pointer.

5: **cvec** – double **

Input/Output

On entry: the coefficients, c, of the linear term of the objective function, to be freed. If **evec** or ***evec** is a null pointer, no action is taken.

On exit: if cvec is not null, *cvec is set to the null pointer.

6: $\mathbf{x} - \text{double **}$ Input/Output

On entry: a set of initial values for the variables, to be freed. If \mathbf{x} or \mathbf{x} is a null pointer no action is taken.

On exit: if x is not null, *x is set to the null pointer.

6 Error Indicators and Warnings

None.

7 Accuracy

Not applicable.

8 Parallelism and Performance

nag ip mps free (h02bvc) is not threaded in any implementation.

9 Further Comments

In addition to allocating the memory freed by this function, $nag_ip_mps_read$ (h02buc) also allocates memory to the **crnames** member of the **options** structure (if the structure is supplied as an argument). The function nag_ip_free (h02xzc) should be used to free this memory. You should **not** use the standard C function free() for this purpose.

10 Example

For an example of the use of $nag_ip_mps_free$ (h02bvc) see the documentation for $nag_ip_mps_read$ (h02buc).

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