1 Purpose
nag_zge_load (f16thc) initialises a complex general matrix.

2 Specification
void nag_zge_load (Nag_OrderType order, Integer m, Integer n, Complex alpha, Complex diag, Complex a[], Integer pda, NagError *fail)

3 Description
nag_zge_load (f16thc) forms the complex $m$ by $n$ general matrix $A$ given by

$$a_{ij} = \begin{cases} 
\text{diag} & \text{if } i = j \\
\text{alpha} & \text{if } i \neq j 
\end{cases}$$

4 References
None.

5 Parameters
1: order – Nag_OrderType
   
   On entry: the order parameter specifies the two-dimensional storage scheme being used, i.e., row-major ordering or column-major ordering. C language defined storage is specified by order = Nag_RowMajor. See Section 2.2.1.4 of the Essential Introduction for a more detailed explanation of the use of this parameter.
   
   Constraint: order = Nag_RowMajor or Nag_ColMajor.

2: m – Integer
   
   On entry: $m$, the number of rows of the matrix $A$.
   
   Constraint: $m \geq 0$.

3: n – Integer
   
   On entry: $n$, the number of columns of the matrix $A$.
   
   Constraint: $n \geq 0$.

4: alpha – Complex
   
   On entry: the value to be assigned to the off-diagonal elements of $A$.

5: diag – Complex
   
   On entry: the value to be assigned to the diagonal elements of $A$.

6: a[dim] – Complex
   
   Note: the dimension, dim, of the array a must be at least max(1, pda x n) when order = Nag_ColMajor and at least max(1, pda x m) when order = Nag_RowMajor.
   
   If order = Nag_ColMajor, the (i,j)th element of the matrix $A$ is stored in $a[(j-1) \times \text{pda} + i - 1]$ and if order = Nag_RowMajor, the (i,j)th element of the matrix $A$ is stored in $a[(i-1) \times \text{pda} + j - 1]$.
On entry: the $m$ by $n$ general matrix $A$.

7:  

$pda$ – Integer

Input

On entry: the stride separating matrix row or column elements (depending on the value of $order$) in the array $a$.

Constraints:

if $order = \text{Nag\_ColMajor}$, $pda \geq \max(1, m)$;

if $order = \text{Nag\_RowMajor}$, $pda \geq \max(1, n)$.

8:  

fail – NagError *  

Input/Output

The NAG error parameter (see the Essential Introduction).

6 Error Indicators and Warnings

NE_INT

On entry, $m = \langle value \rangle$.

Constraint: $m \geq 0$.

On entry, $n = \langle value \rangle$.

Constraint: $n \geq 0$.

On entry, $pda = \langle value \rangle$.

Constraint: $pda \geq \max(1, m)$.

On entry, $pda = \langle value \rangle$.

Constraint: $pda \geq \max(1, n)$.

NE_BAD_PARAM

On entry, parameter $\langle value \rangle$ had an illegal value.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

None.