makesymmetric( ) — Make square matrix symmetric (Hermitian)

Description Syntax Remarks and examples Conformability Diagnostics Also see

Description

`makesymmetric(`*A*`)` returns *A* made into a symmetric (Hermitian) matrix by reflecting elements below the diagonal.

`_makesymmetric(`*A*`)` does the same thing but stores the result back in *A*.

Syntax

numeric matrix	`makesymmetric(`*numeric matrix A*`)`
void	`_makesymmetric(`*numeric matrix A*`)`

Remarks and examples

If *A* is real, elements below the diagonal are copied into their corresponding above-the-diagonal position.

If *A* is complex, the conjugate of the elements below the diagonal are copied into their corresponding above-the-diagonal positions, and the imaginary part of the diagonal is set to zero.

Whether *A* is real or complex, roundoff error can make matrix calculations that are supposed to produce symmetric matrices produce matrices that vary a little from symmetry, and `makesymmetric()` can be used to correct the situation.

Conformability

`makesymmetric(`*A*`)`:

A:	$n \times n$
result:	$n \times n$

`_makesymmetric(`*A*`)`:

A:	$n \times n$

Diagnostics

`makesymmetric(`*A*`)` and `_makesymmetric(`*A*`)` abort with error if *A* is not square. Also, `_makesymmetric()` aborts with error if *A* is a view.

Also see

[M-5] **issymmetric( )** — Whether matrix is symmetric (Hermitian)

[M-4] **Manipulation** — Matrix manipulation