NAG Fortran Library Chapter Contents

F01 – Matrix Operations, Including Inversion

Note: please refer to the Users' Note for your implementation to check that a routine is available.

F01 Chapter Introduction

Routine Name	Mark of Introduction	Purpose
F01ABF	1	Inverse of real symmetric positive-definite matrix using iterative refinement
F01ADF	2	Inverse of real symmetric positive-definite matrix
F01BLF	5	Pseudo-inverse and rank of real m by n matrix $(m \geq n)$
F01BRF	7	LU factorization of real sparse matrix
F01BSF	7	LU factorization of real sparse matrix with known sparsity pattern
F01BUF	7	$ULDL^T U^T$ factorization of real symmetric positive-definite band matrix
F01BVF	7	Reduction to standard form, generalized real symmetric-definite banded eigenproblem
F01CKF	2	Matrix multiplication
F01CRF	7	Matrix transposition
F01CTF	14	Sum or difference of two real matrices, optional scaling and transposition
F01CWF	14	Sum or difference of two complex matrices, optional scaling and transposition
F01LEF	11	LU factorization of real tridiagonal matrix
F01LHF	13	LU factorization of real almost block diagonal matrix
F01MCF	8	LDL^T factorization of real symmetric positive-definite variable-bandwidth matrix
F01QGF	14	RQ factorization of real m by n upper trapezoidal matrix $(m \leq n)$
F01QJF	14	RQ factorization of real m by n matrix $(m \leq n)$
F01QKF	14	Operations with orthogonal matrices, form rows of Q, after RQ factorization by F01QJF
F01RGF	14	RQ factorization of complex m by n upper trapezoidal matrix $(m \leq n)$
F01RJF	14	RQ factorization of complex m by n matrix $(m \leq n)$
F01RKF	14	Operations with unitary matrices, form rows of Q, after RQ factorization by F01RJF
F01ZAF	14	Convert real matrix between packed triangular and square storage schemes
F01ZBF	14	Convert complex matrix between packed triangular and square storage schemes
F01ZCF	14	Convert real matrix between packed banded and rectangular storage schemes
F01ZDF	14	Convert complex matrix between packed banded and rectangular storage schemes