Syntax

\[
\text{real matrix } I(\text{real scalar } n) \\
\text{real matrix } I(\text{real scalar } m, \text{real scalar } n)
\]

Description

\(I(n)\) returns the \(n \times n\) identity matrix.

\(I(m, n)\) returns an \(m \times n\) matrix with 1s down its principal diagonal and 0s elsewhere.

Remarks and examples

\(I()\) must be typed in uppercase.

Conformability

\[
\begin{array}{ll}
\text{I}(n): & \\
\text{n: } & 1 \times 1 \\
\text{result: } & n \times n \\
\text{I}(m, n): & \\
\text{m: } & 1 \times 1 \\
\text{n: } & 1 \times 1 \\
\text{result: } & m \times n \\
\end{array}
\]

Diagnostics

\(I(n)\) aborts with error if \(n\) is less than 0 or is missing. \(n\) is interpreted as \(\text{trunc}(n)\).

\(I(m, n)\) aborts with error if \(m\) or \(n\) are less than 0 or if they are missing. \(m\) and \(n\) are interpreted as \(\text{trunc}(m)\) and \(\text{trunc}(n)\).

Also see

[M-4] standard — Functions to create standard matrices