Syntax

\texttt{void \_diag(numeric matrix Z, numeric vector v)}

Description

\_diag(Z, v) replaces the diagonal of the matrix Z with v. Z need not be square.

1. If \(v\) is a vector, the vector replaces the principal diagonal.
2. If \(v\) is 1 \(\times\) 1, each element of the principal diagonal is replaced with \(v\).
3. If \(v\) is a void vector (1 \(\times\) 0 or 0 \(\times\) 1), Z is left unchanged.

Conformability

\_diag(Z, v):
\begin{align*}
\text{input:} \\
Z & : n \times m, n \leq m \\
v & : 1 \times 1, 1 \times n, \text{ or } n \times 1 \\
\end{align*}

or
\begin{align*}
Z & : n \times m, n > m \\
v & : 1 \times 1, 1 \times m, \text{ or } m \times 1 \\
\end{align*}

\text{output:} \\
Z & : n \times m

Diagnostics

\_diag(Z, v) aborts with error if Z or v is a view.

Also see

[M-5] diag() — Create diagonal matrix
[M-4] manipulation — Matrix manipulation