_diag() — Replace diagonal of a matrix

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

Syntax

    void _diag(numeric matrix Z, numeric vector v)

Conformability

_diag(Z, v):

input:

<table>
<thead>
<tr>
<th>Z: n × m, n ≤ m</th>
</tr>
</thead>
<tbody>
<tr>
<td>v: 1 × 1, 1 × n,  or n × 1</td>
</tr>
</tbody>
</table>

or

<table>
<thead>
<tr>
<th>Z: n × m, n &gt; m</th>
</tr>
</thead>
<tbody>
<tr>
<td>v: 1 × 1, 1 × m,  or m × 1</td>
</tr>
</tbody>
</table>

output:

| Z: n × m |

Diagnostics

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

Also see

[M-5] diag() — Create diagonal matrix