Package ‘diagonals’

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Title Block Diagonal Extraction or Replacement
Version 6.4.0
Description Several tools for handling block-matrix diagonals and similar constructs are implemented. Block-diagonal matrices can be extracted or removed using two small functions implemented here. In addition, non-square matrices are supported. Block diagonal matrices occur when two dimensions of a data set are combined along one edge of a matrix. For example, trade-flow data in the 'decompr' and 'gvc' packages have each country-industry combination occur along both edges of the matrix.

Depends R (>= 2.10)
License GPL-3
BugReports https://github.com/bquast/diagonals/issues
Suggests testthat, knitr, rmarkdown
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Several tools for handling block-matrix diagonals and similar constructs are implemented. Block-diagonal matrices can be extracted or removed using two small functions implemented here. In addition, non-square matrices are supported. Block diagonal matrices occur when two dimensions of a data set are combined along one edge of a matrix. For example, trade-flow data in the decompr' and 'gvc' packages have each country-industry combination occur along both edges of the matrix.

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See Also
https://qua.st/diagonals

Description
Fat Matrix Diagonals
fatdiag set

Usage
```r
fatdiag(x = 1, steps = NULL, size = NULL, nrow = NULL, ncol = NULL)
fatdiag(x, steps = NULL, size = NULL, on_diagonal = TRUE) <- value
```

Arguments
- `x`: a matrix where the dimensions are integer multiples of size or integer divisors of steps
- `steps`: the required number of steps (block matrices) across the diagonal
- `size`: the width or height of the matrix being dropped over the diagonal of matrix x
- `nrow`: the number of rows
- `ncol`: the number of columns
- `on_diagonal`: should the operation be applied to the elements on the fat diagonal.
- `value`: replacement value
Details

Either steps or size is expected to be provided.

Functions

- fatdiag<-. the set version of fatdiag

Examples

\[
\text{fatdiag}(12, \text{steps}=3) \\
(m <- \text{matrix}(111, \text{nrow}=6, \text{ncol}=9)) \\
\text{fatdiag}(m, \text{steps}=3) \leftarrow 5 \\
\text{fatdiag}(m, \text{steps}=3) \\
\text{fatdiag}(12, \text{size}=4) \\
\text{fatdiag}(12, \text{size} = c(3, 4))
\]

split_vector

Description

Split Vector

Usage

\[\text{split\_vector}(x, \text{steps} = \text{NULL}, \text{size} = \text{NULL}, \text{replacement} = 0)\]

Arguments

- \(x\) a numeric or character vector
- \(\text{steps}\) the number of steps
- \(\text{size}\) the size of the step
- \(\text{replacement}\) value to be inserted on the diagonal, by default this is zero (0).

Details

Either steps or size is expected to be provided.
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