Package ‘lotri’

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Title A Simple Way to Specify Symmetric, Block Diagonal Matrices
Version 0.2.1
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Description Provides a simple mechanism to specify a symmetric block diagonal matrices (often used for covariance matrices). This is based on the domain specific language implemented in 'nlmixr' but expanded to create matrices in R generally instead of specifying parts of matrices to estimate.
Depends R (>= 3.4.0)
License GPL (>= 2)
Encoding UTF-8
LazyData true
Imports Matrix, methods, utils, stats
Suggests testthat, covr, knitr, rmarkdown
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VignetteBuilder knitr
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Repository CRAN
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R topics documented:

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Description
Easily Specify block-diagonal matrices with lower triangular info

Usage
lotri(x, ..., envir = parent.frame())

Arguments
- **x**: list, matrix or expression, see details
- **...**: Other arguments treated as a list that will be concatenated then reapplied to this function.
- **envir**: the environment in which expr is to be evaluated. May also be NULL, a list, a data frame, a pairlist or an integer as specified to `sys.call`.

Details
This can take an R matrix, a list including matrices or expressions, or expressions
Expressions can take the form
name ~ estimate
Or the lower triangular matrix when "adding" the names
name1 + name2 ~ c(est1, est2, est3)
The matrices are concatenated into a block diagonal matrix, like *bdig*, but allows expressions to specify matrices easier.

Value
named symmetric matrix useful in RxODE simulations (and perhaps elsewhere)

Author(s)
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Examples
```r
## A few ways to specify the same matrix
lotri({et2 + et3 + et4 ~ c(40,
       0.1, 20,
       0.1, 0.1, 30)})

## You do not need to enclose in {}
```
lotri(et2 + et3 + et4 ~ c(40,
    0.1, 20,
    0.1, 0.1, 30),
    et5 ~ 6)
## But if you do enclose in {}, you can use
## multi-line matrix specifications:
lotri({et2 + et3 + et4 ~ c(40,
    0.1, 20,
    0.1, 0.1, 30);
    et5 ~ 6;})
## You can also add lists or actual R matrices as in this example:
lotri(list(et2 + et3 + et4 ~ c(40,
    0.1, 20,
    0.1, 0.1, 30),
    matrix(1,dimnames=list("et5","et5"))))
## Overall this is a flexible way to specify symmetric block
diagonal matrices.
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