Package 'Massign'

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Type Package

Title Simple Matrix Construction

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Description Constructing matrices for quick prototyping can be a nuisance, requiring the user to think about how to fill the matrix with values using the matrix() function. The %<-% operator solves that issue by allowing the user to construct matrices using code that shows the actual matrices.

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Suggests testthat

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R topics documented:

Massign *Construct a matrix from a (formatted) string*

Description

Constructing matrices for quick prototyping can be very annoying in R, requiring the user to think about how to fill the matrix with values using the `matrix(data, nrow, ncol, byrow)` function. The `%<-%` operator solves that issue by allowing the user to construct string matrices that look like actual matrices.

Usage

```
var %<-% value

value %->% var
```

Arguments

var	the variable to which the matrix will be assigned. Can be an element of a list.
value	a matrix in character form to be converted to a numeric matrix. See examples for valid forms.

See Also

matrix

Examples

```
# Basic usage
M %<-% "   1,  0.2, -0.3,  0.4
         0.2,    1,  0.6, -0.4
        -0.3,  0.6,    1,  0.4
         0.4, -0.4,  0.4,    1"
M

# Variables allowed!
phi <- 1.5
V %<-% "1,     1,     1
        1,   phi, phi^2
        1, phi^2, phi^4"
V

# Lower triangular is made symmetric:
S %<-% "   1
         0.5,   1
        -0.2, 0.2,   1"
S

# Complex matrices work too:
```

```
C %<-% "  1+2i, 2+1i, 3+4i
        4+0.5i, 5+2i, 6+4i"
C

# And lastly, if you're a fan of LaTeX and one-liners:
L %<-% "1, 2, 3 \\ 4, 5, 6 \\ 7, 8, 9 \\ 10, 11, 12"
# (although this kind of defeats the WYSIWYG purpose of Massign)
```

`Multiplipe` *Quickly test matrix multiplication of two matrices interpreted from strings.*

Description

Building on Massign's core functionality, the Multiplipe operator ‘ allows for quick prototyping of matrix multiplications.

Usage

```
matrix1 %*>% matrix2
```

Arguments

`matrix1`	a matrix or Massign character matrix that premultiplies
`matrix2`	a matrix or Massign character matrix that postmultiplies

See Also

`matrix`, `Massign`

Examples

```
# Basic usage
"1, 2
 3, 4" %*>%
 " 0, 1
   1, 0"

# Second argument can be a matrix:
"1, 2, pi \\ 3, 4, 1 \\ 3, 2, 1" %*>% diag(c(1, 2, 3))

# Or the first, for that matter:
diag(c(1, 2, 3)) %*>% "1, 2, pi \\ 3, 4, 1 \\ 3, 2, 1"
```

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