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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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:
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

\texttt{matrix1 \%\%\% matrix2}

Arguments

\texttt{matrix1}  \hspace{1cm} a matrix or Massign character matrix that premultiplies

\texttt{matrix2}  \hspace{1cm} a matrix or Massign character matrix that postmultiplies

See Also

\texttt{matrix, Massign}

Examples

\texttt{# Basic usage}
\begin{verbatim}
  \texttt{1, 2}
  \texttt{3, 4 \%\%\%}
  \texttt{\texttt{"0, 1}}
  \texttt{\texttt{1, 0}}
\end{verbatim}

\texttt{# Second argument can be a matrix:}
\begin{verbatim}
  \texttt{\texttt{1, 2, pi \texttt{\|} 3, 4, 1 \texttt{\|} 3, 2, 1} \%\%\% \texttt{diag(c(1, 2, 3))}
\end{verbatim}

\texttt{# Or the first, for that matter:}
\begin{verbatim}
  \texttt{diag(c(1, 2, 3)) \%\%\% \texttt{\texttt{1, 2, pi \texttt{\|} 3, 4, 1 \texttt{\|} 3, 2, 1}}
\end{verbatim}
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