Package 'solver'

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Type Package

Title What the Package Does (Title Case)

Version 0.1.0

Author Who wrote it

Maintainer The package maintainer <yourself@somewhere.net>

Description More about what it does (maybe more than one line)
Use four spaces when indenting paragraphs within the Description.

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Encoding UTF-8

LazyData true

RoxygenNote 6.1.1.9000

R topics documented:

`errors` *Errors of a list of formulas.*

Description

`errors` returns all differences between the left and right sides of a list of formula (errors).

Usage

```
errors(endogenous, exogenous, formulas)
```

Arguments

`endogenous`	A list of variables to be used in evaluation (variables may be scalars, vectors or matrices)
`exogenous`	A list of parameters to be used in evaluation
`formulas`	A list of formulas

Value

A list of real numbers on the same skeleton as the endogenous variables

Examples

```
errors(formulas =
          list(price = price ~ 0.3 * variablecost + coefficient1,
               variablecost  = variablecost ~ 0.5 * price + coefficient2),
       endogenous = list(price = 1, variablecost=0.4),
       exogenous = list(coefficient1=0.56, coefficient2=0.7))
```

`solver` *solver: A package solving a system of equations.*

Description

The solver package provides two important functions: rsolve (which solves a system) and errors (which evaluates error terms)

`solveSystem` *Solve a system of equations.*

Description

`solveSystem` returns a set of endogenous variables that solve the system.

Usage

```
solveSystem(formulas, endogenous, exogenous, lowerBounds = NULL,
  upperBounds = NULL, maxIterations = 100, maxError = 5e-09)
```

Arguments

`formulas`	A list of formulas
`endogenous`	A list of variables to be used in evaluation (variables may be scalars, vectors or matrices)
`exogenous`	A list of parameters to be used in evaluation
`lowerBounds`	A list of lower bounds for endogenous variables
`upperBounds`	A list of upper bounds for endogenous variables
`maxIterations`	A maximum number of times the Newton algorithm should be applied (default value = 100)
`maxError`	Maximum total absolute error of all equations (default value = 5e-9)

Value

A vector of real numbers

Examples

```
solveSystem(formulas =
          list(price = price ~ 0.3 * variablecost + coefficient1,
               variablecost  = variablecost ~ 0.5 * price + coefficient2),
       endogenous = list(price = 1, variablecost=0.4),
       exogenous = list(coefficient1=0.56, coefficient2=0.7))
solveSystem(formulas =
          list(price = price ~ 0.3 * variablecost + coefficient1,
               variablecost  = variablecost ~ 0.5 * price + coefficient2),
      endogenous = list(price = c(wheat=1, rice=4), variablecost=c(wheat=0.4, rice=0.2)),
     exogenous = list(coefficient1=c(wheat=0.56, rice=4), coefficient2=c(wehat=0.7, rice=0.9)))
```

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