

Package: **piamutils** (via r-universe)

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Type Package

Title Utilities for the piam-verse

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Description This package contains utilities and helpers needed in various piam libraries.

License LGPL-3

URL <https://github.com/pik-piam/piamutils>

Imports dplyr, gamstransfer, magclass, magrittr, pkgload, quitte, rlang, stats, utils

Suggests testthat

Encoding UTF-8

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Config/pak/sysreqs cmake make libicu-dev libuv1-dev libx11-dev zlib1g-dev

Repository <https://pik-piam.r-universe.dev>

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compareMagpieObject	<i>compareMagpieObject</i>
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Description

A helper to analyze two magpie objects for differences.

Usage

```
compareMagpieObject(x, y, tol = 0)
```

Arguments

x	a magpie object or a string referring to a file that can be read in as a magpie object
y	a magpie object or a string referring to a file that can be read in as a magpie object
tol	optional value between 0 and 1 to restrict value differences between the two magpie objects to be listed, a data entry must exceed ‘tol’ percent of the maximum value difference observed in the data to be listed

Author(s)

Falk Benke

deletePlus	<i>Delete "+" in Variable Names. Optionally Save in File with Suffix "_withoutPlus"</i>
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Description

The function can take a multiple of input formats. It replaces "|+|", "|++|", "|+++|", ... by "|" in variable names and in this "deletes" the "plus-notation".

Usage

```
deletePlus(mif, writemif = FALSE)
```

Arguments

mif	A path to a mif-file (might be created by confGDX2MIF), a magpie object containing reporting, a quitte object, or a character vector or factor of variable names.
writemif	A single truth value. Only used when mif is a file path. Should the new mif with the adjusted names be saved? If yes the new name will have the suffix "_withoutPlus.mif".

Value

If mif is a file path and writemif is FALSE, a MAGPIE object. If mif is not a file path the result is the object mif with replaced variable names.

Examples

```
deletePlus(c(
  "ab|cd", # "ab|cd"
  "de|+|fgh", # "de|fgh"
  "i|j|++|k|l|++++|mno|p", # "i|j|k|l|mno|p"
  "++|q|+|r|+p|+u+v|+", # "++|q|+|r|+p|+u+v|+"
  "w|+|+|x")) # "w|x"
```

getSystemFile

*Find the path to R System Files for a given R library***Description**

A wrapper around [system.file](#) to make sure that the correct paths are returned when working with devtools::load_all() during development.

Usage

```
getSystemFile(..., package = "base", mustWork = FALSE)
```

Arguments

...	character vectors, specifying subdirectory and file(s) within some package
package	a character string with the name of a single package
mustWork	if TRUE, an error is given if there are no matching files

modifyVariableNames

*Modify Variable Names***Description**

Modify Variable Names

Usage

```
modifyVariableNames(x, modify, writeMifSuffix = NULL, ...)
```

Arguments

<code>x</code>	A path to a mif-file (might be created by <code>confGDX2MIF</code>), a magpie object containing reporting, a quitte object, or a character vector or factor of variable names.
<code>modify</code>	A function that modifies a character vector.
<code>writeMifSuffix</code>	NULL or a suffix for the file name if the result should be written as a mif-file.
<code>...</code>	Further arguments for the modify function.

Value

If `x` is a file path and `writeMifSuffix` is NULL, a MAGPIE object. If `x` is not a file path the result is the object `x` with replaced variable names.

<code>niceround</code>	<i>niceround returns human-readable string for big and small numbers Show everything before the dot and at least 'digits' significant digits For a data.frame, convert all numeric columns</i>
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Description

`niceround` returns human-readable string for big and small numbers Show everything before the dot and at least 'digits' significant digits For a data.frame, convert all numeric columns

Usage

```
niceround(x, digits = 3)
```

Arguments

<code>x</code>	either a vector or list of numbers, or a dataframe
<code>digits</code>	number of significant digits that are definitely kept

<code>readGdxToDf</code>	<i>readGdxToDf</i>
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Description

Read data for a given symbol from a.gdx file and return it as a dataframe using `gamstransfer::readGDX`

Usage

```
readGdxToDf(symbolName, pathToGdx, ...)
```

Arguments

symbolName	The name of a symbol to be extracted from.gdx.
pathToGdx	Path to a.gdx file.
...	Additional arguments passed to gamstransfer::readGDX.

Value

A data frame with data about symbolName from the given.gdx file.

Author(s)

Falk Benke

substitutePlaceholder *Substitute Placeholders in Variable Names.*

Description

Substitute Placeholders in Variable Names.

Usage

```
substitutePlaceholder(x, writeMifSuffix = NULL, substitutions = c(. = "$dot$"))
```

Arguments

x	A path to a mif-file (might be created by confGDX2MIF), a quitte object, or a character vector or factor of variable names.
writeMifSuffix	NULL or a suffix for the filename if the result should be written as a mif-file.
substitutions	A named character vector of placeholders with replacements as names.

Value

If x is not a file path the result is the object x with replaced variable names.

Examples

```
substitutePlaceholder(c(
  "3$dot$5", # "3.5"
  "3$dot5", # "3$dot5"
  "3.5", # "3.5"
  "$dot$dot$dot$dot$dot$dot$")) # ".dot.dot."
```

`writeDfToGDXparameter` *Export Data Frame / Data Table to GDX Parameter and save to file based on gamstransfer package*

Description

Export Data Frame / Data Table to GDX Parameter and save to file based on gamstransfer package

Usage

```
writeDfToGDXparameter(
  ddata,
 .gdxFileName,
  paramName,
  domainCols = NULL,
  valueCol = "value",
  description = ""
)
```

Arguments

<code>ddata</code>	data.frame or data.table
<code>.gdxFileName</code>	Output file name incl. path (e.g., "pXX_someName.gdx")
<code>paramName</code>	Name of the GAMS parameter in GDX
<code>domainCols</code>	Optional vector of column names for domains. If NULL, defaults to all columns except 'valueCol'.
<code>valueCol</code>	Name of the numerical value column (default: "value")
<code>description</code>	Optional description for the parameter (default: "")

Value

'NULL', invisibly. Called for the side effect of writing '.gdxFileName'.

Author(s)

Alex K. Hagen

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