

Package ‘jmvcore’

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Type Package

Title Dependencies for the 'jamovi' Framework

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Author Jonathon Love

Maintainer Jonathon Love <jon@thon.cc>

Description 'jamovi' is a framework for creating rich interactive statistical analyses (see <<https://www.jamovi.org>> for more information). This package represents the core libraries which jamovi analyses written in R depend upon.

URL <https://www.jamovi.org>

BugReports <https://github.com/jamovi/jmvcore/issues>

License GPL (>= 2)

Depends R (>= 3.2)

Imports R6 (>= 1.0.1), rjson, base64enc

Suggests testthat (>= 1.0.2), RProtoBuf, knitr, ggplot2

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Analysis	<i>the jmvcore Object classes</i>
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Description

the jmvcore Object classes

Usage

Analysis

Array

Column

Group

Html

Image

Preformatted

State

Table

Format

An object of class R6ClassGenerator of length 24.

canBeNumeric	<i>Determines whether an object is or can be converted to numeric</i>
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Description

Determines whether an object is or can be converted to numeric

Usage

canBeNumeric(object)

Arguments

object the object

Cell.BEGIN_GROUP	<i>Constants to specify formatting of Table cells</i>
------------------	---

Description

Cell.BEGIN_GROUP adds spacing above a cell

Usage

Cell.BEGIN_GROUP

Cell.END_GROUP

Cell.BEGIN_END_GROUP

Cell.NEGATIVE

Format

An object of class numeric of length 1.

Details

Cell.END_GROUP add spacing below a cell

Cell.BEGIN_END_GROUP add spacing above and below a cell

Cell.NEGATIVE specifies that the cells contents is negative

Examples

```
## Not run:

table$addFormat(rowNo=1, col=1, Cell.BEGIN_END_GROUP)

## End(Not run)
```

composeTerm	<i>Compose and decompose interaction terms to and from their components</i>
-------------	---

Description

Compose and decompose interaction terms to and from their components

Usage

```
composeTerm(components)

composeTerms(listOfComponents)

decomposeTerm(term)

decomposeTerms(terms)
```

Arguments

components	a character vectors of components
listOfComponents	a list of character vectors of components
term	a string with components separated with colons
terms	a character vector of components separated with colons

Examples

```
composeTerm(c('a', 'b', 'c'))
# 'a:b:c'

composeTerm(c('a', 'b', 'with space'))
# 'a:b:`with space`'

decomposeTerm('a:b:c')
# c('a', 'b', 'c')

decomposeTerm('a:b:`with space`')
# c('a', 'b', 'with space')
```

constructFormula	<i>Construct a formula string</i>
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Description

Construct a formula string

Usage

```
constructFormula(dep = NULL, terms)
```

Arguments

dep	the name of the dependent variable
terms	list of character vectors making up the terms

Value

a string representation of the formula

Examples

```
constructFormula(terms=list('a', 'b', c('a', 'b')))
# a+b+a:b

constructFormula('f', list('a', 'b', c('a', 'b')))
# "f~a+b+a:b"

constructFormula('with spaces', list('a', 'b', c('a', 'b')))
#'with spaces`~a+b+a:b'
```

create	<i>Create an analysis</i>
--------	---------------------------

Description

Used internally by jamovi

Usage

```
create(ns, name, optionsPB, datasetId, analysisId, revision)
```

Arguments

ns	package name
name	analysis name
optionsPB	options protobuf object
datasetId	dataset id
analysisId	analysis id
revision	revision

createError	<i>Create and throw errors</i>
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Description

These functions are convenience functions for creating and throwing errors.

Usage

```
createError(formats, code = NULL, ...)
```

```
reject(formats, code = NULL, ...)
```

Arguments

formats	a format string which is passed to format
code	an error code
...	additional arguments passed to format

extractErrorMessage	<i>Extracts the error message from an error object</i>
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Description

Extracts the error message from an error object

Usage

```
extractErrorMessage(error)
```

Arguments

error	an error object
-------	-----------------

format	<i>Format a string with arguments</i>
--------	---------------------------------------

Description

Substitutes the arguments into the argument str. See the examples below.

Usage

```
format(str, ..., context = "normal")
```

Arguments

str	the format string
...	the arguments to substitute into the string
context	'normal' or 'R'

Value

the resultant string

Examples

```
jmvcore::format('the {} was delish', 'fish')
# 'the fish was delish'

jmvcore::format('the {} was more delish than the {}', 'fish', 'cow')
# 'the fish was more delish than the cow'

jmvcore::format('the {1} was more delish than the {0}', 'fish', 'cow')
# 'the cow was more delish than the fish'

jmvcore::format('the {what} and the {which}', which='fish', what='cow')
# 'the cow and the fish'

jmvcore::format('that is simply not {}', TRUE)
# 'that is simply not true'

jmvcore::format('that is simply not {}', TRUE, context='R')
# 'that is simply not TRUE'
```

isError *Determine if an object is an error*

Description

Determine if an object is an error

Usage

```
isError(object)
```

Arguments

object the object to test

Value

TRUE if the object is an error

naOmit *remove missing values from a data frame listwise*

Description

removes all rows from the data frame which contain missing values (NA)

Usage

```
naOmit(object)
```

Arguments

object the object to remove missing values from

Details

this function is equivalent to `na.omit` from the stats package, however it preserves attributes on columns in data frames

Options

The jmv Options classes

Description

The jmv Options classes

Usage

Options

OptionBool

OptionList

OptionNMXList

OptionVariables

OptionVariable

OptionTerms

OptionInteger

OptionNumber

OptionString

OptionGroup

OptionSort

OptionArray

OptionPairs

Format

An object of class R6ClassGenerator of length 24.

`select`*Create a new data frame with only the selected columns*

Description

Shorthand equivalent to `subset(df, select=columnNames)`, however it additionally preserves attributes on the columns

Usage

```
select(df, columnNames)
```

Arguments

`df` the data frame
`columnNames` the names of the columns to make up the new data frame

Value

the new data frame

`sourcify`*Converts basic R object into their source representation*

Description

Converts basic R object into their source representation

Usage

```
sourcify(object, indent = "")
```

Arguments

`object` the object to convert to source
`indent` the level of indentation to use

Value

a string of the equivalent source code

Examples

```
sourcify(NULL)

# 'NULL'

sourcify(c(1,2,3))

# 'c(1,2,3)''

l <- list(a=7)
l[['b']] <- 3
l[['c']] <- list(d=3, e=4)
sourcify(l)

# 'list(
#   a=7,
#   b=3,
#   c=list(
#     d=3,
#     e=4))'
```

startsWith*Test whether strings start or end with a particular string*

Description

Same as `base::startsWith()` and `base::endsWith()` except available for `R < 3.3`

Usage

```
startsWith(x, prefix)
```

```
endsWith(x, suffix)
```

Arguments

<code>x</code>	a string to test
<code>prefix</code>	a string to test the presence of
<code>suffix</code>	a string to test the presence of

stringifyTerm	<i>Converts a term into a string</i>
---------------	--------------------------------------

Description

Converts a term (a vector of components) into a string for display purposes

Usage

```
stringifyTerm(components, sep = getOption("jmvTermSep", ":"))
```

Arguments

components	a character vector of components
sep	a separator to go between the components

Value

the components joined together into a string for display

Examples

```
stringifyTerm(c('a', 'b', 'c'))  
# "a:b:c"  
  
stringifyTerm(c('a', 'b', 'c'), sep=' * ')  
# "a * b * c"  
  
options('jmvTermSep', ' * ')  
stringifyTerm(c('a', 'b', 'c'))  
# "a * b * c"  
  
#' stringifyTerm(c(`quoted`, 'b', 'c'))  
# "quoted * b * c"
```

themes	<i>The jamovi plot themes</i>
--------	-------------------------------

Description

This contains the following plot themes: ‘themes\$default’ is the default theme ‘themes\$hadley’ is a theme based on the default ggplot2 theme ‘themes\$iheartspss’ is a theme based on the default SPSS theme ‘themes\$minimal’ is a minimal theme ‘themes\$liberace’ is a gold theme

Usage

themes

Format

An object of class R6 of length 7.

toB64	<i>Convert names to and from Base64 encoding</i>
-------	--

Description

Note: uses the . and _ characters rather than + and / allowing these to be used as variable names

Usage

toB64(names)

fromB64(names)

Arguments

names the names to be converted base64

toNumeric	<i>Converts a vector of values to numeric</i>
-----------	---

Description

Similar to `as.numeric`, however if the object has a `values` attribute attached, these are used as the numeric values

Usage

```
toNumeric(object)
```

Arguments

object	the vector to convert
--------	-----------------------

tryNaN	<i>try an expression, and return NaN on failure</i>
--------	---

Description

if the expression fails, NaN is returned silently

Usage

```
tryNaN(expr)
```

Arguments

expr	an expression to evaluate
------	---------------------------

Value

the result, or NaN on failure

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