

Package ‘pisar’

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Type Package

Title pisar: pISA-tree Support Functions

Version 0.1.0.9000

Description The package provides several functions for support and use of pISA-tree.

License GPL-3

URL <https://github.com/NIB-SI/pisar>

Encoding UTF-8

LazyData true

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jsonlite,
sys

VignetteBuilder knitr

Suggests knitr,
rmarkdown

R topics documented:

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createISAtab

*Export to ISA-tab***Description**

Export pISA-tree investigation into ISA-tab files.

Usage

```
createISAtab(iroot, files, path, zip = TRUE, isamap)
```

Arguments

iroot	path to investigation. If missing, a interactively navigate to the desired investigation and select investigation metadata file.
files	a vector of assay metadata file names (with study and assay path) to export. If missing, all assays in selected investigation will be processed.
path	path to the exported files, default is /ISA-tab/ folder in the investigation path.
zip	controls creation of zip file, created if TRUE.
isamap	path and name of the file with mapping of pISA-tree and ISA-tab keys. If missing, the mapping file that comes with the package pisar is used.

Value

character vector, names of created files.

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
## Not run:
# interactively select investigation metadata file for export.
isafiles <- createISAtab()
# export one assay from the demonstrative investigation
iroot <- file.path(find.package("pisar"), "extdata/_p_Test-pISA-tab/_I_i")
files <- "_S_s/_A_a-GCMS/_ASSAY_METADATA.TXT"
path <- "../ISA-tab"
createISAtab(iroot, files, path)

## End(Not run)
```

fileName	<i>Extract file name</i>
----------	--------------------------

Description

Extract file name from a file path.

Usage

```
fileName(x, ...)
```

Arguments

x	Complete file path or file name.
...	Any other arguments.

Value

File name (character string).

Note

Parameter ... is ignored at this time.

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

See Also

[fileType](#)

Examples

```
fileName(".\validation.Rnw")
fileName("./bla/validation.Rnw")
fileName("./validation.")
fileName("./validation")
```

fileType	<i>Extract file type</i>
----------	--------------------------

Description

Extract file type from a file path.

Usage

```
fileType(x, ...)
```

Arguments

x Complete file path or file name.
 ... Any other arguments.

Value

File type (character string).

Note

Parameter ... is ignored at this time.

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
fileName(".\\validation.Rnw")
fileName("./bla/validation.Rnw")
fileName("./validation.")
fileName("./validation")
```

fsummary

As factor summary of a data frame

Description

As factor summary of a data frame

Usage

```
fsummary(x, ...)
```

Arguments

x Data frame.
 ... Any other arguments.

Value

Summary object.

Note

Argument ... not used

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
fsummary(data.frame(x=rnorm(20),txt=sample(letters,20,rep=TRUE)))
```

getLayer	<i>Get pISA layer name</i>
----------	----------------------------

Description

Get pISA layer name

Usage

```
getLayer(x, path = getwd())
```

Arguments

x	Layer character (one of "p", "I", "S", or "A").
path	Directory path, defaults to working directory.

Value

Character string with layer name.

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
## Not run:
astring <- "_p_Demo/_I_Test/_S_Show/_A_Work-R/other"
oldwd <- setwd(system.file("extdata",astring,package="pisar"))
oldwd
.pname <- getLayer("p")
.pname
getLayer("I")
getLayer("S")
getLayer("A")
if(interactive()) setwd(oldwd)
getwd()

## End(Not run)
```

getMeta	<i>Get metadata value</i>
---------	---------------------------

Description

Get metadata value

Usage

```
getMeta(x, key, nl = TRUE)
```

Arguments

x	Two column character data frame with Key / Value pairs.
key	String, key name. Trailing colon can be omitted.
nl	Logical, expand backslash character for new lines.

Value

Key value (character string or number).

Note

Argument key is matched exactly to the key names.

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
## Not run:
astring <- "_p_Demo/_I_Test/_S_Show/_A_Work-R/other"
oldwd <- setwd(system.file("extdata",astring,package="pisar"))
oldwd
.iroot <- getRoot("I")
.imeta <- readMeta(.iroot)
getMeta(.imeta, "Description")
# list
listmeta <- list(Title = "My title"
  , Description = "A longer description")
getMeta( listmeta, "Title")
getMeta( listmeta, "Description")
setwd(oldwd)

## End(Not run)
```

getRoot

Get root directory for pISA layer

Description

Get root directory for pISA layer

Usage

```
getRoot(x = "p", path = getwd(), ...)
```

Arguments

x	Character characteristic for pISA layer (one of "p", "I", "S", or "A").
path	Path within the pISA-tree.
...	Any other arguments.

Value

Relative path to the layer directory (from working directory).

Note

The path should be compliant with the pISA-tree structure. Path defaults to the working directory, which is usually in or below an assay. Argument ... is not used.

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
getRoot("p", path="d:/_p_prj/_I_inv/_S_st/_A_asy/other/doc")
getRoot("A", path="d:/_p_prj/_I_inv/_S_st/_A_asy")
```

out.path	<i>Create output directory</i>
----------	--------------------------------

Description

Create output directory, name it with appended arguments.

Usage

```
out.path(out.dir = "../out", args = "", which = 1:length(args))
```

Arguments

out.dir	Character string, base output directory.
args	Character vector, arguments used for sub-analysis. or from a batch call
which	Numeric vector, which arguments to use.

Value

Directory name.

Note

Directory is created

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
out.path()
out.path(args="")
dir.exists("../out/xx-ena-dva")
out.path(args=c("xx.txt", "ena", "dva"))
dir.exists("../out/xx-ena-dva")
unlink("../out/xx-ena-dva", recursive=TRUE)
dir.exists("../out/xx-ena-dva")
```

pasteMeta

Paste metadata values

Description

Paste metadata values into a string.

Usage

```
pasteMeta(x, kvsep = "\t", nlsep = "\n")
```

Arguments

x	Two column character data frame with Key / Value pairs or a list of Vales named by Keys.
kvsep	Key/Value separator (default is a tab character).
nlsep	line separator (default is new line).

Value

Character string with concatenated key values.

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
## Not run:
astring <- "_p_Demo/_I_Test/_S_Show/_A_Work-R/other"
oldwd <- setwd(system.file("extdata", astring, package="pisar"))
oldwd
.iroot <- getRoot("I")
.imeta <- readMeta(.iroot)
x <- pasteMeta(.imeta)
x
cat(x)
# list
listmeta <- list(Title = "My title"
  , Description = "A longer description")
x <- pasteMeta( listmeta )
x
cat(x)
setwd(oldwd)
```



```
## End(Not run)
```

pisa	<i>Extract pISA-tree details</i>
------	----------------------------------

Description

Extract pISA-tree details: name, root and metadata for all layers above the current directory (below or in the Assay).

Usage

```
pisa(path = getwd(), addArgs = NULL, global = TRUE)
```

Arguments

path	Path to part of pISA-tree, defaults to working directory.
addArgs	Character vector, additional arguments.
global	If TRUE (default) auxiliary objects will be created in the global environment (see note).

Value

A list with layer information components, possibly changing objects in the global environment (See Note).

Note

If argument `global` is TRUE (default), auxiliary objects with pISA related information will be created in the global environment. Sometimes it is more convenient to use such object instead of the elements of the (invisibly) returned `pisa` list. The object are hidden (names start with dot); use `ls(pattern="^\\.", all.names=TRUE)` to get a full list of hiddent objects. The created objects are

- .`[pisa name]`** layer name
- .`[pisa root]`** layer path (relative to the working directory)
- .`[pisa meta]`** data frame with corresponding layer metadata
- .`oroot`** output directory path
- .`inroot`** input (data) directory path
- .`reproot`** report directory path
- .`reproot`** report directory path
- .`outputFile`** output file path and name
- .`args`** a vector of additional arguments (possibly from a batch call)
- .`pfn`** phenodata file path and name (relative to Investigation)
- .`ffn`** featuredata fiel path and name
- .`outfn`** output file basename (no type)
- .`rnwfn`** knitr source file name (*.Rnw or *.Rmd)

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
## Not run:
astring <- "_p_Demo/_I_Test/_S_Show/_A_Work-R/other"
oldwd <- setwd(system.file("extdata",astring,package="pisar"))
oldwd
pisa <- pisa(global=FALSE)
str(pisa)
names(pisa)
dir(pisa$p$root)
# Set pisa options
options(pisa=pisa(global=FALSE))
# Access details with $
options()$pisa$p$root
setwd(oldwd)

## End(Not run)
```

pisar	<i>pisar: pISA-tree support functions</i>
-------	---

Description

The package provides several functions for support and use of pISA-tree.

Usage

pISA-tree is a standardized directory tree for storing project information under ISA paradigm. This set of functions enables use of metadata for reproducible documents. Export of investigations to ISA-tab format is also provided.

print.pISAMeta	<i>Print metadata object as Dlist</i>
----------------	---------------------------------------

Description

Print metadata object as Dlist

Usage

```
## S3 method for class 'pISAMeta'
print(x, width = max(nchar(x[, 1])) * 3.5, ...)
```

Arguments

- x Metadata object, data.frame with two columns.
- width Estimated text width.
- ... Any other arguments.

Note

Metadata table is printed in convenient Dlist form.

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
## Not run:
.pISALoc <- system.file("extdata", "_p_Demo", package="pisar")
readMeta(.pISALoc)

## End(Not run)
```

readMeta

Read metadata file from the given directory

Description

Read metadata file from the given directory

Usage

```
readMeta(x = ".", ...)
```

Arguments

x	File path to the pISA layer.
...	Any other arguments.

Value

Data frame with Key/Value pairs with class 'pISAMeta'.

Note

Metadata table gets the class 'Dlist' to inherit a convenient print.

Author(s)

Andrej Blejec <andrej.blejec@nib.si>

Examples

```
## Not run:
astring <- "_p_Demo/_I_Test/_S_Show/_A_Work-R/other"
oldwd <- setwd(system.file("extdata",astring,package="pisar"))
oldwd
.aroot <- getRoot("A")
.ameta <- readMeta(.aroot)
.ameta
setwd(oldwd)

## End(Not run)
```

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