

Package ‘repmis’

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Type Package

Title Miscellaneous Tools for Reproducible Research

Description Tools to load 'R' packages
and automatically generate BibTeX files citing them as well as load and
cache plain-text and 'Excel' formatted data stored on 'GitHub', and
from other sources.

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License GPL (>= 3)

Depends R (>= 3.0.0)

URL <https://CRAN.R-project.org/package=repmis>

BugReports <https://github.com/christophergandrud/repmis/issues>

Imports data.table, digest, httr, plyr, R.cache

Suggests xlsx

Encoding UTF-8

RoxygenNote 7.3.2

NeedsCompilation no

Repository CRAN

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git_stamp	<i>Get git stamp (commit and branch) for a repository</i>
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Description

The function returns the latest git commit and branch for the repo specified in repo or the current working directory if unspecified. Git is needed for the command to run. The functions makes it possible to include the latest git commit and branch in a run to be able to know exactly which code where used.

Usage

```
git_stamp(repo = getwd())
```

Arguments

repo Git repo directory. If unspecified, then the current working directory is used.

Value

character vector with latest commit and branch

InstallOldPackages	<i>Install old versions of R packages.</i>
--------------------	--

Description

InstallOldPackages installs specific R package versions.

Usage

```
InstallOldPackages(  
  pkgs,  
  versions,  
  oldRepos = "http://cran.r-project.org",  
  lib = NULL  
)
```

Arguments

<code>pkgs</code>	character vector of package names to install.
<code>versions</code>	character vector of package version numbers. to install. The order must match the order of package names in <code>pkgs</code> .
<code>oldRepos</code>	character name of repository to download the packages old package versions from. Default is <code>oldRepos = "http://cran.r-project.org"</code> .
<code>lib</code>	character vector giving the library directories where to install the packages. Recycled as needed. If NULL, defaults to the first element of <code>.libPaths()</code> .

Details

Installs specific R package versions.

See Also

[install.packages](#) and [download.file](#)

Examples

```
## Not run:
# Install old versions of the e1071 and gtools packages.
Names <- c("e1071", "gtools")
Vers <- c("1.6", "2.6.1")
InstallOldPackages(pkgs = Names, versions = Vers)

## End(Not run)
```

LoadandCite

Install, load, and cite R packages

Description

LoadandCite can install and load R packages as well as automatically generate a BibTeX file citing the packages.

Usage

```
LoadandCite(
  pkgs = NULL,
  versions = NULL,
  Rversion = NULL,
  bibtex = TRUE,
  style = "plain",
  tweak = TRUE,
  install = FALSE,
  file = NULL,
  repos = NULL,
  lib = NULL
)
```

Arguments

<code>pkgs</code>	a character vector of R package names. If <code>pkgs = NULL</code> then <code>LoadandCite</code> only cites the non-base packages in the current session. It does not load or install any packages.
<code>versions</code>	character vector of package version numbers to install. Only works if <code>install = TRUE</code> . The order must match the order of package names in <code>pkgs</code> .
<code>Rversion</code>	a character string specifying a particular R version. If the version of R currently running differs from <code>Rversion</code> <code>LoadandCite</code> a warning will be given. This argument is for replication purposes.
<code>bibtex</code>	logical. If <code>TRUE</code> than a BibTeX formatted citation file is created. If <code>FALSE</code> than the citations are returned as plain text.
<code>style</code>	character string indicating stylistic elements to add to the citations. Currently supports 'plain', i.e. no special formatting and 'JSS' to match the BibTeX style for the <i>Journal of Statistical Software</i> (see https://www.jstatsoft.org/style).
<code>tweak</code>	logical. Whether to fix some known problems in the citations, especially non-standard format of authors.
<code>install</code>	a logical option for whether or not to install the packages. The default is <code>install = FALSE</code> .
<code>file</code>	the name of the BibTeX file you want to create. If <code>file = NULL</code> then the packages are loaded, but no BibTeX file is created.
<code>repos</code>	character vector specifying which repository to download packages from. Only relevant if <code>install = TRUE</code> and <code>versions</code> are not specified. If <code>repos = NULL</code> , automatically reads user defined repository (via options), but defaults to <code>repos = "http://cran.us.r-project.org"</code> if <code>repos</code> is not set.
<code>lib</code>	character vector giving the library directories where to install the packages. Recycled as needed. If <code>NULL</code> , defaults to the first element of <code>.libPaths()</code> . Only relevant if <code>install = TRUE</code> .

Details

The command can install R packages, load them, and create a BibTeX file that can be used to cite the packages in a LaTeX or similar document. It can be useful to place this command in a knitr code chunk at the beginning of a reproducible research document. Note: the command will overwrite existing files with the same name as `file`, so it is generally a good idea to create a new BibTeX file with `LoadandCite`.

Source

Gandrud, Christopher (2013). Automating R Package Citations in Reproducible Research Documents. SSRN. This function is partially based on: <https://gist.github.com/3710171>. It also builds on code from knitr's `write_bib`. See: Y. Xie. knitr: A general-purpose package for dynamic report generation in R, 2013. URL <https://CRAN.R-project.org/package=knitr>. R package version 1.5. Note that it does not formally depend on knitr so that knitr can be included in `LoadandCite` so that it is possible to install old versions of that package.

See Also

write_bib, [install.packages](#), and [library](#)

Examples

```
## Not run:
# Create vector of package names
## In this example you need to have the packages installed already.
PackNames <- "repmis"
# Load the packages and create a BibTeX file
LoadandCite(pkgs = PackNames, file = 'PackageCites.bib', style = 'JSS')

## End(Not run)
## Not run:
# Install, load, and cite specific package versions
# dontrun due to CRAN restrictions
Names <- c("e1071", "gtools")
Vers <- c("1.6", "2.6.1")
LoadandCite(pkgs = Names, versions = Vers, install = TRUE,
            file = "PackageCites.bib")

## End(Not run)
```

scan_https	<i>Read a character text file from a secure (https) site into R as a single object.</i>
------------	---

Description

Read a character text file from a secure (https) site into R as a single object.

Usage

```
scan_https(url, sha1 = NULL)
```

Arguments

url	The files's URL.
sha1	Character string of the file's SHA-1 hash, generated by source_data. Note if you are using data stored using Git, this is not the file's commit SHA-1 hash.

Value

a charcter object of length 1

Source

Originally based on source_url from the Hadley Wickham's devtools package.

set_valid_wd	<i>Sets valid working directory from vector of possible directories</i>
--------------	---

Description

Sets valid working directory from vector of possible directories

Usage

```
set_valid_wd(possible)
```

Arguments

possible character vector of possible working directoroes

Details

Sets the working directory to the first valid directory from a list of possible directories.

Examples

```
## Not run:
set_valid_wd(c('examples/directory1', 'anotherExample/directory2'))

## End(Not run)
```

source_data	<i>Load plain-text data and RData from a URL (either http or https)</i>
-------------	---

Description

source_data loads plain-text or RDATA formatted data stored at a URL (both http and https) into R.

Usage

```
source_data(
  url,
  rdata,
  sha1 = NULL,
  cache = FALSE,
  clearCache = FALSE,
  sep = "auto",
  header = "auto",
  stringsAsFactors = FALSE,
```

```

    envir = parent.frame(),
    ...
  )

```

Arguments

<code>url</code>	The data's URL. To distinguish between plain-text and RDATA the <code>url</code> must end in a distinguishing file extension.
<code>rdata</code>	logical. Whether or not the data set is an .RDATA file. If not specified than <code>source_url</code> will attempt to determine whether or not the file is an .RDATA file from the URL's extension.
<code>sha1</code>	Character string of the file's SHA-1 hash, generated by <code>source_data</code> . Note if you are using data stored using Git, this is not the file's commit SHA-1 hash.
<code>cache</code>	logical. Whether or not to cache the data so that it is not downloaded every time the function is called.
<code>clearCache</code>	logical. Whether or not to clear the downloaded data from the cache.
<code>sep</code>	The separator method for the plain-text data. For example, to load comma-separated values data (CSV) use <code>sep = ","</code> . To load tab-separated values data (TSV) use <code>sep = "\t"</code> . Only relevant for plain-text data.
<code>header</code>	Logical, whether or not the first line of the file is the header (i.e. variable names).
<code>stringsAsFactors</code>	logical. Convert all character columns to factors?
<code>envir</code>	the environment where the data should be loaded.
<code>...</code>	additional arguments passed to fread or load as relevant.

Details

Loads plain-text data (e.g. CSV, TSV) or RDATA from a URL. Works with both HTTP and HTTPS sites. Note: the URL you give for the `url` argument must be for the RAW version of the file. The function should work to download plain-text data from any secure URL (https), though I have not verified this.

From the `source_url` documentation: "If a SHA-1 hash is specified with the `sha1` argument, then this function will check the SHA-1 hash of the downloaded file to make sure it matches the expected value, and throw an error if it does not match. If the SHA-1 hash is not specified, it will print a message displaying the hash of the downloaded file. The purpose of this is to improve security when running remotely-hosted code; if you have a hash of the file, you can be sure that it has not changed."

Value

a data frame

Source

Originally based on `source_url` from the Hadley Wickham's `devtools` package.

See Also

[GET](#), [fread](#), and [load](#)

Examples

```
## Not run:
# Download electoral disproportionality data stored on GitHub
# Note: Using shortened URL created by bitly
DisData <- source_data("http://bit.ly/156oQ7a")

# Check to see if SHA-1 hash matches downloaded file
DisDataHash <- source_data("http://bit.ly/Ss6zD0",
  sha1 = "dc8110d6dff32f682bd2f2fdbacb89e37b94f95d")

## End(Not run)
```

source_DropboxData	<i>No longer supported</i>
--------------------	----------------------------

Description

No longer supported

Usage

```
source_DropboxData()
```

source_XlsxData	<i>Download an Excel data set</i>
-----------------	-----------------------------------

Description

source_XlsxData loads Excel data stored at a URL (both http and https) into R.

Usage

```
source_XlsxData(
  url,
  sheet,
  sha1 = NULL,
  cache = FALSE,
  clearCache = FALSE,
  ...
)
```


Arguments

url	character string of the Excel files's URL.
sheet	character string of number of representing the sheet in the workbook to return. Only one sheet at a time can currently be returned
sha1	Character string of the file's SHA-1 hash, generated by <code>source_data</code> . Note if you are using data stored using Git, this is not the file's commit SHA-1 hash.
cache	logical. Whether or not to cache the data so that it is not downloaded every time the function is called.
clearCache	logical. Whether or not to clear the downloaded data from the cache.
...	arguments to pass to <code>read.xlsx</code> from the <code>xlsx</code> package.

Value

a data frame

See Also

`read.xlsx`, [GET](#), [source_data](#)

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