Package ‘R1010’

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Type Package

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Description A set of functions that help a 1010data user interact with 1010data through R.

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Depends Rcpp, pryr, getPass

LinkingTo Rcpp

ByteCompile false


R topics documented:

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R1010-package

An interface between 1010data and R.

Description

The functions in R1010 provide a 1010data user the ability to manage sessions, view tables, and run queries.

Details

Package: R1010
Type: Package
Version: 0.1.2
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License: see LICENSE.txt

Author(s)

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References

www.1010data.com

clearCache

Clear server-side cache.
**deleteDir**

**Description**

Frees data stored in the cache on the 1010data Insights Platform for the given session.

**Usage**

```r
clearCache(session)
```

**Arguments**

- `session` A session handle generated using `newSession`.

**Examples**

```r
## Not run:
s <- posSession("captain_smith")
clearCache(s)
## End(Not run)
```

---

**deleteDir**

*Delete a folder from the 1010data Insights Platform.*

**Description**

Deletes a 1010data folder and all of its nested folders and tables from the system.

**Usage**

```r
deleteDir(session, path)
```

**Arguments**

- `session` A 1010data session handle generated with `newSession`.
- `path` An object of class character. Accepts a valid 1010data folder path.
deleteTable  Delete a table from the 1010data Insights Platform.

Description

Deletes a table from the 1010data Insights Platform.

Usage

deleteTable(session, path)

Arguments

session  A 1010data session handle generated with newSession.
path  An object of class character. Accepts a valid 1010data table.

dim  Get the number of rows and columns in a 1010data table.

Description

Returns the number of rows and columns in a table.

Usage

dim(df)

Arguments

df  An object of class R1010.

Examples

## Not run:
s <- newSession("captain_smith", "meLike1010")
df <- openTable(s, "pub.demo.retail.item")
dim(df)  # [1] 35 8
# 35 rows, 8 columns

## End(Not run)
### getCurrMem

*Get memory allocated to the current session on the 1010data Insights Platform.*

<table>
<thead>
<tr>
<th>Description</th>
<th>Returns the memory high water mark reached during the current session.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage</td>
<td>getCurrMem(session)</td>
</tr>
<tr>
<td>Arguments</td>
<td>session A session handle generated using newSession.</td>
</tr>
</tbody>
</table>
| Examples    | ```
## Not run:
s <- newSession("captain_smith", "meLike1010")
memory.high.watermark <- getCurrMem(s)
## End(Not run)
``` |

### getDir

*Get information about a particular directory (folder) on the 1010data Insights Platform.*

<table>
<thead>
<tr>
<th>Description</th>
<th>Returns a data.frame of the tables and folders visible from the given folder path. The default call provides a data.frame of the current tables and folders visible from the root directory.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage</td>
<td>getDir(session, path = &quot;&quot;, recursive = FALSE)</td>
</tr>
<tr>
<td>Arguments</td>
<td>session A 1010data session handle generated with newSession.</td>
</tr>
<tr>
<td></td>
<td>path A valid 1010data folder path.</td>
</tr>
<tr>
<td></td>
<td>recursive An object of type boolean that specifies whether to return directory information about all subdirectories. The default is FALSE.</td>
</tr>
</tbody>
</table>
Examples

```r
## Not run:
s <- newSession("captain_smith", "meLike1010")
getDir(s)  # folders at root
getDir(s, "pub")  # folders and tables in pub folder
dir(s, "pub.demo")  # folders and tables in pub.demo folder
getDir(s, "pub.demo", TRUE)  # all folders under pub.demo recursively
getDir(s, "path.to.table")  # error, as tables are not directories

## End(Not run)
```

getSystemVersion

Get the version of the 1010data Insights Platform associated with a given session.

Description

Returns the version of the 1010data Insights Platform associated with a specific R1010 session handle. The system version is a string that details the most recent version that a handle successfully logged on to.

Usage

```r
getSystemVersion(session)
```

Arguments

- `session`: A session handle generated using `newSession`.

Examples

```r
## Not run:
s <- newSession("captain_smith", "meLike1010")
system.version <- getSystemVersion(s)  # [1] "prime-11.38"

## End(Not run)
```

head.R1010

Display the first n rows of the current R1010 table object.

Description

Displays the current state of a table (possibly transformed by a query).

Usage

```r
head(df, nrows = 20)
```
Arguments

`df`  
An object of class `R1010` and `data.frame`.

`nrows`  
The number of rows to view from the top of the table. The default is 20.

Examples

```r
## Not run:
ses <- newSession("moe1010", "Pl3a5e")
df <- openTable(ses, "pub.demo.weather.stations")

dfq.select <- query(df, 
  "<sel value="between(i_;5;21)"/>")

head(df) # shows first 20 rows of pub.demo.weather.stations
head(dfq.select) # shows all 17 rows after <sel> operation
head(dfq.select, 10) # shows first 10 rows after <sel> operation

## End(Not run)
```

**info**

Get information about the various attributes of a table on the 1010data Insights Platform.

Description

Returns the table path, column information, dimensions, current memory high-water mark, and version associated with the given R1010 object.

Usage

`info(df)`

Arguments

`df`  
An object of class `R1010`.

Examples

```r
## Not run:
s <- newSession("captain_smith", "meLike1010")
df <- openTable(s, "pub.demo.retail.item")
info(df)

## End(Not run)
```
**Description**

Links a foreign table of class R1010 to a base table of class R1010.

**Usage**

```r
link(df1, df2, by, by2 = NULL, options = NULL, run = FALSE, ...)
```

**Arguments**

- `df`: An object of class R1010 and data.frame that represents the base table.
- `df2`: An object of class R1010 and data.frame that represents the foreign table. Operations on the foreign table are applied prior to effecting the link, so that the current table is linked to the foreign table as transformed by those operations.
- `by`: An object of type character that represents the linking column in the base table.
- `by2`: An object of type character that represents the linking column in the foreign table. The `by2` parameter may be omitted if the linking column in the foreign table has the same name as the linking column in the base table.
- `options`: An object of type list that represents valid link attributes. The default is `NULL`. See the 1010data Reference Manual for valid attributes. (Note: The attributes `table2`, `col`, and `col2` should not be specified via the `options` argument; they should instead be specified via the `df2`, `by`, and `by2` parameters.)
- `run`: An object of type boolean that specifies whether the tables will be linked. If `FALSE`, the link is added to the query in the `df` argument, but the tables are not linked. The default is `FALSE`.

**Details**

The `link` function requires a table handle for the base table (an object of class R1010), a table handle for the foreign table (an object of class R1010), the name of a linking column in the base table, the name of a linking column in the foreign table (if different from the base table). It returns a table handle containing the results of the link (if `run` is set to `TRUE`).

**Examples**

```r
## Not run:
ses <- newSession("curly1010", "P13a5e")

df <- openTable(ses, "pub.demo.retail.item")
df.prod <- openTable(ses, "pub.demo.retail.prod")
df.linked <- link(df, df.prod, "sku", run=TRUE)
df.prod.sel <- sel(df.prod, "dept==22", run=TRUE)
```
logoutSession

Log out of a 1010data Insights Platform session.

Description
Logs out of a 1010data Insights Platform session.

Usage
logoutSession(session)

Arguments

session A 1010data session handle generated with newSession.

makeDir Make a directory (folder) on the 1010data Insights Platform.

Description
Creates a directory (folder) on the 1010data Insights Platform with the specified permissions for a given set of users and uploaders.

Usage
makeDir(session, path, title = NULL, users = NULL, uploaders = NULL, permissions = NULL)

Arguments

session A 1010data session handle generated with newSession.
path An object of class character. A valid 1010data folder path.
title An object of class character. Accepts the text for the title of the new folder.
users  An object of class character consisting of a set of 1010data IDs, either

"user1,user2,...,usrn"

or

c("user1","user2",...,"usrn")

. Each of the IDs in users will be able to view the directory at path. The default is private.

uploaders  An object of class character consisting of a set of 1010data IDs, either

"uploader1,uploader2,...,uploadern"

or

c("uploader1","uploader2",...,"uploadern")

. Each of the ID in uploaders will be able to write to the directory at path. The default is private.

permissions  An object of class list. The possible keys are {"users", "uploaders"} and the possible values are {"default", "inherit", "private"}.

Details

A directory can be made to either have a specific set of users/uploaders or set to one of three possible general settings through the permissions argument. The three possible setting are:

- default: The directory receives default permission defined by the API.
- inherit: The directory inherits key permissions from its parent.
- private: The directory is private. For uploaders, only the owner can upload tables.

Examples

```r
# Not run:
s <- newSession("bungalow_bill", "meLike1010")
# make a directory with users set to inherit, with default uploaders.
makeDir(s,"path.to.new.directory.my_new_directory",
permissions=list(users="inherit"))
# make a directory with default users, and a list of IDs for uploaders.
makeDir(s,"path.to.new.directory.my_new_directory",
uploaders=c("fatima","santiago","jian"))
# can also be: makeDir(s,"path.to.new.directory.my_new_directory",
# uploaders="fatima,santiago,jian")

# End(Not run)
```
modifyDir

Modify directory metadata.

Description
Modifies a directory’s title, permissions, descriptions, and ownership.

Usage

modifyDir(session, path, title = NULL, sdesc = NULL, ldesc = NULL, owner = NULL, users = NULL, uploaders = NULL, permissions = NULL)

Arguments

- **session**: A 1010data session handle generated with newSession.
- **path**: An object of class character. Accepts a valid 1010data folder path.
- **title**: An object of class character.
- **sdesc**: An object of class character.
- **ldesc**: An object of class character.
- **owner**: An object of class character.
- **users**: An object of class character consisting of a set of IDs, either "user1,user2,...,usern" or c("user1","user2",...,"usern"). Each of the IDs in users will be able to view the directory at path.
- **uploaders**: An object of class character consisting of a set of IDs, either "uploader1,uploader2,...,uploadern" or c("uploader1","uploader2",...,"uploadern"). Each of the IDs in uploaders will be able to write to path.
- **permissions**: An object of class list. The possible keys are "users", "uploaders", and the possible values are "default", "inherit", "private".

Details
A directory can be modified to either have a specific set of users/uploaders or set to one of three possible general settings through the permissions argument. The three possible setting are:

- **default**: The directory receives default permission defined by the API.
- **inherit**: The directory inherits key permissions from its parent.
- **private**: The directory is private. For uploaders, only the owner can upload tables.
modifyTable

Modify table metadata.

Description

Modifies a table's title, permissions, descriptions, and ownership.

Usage

modifyTable(session, path, title = NULL, sdesc = NULL, ldesc = NULL, owner = NULL, users = NULL, user.permissions = NULL)

Arguments

session A 1010data session handle generated with newSession.
path An object of class character.
title An object of class character.
sdesc An object of class character.
ldesc An object of class character.
owner An object of class character.
users An object of class character consisting of a set of IDs, either "user1,user2,...,usern"
or c("user1","user2",...,"usern")
  . Each of the IDs in users will be able to view the directory at path.
user.permissions A object of class character. The possible values are {"default", "inherit", "private"}.

Examples

```r
## Not run:
s <- newSession("bungalow_bill", "meLike1010")
# modify a directory's title.
modifyDir(s,"path.to.directory.fulla_data",title="New and Improved Title!!!")
# modify a directory's users.
modifyDir(s,"path.to.directory.big_data",users=c("amir","maria","hui"))
# can also be: makeDir(s,"path.to.new.directory.big_data",users="amir,maria,hui")
# add short and long description
short.desc <- "all global transactions"
long.desc <- "All global transactions includes tables for transactions,
  and lookup tables for geo, color, size, and promo metadata."
modifyDir(s,"path.to.directory.global_transids",sdesc=short.desc,ldesc=long.desc)
## End(Not run)
```
newSession

Examples

```r
## Not run:
s <- newSession("bungalow_bill", "meLike1010")
# modify a table's title.
modifyTable(s,"path.to.my_table",title="New and Improved Title!!!")
# modify a table's users.
modifyTable(s,"path.to.my_table",users=c("amir","maria","hui"))
# can also be: makeTable(s,"path.to.my_table",users="amir,maria,hui")
# add short and long description
short.desc <- "all global transactions"
long.desc <- "All global transactions including price, quantity, color, size, and promo."
modifyTable(s,"path.to.global_transids",sdesc=short.desc,ldesc=long.desc)
## End(Not run)
```

newSession

Generate a session handle for subsequent R1010 function calls.

Description

Returns a R1010 data session handle.

Usage

```r
newSession(username, password = "", kill = "notKill",
gateway = "http://www2.1010data.com/cgi-bin/gw.k",
xml.log.list = list("off", ""), log.name = "")
```

Arguments

- **username**: An object of type character that represents a valid 1010data user name.
- **password**: An object of type character that represents a valid 1010data password. If an empty string (e.g., "") is passed, the user is prompted to enter a password. The default is an empty string.
- **kill**: An object of type character that represents a valid 1010data kill value. If `kill = "pos"`, a live session is possessed or new session is created. If `kill = "kill"`, the current live session is killed, and a new session is created. If `kill = "notKill"`, the current live session is not killed and no new session is created, or if there is no current live session, a new session is created. The default is "notKill".
- **gateway**: An object of type character that represents a valid 1010data gateway. The default is "http://www2.1010data.com/cgi-bin/gw.k".
- **xml.log.list**: An object of type list with two elements that determines if XML logging should be enabled. The first element may be "off" or "on", and the second element is a filename.
- **log.name**: If a non-empty object of type character is passed to `log.name`, then logging is enabled. This will not enable XML logging.
Details

A call to the `newSession` function produces a session handle that points to the location in memory where session information is stored. It is used by other functions in the R1010 package to interact with a 1010data session. It also allows for two different forms of logging.

Examples

```r
## Not run:
# basic login
ses <- newSession("Moe1010", "P13A5e")
df <- openTable(ses, "pub.demo.weather.stations")

# Gateway options

# specific version
ses_version <- newSession("tenten_usr", gateway="prod-9.56")

# different in environment
ses_env <- newSession("tenten_usr", "password", gateway="fr.1010data.com/gw")

# proxy examples
gw_proxy = "[http://username:password@my.corporate.proxy:8080]https://www2.1010data.com/cgi-bin/gw.k"
ses_proxy <- newSession("tenten_usr", "password", gateway=gw_proxy)

## End(Not run)
```

---

### nrow

*Get number of rows in the 1010data Insights Platform.*

**Description**

Returns the `nrows` attribute of the given table.

**Usage**

`nrow(df)`

**Arguments**

- `df` An object of class `R1010`.
openTable

Attach a 1010data session handle to a table on the 1010data Insights Platform.

Description

Opens a table stored in the 1010data Insights Platform and returns a data.frame with a session handle.

Usage

openTable(session, tab, row.range = NULL, header = "name", cells = 2000000)

Arguments

session A session handle generated using newSession.

table An object of type character that represents a path to a table on the 1010data Insights Platform.

row.range An object of type integer (or double) with length equal to 2. This object represents the range of rows to download. The first value specifies the starting row, and the second value specifies the last row. The row.range argument may also take the character values "none" or "all". "none" will return a valid table handle, but with an empty data.frame. "all" will attempt to download all rows.

header An object of class character. Possible values are \{"name","label"\}. Columns within a table on the 1010data Insights Platform have the concept of a label, which can be more descriptive than the column name. Note that the label values cannot be used in a query.

cells Approximately, the number of table values to be downloaded at a time.

Examples

## Not run:
s <- newSession("captain_smith", "meLike1010")
df <- openTable(s, "pub.demo.retail.item")
retail.item.rows <- nrow(df)

## End(Not run)
posSession

Possess an existing 1010data session.

Description

Returns the session handle for an existing 1010data session.

Usage

posSession(username, password = "", xml.log.list = list("off", ""), log.name = "")

Arguments

username An object of class character that represents a valid 1010data user name.
password An object of class character that represents a valid 1010data password. If an empty string (e.g., "") is passed, the user is prompted to enter a password. The default is an empty string.
xml.log.list An object of class list with two elements that determines if XML logging should be enabled. The first element may be "off" or "on", and the second element is a filename.
log.name If a non-empty object of class character is passed to log.name, then logging is enabled. This will not enable XML logging.

Details

A call to the posSession function produces a session handle that points to the location in memory where session information is stored. It is used by other functions in the R1010 package to interact with a 1010data session. It also allows for two different forms of logging.

Examples

## Not run:
ses <- posSession("Moe1010")
df <- openTable(ses, "pub.demo.weather.stations")

## End(Not run)
query

Run a query on the 1010data Insights Platform.

Description

Runs a 1010data Macro Language query on a given table and returns a data.frame.

Usage

```r
query(df, q, file = NULL, row.range = NULL, run = TRUE, colord = NULL, cells = 2000000, ...)
```

Arguments

- `df`: An object of class `R1010` and data.frame.
- `q`: An object of type character that represents a query written in the 1010data Macro Language.
- `file`: An object of type character that represents the name of a file in the working directory which contains a 1010data query.
- `row.range`: An object of type integer (or double) with length equal to 2. This object represents the range of rows to download. The first value specifies the starting row, and the second value specifies the last row. The `row.range` argument may also take the character values "none" or "all". "none" will return a valid table handle, but with an empty data.frame. "all" will attempt to download all rows.
- `run`: An object of type boolean that specifies whether the query is to be run. The default is TRUE.
- `colord`: May be NULL or a character vector. If `colord = NULL` the current set of columns in view are returned, else a character vector of length 1 that is delimited with commas or a character vector that has column names as elements.
- `cells`: Approximately, the number of values to be downloaded at a time. The exact number of cells downloaded in a single chunk is

\[
\text{floor}(\text{cells/numberofcolumns}).
\]

Details

The `query` function may be run with either a string containing the query, or a string that specifies the name of a file which contains a valid 1010data query. A data.frame containing session information (attached using `openTable`) may also be used in the `df` argument with `run=FALSE` to prevent unnecessary API requests.
## sel

*Perform a selection on a table on the 1010data Insights Platform.*

### Description

Performs a selection on a table on the 1010data Insights Platform.

### Usage

```
sel(df, expr, run = FALSE, ...)
```

### Arguments

- **df**: An object of class `R1010` and `data.frame`.
- **expr**: An object of type character that is a valid 1010data expression. See the [1010data Reference Manual](#).
- **run**: An object of type boolean that specifies whether the selection is to be run. If `FALSE`, the selection is added to the query in the `df` argument, but the selection is not performed. The default is `FALSE`.

### Examples

#### Not run:

```r
ses <- newSession("moe1010", "P13a5e")
df <- openTable(ses, "pub.demo.weather.stations")

dfq.select <- query(df,
    "<sel value="between(i_;5;21)"/>")

dfq.select.and.willbe.1 <- query(dfq.select,
    "<willbe name="is_az" value="state='AZ'"/>")

dfq.select.and.willbe.2 <- query(df,
    "<sel value="between(i_;5;21)"/>
    <willbe name="is_az" value="state='AZ'"/>")

identical(dfq.select.and.willbe.1,dfq.select.and.willbe.2) # TRUE

dfq.select.and.willbe.3 <- query(
    query(df, "<sel value="between(i_;5;21)"/>" run = FALSE ),
    "<willbe name="is_az" value="state='AZ'"/>
)

identical(dfq.select.and.willbe.1,dfq.select.and.willbe.3) # TRUE

# Example use of colord
query(df,"<sel value="between(i_;5;21)"/>",colord="id,state")
query(df,"<sel value="between(i_;5;21)"/>",colord=c("id","state","lat","lon"))

## End(Not run)
```
Details

The `sel` function requires a table handle (an object of class `R1010`) and an expression, and it returns a table handle containing the results of the selection (if `run` is set to `TRUE`).

Examples

```r
## Not run:
ses <- newSession("moe1010", "P13a5e")
df <- openTable(ses, "pub.demo.retail.item")

sel(df, "account=957", run=TRUE)

sel(df, "between(date; 20120515; 20120516)", run=T)

sel(df, "g_first1(store date; ; )", run=T)

## End(Not run)
```

---

**tabu**

Perform a tabulation on a table on the 1010data Insights Platform.

Description

Performs a tabulation or cross-tabulation on a table on the 1010data Insights Platform.

Usage

```
tabu(df, breaks, tcols = NULL, cbreaks = NULL, run = FALSE)
```

Arguments

- `df`: An object of class `R1010`.
- `breaks`: An object of class string or symbol that represents columns on which to group the summarizations.
- `tcols`: An object of class list, where each element defines a result column in the tabulation. See the examples below for details. If nothing is specified, the `cnt` function is applied to each group on the 1010data table. A list of available functions that can be specified for the result column can be found in the 1010data Reference Manual.
- `cbreaks`: An object of class string or symbol that represents a list of names of the column-break columns (real or computed). All records that have the same values for these columns will be grouped together. If omitted, the result is a straight tabulation.
- `run`: An object of class boolean that specifies whether the tabulation is to be run. If `FALSE`, the tabulation is added to the query in the `df` argument, but is not computed. The default is set to `FALSE`. 
Details

The `tabu` function requires a table handle (an object of class R1010) and a set of break columns, and it returns a table handle containing the results of the tabulation.

Examples

```r
## Not run:
ses <- newSession("moe1010", "P13a5e")
df <- openTable(ses, "pub.demo.retail.item")

   tabu(df, breaks=c("store"), run=TRUE)
   tabu(df, breaks=c(store,date), run=TRUE)
   tabu(df, breaks=store, tcols=list(ucnt_sku=ucnt(sku),fd=first(date),ld=last(date)), run=TRUE)
## End(Not run)
```

---

tail.R1010

Display the last n rows of the current R1010 table object.

Description

Display the current state of a table (possibly transformed by a query).

Usage

tail.R1010(df, nRows = 20)

Arguments

- `df`: An object of class R1010.
- `nrows`: The number of rows from the bottom of a table to be displayed. The default is 20.

Examples

```r
## Not run:
ses <- newSession("moe1010", "P13a5e")
df <- openTable(ses, "pub.demo.weather.stations")

dfq.select <- query(df,
                      "<sel value="between(i_;5;21)"/>")

tail(df) # shows last 20 rows of pub.demo.weather.stations
tail(dfq.select) # shows all 17 rows after <sel> operation
tail(dfq.select, 10) # shows last 10 rows after <sel> operation
## End(Not run)
```
upload

Upload a data.frame.

Description

Uploads a data.frame to the 1010data Insights Platform with a set of specific options.

Usage

upload(session, df, path, title, col.titles = NULL, options = NULL, stringsAsFactors = FALSE)

Arguments

- session: A 1010data session handle generated with newSession.
- df: An object of class data.frame that will be uploaded.
- path: An object of class character that specifies where to upload the data.frame. path must be a valid 1010data table path.
- title: An object of class character that specifies the title of the new table on the 1010data Insights Platform.
- col.titles: An object of class character that are the column titles in the table on the 1010data Insights Platform. The length of col.titles must be the same length as the number of columns in df. If col.titles = NULL, names(df) will be used to set the column titles in the 1010data table.
- options: An object of class list. See Details for possible keys and values.
- stringsAsFactors: An object of class bool. If TRUE, factor columns are uploaded as integers based on their R internal representation. If FALSE, factor columns are uploaded as text.

Details

upload takes a 1010data session object and a data.frame in the current R session and uploads the data.frame to a path. Using upload, various table metadata and table options may be set. Options are specified via the options argument, which is a list of key/value pairs. Possible keys are:

- sdesc - Short description of the new table. The default is no short description.
- ldesc - Long description of the new table. The default is no long description.
- link.header - The link.header will be used as the table’s default link header, which is prepended to each column’s label when the table is used in a link.
- download.max - The maximum number of cells that a user interacting with this table can download in a single transaction. The default is 100,000,000 cells.
- segsize - Segments stored on the server will each be segsize records. If you append to an existing table, segsize is ignored for existing segments.
• segby - A object of class character consisting of a set of column names, either

"segby1,segby2,...,segbyn"

or

c("segby1","segby2",...,"segbyn").

After loading the table, the content of all segments will be reorganized so that the table is segby

"segby1,segby2,...,segbyn".

This can improve performance in some forms of analysis.

• sortseg - A object of class character consisting of a set of column names, either

"sortseg1,sortseg2,...,sortsegn"

or

c("sortseg1","sortseg2",...,"sortsegn").

After loading the table, the content of all segments will be reorganized so that the table is sortseg by

"sortseg1,sortseg2,...,sortsegn".

This can improve performance in some forms of analysis. This option cannot be used in conjunction with segby.

• segbyadvise - If segby or sortseg is used, it is possible that the table is implicitly segby / sortseg other sets of columns, based on assumptions about the data. For example, if a table is segby month then you can assume it is also segby date. This option can be repeated, must be used in conjunction with either segby or sortseg, and can also by used in conjunction with sortsegadvise.

• sortsegadvise - If segby or sortseg is used, it is possible that the table is implicitly segby / sortseg other sets of columns, based on assumptions about the data. For example, if a table is sortseg by date then you can assume it is also sortseg by year. This option can be repeated, must be used in conjunction with either segby or sortseg, and can also by used in conjunction with segbyadvise.

• timeseries - An object of class character that specifies a column on which to sort the segments and generate time series metadata. This option can only be used in conjunction with segby or sortseg and cannot be used with sort.

• links - An object of class character where each element is a <link> op. Each <link> op will result in a prelink unless denormalize="1" is an attribute/value pair in the <link>. If denormalize="1" is specified in the <link>, the columns in cols will be denormalized into the uploaded table. Note that links to be prelinked cannot have nested ops.

• sort - A object of class character consisting of a set of columns, either

"sort1,sort2,...,sortn"

or

c("sort1","sort2",...,"sortn").

After loading this table, the content of each segment will be sorted first by sortn then by sortn-1 until it is sorted by sort1. This can improve performance in some forms of analysis.
• `sendcompress` - If `sendcompress=1` data will be compressed when uploading.

• `users` - A object of class character consisting of a set of IDs, either
  
  \[ "user1,user2,\ldots,usern" \]
  
  or
  
  \[ c("user1","user2",\ldots,"usern"). \]

  Each of the IDs in `users` will be able to view the uploaded table.

• `owner` - The user owner will be set as the owner of this table. By default, the current session is the owner, unless a SAM pool is being used in which case the group name is the owner.

• `replace` - If `replace=TRUE` and the table specified by `path` already exists, upload will replace it.

• `append` - If `append=TRUE` and table `path` already exists, upload will append to it.

• `colsperbundle` - When uploading data, upload `colsperbundle` columns at a time. You may set `colsperbundle=-1` to load all the columns in a single bundle. The default is 32.

• `chunk` - Uploads the specified number of records at a time. The default is 16,777,216 (2^24).

Valid column names in the 1010data Insights Platform are a little different than in R. While column names in R can contain dots, in Insights Platform they cannot. To generate names for uploading, the column names are transformed with `make.names`, trimmed, converted to lowercase, and then dots are replaced with underscores. In the 1010data Insights Platform, a column has both a name and title; if `col.title` is not supplied, then the column name is used as the title. 1010data does not have the same concept of a factor. The `stringsAsFactors` option is there to allow for either the integer representation or character representation to be uploaded. If `stringsAsFactors=FALSE`, (the default) factors are first coerced to character before uploading.

Examples

```r
## Not run:
# get session variable "ses"
ses <- newSession("user_goes_here", "password_goes_here")

# upload iris data set with kmeans clusters
iris_to_upload <- iris
iris_to_upload$kmeans_clusts <- kmeans(iris[-5],3)$cluster
upload(ses,iris_to_upload,"tenten.path.to.iris","Iris data set (with R kmeans clusters)")
# directory/path search for new table
"tenten.path.to.iris" %in% dir(ses,"demos")$path # TRUE

# upload iris data with options replace = TRUE, and add some descriptions (sdesc, ldesc)
ldescription = "Iris Data with an additional cluster column.
The call to kmeans was 'kmeans(iris[-5],3)'."
opts = list(replace = TRUE,
sdesc = "iris data",
ldesc = ldescription,
)
upload(ses,iris_to_upload,"path.to.iris","Iris data set (with R kmeans clusters)",opts)
#
## End(Not run)
```
willbe

Create a computed column within an R1010 table.

Description

Creates a computed column within an R1010 table.

Usage

willbe(df, name, value, run = FALSE, ...)

Arguments

df
An object of class R1010.

name
An object of class character that will be used to name the computed column. The name may only contain alphanumeric characters or underscores and must begin with an alphabetic character (e.g., percent_total_sales). It may not contain any spaces or other special characters.

value
An object of class character that is a valid expression. See the 1010data Reference Manual.

run
An object of class boolean that specifies whether the computed column will be created. If FALSE, the willbe is added to the query in the df argument, but the computed column is not created. The default is FALSE.

Details

The willbe function requires a table handle (an object of class R1010), a name, and an expression, and it returns a table handle containing the results of the willbe (if run is set to TRUE).

Examples

## Not run:
ses <- newSession("larry1010", "P13a5e")
df <- openTable(ses, "pub.demo.retail.item")

willbe(df, "margin", "sales-cost", run=TRUE)

willbe(df, "store_sales", "g_sum(store; ; sales)", run=T)

willbe(df, "store_sales_by_date", "g_sum(store date; ; sales)", run=T)

## End(Not run)
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