

Package ‘dcmodydb’

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Title Modifying Rules on a DataBase

Version 0.2.0

Description Apply modification rules from R package 'dcmody' to the database, prescribing and documenting deterministic data cleaning steps on records in a database. The rules are translated into SQL statements using R package 'dbplyr'.

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Encoding UTF-8

RoxygenNote 7.1.2

Suggests testthat (>= 3.0.0), RSQLite, covr

Imports dplyr, dbplyr, DBI, dcmody (>= 0.1.9), validate, methods

URL <https://github.com/data-cleaning/dcmodydb>

BugReports <https://github.com/data-cleaning/dcmodydb/issues>

NeedsCompilation no

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dump_sql	<i>Write generated sql</i>
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Description

Writes the generated sql to a file. The script contains ALTER and UPDATE statements and can be used as documentation. Note that when this script is run on the database it will change the original table. This differs from the default behavior of dcmofify which works on a (temporary) copy of the table.

Usage

```
dump_sql(x, table, con = NULL, file = stdout(), ...)
```

Arguments

x	dcmofify::modifier() object with rules to be written
table	either a <code>dplyr::tbl()</code> object or a character with table name
con	optional, when table is a character, a dbi connection.
file	to which the sql will be written.
...	not used

Value

character sql script with all statements.

is_working_db	<i>Check if UPDATE statement is functional</i>
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Description

Get an indication of which R statement can be executed on the SQL database.

Usage

```
is_working_db(updates, tab, n = 2)
```

Arguments

updates	list of update statements object (<code>modifier_to_sql()</code>)
tab	tbl object
n	number of records to use in this check

Value

logical with which statements are working

modifier_to_sql	<i>Extract UPDATE statements</i>
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Description

Extract UPDATE statements from modifier object as a list of SQL statements.

Usage

```
modifier_to_sql(x, table, con = NULL)
```

Arguments

x	dcmmodify::modifier() object
table	table object
con	optional connection

Value

list of sql UPDATE statements.

modify,ANY,modifier-method	<i>Modify records in a tbl</i>
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Description

Modify records in a database table using modification rules specified in a modifier object.

Usage

```
## S4 method for signature 'ANY,modifier'
modify(dat, x, copy = NULL, transaction = !isTRUE(copy), ...)
```

Arguments

dat	tbl_sql() object, table in a SQL database
x	dcmmodify::modifier() object.
copy	if TRUE (default), modify copy of table
transaction	if TRUE use one transaction for all modifications.
...	unused

Details

The modification rules are translated into SQL update statements and executed on the table. Note that

- by default the updates are executed on a copy of the table.
- the default for transaction is FALSE when copy=TRUE and TRUE when copy=FALSE
- when transaction = TRUE and a modification fails, all modifications are rolled back.

Value

`tbl_sql()` object, referencing the modified table object.

Examples

```
library(DBI)
library(dcmmodify)
library(dcmmodifydb)

# silly modification rules
m <- modifier( if (cyl == 6) gear <- 10
               , gear[cyl == 4] <- 0 # this R syntax works too :- )
               , if (gear == 3) cyl <- 2
               )

# setting up a table in the database
con <- dbConnect(RSQLite::SQLite())
dbWriteTable(con, "mtcars", mtcars[,c("cyl", "gear")])
tbl_mtcars <- dplyr::tbl(con, "mtcars")

# "Houston, we have a table"
head(tbl_mtcars)

# lets modify on a copy of the table...
tbl_m <- modify(tbl_mtcars, m, copy=TRUE)
# and gear has changed...
head(tbl_m)

dbDisconnect(con)
```

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