

Package ‘duckdb’

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Title DBI Package for the DuckDB Database Management System

Version 0.2.2-1

Description The DuckDB project is an embedded analytical data management system with support for the Structured Query Language (SQL). This package includes all of DuckDB and a R Database Interface (DBI) connector.

License MPL

URL <https://duckdb.org/>, <https://github.com/cwida/duckdb>

BugReports <https://github.com/cwida/duckdb/issues>

Depends DBI, R (>= 3.5.0)

Imports methods, utils

Suggests callr, DBItest, dbplyr, nycflights13, testthat

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

SystemRequirements C++11, GCC on Solaris

NeedsCompilation yes

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duckdb-package	<i>DuckDB client package for R</i>
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Description

R client package for DuckDB: an embeddable SQL OLAP Database Management System.

See Also

[duckdb\(\)](#) for connection instructions.

<https://duckdb.org/> for the project website.

dbConnect,duckdb_driver-method	<i>Connect to a DuckDB database instance</i>
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Description

dbConnect() connects to a database instance.

dbDisconnect() closes a DuckDB database connection, optionally shutting down the associated instance.

duckdb() creates or reuses a database instance.

duckdb_shutdown() shuts down a database instance.

Usage

```
## S4 method for signature 'duckdb_driver'
dbConnect(
  drv,
  dbdir = DBDIR_MEMORY,
  ...,
  debug = getOption("duckdb.debug", FALSE),
  read_only = FALSE
)

## S4 method for signature 'duckdb_connection'
dbDisconnect(conn, ..., shutdown = FALSE)

duckdb(dbdir = DBDIR_MEMORY, read_only = FALSE)

duckdb_shutdown(drv)
```

Arguments

drv	Object returned by duckdb()
dbdir	Location for database files. Should be a path to an existing directory in the file system. With the default, all data is kept in RAM
...	Ignored
debug	Print additional debug information such as queries
read_only	Set to TRUE for read-only operation
conn	A duckdb_connection object
shutdown	Set to TRUE to shut down the DuckDB database instance that this connection refers to.

Value

dbConnect() returns an object of class [duckdb_connection](#).
 duckdb() returns an object of class [duckdb_driver](#).
 dbDisconnect() and duckdb_shutdown() are called for their side effect.

Examples

```
drv <- duckdb()
con <- dbConnect(drv)

dbGetQuery(con, "SELECT 'Hello, world!'")

dbDisconnect(con)
duckdb_shutdown(drv)

# Shorter:
con <- dbConnect(duckdb())
```

```
dbGetQuery(con, "SELECT 'Hello, world!'")
dbDisconnect(con, shutdown = TRUE)
```

duckdb_read_csv *Reads a CSV file into DuckDB*

Description

Directly reads a CSV file into DuckDB, tries to detect and create the correct schema for it. This usually is much faster than reading the data into R and writing it to DuckDB.

Usage

```
duckdb_read_csv(
  conn,
  name,
  files,
  header = TRUE,
  na.strings = "",
  nrow.check = 500,
  delim = ",",
  quote = "\"",
  col.names = NULL,
  lower.case.names = FALSE,
  sep = delim,
  transaction = TRUE,
  ...
)
```

Arguments

conn	A DuckDB connection, created by <code>dbConnect()</code> .
name	The name for the virtual table that is registered or unregistered
files	One or more CSV file names, should all have the same structure though
header	Whether or not the CSV files have a separate header in the first line
na.strings	Which strings in the CSV files should be considered to be NULL
nrow.check	How many rows should be read from the CSV file to figure out data types
delim	Which field separator should be used
quote	Which quote character is used for columns in the CSV file
col.names	Override the detected or generated column names
lower.case.names	Transform column names to lower case
sep	Alias for <code>delim</code> for compatibility
transaction	Should a transaction be used for the entire operation
...	Passed on to <code>read.csv()</code>

Value

The number of rows in the resulted table, invisibly.

Examples

```
con <- dbConnect(duckdb())

data <- data.frame(a = 1:3, b = letters[1:3])
path <- tempfile(fileext = ".csv")

write.csv(data, path, row.names = FALSE)

duckdb_read_csv(con, "data", path)
dbReadTable(con, "data")

dbDisconnect(con)
```

duckdb_register	<i>Register a data frame as a virtual table</i>
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Description

duckdb_register() registers a data frame as a virtual table (view) in a DuckDB connection. No data is copied.

Usage

```
duckdb_register(conn, name, df)

duckdb_unregister(conn, name)
```

Arguments

conn	A DuckDB connection, created by dbConnect().
name	The name for the virtual table that is registered or unregistered
df	A data.frame with the data for the virtual table

Details

duckdb_unregister() unregisters a previously registered data frame.

Value

These functions are called for their side effect.

Examples

```
con <- dbConnect(duckdb())

data <- data.frame(a = 1:3, b = letters[1:3])

duckdb_register(con, "data", data)
dbReadTable(con, "data")

duckdb_unregister(con, "data")
try(dbReadTable(con, "data"))

dbDisconnect(con)
```

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