

Package ‘easydb’

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Type Package

Title Easily Connect to Common Types of Databases

Version 1.1.0

Description A unified interface for connecting to databases ('SQLite', 'MySQL', 'PostgreSQL'). Just provide the database name and the package will ask you questions to help you configure the connection and setup your credentials. Once database configuration and connection has been set up once, you won't have to do it ever again.

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URL <https://github.com/selkamand/easydb>,
<https://selkamand.github.io/easydb/>

BugReports <https://github.com/selkamand/easydb/issues>

Imports askpass, assertthat, cli, DBI, keyring, rlang, utils, yaml

Suggests knitr, RMariaDB, rmarkdown, RPostgres, RSQLite, testthat (>= 3.0.0)

VignetteBuilder knitr

Config/testthat/edition 3

Encoding UTF-8

RoxygenNote 7.2.3

NeedsCompilation no

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assert_config_file_appropriate
<i>Check config filepath is appropriate</i>

Description

Ensures file is hidden, in a folder that exists, and that has read and write permissions. The file itself doesn't already have to exist

Usage

```
assert_config_file_appropriate(file)
```

Arguments

file	path to config file (string)
------	------------------------------

Value

invisibly returns TRUE

`easydb_available_databases`*Available Databases*

Description

List databases with configuration details stored in a configuration file.

Usage

```
easydb_available_databases(config_file)
```

Arguments

<code>config_file</code>	path to yaml file containing configuration information about databases (port, host, etc.) (string)
--------------------------	---

Value

database names (character vector)

Examples

```
path_to_config = tempfile()
easydb_available_databases(path_to_config)
```

`easydb_connect`*Easy Database Connection*

Description

Easily connect to a database. When connecting to a database for the first time, you will be prompted for connection details. Configuration details will be stored in the user-specified 'configuration file'. The next time you run the same command, config details will be automatically retrieved from the config file. Any usernames and passwords are stored in your system credential manager (not on-disk)

Usage

```
easydb_connect(dbname, config_file, from_scratch = FALSE)
```

Arguments

<code>dbname</code>	name of database (string)
<code>config_file</code>	path to yaml file containing configuration information about databases (port, host, etc.) (string)
<code>from_scratch</code>	should we delete any current config / credentials for databases with the supplied name and start again? (logical)

Value

connection to database (connection)

Examples

```
if(interactive()) {

  # Choose config file path
  # Do NOT use tempfile in practice.
  # Instead, choose a fixed location such as '~/easydb'
  config <- tempfile('example_config')

  # Initialise config file
  easydb_init(config)

  # Connect to SQLite database
  path_to_db <- system.file(package = 'easydb', 'testdb/mtcars.sqlite')
  con <- easydb_connect(dbname = path_to_db, config_file = config)

  # Disconnect from database when finished
  easydb_disconnect(con)
}
```

easydb_disconnect	<i>Disconnect from database</i>
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Description

Simple wrapper around [DBI::dbDisconnect()]

Usage

```
easydb_disconnect(connection)
```

Arguments

connection connection generated by [easydb_connect]

Value

Invisibly returns TRUE

Examples

```
if(interactive()) {

  # Choose config file path
  # Do NOT use tempfile in practice.
  # Instead, choose a fixed location such as '~/easydb'
```

```
config <- tempfile('.example_config')

# Initialise config file
easydb_init(config)

# Connect to SQLite database
path_to_db <- system.file(package = 'easydb', 'testdbs/mtcars.sqlite')
con <- easydb_connect(dbname = path_to_db, config_file = config)

# Disconnect from database when finished
easydb_disconnect(con)
}
```

easydb_init*Initialise Configuration Store*

Description

Create a file to store your database configurations in.

Usage

```
easydb_init(config_file)
```

Arguments

config_file path to create a new config file to store database configurations

Value

invisibly returns path to config file

Examples

```
# Choose config file path
# Do NOT use tempfile in practice.
# Choose a fixed location such as '~/easydb'
config <- tempfile('.example_config')

# Initialise Configuration File
easydb_init(config)
```

supported_drivers	<i>List supported drivers</i>
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Description

List supported drivers

Usage

```
supported_drivers()
```

Value

returns a vector of supported database drivers (character). Names relate to the R packages containing the relevant driver function

utils_database_already_in_yaml	<i>Database Utils</i>
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Description

Check if a yaml contains an entry describing a given database

Usage

```
utils_database_already_in_yaml(dbname, file)
```

Arguments

dbname	database name (character)
file	file (string)

Value

true if yaml entry for dbname found, otherwise false (logical)

`utils_database_get_or_set_config`*Interactive getting/setting database configurations*

Description

Interactive getting/setting database configurations

Usage

```
utils_database_get_or_set_config(dbname, file)
```

Arguments

dbname	name of database (string)
file	yaml file to store database configuration information

Value

list describing database configuration

`utils_database_get_or_set_creds`*Create/Retrieve database credentials*

Description

Retrieves credentials (username and password) from os credential store using keyring package.

Usage

```
utils_database_get_or_set_creds(dbname)
```

Arguments

dbname	Name of database to store/retrieve credentials for (string)
--------	---

Value

Invisibly returns list of username and password

Examples

```
## Not run:
creds <- easydb::util_get_database_creds(
  service = "R-keyring-test-service",
  username = "donaldduck"
)
creds$username
creds$password

## End(Not run)
```

```
utils_database_read_yaml
```

Read the database config

Description

Read the database config

Usage

```
utils_database_read_yaml(dbname, file)
```

Arguments

dbname	name of database whose config you want to read
file	path to config yaml

Value

list with config

```
utils_database_remove_entry_from_yaml
```

Delete database config entries from yaml

Description

Delete database config entries from yaml

Usage

```
utils_database_remove_entry_from_yaml(dbnames, file)
```


Arguments

dbnames	names of databases to delete from yaml (character)
file	path to config yaml (string)

Value

Run for its side effects

```
utils_database_write_yaml
    Write database yaml
```

Description

Writes database config details into a yaml. Usernames and passwords are never saved in this yaml file

Usage

```
utils_database_write_yaml(
  dbname,
  driver,
  creds_required = FALSE,
  port = NULL,
  host = NULL,
  ssl_cert = NULL,
  ssl_key = NULL,
  ssl_ca = NULL,
  file,
  append = TRUE
)
```

Arguments

dbname	name of database
driver	name of driver
creds_required	are credentials (username/password) required for this database (flag)
port	database port
host	database host
ssl_cert	path to ssl certificate (string)
ssl_key	path to ssl key (string)
ssl_ca	path to ssl CA certificate (string)
file	where config file should be located (will be produced if it doesn't already exist)
append	should config file be appended or overwritten? Defaults to append. Don't change unless you know what you're doing

Value

path to config yaml containing the new database info (string)

utils_user_input_retrieve_free_text
<i>get user input</i>

Description

get user input

Usage

```
utils_user_input_retrieve_free_text(  
    message,  
    default = NULL,  
    type = c("string", "number")  
)
```

Arguments

message	message - tell user what information to input
default	if user enters no data, this value will be returned (NULL)
type	return type

Value

user input formatted according to type. If user does not enter anything will return value of default

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