

# Package ‘easydb’

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**Type** Package

**Title** Easily Connect to Common Types of Databases

**Version** 1.0.0

**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** 7.2.0

**NeedsCompilation** no

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assert\_config\_file\_appropriate

*Check config filepath is appropriate*

---

**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**

config\_file      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**

dbname            name of database (string)

config\_file      path to yaml file containing configuration information about databases (port, host, etc. ) (string)

from\_scratch     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', 'testdbs/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>
-------------------	---------------------------------

---

**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      *List supported drivers*

---

**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  
*Database Utils*

---

**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
    get user input
```

---

**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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