

Package ‘shiny.reglog’

August 30, 2022

Title Optional Login and Registration Module System for ShinyApps

Version 0.5.2

Description RegLog system provides a set of shiny modules to handle register procedure for your users, alongside with login, edit credentials and password reset functionality.

It provides support for popular SQL databases and optionally googlesheet-based database for easy setup. For email sending it provides support for 'emayili' and 'gmailr' backends. Architecture makes customizing usability pretty straightforward.

The authentication system created with shiny.reglog is designed to be optional: user don't need to be logged-in to access your application, but when logged-in the user data can be used to read from and write to relational databases.

Depends R (>= 4.1.0), R6, shiny

Imports dplyr, lubridate, lifecycle, scrypt, shinyjs, stringi, uuid

Suggests covr, DBI, DT, devtools, emayili, gmailr, googledrive, googlesheets4, jsonlite, knitr, mongolite, rmarkdown, RSQLite, shinytest2, testthat (>= 3.0.0)

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.2.1

VignetteBuilder knitr

Config/testthat/edition 3

URL <https://statismike.github.io/shiny.reglog/>

NeedsCompilation no

Author Michal Kosinski [aut, cre] (<<https://orcid.org/0000-0002-8426-3654>>)

Maintainer Michal Kosinski <kosinski.mich@gmail.com>

Repository CRAN

Date/Publication 2022-08-30 18:20:02 UTC

R topics documented:

DBI_tables_create	2
db_timestamp	5
gsheet_tables_create	5
mailMessageAttachment	7
mongo_tables_create	8
RegLogConnector	9
RegLogConnectorMessage	11
RegLogDBIConnector	11
RegLogDemo	12
RegLogEmayiliConnector	13
RegLogGmailrConnector	14
RegLogGsheetConnector	16
RegLogMongoConnector	17
RegLogServer	18
RegLog_credsEdit_UI	21
RegLog_login_UI	22
RegLog_register_UI	22
RegLog_resetPass_UI	23
RegLog_txt	23

Index	24
--------------	-----------

DBI_tables_create	<i>Create RegLog-valid database tables with DBI</i>
-------------------	---

Description

Create RegLog-valid database tables with DBI

Usage

```
DBI_tables_create(
  conn,
  account_name = "account",
  reset_code_name = "reset_code",
  use_log = FALSE,
  log_name = "logs",
  user_data = NULL,
  hash_passwords = FALSE,
  verbose = TRUE
)
```

Arguments

conn	DBI connection object
account_name	Name of the table for storing user accounts credentials. Defaults to 'account'. Mandatory table.
reset_code_name	Name of the table for storing generated password reset codes. Defaults to 'reset_code'. Mandatory table.
use_log	Should the table for keeping RegLogServer logs be also created? Defaults to FALSE
log_name	Name of the table for storing logs from RegLogServer object. Used only if use_log = TRUE. Defaults to logs
user_data	If you wish to import existing user database, you can input data.frame with that table in this argument. It should contain columns: username, password, email. Defaults to NULL.
hash_passwords	If you are importing table of users upon tables creation, you can also specify if the password should be hashed using <code>bcrypt::hashPassword</code> . Defaults to FALSE. If you have unhashed passwords in imported table, set this option to TRUE.
verbose	Boolean specific if the actions made by function should be printed back to the console. Defaults to TRUE.

Details

Currently, the function is tested and working correctly for SQLite, MySQL, MariaDB and PostgreSQL databases. If you want to use another DBI-supported database, you need to create tables in other ways.

Created tables should have following structure:

- account (default name)
 - id: integer, primary key, auto-increment
 - username: varchar(255), NOT NULL, unique key
 - password: varchar(255), NOT NULL
 - email: varchar(255), NOT NULL, unique key
 - create_time: datetime, NOT NULL
 - update_time: datetime, NOT NULL
- reset_code (default name)
 - id: integer, primary key, auto-increment
 - user_id: integer, NOT NULL, key
 - reset_code: varchar(10), NOT NULL
 - used: tinyint, NOT NULL
 - create_time: datetime, NOT NULL
 - update_time: datetime, NOT NULL
- logs (default name, optional)

- id: integer, primary key, auto-increment
- time: datetime, NOT NULL
- session: varchar(255), NOT NULL
- direction: varchar(255), NOT NULL
- type: varchar(255), NOT NULL
- note: varchar(255)

Value

List with results of the creation

See Also

Other RegLog databases: [gsheet_tables_create\(\)](#), [mongo_tables_create\(\)](#)

Examples

```
library(shiny.reglog)

# create a temporary SQLite database
conn <- DBI::dbConnect(
  RSQLite::SQLite(),
  dbname = ":memory:"
)

# mockup user data
user_data <-
  data.frame(username = c("Whatever", "Hanuka", "Helsinki", "How_come"),
             password = c("&f5*MSYj^niDt=V'3.[dyEX.C/", "%}&B[fs\\}5PKE@,*+V\\tx9\\at]",
                          "35z*ofW\\'G_8,@vCC`]~?e$Jm%", "s;r_eLn?-D6;oA-=\"^R(-Ew<x)",
                          email = c("what@mil.com", "hehe@soso.so", "nider@what.no", "crazzz@simpsy.com"))

# create the tables and input the data (hashing the passwords in the process)
DBI_tables_create(conn = conn,
                  user_data = user_data,
                  hash_passwords = TRUE,
                  verbose = FALSE)

# check generator tables
DBI::dbListTables(conn = conn)

# check the "user" table for user data
DBI::dbReadTable(conn = conn,
                  "account")

# disconnect
DBI::dbDisconnect(conn = conn)
```

db_timestamp	<i>function to create standardized timestamp</i>
--------------	--

Description

function to create standardized timestamp

Usage

```
db_timestamp()
```

gsheet_tables_create	<i>Create RegLog-valid database tables with googlesheets4</i>
----------------------	---

Description

Create RegLog-valid database tables with googlesheets4

Usage

```
gsheet_tables_create(
  account_name = "account",
  reset_code_name = "reset_code",
  use_log = FALSE,
  log_name = "logs",
  user_data = NULL,
  hash_passwords = FALSE,
  gsheet_ss = NULL,
  gsheet_name = NULL,
  verbose = TRUE
)
```

Arguments

account_name	Name of the sheet for storing user accounts credentials. Defaults to 'account'. Mandatory spreadsheet.
reset_code_name	Name of the sheet for storing generated password reset codes. Defaults to 'reset_code'. Mandatory table.
use_log	Should the sheet for keeping RegLogServer logs be also created? Defaults to FALSE
log_name	Name of the sheet for storing logs from RegLogServer object. Used only if use_log = TRUE. Defaults to logs

user_data	If you wish to import existing user database, you can input data.frame with that table in this argument. It should contain columns: username, password, email. Defaults to NULL.
hash_passwords	If you are importing table of users upon tables creation, you can also specify if the password should be hashed using <code>script::hashPassword</code> . Defaults to FALSE. If you have unhashed passwords in imported table, set this option to TRUE.
gsheet_ss	ID of the googlesheet that you want to append created tables to. Defaults to NULL, which means creating new googlesheet.
gsheet_name	If <code>gsheet_ss = NULL</code> and new googlesheet will be generated, you can choose its name. If left at default NULL, name will be generated randomly.
verbose	Boolean specific if the actions made by function should be printed back to the console. Defaults to TRUE. Don't affect googlesheets4 generated messages. To silence them, use <code>options(googlesheets4_quiet = TRUE)</code> in the script before.

Details

Created spreadsheets will have following structure:

- account (default name)
 - username: character
 - password: character
 - email: character
 - create_time: character
 - update_time: character
- reset_code (default name)
 - user_id: numeric
 - reset_code: character
 - used: numeric
 - create_time: character
 - update_time: character
- logs (default name, optional)
 - time: character
 - session: character
 - direction: character
 - type: character
 - note: character

Value

ID of the googlesheet

See Also

Other RegLog databases: [DBI_tables_create\(\)](#), [mongo_tables_create\(\)](#)

Examples

```

if (googlesheets4::gs4_has_token()) {
  library(shiny.reglog)

  # mockup user data
  user_data <-
    data.frame(username = c("Whatever", "Hanuka", "Helsinki", "How_come"),
               password = c("&f5*MSYj^niDt=V'3.[dyEX.C/", "%}&B[fs\\}5PKE@,**V\\tx9\\at]",
                            "35z*ofW\\'G_8,@vCC`]?e$Jm%", "s;r_eLn?-D6;oA=-\\\"^R(-Ew<x\""),
               email = c("what@mil.com", "hehe@soso.so", "nider@what.no", "crazzz@simpsy.com"))

  # create the tables and input the data (hashing the passwords in the process)
  id <- gsheet_tables_create(user_data = user_data,
                             hash_passwords = TRUE,
                             verbose = FALSE)

  # check generated googlesheet
  googlesheets4::gs4_get(id)

  # check the "account" sheet for credentials data
  googlesheets4::read_sheet(id, "account")

  # remove example googlesheets
  googledrive::drive_trash(id)
}

```

mailMessageAttachment Mail attachment data to be handled by mailConnector via custom_mail RegLogConnectorMessage

Description

Mail attachment data to be handled by mailConnector via custom_mail RegLogConnectorMessage

Usage

```
mailMessageAttachment(filepath, filename = NULL, cid = NULL, filetype = NULL)
```

Arguments

filepath	path to the file to be attached
filename	name of the file to be used (supported by RegLogEmayiliConnector)
cid	content ID to be used to access in email body
filetype	mime type of the attached file

Value

mailMessageAttachment object

mongo_tables_create *Create RegLog-valid database collections for MongoDB*

Description

[Experimental]

MongoDB database don't enforce a structure to the documents contained within. Even though this is true, it's best to use this function explicitly, as after creation of collections it also create appropriate indexes for quick querying of the database by RegLogMongoConnector.

Usage

```
mongo_tables_create(
  mongo_url,
  mongo_db,
  mongo_options = mongolite::ssl_options(),
  account_name = "account",
  reset_code_name = "reset_code",
  user_data = NULL,
  hash_passwords = FALSE,
  verbose = TRUE
)
```

Arguments

mongo_url	URI to the MongoDB cluster
mongo_db	name of the MongoDB database
mongo_options	additional connection options such as SSL keys/certs
account_name	Name of the collection for storing user accounts credentials. Defaults to 'account'. Mandatory collection.
reset_code_name	Name of the collector for storing generated password reset codes. Defaults to 'reset_code'. Mandatory collection.
user_data	If you wish to import existing user database, you can input data.frame with that table in this argument. It should contain columns: username, password, email (ond optionally: create_time). Defaults to NULL.
hash_passwords	If you are importing table of users upon tables creation, you can also specify if the password should be hashed using <code>script::hashPassword</code> . Defaults to FALSE. If you have unhashed passwords in imported table, set this option to TRUE.
verbose	Boolean specific if the actions made by function should be printed back to the console.

Details

Every document in created collections will have following structure:

- account (default name)
 - username: character (**index**)
 - password: character
 - email: character (**index**)
 - create_time: timestamp
 - update_time: timestamp
- reset_code (default name)
 - user_id: character (**index**)
 - reset_code: character
 - used: numeric
 - create_time: timestamp
 - update_time: timestamp
- logs (default name, optional) - this collection isn't created with this function, as there is no need for that - MongoDB collections don't have a set structure, and no additional index is created there.
 - time: timestamp
 - session: character
 - direction: character
 - type: character
 - note: character

See Also

Other RegLog databases: [DBI_tables_create\(\)](#), [gsheet_tables_create\(\)](#)

RegLogConnector

RegLog connector template

Description

Parent class for all RegLog connectors

Public fields

`module_id` character vector specifying the automatically-generated `module_id` for listener server module

`listener` reactiveVal that the object keeps listening of changes for

`message` reactiveVal containing outward message

`log` list containing data about received and sent messages by the object

`handlers` named list containing functions used to handle different types of RegLogConnectorMessage. Name of the element corresponds to the 'type' that is should handle.

Methods

Public methods:

- [RegLogConnector\\$get_logs\(\)](#)
- [RegLogConnector\\$new\(\)](#)
- [RegLogConnector\\$suspend\(\)](#)
- [RegLogConnector\\$resume\(\)](#)
- [RegLogConnector\\$clone\(\)](#)

Method `get_logs()`: Function to receive all saved logs from the object in the form of single `data.frame`

Usage:

```
RegLogConnector$get_logs()
```

Details: You can specify custom handler functions as a named list passed to `custom_handlers` arguments during object initialization. Every custom handler should take arguments: `self` and `private` - relating to the R6 object and message of class `RegLogConnectorMessage`. It should return `RegLogConnectorMessage` object.

Returns: `data.frame`

Method `new()`: Initialization of the object. Sets up listener `reactiveVal` and initializes listening server module

Usage:

```
RegLogConnector$new(custom_handlers = NULL)
```

Arguments:

`custom_handlers` named list of custom handler functions. Every custom handler should take arguments: `self` and `private` - relating to the R6 object and message of class `RegLogConnectorMessage`. It should return `RegLogConnectorMessage` object.

Returns: object of `RegLogConnector` class

Method `suspend()`: Suspend the listening to the changes

Usage:

```
RegLogConnector$suspend()
```

Method `resume()`: Resume the listening to the changes

Usage:

```
RegLogConnector$resume()
```

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```
RegLogConnector$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

 RegLogConnectorMessage

create RegLogConnectorMessage object

Description

Create an object of ReglogConnectorMessage class. It is used to send data to objects that inherit their class from RegLogConnector

Usage

```
RegLogConnectorMessage(type, ..., logcontent = NULL)
```

```
is.RegLogConnectorMessage(x)
```

Arguments

type	character string declaring the type of message
...	named arguments that will be passed as data
logcontent	character string. Optional description to save into logs.
x	Any R object

Value

object of RegLogConnector class, containing fields:

- *time*: numeric representation of `Sys.time()`
- *type*: character specifying the type of message
- *data*: list of values that are to be sent alongside the message
- *logcontent*: Character string with information to be saved in logs. Optional.

 RegLogDBIConnector

Connector to DBI-valid databases

Description

Object of this class handles all connections for the RegLogServer object to the database. It is created to handle DBI compatible drivers. Provides methods than will be used by RegLogServer to get and send data.

Super class

[shiny.reglog::RegLogConnector](#) -> RegLogDBIConnector

Methods

Public methods:

- [RegLogDBIConnector\\$new\(\)](#)
- [RegLogDBIConnector\\$clone\(\)](#)

Method `new()`: Initialization of the object. Creates initial connection to the database.

Requires DBI package to be installed.

Usage:

```
RegLogDBIConnector$new(  
  driver,  
  ...,  
  table_names = c("account", "reset_code", "logs"),  
  custom_handlers = NULL  
)
```

Arguments:

`driver` Call that specifies the driver to be used during all queries

... other arguments used in `DBI::dbConnect()` call

`table_names` character vector. Contains names of the tables in the database: first containing user data, second - reset codes information, third (optional) - logs from the object. For more info check documentation of `DBI_database_create`.

`custom_handlers` named list of custom handler functions. Every custom handler should take arguments: `self` and `private` - relating to the R6 object and message of class `RegLogConnectorMessage`. It should return `RegLogConnectorMessage` object.

Returns: object of `RegLogDBIConnector` class

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```
RegLogDBIConnector$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

See Also

Other dbConnectors: [RegLogGsheetsConnector](#)

Description

You can play a little with `RegLogSever` functionalities launching this ShinyApp. This demo needs also an installation of 'RSQLite' package to create and manage a temporary database.

Usage

```
RegLogDemo(emayili_smtp = NULL, emayili_from = NULL)
```

Arguments

emayili_smtp	defined emayili smtp server for you e-mail provider. If kept as default NULL, the e-mail sending functionality won't be used. If provided, it will require an installation of 'emayili' package.
emayili_from	String containing e-mail from which the sending will take place. Used only with 'emayili_smtp' defined.

RegLogEmayiliConnector

RegLogConnector for email sending via emayili package

Description

With the use of this object, RegLogServer can send emails confirming the registration and containing code for password reset procedure.

Super class

[shiny.reglog::RegLogConnector](#) -> RegLogEmayiliConnector

Public fields

mails List containing default mail templates to use by default mail handlers for register and password reset

Methods**Public methods:**

- [RegLogEmayiliConnector\\$new\(\)](#)
- [RegLogEmayiliConnector\\$clone\(\)](#)

Method `new()`: Initialization of the object. Creates smtp server for email sending.

Usage:

```
RegLogEmayiliConnector$new(
  from,
  smtp,
  lang = "en",
  custom_txts = NULL,
  custom_handlers = NULL,
  custom_mails = NULL
)
```

Arguments:

`from` Character containing content in `from` of the email.

`smtp` Object created by `emayili::server` or all its similar functions.

`lang` character specifying which language to use for all texts generated in the UI. Defaults to 'en' for English. Currently 'pl' for Polish is also supported.

`custom_txts` named list containing character strings with custom messages. Defaults to NULL, so all built-in strings will be used.

`custom_handlers` named list of custom handler functions. Custom handler should take arguments: `self` and `private` - relating to the R6 object and message of class `RegLogConnectorMessage`. It should return `RegLogConnectorMessage` object.

`custom_mails` named list containing character strings of the same structure as elements in the `mails` field. Not all elements need to be present.

Details: default mails are used by `register_mail` and `reset_pass_mail` handlers. To change the mail used by these handlers you can pass character strings to the `custom_mail` argument during initialization or append them directly into this list.

They are stored (and should be passed accordingly) in a list of structure:

- `register`
 - `subject`
 - `body`
- `resetPass`
 - `subject`
 - `body`
- `credsEdit`
 - `subject`
 - `body`

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```
RegLogEmayiliConnector$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

See Also

Other mailConnectors: [RegLogGmailConnector](#)

RegLogGmailConnector *RegLogConnector for email sending via emayili package*

Description

With the use of this object, `RegLogServer` can send emails confirming the registration and containing code for password reset procedure.

Super class

`shiny.reglog:RegLogConnector` -> RegLogGmailrConnector

Public fields

`mails` List containing default mail templates to use by default mail handlers for register and password reset

Methods**Public methods:**

- `RegLogGmailrConnector$new()`
- `RegLogGmailrConnector$clone()`

Method `new()`: Initialization of the object. Creates smtp server for email sending.

Usage:

```
RegLogGmailrConnector$new(
  from,
  lang = "en",
  custom_txts = NULL,
  custom_handlers = NULL,
  custom_mails = NULL
)
```

Arguments:

`from` Character containing content in from of the email.

`lang` character specifying which language to use for all texts generated in the UI. Defaults to 'en' for English. Currently 'pl' for Polish is also supported.

`custom_txts` named list containing character strings with custom messages. Defaults to NULL, so all built-in strings will be used.

`custom_handlers` named list of custom handler functions. Custom handler should take arguments: `self` and `private` - relating to the R6 object and message of class `RegLogConnectorMessage`. It should return `RegLogConnectorMessage` object.

`custom_mails` named list containing character strings of the same structure as elements in the `mails` field. Not all elements need to be present.

Details: default mails are used by `register_mail` and `reset_pass_mail` handlers. To change the mail used by these handlers you can pass character strings to the `custom_mail` argument during initialization or append them directly into this list.

They are stored (and should be passed accordingly) in a list of structure:

- `register`
 - `subject`
 - `body`
- `resetPass`
 - `subject`
 - `body`
- `credsEdit`

- subject
- body

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```
RegLogGmailrConnector$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

See Also

Other mailConnectors: [RegLogEmayiliConnector](#)

RegLogGsheetConnector *Connector to googlesheet database*

Description

Object of this class handles all connections for the RegLogServer object to the database. It is created to handle googlesheet database. Provides methods than will be used by RegLogServer to get and send data.

Requires googlesheets4 package to be installed.

Super class

[shiny.reglog:RegLogConnector](#) -> RegLogGsheetConnector

Methods

Public methods:

- [RegLogGsheetConnector\\$new\(\)](#)
- [RegLogGsheetConnector\\$clone\(\)](#)

Method `new()`: Initialization of the object. Creates initial connection to the database.

Usage:

```
RegLogGsheetConnector$new(
  gsheet_ss,
  gsheet_sheetnames = c("account", "reset_code", "logs"),
  custom_handlers = NULL
)
```

Arguments:

`gsheet_ss` id of the googlesheet holding database

`gsheet_sheetnames` character vector. Contains names of the sheets in the googlesheet: first containing user data, second - reset codes information, third (optional) - logs from the object. For more info check documentation of `gsheet_database_create`.

`custom_handlers` named list of custom handler functions. Every custom handler should take arguments: `self` and `private` - relating to the R6 object and message of class `RegLogConnectorMessage`. It should return `RegLogConnectorMessage` object.

Returns: object of `RegLogDBIConnector` class

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```
RegLogGsheetConnector$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

See Also

Other dbConnectors: [RegLogDBIConnector](#)

RegLogMongoConnector *Connector to MongoDB database*

Description

[Experimental]

Object of this class handles all connections for the `RegLogServer` object to the database. It is created to handle MongoDB database compatible drivers. Provides methods than will be used by `RegLogServer` to get and send data.

Requires `mongolite` package to be installed.

Super class

`shiny.reglog::RegLogConnector` -> `RegLogMongoConnector`

Methods

Public methods:

- [RegLogMongoConnector\\$new\(\)](#)
- [RegLogMongoConnector\\$clone\(\)](#)

Method `new()`: Initialization of the object

Usage:

```
RegLogMongoConnector$new(
  mongo_url,
  mongo_db,
  mongo_options = mongolite::ssl_options(),
  collections = c("account", "reset_code", "logs"),
  custom_handlers = NULL
)
```

Arguments:

mongo_url URI to the MongoDB cluster

mongo_db name of the MongoDB database

mongo_options additional connection options such as SSL keys/certs

collections names of the collections

custom_handlers named list of custom handler functions. Every custom handler should take arguments: self and private - relating to the R6 object and message of class RegLogConnectorMessage. It should return RegLogConnectorMessage object.

table_names character vector. Contains names of the collections in the database: first containing user data, second - reset codes information, third (optional) - logs from the object. For more info check documentation of mongo_database_create.

Returns: Object of RegLogMongoConnector class

Method clone(): The objects of this class are cloneable with this method.

Usage:

```
RegLogMongoConnector$clone(deep = FALSE)
```

Arguments:

deep Whether to make a deep clone.

 RegLogServer

Login and registration moduleServer

Description

RegLogServer is an R6 class to use for handling the whole backend of login and registration component of your shinyApp.

Public fields

is_logged reactiveVal containing logical indicating if the user is logged in

user_id reactiveVal containing character specifying the logged user name. If the user is not logged in, it will consist of uuid generated with uuid::UUIDgenerate

user_mail reactiveVal containing character string specifying the logged user mail. When not logged in, it contains NULL.

account_id reactiveVal containing integer specifying the logged user account's id number: for SQL database it is equal to the value contained within id variable. For googlesheets database it is equal to the row number - 1 (the header). If not logged, it contains NULL.

mail_message reactiveVal containing most recent RegLogConnectorMessage received from mailConnector

message reactiveVal containing most recent RegLogConnectorMessage received from dbConnector or generated by RegLogServer itself.

module_id character storing ID for reglog_system module.

`dbConnector` RegLogConnector object used for communication with the database. Build-in children classes are RegLogDBIConnector and RegLogGsheetConnector.

`mailConnector` RegLogConnector object used for sending emails. Built-in children classes are RegLogEmailConnector and RegLogGmailConnector.

`log` list containing all messages send and received.

`UI_list_login` reactiveVal holding the tagList of whole login UI.

`UI_list_resetPass` reactiveVal holding the tagList of whole resetPass UI.

`UI_list_credsEdit` reactiveVal holding the tagList of whole credentials edit UI.

`UI_list_register` reactiveVal holding the tagList of whole register UI.

Methods

Public methods:

- [RegLogServer\\$new\(\)](#)
- [RegLogServer\\$logout\(\)](#)
- [RegLogServer\\$get_logs\(\)](#)
- [RegLogServer\\$clone\(\)](#)

Method `new()`: Initialize 'ReglogServer' moduleServer

Usage:

```
RegLogServer$new(
  dbConnector,
  mailConnector,
  app_name = basename(getwd()),
  app_address = NULL,
  lang = "en",
  custom_txts = NULL,
  use_modals = TRUE,
  module_id = "login_system"
)
```

Arguments:

`dbConnector` object of class RegLogConnector handling the reads from and writes to database.

Two available in the package are RegLogDBIConnector and RegLogGsheetsConnector.

See their documentation for more information about usage and creation of custom dbConnectors.

`mailConnector` object of class RegLogConnector handling the email sending to the user for register confirmation and password reset. Two available in the package are RegLogEmailConnector and RegLogGmailConnector. See their documentation for more information about usage and creation of custom mailConnectors.

`app_name` Name of the app to refer during correspondence to users. Defaults to the name of working directory.

`app_address` URL to refer to during correspondence to users. If left at NULL, the URL will be parsed from `session$clientData`.

`lang` character specifying which language to use for all texts generated in the UI. Defaults to 'en' for English. Currently 'pl' for Polish is also supported.

`custom_txts` named list containing character strings with custom messages. Defaults to NULL, so all built-in strings will be used.

`use_modals` either logical indicating if all (TRUE) or none (FALSE) modalDialogs should be shown or character vector indicating which modals should be shown. For more information see details.

`module_id` Character declaring the id of the module. Defaults to 'login_system'. Recommended to keep it that way, unless it would cause any namespace issues.

Method `logout()`: Method logging out logged user

Usage:

```
RegLogServer$logout()
```

Method `get_logs()`: Method to receive all saved logs from the object in the form of single data.frame

Usage:

```
RegLogServer$get_logs()
```

Returns: data.frame

Method `clone()`: The objects of this class are cloneable with this method.

Usage:

```
RegLogServer$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

Examples

```
# Run only in interactive session #

if (interactive()) {

  library(shiny.reglog)

  # for exemplary setup temporary SQLite database will be created
  library("DBI")
  library("RSQLite")
  temp_sqlite <- tempfile(fileext = ".sqlite")
  conn <- DBI::dbConnect(RSQLite::SQLite(),
                        dbname = temp_sqlite)
  DBI_tables_create(conn)
  DBI::dbDisconnect(conn)

  # create minimalistic UI
  ui <- navbarPage(
    title = "RegLog system",
    tabPanel("Register", RegLog_register_UI("custom_id")),
    tabPanel("Login", RegLog_login_UI("custom_id")),
    tabPanel("Credentials edit", RegLog_credsEdit_UI("custom_id")),
    tabPanel("Password reset", RegLog_resetPass_UI("custom_id"))
  )
}
```

```

)

# create server logic
server <- function(input, output, session) {

  # create dbConnector with connection to the temporary SQLite database
  dbConnector <- RegLogDBIConnector$new(
    driver = RSQLite::SQLite(),
    dbname = temp_sqlite)

  # create mockup mailConnector
  mailConnector <- RegLogConnector$new()

  # create RegLogServer
  RegLog <- RegLogServer$new(
    dbConnector = dbConnector,
    mailConnector = mailConnector,
    ## all arguments below are optional! ##
    app_name = "RegLog example",
    app_address = "https://reglogexample.com",
    lang = "en",
    # custom texts as a named list with strings
    custom_txts = list(
      user_id = "Name of the user",
      register_success_t= "Congratulations - you have been registered in
                           successfully with RegLog system!"),
    # use modals as a named list of FALSE to inhibit specific modal
    use_modals = list(
      login_success = FALSE),
    # custom module id - provide the same to the UI elements!
    module_id = "custom_id")
}

shinyApp(ui, server)
}

```

RegLog_credsEdit_UI *Generate Edit User Data UI for RegLog system*

Description

Generate Edit User Data UI for RegLog system

Usage

```
RegLog_credsEdit_UI(module_id = "login_system")
```

Arguments

module_id	Character declaring the id of the module. Defaults to 'login_system'. Recommended to keep it that way, unless it would cause any namespace issues.
-----------	--

See Also

Other RegLog UI: [RegLog_login_UI\(\)](#), [RegLog_register_UI\(\)](#), [RegLog_resetPass_UI\(\)](#)

RegLog_login_UI	<i>Generate Login UI for RegLog system</i>
-----------------	--

Description

Generate Login UI for RegLog system

Usage

```
RegLog_login_UI(module_id = "login_system")
```

Arguments

module_id	Character declaring the id of the module. Defaults to 'login_system'. Recommended to keep it that way, unless it would cause any namespace issues.
-----------	--

See Also

Other RegLog UI: [RegLog_credsEdit_UI\(\)](#), [RegLog_register_UI\(\)](#), [RegLog_resetPass_UI\(\)](#)

RegLog_register_UI	<i>Generate Register UI for RegLog system</i>
--------------------	---

Description

Generate Register UI for RegLog system

Usage

```
RegLog_register_UI(module_id = "login_system")
```

Arguments

module_id	Character declaring the id of the module. Defaults to 'login_system'. Recommended to keep it that way, unless it would cause any namespace issues.
-----------	--

See Also

Other RegLog UI: [RegLog_credsEdit_UI\(\)](#), [RegLog_login_UI\(\)](#), [RegLog_resetPass_UI\(\)](#)

RegLog_resetPass_UI *Generate ResetPass code UI for RegLog system*

Description

Generate ResetPass code UI for RegLog system

Usage

```
RegLog_resetPass_UI(module_id = "login_system")
```

Arguments

module_id Character declaring the id of the module. Defaults to 'login_system'. Recommended to keep it that way, unless it would cause any namespace issues.

See Also

Other RegLog UI: [RegLog_credsEdit_UI\(\)](#), [RegLog_login_UI\(\)](#), [RegLog_register_UI\(\)](#)

RegLog_txt *Getting texts for given language*

Description

Getting texts for given language

Usage

```
RegLog_txt(lang, x = NULL, custom_txts = NULL)
```

Arguments

lang character to identify the language
x character to identify the txt to get. If NULL, all labels are recovered
custom_txts named list providing custom messages to replace default for specific languages.

Details

'RegLog_txt' outside of internal usage should be used only for getting the structure of all texts generated by 'shiny.reglog'.

To customize texts used by RegLog objects, provide within their call named list to the 'custom_txts' argument - it will be passed to 'custom_txts' within this call. You can check validity of your list by providing the 'custom_txts' and calling this function in console.

Values of list provided should be named in the same way as the default text you are willing to replace.

Index

- * **RegLog UI**
 - RegLog_credsEdit_UI, 21
 - RegLog_login_UI, 22
 - RegLog_register_UI, 22
 - RegLog_resetPass_UI, 23
- * **RegLog databases**
 - DBI_tables_create, 2
 - gsheet_tables_create, 5
 - mongo_tables_create, 8
- * **dbConnectors**
 - RegLogDBIConnector, 11
 - RegLogGsheetConnector, 16
- * **mailConnectors**
 - RegLogEmayiliConnector, 13
 - RegLogGmailrConnector, 14
- db_timestamp, 5
- DBI_tables_create, 2, 6, 9
- gsheet_tables_create, 4, 5, 9
- is.RegLogConnectorMessage
(RegLogConnectorMessage), 11
- mailMessageAttachment, 7
- mongo_tables_create, 4, 6, 8
- RegLog_credsEdit_UI, 21, 22, 23
- RegLog_login_UI, 22, 22, 23
- RegLog_register_UI, 22, 22, 23
- RegLog_resetPass_UI, 22, 23
- RegLog_txt, 23
- RegLogConnector, 9
- RegLogConnectorMessage, 11
- RegLogDBIConnector, 11, 17
- RegLogDemo, 12
- RegLogEmayiliConnector, 13, 16
- RegLogGmailrConnector, 14, 14
- RegLogGsheetConnector, 12, 16
- RegLogMongoConnector, 17
- RegLogServer, 18
- shiny.reglog::RegLogConnector, 11, 13, 15–17