Package 'restatis'

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Title R Wrapper to Access a Wide Range of Germany's Federal
Statistical System Databases Based on the GENESIS Web Service
RESTful API of the German Federal Statistical Office
(Statistisches Bundesamt/Destatis)

Version 0.3.0

Description A RESTful API wrapper for accessing the GENESIS database of
the German Federal Statistical Office (Destatis) as well as its Census
Database and the database of Germany's regional statistics. Supports data
search functions, credential management, result caching, and handling
remote background jobs for large datasets.

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URL <https://correlaid.github.io/restatis/>,
<https://github.com/CorrelAid/restatis>

BugReports <https://github.com/CorrelAid/restatis/issues>

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Contents

.gen_api_core *Basic API request function*

Description

(Uncached) Low-level function to interact with the one of the APIs

Usage

```
.gen_api_core(endpoint, database, ...)
```

Arguments

endpoint	Character string. The endpoint of the API that is to be queried.
database	The database the query should be sent to.
...	Further parameters passed on to the final API call.

binding_lapply *binding_lapply*

Description

binding_lapply

Usage

```
binding_lapply(x, characteristics)
```

Arguments

x   Element to bind

characteristics

                Characteristics to filter for

check_function_input *check_function_input*

Description

check_function_input

Usage

```
check_function_input(
  code = NULL,
  term = NULL,
  sortcriterion = NULL,
  category = NULL,
  detailed = NULL,
  type = NULL,
  date = NULL,
  similarity = NULL,
  error.ignore = NULL,
  ordering = NULL,
  pagelength = NULL,
  database = NULL,
  area = NULL,
  caller = NULL,
  verbose = NULL,
  raw = NULL
)
```

Arguments

code	Parameter to be checked
term	Parameter to be checked
sortcriterion	Parameter to be checked
category	Parameter to be checked
detailed	Parameter to be checked
type	Parameter to be checked
date	Parameter to be checked
similarity	Parameter to be checked
error.ignore	Parameter to be checked
ordering	Parameter to be checked
pagelength	Parameter to be checked
database	Parameter to be checked
area	Parameter to be checked
caller	Parameter to be checked
verbose	Parameter to be checked
raw	Parameter to be checked

---

check_results	*check_results*

Description

check_results

Usage

```
check_results(input)
```

Arguments

input	Input to test result structure

---

evas_list   *List of EVAS Codes*

Description

List of EVAS Codes

Usage

```
evas_list
```

Format

`evas_list`:
A data frame with 1132 rows and 3 columns:

EVAS EVAS code
Beschreibung Details on the EVAS code
Titel Alternative desription of EVAS code contents

Source

<https://www.destatis.de/DE/Methoden/Revisionen/Glossar/EVAS.html>

---

find_token   *find_token*

Description

find_token

Usage

```
find_token(input, error.input, text, sub_category)
```

Arguments

`input`	Input to test result structure
`error.input`	error.ignore TRUE or FALSE
`text`	verbose TRUE or FALSE
`sub_category`	sub_category character string

---

forming_evas   *forming_evas*

Description

forming_evas

Usage

```
forming_evas(list_of)
```

Arguments

list_of   List of EVAS to iterate over

---

gen_alternative_terms   *Find similar search terms*

Description

Function to find search terms that are similar or related to one another in spelling and also represented in the GENESIS, Zensus 2022 or regionalstatistik.de databases. Important note: The API call is searching for terms with the same characters. To be useful in searching for related terms it is highly recommended to work with "*" placeholders (see examples). The placeholder can be placed before and/or after the search term.

Usage

```
gen_alternative_terms(
  term = NULL,
  similarity = TRUE,
  database = c("all", "genesis", "zensus", "regio"),
  pagelength = 500,
  verbose = TRUE,
  ...
)
```

Arguments

term   Character string. Maximum length of 15 characters. Term or word for which
                 you are searching for alternative or related terms. Use of '*' as a placeholder is
                 possible to generate broader search areas.

similarity   Boolean. Indicator if the output of the function should be sorted based on a
                 Levenshtein edit distance based on the adist() function. Default is 'TRUE'.

database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
pagelength	Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recollected elements from the respective database. Attributes are added to the data.frame, describing the search configuration for the returned output.

Examples

```
## Not run:
# Find terms at GENESIS that are the same (in spelling) to search term "bus"
# and sort them by Levenshtein edit distance
object <- gen_alternative_terms(term = "bus", similarity = TRUE, database = "genesis")

# Find terms at GENESIS that are related (in spelling) to search term "bus"
object <- gen_alternative_terms(term = "bus*", similarity = TRUE, database = "genesis")

# Find terms at Zensus 2022 that are related (in spelling) to search term "wohn"
object <- gen_alternative_terms(term = "wohn*", similarity = TRUE, database = "zensus")

## End(Not run)
```

---

gen_auth_ask   *Helper function for authentication purposes*

Description

Helper function for authentication purposes

Usage

```
gen_auth_ask(credential_type)
```

Arguments

credential_type

        Character string. Type of credential to ask for

Value

The user response

---

gen_auth_get	*Retrieve database credentials*

Description

Function to retrieve the credentials stored via gen_auth_save()

Usage

```
gen_auth_get(database = NULL)
```

Arguments

database   Character string. The database to get the credentials for ('all', 'genesis', 'zensus' and 'regio').

Value

Credentials for the database(s) chosen by the user

Examples

```
## Not run:
gen_auth_get("all")

## End(Not run)
```

---

gen_auth_path	*Helper function for authentication purposes*

Description

Helper function for authentication purposes

Usage

```
gen_auth_path(...)
```

Arguments

...   Optional arguments for file.path()

Value

A file path for the storage of config files

---

gen_auth_save   *Save database credentials*

Description

Save credentials of the different databases for further convenient use

Usage

```
gen_auth_save(database, use_token = FALSE)
```

Arguments

database   Character string. The database to store credentials for ('all', 'genesis', 'zensus' or 'regio').

use_token   Boolean. Do you want to (if possible) set an API token instead of password + username? Note: This is not supported by regionalstatistik.de. Defaults to FALSE.

Details

Username and password are encrypted and saved as RDS in the package config directory. A random string is generated and stored in the session environment variable GENESIS_KEY. This string is used as the key to encrypt and decrypt the entered credentials. To avoid having to save authentication in future sessions, GENESIS_KEY can be added to .Renviron. The {usethis} package includes a helper function for editing .Renviron files from an R session with usethis::edit_r_environ().

Value

Path to the RDS file in which credentials are saved, invisibly.

Examples

```
## Not run:
gen_auth_save("zensus")

## End(Not run)
```

---

gen_catalogue   *Search for tables, statistics and cubes*

Description

Function to search for tables, statistics and cubes from GENESIS, Zensus 2022 or regionalstatis-
tik.de. Additionally, it structures the output based on the internal tree structure based on the EVAS
numbers. Time-series are represented as cubes with a specified time span. Important note: To
be useful in searching for objects it is highly recommended to work with "*" placeholders (see
examples). The placeholder can be placed before and/or after the search term.

Usage

```
gen_catalogue(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  category = c("tables", "statistics", "cubes"),
  area = c("all", "public", "user"),
  detailed = FALSE,
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

Arguments

code	String with a maximum length of 15 characters for a database object (GENESIS and regionalstatistik.de) and 15 characters for a Zensus 2022 object. Only one code per iteration. "*" notations are possible.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
category	Character string. Specify specific GENESIS/regionalstatistik.de object types ('tables', 'statistics' and 'cubes') and specific Zensus 2022 object types ('tables' and 'statistics'). All types that are specific for one database can be used together. Default option is to use all types that are possible for the specific database.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
detailed	Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.
sortcriterion	Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.

pagelength	Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recalled elements from the API. Based on the 'detailed' parameter, it contains more or less information, but always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Scroll through objects under the topic "12*"
# which is "Bevoelkerung" in GENESIS from all categories and
# with a detailed output
object <- gen_catalogue(code = "12*", detailed = TRUE)

# Search tables under the topic "12*" which is "Bevoelkerung"
# without a detailed output
object <- gen_catalogue(code = "12*", category = "tables")

## End(Not run)
```

---

gen_cube   *gen_cube*

Description

Download a cube with data from GENESIS or regionalstatistik.de database

Usage

```
gen_cube(name, ...)
```

Arguments

name	Character string for a cube object (only GENESIS and regionalstatistik.de)
...	Further (optional) parameters passed on to the API call:

area Character string. The area in which the table is stored. Possible values:
- "public": cube in the public catalogue
- "user": cube in the user's account
- "all": both of the above

values Boolean. Should values be included?

metadata Boolean. Should metadata be included?

additionals Boolean. Should additional metadata be included?

contents Character string. Names of required statistical specifications

startyear,endyear Four-digit integers. Only retrieve data between these years.

timeslices Integer. Number of timeslices (cumulative to startyear or endyear)

regionalvariable Character string. Code of the regional variable whose value is specified in regionalkey to filter the results.

regionalkey Character string. One or more regional keys. Multiple values can be supplied as a character vector or as a single string, with the regional keys separated by commas. Use of wildcard (*) allowed.

classifyingvariable1,classifyingvariable2 ,classifyingvariable3 Character string. Code of the subject classification (SK-Merkmal) to which the selection by means of the corresponding classifyingkey parameter is to be applied.

classifyingkey1,classifyingkey2,classifyingkey3 Character string. One or more values of a subject classification (e.g. "WZ93012"). Applied to the corresponding classifyingvariable parameter. Multiple keys can be supplied as a character vector or as a single string, with the keys separated by commas. Use of wildcard (*) allowed.

stand Character string, format: "DD.MM.YYYY". Only retrieve data updated after this date.

language Character string. Search terms, returned messages and data descriptions in German ("de") or English ("en")?

... Additional parameters for the API call (see respective API documentation). A valid specification of these will not be checked by the function, so wrongful specification may lead to errors.

Value

A [tibble]. Non-data contents of the data cube object are saved in the metadata [attribute] of the data frame.

Examples

```
## Not run:
gen_cube("47414BJ002")


## End(Not run)
```

---

gen_download_job *gen_download_job*

Description

gen_download_job

Usage

```
gen_download_job(
  name,
  database = c("genesis", "regio"),
  area = c("all", "public", "user"),
  compress = FALSE,
  language = Sys.getenv("RESTATIS_LANG"),
  all_character = TRUE
)
```

Arguments

name	Character string. The job code retrieved by using gen_list_jobs().
database	Character string. Indicator if the GENESIS ('genesis') or regionalstatistik.de ('regio') database is called. Only one database can be addressed per function call. Default option is 'genesis'.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'.
compress	Boolean. Should empty rows and columns be discarded? Default is FALSE.
language	Character string. Defines if the decimal mark and grouping mark of integers should be represented based on the European (e.g.: '100,5', '200.000,5') or American ('100.5', '200,000.5') system. Defaults to 'Sys.getenv("RESTATIS_LANG")'.
all_character	Boolean. Should all variables be imported as 'character' variables? Avoids fuzzy data type conversions if there are leading zeros or other special characters. Defaults to TRUE.

Value

Returns a data.frame with the table content

Examples

```
## Not run:
gen_download_job("21311-00-01-1_123456789", "regio")

## End(Not run)
```

---

gen_find | *General Search for Objects Through A Database*

Description

Function to search through the databases GENESIS, Zensus 2022 and regionalstatistik.de. It is similar in usage as the search function on the GENESIS main page (https://www-genesis.destatis.de/genesis/online). In the search query, "UND" (German word for 'and', also written "und" or "&") as well as "ODER" (German word for 'or', also written "oder" or "|") can be included and logically combined. Furthermore, wildcards are possible by including "*". If more then one word is included in the term string, 'and' is used automatically to combine the different words. Important note: Time-series are treated as cubes in GENESIS and regionalstatistik.de, they are not longer distinguished. If you want to find a specific object with a clear code with this find function, you need to specify the object type or search for all object types.

Usage

```
gen_find(
  term = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  category = c("all", "tables", "statistics", "variables", "cubes"),
  detailed = FALSE,
  ordering = TRUE,
  pagelength = 500,
  error.ignore = TRUE,
  verbose = TRUE,
  ...
)
```

Arguments

term	A character string with no maximum character length, but a word limit of five words.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
category	Character string. Specify specific GENESIS/regionalstatistik.de object types ('tables', 'statistics' and 'cubes') and specific Zensus 2022 object types ('tables' and 'statistics'). All types that are specific for one database can be used together. Default option is to use all types that are possible for the specific database.
detailed	Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.
ordering	A logical. Indicator if the function should return the output of the iteration ordered first based on the fact if the searched term is appearing in the title of the object and secondly on an estimator of the number of variables in this object. Default option is 'TRUE'.

pagelength	Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'TRUE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recalled elements from the API. Based on the 'detailed' parameter it contains more or less information, but always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find objects related to "bus" in GENESIS
object <- gen_find(term = "bus")

# Find tables related to "bus" in GENESIS and return a unordered detailed output
object <- gen_find(term = "bus", detailed = TRUE, ordering = FALSE)

# Find tables related to "Autos" or "Corona" in GENESIS and return a unordered detailed output
object <- gen_find(term = "autos ODER corona", detailed = TRUE, ordering = FALSE)

#' # Find tables related to "Autos" and "Corona" in GENESIS and return a unordered detailed output
object <- gen_find(term = "autos UND corona", detailed = TRUE, ordering = FALSE)

## End(Not run)
```

---

gen_list_jobs   *gen_list_jobs*

Description

Function to list all current jobs connected to the given user in the GENESIS or regionalstatistik.de database. Important note: For this function it is also possible to use searchcriterion parameter and selection parameter, making it possible to filter the job list based on 'type','time','status' or 'code'. For more details see vignette("additional_parameter").

Usage

```
gen_list_jobs(
  database = c("genesis", "regio"),
  sortcriterion = c("type", "time", "status", "code"),
  flat = FALSE,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

Arguments

database	Character string. Indicator if 'genesis' or 'regionalstatistik.de' database is called.
sortcriterion	Character string. Indicator if the output should be sorted by 'type','time','status' or 'code'. This is a parameter of the API call itself. The default is 'type'.
flat	Boolean. Should the function return a list with jobs and metadata ('FALSE') or just a flat data.frame ('TRUE')? Defaults to FALSE.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Details

Important information concerning the caching of results: This function's results are *never* cached because there is no use-case for a cached list of jobs (users would always want a refreshed list of jobs and their respective status).

Value

A list or data.frame (see parameter 'flat') of all current jobs of the user.

Examples

```
## Not run:
gen_list_jobs("regio", flat = TRUE)

## End(Not run)
```

---

gen_logincheck *gen_logincheck*

Description

Function to check if a login is possible for a certain database.

Usage

```
gen_logincheck(database = "all", verbose = TRUE, ...)
```

Arguments

database   Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. If all databases should be checked, use 'all'. Default option is 'all'.

verbose   Boolean. In case of success, should a message be printed? Defaults to 'TRUE'.

...   Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

Leads to an informative error message if the login check failed and returns FALSE invisibly. Invisibly returns TRUE otherwise.

Examples

```
## Not run:
gen_logincheck("zensus")

## End(Not run)
```

---

gen_metadata *Search For Meta-Information For All Types Of Objects*

Description

Search for metadata-information for all types of objects and databases and have them returned as a list.

Usage

```
gen_metadata(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  category = c("cube", "statistic", "table", "variable", "value"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

Arguments

code	String with a maximum length of 15 characters for a database object (GENESIS, regionalstatistik.de, Zensus 2022). Only one code per iteration.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
category	Character string. Specifying the specific object type of the object that you want meta data for. No default option - you need to specify the object type. Hint: The functions in 'restatis' often return information on object 'Type'.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
raw	Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find meta-information of the table with the code "11111"
object <- gen_metadata(code = "11111", category = "table", database = "genesis")
```

```
## End(Not run)
```

---

gen_metadata_cube   *gen_metadata_cube*

Description

Function to search for meta information for a specific cube. Usable only for GENESIS and regionalstatistik.de.

Usage

```
gen_metadata_cube(
  code = NULL,
  database = c("all", "genesis", "regio"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

Arguments

code	A character string with a maximum length of 15 characters. Code from a GENESIS or regionalstatistik.de object. Only one code per iteration.
database	Character string. Indicator if the GENESIS ('genesis') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
raw	Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find meta-information of the cube with the code "11111KE001"
object <- gen_metadata_cube(code = "11111KE001")

## End(Not run)
```

```
gen_metadata_statistic
```
gen_metadata_statistic

Description

Function to search for meta information for a specific statistic.

Usage

```
gen_metadata_statistic(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

Arguments

code	A character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.

verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
raw	Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see `vignette("additional_parameter")`.

Value

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find meta-information of the statistic with the code "12411"
object <- gen_metadata_stats(code = "12411")

## End(Not run)
```

---

gen_metadata_table   *gen_metadata_table*

Description

Function to search for meta information for a specific table.

Usage

```
gen_metadata_table(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

Arguments

| code | A character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration. |
| database | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'. |

area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
raw	Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find meta-information of the table with the code "11111"
object <- gen_metadata_tab(code = "11111")

## End(Not run)
```

---

gen_metadata_value *gen_metadata_value*

Description

Function to search for meta information for a specific value.

Usage

```
gen_metadata_value(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

Arguments

code	A character string with a maximum length of 15 characters. Code from a GEN-ESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
raw	Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find meta-information of the value with the code "LEDIG"
object <- gen_metadata_val(code = "LEDIG")

## End(Not run)
```

---

gen_metadata_variable *gen_metadata_variable*

Description

Function to search for meta information for a specific variable.

Usage

```
gen_metadata_variable(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

Arguments

code	A character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
raw	Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find meta-information of the variable with the code "FAMSTD"
object <- gen_metadata_var(code = "FAMSTD")

## End(Not run)
```

gen_modified_data   *gen_modified_data*

Description

Function to check for updates, changes, or new objects based on a specific date.

Usage

```
gen_modified_data(
  code = "",
  database = c("all", "genesis", "zensus", "regio"),
  type = c("all", "tables", "statistics", "statisticsUpdates"),
  date = c("now", "week_before", "month_before", "year_before"),
  pagelength = 500,
  verbose = TRUE,
  ...
)
```

Arguments

code	A character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
type	Character string. Specific GENESIS and regionalstatistik.de object types: 'tables', 'statistics', and 'statisticsUpdates'. Specific Zensus 2022 object types: 'tables' and 'statistics'. All types that are specific for one database can be used together through 'all', which is the default.
date	Character string. Specific date that is used as the last update or upload time to include an object in return. Default option is 'now', which uses the current date of your system. Alternative options are 'week_before', using the current date of your system minus 7 days, 'month_before', using the current date of your system minus 4 weeks, and 'year_before', using the current date of your system minus 52 weeks. Additionally, it is possible to fill in a specific date of format 'DD.MM.YYYY'.
pagelength	Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recalled elements from the API. Always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find objects which were modified last_week
object <- gen_modified_data(date = "week_before")

# Find tables that were new from 31.03.2020
object <- gen_modified_data(type = "tables", date = "31.03.2020")

# Find objects related to the topic "Bevoelkerung" (Code: '12*') which were new today
object <- gen_modified_data(code = "12*")

## End(Not run)
```

---

gen_objects2stat *gen_objects2stat*

Description

Function to find objects related to a statistic

Usage

```
gen_objects2stat(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  category = c("tables", "variables", "cubes"),
  area = c("all", "public", "user"),
  detailed = FALSE,
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

Arguments

code   Character string with a maximum length of 6 characters (15 characters if 'cubes' are not used as a category). Code from a GENESIS, Zensus 2022 or regional-statistik.de object. Only one code per iteration.

database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
category	Character string. Specify specific GENESIS/regionalstatistik.de object types ('tables', 'statistics' and 'cubes') and specific Zensus 2022 object types ('tables' and 'statistics'). All types that are specific for one database can be used together. Default option is to use all types that are possible for the specific database.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
detailed	Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.
sortcriterion	Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.
pagelength	Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recalled elements from the API. Based on the 'detailed' parameter it contains more or less information, but always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find cubes from the statistic with the code "21111" with a detailed return
 object <- gen_objects2stat(code = "21111", category = "cubes", detailed = T)

# Find all object types from the statistic with the code "12411"
object <- gen_objects2stat(code = "12411")
# Default of detailed-parameter is FALSE, and default of the
# category-parameter is to include all object types.

## End(Not run)
```

---

gen_objects2var *gen_objects2var*

Description

Function to find objects related to a variable

Usage

```
gen_objects2var(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  category = c("tables", "statistics", "cubes"),
  area = c("all", "public", "user"),
  detailed = FALSE,
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

Arguments

code	Character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
category	Character string. Specify specific GENESIS/regionalstatistik.de object types ('tables', 'statistics' and 'cubes') and specific Zensus 2022 object types ('tables' and 'statistics'). All types that are specific for one database can be used together. Default option is to use all types that are possible for the specific database.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
detailed	Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.
sortcriterion	Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.
pagelength	Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API

call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.

verbose   Boolean. Indicator if the output of the function should include detailed mes-
                     sages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to
                     suppress additional messages and warnings.

...   Additional parameters for the API call. These parameters are only affecting the
                     call itself, no further processing. For more details see `vignette("additional_parameter")`.

Value

A list with all recalled elements from the API. Based on the 'detailed' parameter it contains more or less information, but always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find Tables for Variable "Kreise" and return detailed output
object <- gen_objects2var(code = "Kreise", category = "tables", detailed = T)

# Find everything for Variable "GES"
object <- gen_objects2var(code = "GES")
# Default of detailed-parameter is FALSE, and default of the
# category-parameter is to include all object types.

## End(Not run)
```

---

gen_search_vars   *gen_search_vars*

Description

Function to search for specific variables

Usage

```
gen_search_vars(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

Arguments

`code`	Character string with a maximum length of 6 characters. Code from a GENE-SIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.
`database`	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
`area`	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
`sortcriterion`	Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.
`pagelength`	Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.
`error.ignore`	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
`verbose`	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
`...`	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see `vignette("additional_parameter")`.

Value

A list with all recalled elements from the API. Always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find a specific variable "GES" in Genesis
object <- gen_search_vars("GES")

## End(Not run)
```

---

gen_signs	*gen_signs*

Description

Function to list all currently used special signs (e.g., 0, *, X, (), p, ...) and their meaning in GENE-SIS, Zensus 2022 and/or regionalstatistik.de.

Usage

```
gen_signs(
  database = c("all", "genesis", "zensus", "regio"),
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

Arguments

database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. In case of success, should a message be printed? Defaults to 'TRUE'.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list of all current used special signs.

---

gen_table   *gen_table*

Description

Download a table with data from GENESIS, Zensus 2022 or regionalstatistik.de databases

Usage

```
gen_table(name, ...)
```

Arguments

name	Character string. Name/code of the table. Use of wildcards (*) is possible.
...	Optional parameters passed on to the Genesis API call:

area Character string. The area in which the table is stored. Possible values:
- "public": table in the public catalogue
- "user": table in the user's account
- "all": both of the above

compress Boolean. Should empty rows and columns be discarded?

transpose Boolean. Reshape the table between "wide" and "long" format.

startyear,endyear Four-digit integers. Only retrieve data between these years.

regionalvariable Character string. Code of the regional variable whose value is specified in `regionalkey` to filter the results.

regionalkey Character string. One or more regional keys. Multiple values can be supplied as a character vector or as a single string, with the regional keys separated by commas. Use of wildcard (*) allowed.

classifyingvariable1,classifyingvariable2 ,classifyingvariable3 Character string. Code of the subject classification (SK-Merkmal) to which the selection by means of the corresponding `classifyingkey` parameter is to be applied.

classifyingkey1,classifyingkey2,classifyingkey3 Character string. One or more values of a subject classification (e.g. "WZ93012"). Applied to the corresponding `classifyingvariable` parameter. Multiple keys can be supplied as a character vector or as a single string, with the keys separated by commas. Use of wildcard (*) allowed.

stand Character string, format: `"DD.MM.YYYY"`. Only retrieve data updated after this date.

language Search terms, returned messages and data descriptions in German (`"de"`) or English (`"en"`)?

job Boolean. Indicate as to whether a job should be created (not available with the 'Zensus' database). In order to set job = TRUE you have to have username and password saved with gen_auth_save(), using API tokens with job = TRUE will result in an error.

all_character Boolean. Should all variables be imported as 'character' variables? Avoids fuzzy data type conversions if there are leading zeros or other special characters. Defaults to TRUE.

... Additional parameters for the API call (see respective API documentation). A valid specification of these will not be checked by the function, so wrongful specification may lead to errors.

Value

A [tibble](#).

Examples

```
## Not run:
gen_table("21311-0001", database = "genesis")

## End(Not run)
```

---

gen_update_evas   *gen_update_evas*

Description

Function to web scrape the EVAS numbers from the EVAS website and save them as a .rda file. Takes no parameters.

Usage

```
gen_update_evas()
```

Value

An updated .rda file containing the latest EVAS numbers

---

gen_val2var   *gen_val2var*

Description

Function to extract the possible values from a variable. Values for continuous variables are not extractable, which is why the function returns a warning message in this case.

Usage

```
gen_val2var(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = TRUE,
  verbose = TRUE,
  ...
)
```

Arguments

code	Character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.

sortcriterion	Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.
pagelength	Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'TRUE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").

Value

A list with all recalled elements from the API. Always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find the values of the variable "DLAND"
object <- gen_val2var(code = "DLAND")

## End(Not run)
```

---

gen_val2var2stat *gen_val2var2stat*

Description

Get values from variables from a statistic. Values for continuous variables cannot be extracted, so the function returns a warning message.

Usage

```
gen_val2var2stat(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  detailed = FALSE,
  sortcriterion = c("code", "content"),
  pagelength = 500,
```

```
  error.ignore.var = FALSE,
  error.ignore.val = TRUE,
  verbose = TRUE,
  ...
)
```

Arguments

code	Character string with a maximum length of 15 characters. Code from a GENE-SIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
detailed	Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.
sortcriterion	Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.
pagelength	Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.
error.ignore.var	
	Boolean. Indicator for variables if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
error.ignore.val	
	Boolean. Indicator for values if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'TRUE', this prevents the function to stop even if a variable has no further explanation (often the case for numerical variables). Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see `vignette("additional_parameter")`.

Value

A list with all recalled elements from the API. Based on the 'detailed' parameter it contains more or less information, but always includes the code of the object, the title, and the type of the object.

This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find the values of variables in a specific statistic with
# the code "21111" and a detailed description of the variables
object <- gen_val2var2stat(code = "21111", detailed = TRUE)

## End(Not run)
```

---

gen_var2stat *gen_var2stat*

Description

Function to generate variables from statistics

Usage

```
gen_var2stat(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  detailed = FALSE,
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

Arguments

code	Character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.
database	Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.
area	Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.
detailed	Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.

sortcriterion	Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.
pagelength	Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.
error.ignore	Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.
verbose	Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.
...	Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see `vignette("additional_parameter")`.

Value

A list with all recalled elements from the API. Based on the 'detailed' parameter it contains more or less information, but always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

Examples

```
## Not run:
# Find the variables of the statistic with the code "12411"
# with a detailed output
object <- gen_var2stat(code = "12411", detailed = TRUE)

## End(Not run)
```

---

ggsub	*ggsub*

Description

ggsub

Usage

```
ggsub(x)
```

Arguments

x	Element to subset with $Content

insert_and_save_credentials

insert_and_save_credentials

Description

insert_and_save_credentials

Usage

```
insert_and_save_credentials(database, use_token)
```

Arguments

database	The database to specify credentials for
use_token	Boolean. Do you want to (if possible) set an API token instead of password + username? Defaults to FALSE.

is_cube_metadata_header

is_cube_metadata_header

Description

is_cube_metadata_header

Usage

```
is_cube_metadata_header(lines)
```

Arguments

lines	Lines to check for header

logincheck_http_error *logincheck_http_error*

Description

logincheck_http_error

Usage

```
logincheck_http_error(database, verbose, ...)
```

Arguments

database	The user input to 'gen_logincheck'
verbose	Boolean. Should the function message in case of success?
...	Additional parameters (unchecked)

Value

Informative error/warning messages + invisibly TRUE/FALSE

logincheck_stop_or_warn
logincheck_stop_or_warn

Description

logincheck_stop_or_warn

Usage

```
logincheck_stop_or_warn(response, error, verbose, database)
```

Arguments

response	A HTTP response object
error	Boolean. Should the function warn or throw an error?
verbose	Boolean. Should the function message in case of success?
database	The database that the check should be run for

Value

In case of failure warns or errors. Invisibly returns TRUE (success) or FALSE (failure)

---

param_check_regionalkey

param_check_regionalkey

Description

param_check_regionalkey

Usage

```
param_check_regionalkey(regionalkey)
```

Arguments

regionalkey   Regional key

---

param_check_year   *param_check_year*

Description

param_check_year

Usage

```
param_check_year(year)
```

Arguments

year   Year as parameter value

---

param_collapse_vec   *param_collapse_vec*

Description

param_collapse_vec

Usage

```
param_collapse_vec(vec)
```

Arguments

vec   Vector to be collapsed

---

read_cube	*read_cube*

Description

read_cube

Usage

```
read_cube(resp)
```

Arguments

resp   API response object resulting from a call to 'data/cubefile'

---

read_cube_block	*read_cube_block*

Description

read_cube_block

Usage

```
read_cube_block(lines)
```

Arguments

lines   Lines to read as header

---

read_cube_data_lines	*read_cube_data_lines*

Description

read_cube_data_lines

Usage

```
read_cube_data_lines(lines, col_names)
```

Arguments

lines   Lines to read data from

col_names   Specify column names

read_cube_metadata_header

read_cube_metadata_header

Description

read_cube_metadata_header

Usage

```
read_cube_metadata_header(line, rename_dups = TRUE)
```

Arguments

line	Line to read
rename_dups	Rename duplicates?

rename_cube_data_columns

rename_cube_data_columns

Description

rename_cube_data_columns

Usage

```
rename_cube_data_columns(cube)
```

Arguments

cube	A cube object to rename the columns in

resp_check_data *resp_check_data*

Description

resp_check_data

Usage

```
resp_check_data(resp)
```

Arguments

resp	Response object

---

return_table_object   *return_table_object*

Description

return_table_object

Usage

```
return_table_object(response, response_type, language, all_character)
```

Arguments

response	Response object
response_type	Response type
language	Language locale
all_character	Read all variables as character?

---

set_credentials_auth   *set_credentials_auth*

Description

set_credentials_auth

Usage

```
set_credentials_auth(path, sys_env, ui_menu_database, use_token)
```

Arguments

path	Path for the .rds file
sys_env	System environment variable name for the key
ui_menu_database	
	The database for the auth request ('GENESIS' or 'Zensus 2022')
use_token	Boolean. Do you want to (if possible) set an API token instead of password + username? Defaults to FALSE.

---

spezifisch_create *spezifisch_create*

Description

spezifisch_create

Usage

```
spezifisch_create(x)
```

Arguments

x   Element to extract $Spezifisch from

---

split_cube *split_cube*

Description

split_cube

Usage

```
split_cube(lines)
```

Arguments

lines   Lines to split a cube

---

test_database_function

test_database_function

Description

test_database_function

Usage

```
test_database_function(input, error.input, text)
```

Arguments

input   Input to test for database name

error.input Indicator error.ignore

text   Indicator verbose

---

test_if_error   *test_if_error*

Description

test_if_error

Usage

```
test_if_error(input, para, verbose = NULL)
```

Arguments

input   Response object

para   Parameter TRUE/FALSE

verbose   Verbose TRUE/FALSE

---

test_if_error_find   *test_if_error_find*

Description

test_if_error_find

Usage

```
test_if_error_find(input, para, verbose = NULL)
```

Arguments

input   Response object

para   Parameter TRUE/FALSE

verbose   Verbose TRUE/FALSE

test_if_error_light *test_if_error_light*

Description

test_if_error_light

Usage

```
test_if_error_light(input, verbose = NULL)
```

Arguments

input	Response object
verbose	Verbose TRUE/FALSE

test_if_error_variables

test_if_error_variables

Description

test_if_error_variables

Usage

```
test_if_error_variables(input, para)
```

Arguments

input	Response object
para	Parameter TRUE/FALSE

test_if_json *test_if_json*

Description

test_if_json

Usage

```
test_if_json(input)
```

Arguments

input	Response object

---

test_if_okay   *test_if_okay*

Description

test_if_okay

Usage

```
test_if_okay(input)
```

Arguments

input   Response object

---

test_if_process_further

test_if_process_further

Description

test_if_process_further

Usage

```
test_if_process_further(input, para, verbose = NULL)
```

Arguments

input   Response object

para   Parameter TRUE/FALSE

verbose   Verbose TRUE/FALSE

titel_search *titel_search*

Description

titel_search

Usage

```
titel_search(x, term, text)
```

Arguments

x	Element to extract $Content from
term	Search term
text	Indicator verbose

Index