

Package ‘tidywikidatar’

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Title Explore 'Wikidata' Through Tidy Data Frames

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| | |
|----------------|--|
| tw_check_cache | <i>Check caching status in the current session, and override it upon request</i> |
|----------------|--|

Description

Mostly used internally in functions, exported for reference.

Usage

```
tw_check_cache(cache = NULL)
```

Arguments

cache Defaults to NULL. If NULL, checks current cache settings. If given, returns given value, ignoring cache.

Value

Either TRUE or FALSE, depending on current cache settings.

Examples

```
if (interactive()) {
  tw_check_cache()
}
```

tw_check_cached_items *Check if given items are present in cache*

Description

Check if given items are present in cache

Usage

```
tw_check_cached_items(
  id,
  language = tidywikidatar::tw_get_language(),
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

id A character vector. Each element must start with Q, and correspond to a Wiki-data identifier.

language Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_

cache_connection Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details).

disconnect_db Defaults to TRUE. If FALSE, leaves the connection to cache open.

Value

A character vector with IDs of items present in cache. If no item found in cache, returns NULL.

Examples

```
if (interactive()) {
  tw_set_cache_folder(path = tempdir())
  tw_enable_cache()
  tw_create_cache_folder(ask = FALSE)

  # add three items to local cache
  invisible(tw_get(id = "Q180099", language = "en"))
  invisible(tw_get(id = "Q228822", language = "en"))
  invisible(tw_get(id = "Q184992", language = "en"))

  # check if these other items are in cache
  items_in_cache <- tw_check_cached_items(
    id = c(
      "Q180099",
      "Q228822",
      "Q76857"
    ),
    language = "en"
  )
  # it should return only the two items from the current list of id
  # but not other item already in cache
  items_in_cache
}
```

tw_check_cache_folder *Checks if cache folder exists, if not returns an informative message*

Description

Checks if cache folder exists, if not returns an informative message

Usage

```
tw_check_cache_folder()
```

Value

If the cache folder exists, returns TRUE. Otherwise throws an error.

Examples

```
# If cache folder does not exist, it throws an error
tryCatch(tw_check_cache_folder(),
  error = function(e) {
    return(e)
  }
)
```

```
# Create cache folder
tw_set_cache_folder(path = fs::path(
  tempdir(),
  "tw_cache_folder"
))
tw_create_cache_folder(ask = FALSE)

tw_check_cache_folder()
```

| | |
|--------------|---|
| tw_check_qid | <i>Ensures that input appears to be a valid Wikidata id</i> |
|--------------|---|

Description

Mostly used internally by other functions.

Usage

```
tw_check_qid(id)
```

Arguments

`id` A character vector of one or more Wikidata id.

Value

A character vector with only strings appearing to be Wikidata identifiers; possibly shorter than input

Examples

```
tw_check_qid(id = c("Q180099", "q228822", "Not an id", "00180099", NA))
```

| | |
|-----------------|--|
| tw_check_search | <i>Checks if an input is a search; if not, it tries to return a search</i> |
|-----------------|--|

Description

Mostly used as a convenience function inside other functions to have consistent inputs.

Usage

```
tw_check_search(
  search,
  type = "item",
  language = tidywikidatar::tw_get_language(),
  limit = 10,
  include_search = FALSE,
  wait = 0,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|------------------|--|
| search | A string to be searched in Wikidata |
| type | Defaults to "item". Either "item" or "property". |
| language | Language to be used for the search. Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes |
| limit | Maximum numbers of responses to be given. |
| include_search | Logical, defaults to FALSE. If TRUE, the search is returned as an additional column. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Defaults to FALSE. If TRUE, overwrites cache. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

A data frame with three columns, `id`, `label`, and `description`, filtered by the above criteria.

Examples

```
# The following two lines should give the same result.

tw_check_search("Sylvia Pankhurst")
tw_check_search(tw_search("Sylvia Pankhurst"))
```

tw_connect_to_cache *Return a connection to be used for caching*

Description

Return a connection to be used for caching

Usage

```
tw_connect_to_cache(
  connection = NULL,
  RSQLite = NULL,
  language = NULL,
  cache = NULL
)
```

Arguments

| | |
|------------|--|
| connection | Defaults to NULL. If NULL, uses local SQLite database. If given, must be a connection object or a list with relevant connection settings (see example). |
| RSQLite | Defaults to NULL, expected either NULL or logical. If set to FALSE, details on the database connection must be given either as a named list in the connection parameter, or with <code>tw_set_cache_db()</code> as environment variables. |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |

Value

A connection object.

Examples

```
if (interactive()) {
  cache_connection <- pool::dbPool(
    RSQLite::SQLite(), # or e.g. odbc::odbc(),
    Driver = ":memory:", # or e.g. "MariaDB",
    Host = "localhost",
    database = "example_db",
    UID = "example_user",
    PWD = "example_pwd"
  )
  tw_connect_to_cache(cache_connection)
```



```
db_settings <- list(
  driver = "MySQL",
  host = "localhost",
  server = "localhost",
  port = 3306,
  database = "tidywikidatar",
  user = "secret_username",
  pwd = "secret_password"
)

tw_connect_to_cache(db_settings)
}
```

tw_create_cache_folder

Creates the base cache folder where tidywikidatar caches data.

Description

Creates the base cache folder where tidywikidatar caches data.

Usage

```
tw_create_cache_folder(ask = TRUE)
```

Arguments

ask Logical, defaults to TRUE. If FALSE, and cache folder does not exist, it just creates it without asking (useful for non-interactive sessions).

Value

Nothing, used for its side effects.

Examples

```
if (interactive()) {
  tw_create_cache_folder()
}
```

| | |
|------------------|--|
| tw_disable_cache | <i>Disable caching for the current session</i> |
|------------------|--|

Description

Disable caching for the current session

Usage

```
tw_disable_cache()
```

Value

Nothing, used for its side effects.

Examples

```
if (interactive()) {  
  tw_disable_cache()  
}
```

| | |
|--------------------------|---|
| tw_disconnect_from_cache | <i>Ensure that connection to cache is disconnected consistently</i> |
|--------------------------|---|

Description

Ensure that connection to cache is disconnected consistently

Usage

```
tw_disconnect_from_cache(  
  cache = NULL,  
  cache_connection = NULL,  
  disconnect_db = TRUE,  
  language = tidywikidatar::tw_get_language()  
)
```

Arguments

| | |
|------------------|--|
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |

Value

Nothing, used for its side effects.

Examples

```
if (interactive()) {
  tw_get(
    id = c("Q180099"),
    language = "en"
  )
  tw_disconnect_from_cache()
}
```

tw_empty_image_metadata

A zero-rows tibble used internally when `tw_get_image_metadata()` would not return any value.

Description

A zero-rows tibble used internally when `tw_get_image_metadata()` would not return any value.

Usage

```
tw_empty_image_metadata
```

Format

A data frame with 0 rows and 19 columns

| | |
|---------------|---|
| tw_empty_item | <i>A zero-rows tibble used internally when tw_get() would not return any value.</i> |
|---------------|---|

Description

A zero-rows tibble used internally when tw_get() would not return any value.

Usage

```
tw_empty_item
```

Format

A data frame with 0 rows and 3 columns

| | |
|---------------------|--|
| tw_empty_qualifiers | <i>A zero-rows tibble used internally when tw_get_qualifiers() would not return any value.</i> |
|---------------------|--|

Description

A zero-rows tibble used internally when tw_get_qualifiers() would not return any value.

Usage

```
tw_empty_qualifiers
```

Format

A data frame with 0 rows and 8 columns

| | |
|-----------------|--|
| tw_empty_search | <i>A zero-rows tibble used internally when tw_search() would not return any value.</i> |
|-----------------|--|

Description

A zero-rows tibble used internally when tw_search() would not return any value.

Usage

```
tw_empty_search
```

Format

A data frame with 0 rows and 4 columns

tw_empty_wikipedia_page
A zero-rows tibble used internally when tw_get_wikipedia_page_qid() would not return any value.

Description

A zero-rows tibble used internally when tw_get_wikipedia_page_qid() would not return any value.

Usage

```
tw_empty_wikipedia_page
```

Format

A data frame with 0 rows and 6 columns

tw_empty_wikipedia_page_links
A zero-rows tibble used internally when tw_get_wikipedia_page_links() would not return any value.

Description

A zero-rows tibble used internally when tw_get_wikipedia_page_links() would not return any value.

Usage

```
tw_empty_wikipedia_page_links
```

Format

A data frame with 0 rows and 8 columns

`tw_empty_wikipedia_page_sections`
A zero-rows tibble used internally when `tw_get_wikipedia_page_sections()` would not return any value.

Description

A zero-rows tibble used internally when `tw_get_wikipedia_page_sections()` would not return any value.

Usage

```
tw_empty_wikipedia_page_sections
```

Format

A data frame with 0 rows and 8 columns

`tw_enable_cache` *Enable caching for the current session*

Description

Enable caching for the current session

Usage

```
tw_enable_cache(SQLite = TRUE)
```

Arguments

`SQLite` Logical, defaults to TRUE. Set to FALSE to use custom database options. See `tw_set_cache_db()` for details.

Value

Nothing, used for its side effects.

Examples

```
if (interactive()) {  
  tw_enable_cache()  
}
```

| | |
|----------------------|---|
| tw_extract_qualifier | <i>Extract qualifiers from an object of class Wikidata created with WikidataR</i> |
|----------------------|---|

Description

This function is mostly used internally and for testing.

Usage

```
tw_extract_qualifier(id, p, w = NULL)
```

Arguments

| | |
|----|--|
| id | A character vector of length 1, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| p | A character vector of length 1, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |
| w | An object of class Wikidata created with WikidataR, typically created with WikidataR::get_item(id = id) |

Value

A data frame (a tibble) with eight columns: id for the input id, property, qualifier_id, qualifier_property, qualifier_value, rank, qualifier_value_type, and set (to distinguish sets of data when a property is present more than once)

Examples

```
w <- WikidataR::get_item(id = "Q180099")
tw_extract_qualifier(id = "Q180099", p = "P26", w = w)
```

| | |
|-------------------|--|
| tw_extract_single | <i>Extract item data from an object of class Wikidata created with WikidataR</i> |
|-------------------|--|

Description

This function is mostly used internally and for testing.

Usage

```
tw_extract_single(w, language = tidywikidatar::tw_get_language())
```

Arguments

| | |
|----------|--|
| w | An object of class Wikidata created with WikidataR, typically created with WikidataR::get_item(id = id) |
| language | Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |

Value

A data frame (a tibble) with four columns, such as the one created by tw_get.

Examples

```

item <- tryCatch(WikidataR::get_item(id = "Q180099"),
  error = function(e) {
    as.character(e[[1]])
  }
)

tw_extract_single(w = item)

```

| | |
|-----------|---|
| tw_filter | <i>Filter search result and keep only items with matching property and Q identifier</i> |
|-----------|---|

Description

Filter search result and keep only items with matching property and Q identifier

Usage

```

tw_filter(
  search,
  p,
  q,
  language = tidywikidatar::tw_get_language(),
  limit = 10,
  include_search = FALSE,
  wait = 0,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)

```


Arguments

| | |
|------------------|--|
| search | A data frame generated by <code>tw_search()</code> , or a search query. If a data frame is given, language and limits are ignore. |
| p | A character vector of length 1, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |
| q | A character vector of length 1, a wikidata id. Must always start with the capital letter "Q", e.g. "Q5" for "human being". |
| language | Language to be used for the search. Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes . |
| limit | Maximum numbers of responses to be given. |
| include_search | Logical, defaults to FALSE. If TRUE, the search is returned as an additional column. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Defaults to FALSE. If TRUE, overwrites cache. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

A data frame with three columns, `id`, `label`, and `description`, filtered by the above criteria.

Examples

```
tw_search(search = "Margaret Mead", limit = 3) %>%
  tw_filter(p = "P31", q = "Q5")
```

| | |
|------------------------------|---|
| <code>tw_filter_first</code> | <i>Filter search result and keep only and keep only the first match</i> |
|------------------------------|---|

Description

Same as `tw_filter()`, but consistently returns data frames with a single row.

Usage

```
tw_filter_first(
  search,
  p,
  q,
  language = tidywikidatar::tw_get_language(),
  limit = 10,
  include_search = FALSE,
  wait = 0,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|------------------|--|
| search | A data frame generated by <code>tw_search()</code> , or a search query. If a data frame is given, language and limits are ignore. |
| p | A character vector of length 1, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |
| q | A character vector of length 1, a wikidata id. Must always start with the capital letter "Q", e.g. "Q5" for "human being". |
| language | Language to be used for the search. |
| limit | Maximum numbers of responses to be given. |
| include_search | Logical, defaults to FALSE. If TRUE, the search is returned as an additional column. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> |
| overwrite_cache | Defaults to FALSE. If TRUE, overwrites cache. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

A data frame with one row and three columns, id, label, and description, filtered by the above criteria.

Examples

```
tw_search("Margaret Mead") %>%
  tw_filter_first(p = "P31", q = "Q5")
```

| | |
|------------------|--|
| tw_filter_people | <i>Filter search result and keep only people</i> |
|------------------|--|

Description

A wrapper of `tw_filter()` that defaults to keep only "instance of" (P31) "human being" (Q5).

Usage

```
tw_filter_people(
  search,
  language = tidywikidatar::tw_get_language(),
  limit = 10,
  stop_at_first = TRUE,
  wait = 0,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|------------------|--|
| search | A data frame generated by <code>tw_search()</code> , or a search query. If a data frame is given, language and limits are ignore. |
| language | Language to be used for the search. |
| limit | Maximum numbers of responses to be given. |
| stop_at_first | Logical, defaults to TRUE. If TRUE, returns only the first match from the search that satisfies the criteria. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| overwrite_cache | Defaults to FALSE. If TRUE, overwrites cache. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

A data frame with three columns, `id`, `label`, and `description`; all rows refer to a human being.

Examples

```
tw_search("Ruth Benedict")

tw_search("Ruth Benedict") %>%
  tw_filter_people()
```

| | |
|--------|--|
| tw_get | <i>Return (most) information from a Wikidata item in a tidy format</i> |
|--------|--|

Description

Return (most) information from a Wikidata item in a tidy format

Usage

```
tw_get(
  id,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)
```

Arguments

| | |
|------------------|--|
| id | A character vector, must start with Q, e.g. "Q180099" for the anthropologist Margaret Mead. Can also be a data frame of one row, typically generated with <code>tw_search()</code> or a combination of <code>tw_search()</code> and <code>tw_filter_first()</code> . |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A data.frame (a tibble) with three columns (id, property, and value).

Examples

```
tw_get(
  id = c("Q180099", "Q228822"),
  language = "en"
)
```

| | |
|-------------------|---|
| tw_get_all_with_p | <i>Get all items that have a given property (irrespective of the value)</i> |
|-------------------|---|

Description

This function does not cache results.

Usage

```
tw_get_all_with_p(
  p,
  fields = c("item", "itemLabel", "itemDescription"),
  language = tidywikidatar::tw_get_language(),
  method = "SPARQL",
  wait = 0.1,
  limit = Inf,
  return_as_tw_search = TRUE
)
```

Arguments

| | |
|---------------------|---|
| p | A character vector, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |
| fields | A character vector of Wikidata fields. Ignored if return_as_tw_search is set to TRUE (as per default). Defaults to ("item", "itemLabel", "itemDescription") |
| language | Defaults to language set with tw_set_language(); if not set, "en". If more than one, can be set in order of preference, e.g. c("it", "fr", "en"). Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/H |
| method | Defaults to "SPARQL". The only accepted alternative value is "JSON", to use instead json-based API. |
| wait | Defaults to 0.1. Used only in method is set to "JSON". |
| limit | Defaults to Inf. Set to smaller values for testing and cache locally when possible to reduce load on servers. |
| return_as_tw_search | Logical, defaults to TRUE. If TRUE, returns a data frame with three columns (id, label, and description) that can be piped to other tw_ functions. If FALSE, a data frame with as many columns as fields. |

Value

A data frame with three columns is method is set to "SPARQL", or as many columns as fields if more are given and return_as_tw_search is set to FALSE. A single column with Wikidata identifier if method is set to "JSON".

Examples

```
if (interactive()) {
  # get all Wikidata items with an ICAO airport code ("P239")
  tw_get_all_with_p(p = "P239", limit = 10)
}
```

| | |
|--------------------|-----------------------------|
| tw_get_cached_item | <i>Retrieve cached item</i> |
|--------------------|-----------------------------|

Description

Retrieve cached item

Usage

```
tw_get_cached_item(
  id,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|------------------|--|
| id | A character vector, must start with Q, e.g. "Q180099" for the anthropologist Margaret Mead. Can also be a data frame of one row, typically generated with tw_search() or a combination of tw_search() and tw_filter_first(). |
| language | Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with tw_enable_cache() or tw_disable_cache(). |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection open. |

Value

If data present in cache, returns a data frame with cached data.

Examples

```
tw_set_cache_folder(path = tempdir())
tw_enable_cache()
tw_create_cache_folder(ask = FALSE)

df_from_api <- tw_get(id = "Q180099", language = "en")

df_from_cache <- tw_get_cached_item(
  id = "Q180099",
  language = "en"
)
```

tw_get_cached_qualifiers

Retrieve cached qualifier

Description

Retrieve cached qualifier

Usage

```
tw_get_cached_qualifiers(
  id,
  p,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|----------|--|
| id | A character vector, must start with Q, e.g. "Q180099" for the anthropologist Margaret Mead. Can also be a data frame of one row, typically generated with <code>tw_search()</code> or a combination of <code>tw_search()</code> and <code>tw_filter_first()</code> . |
| p | A character vector of length 1, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |

`cache_connection` Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details).

`disconnect_db` Defaults to TRUE. If FALSE, leaves the connection open.

Value

If data present in cache, returns a data frame with cached data.

Examples

```
tw_set_cache_folder(path = tempdir())
tw_enable_cache()
tw_create_cache_folder(ask = FALSE)

df_from_api <- tw_get_qualifiers(id = "Q180099", p = "P26", language = "en")

df_from_cache <- tw_get_cached_qualifiers(
  id = "Q180099",
  p = "P26",
  language = "en"
)

df_from_cache
```

`tw_get_cached_search` *Retrieve cached search*

Description

Retrieve cached search

Usage

```
tw_get_cached_search(
  search,
  type = "item",
  language = tidywikidatar::tw_get_language(),
  response_language = tidywikidatar::tw_get_language(),
  cache = NULL,
  include_search = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```


Arguments

| | |
|-------------------|--|
| search | A string to be searched in Wikidata |
| type | Defaults to "item". Either "item" or "property". |
| language | Language to be used for the search. Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes |
| response_language | Language to be used for the returned labels and descriptions. Corresponds to the <code>uselang</code> parameter of the MediaWiki API: https://www.wikidata.org/w/api.php?action=help&modules=w . Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| include_search | Logical, defaults to FALSE. If TRUE, the search is returned as an additional column. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

If data present in cache, returns a data frame with cached data.

Examples

```
tw_set_cache_folder(path = tempdir())
tw_enable_cache()
tw_create_cache_folder(ask = FALSE)

search_from_api <- tw_search("Sylvia Pankhurst")
search_from_api

df_from_cache <- tw_get_cached_search("Sylvia Pankhurst")
df_from_cache
```

```
tw_get_cached_wikipedia_page_links
```

Gets links of Wikipedia pages from local cache

Description

Mostly used internally.

Usage

```
tw_get_cached_wikipedia_page_links(
  title,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|-------------------------------|--|
| <code>title</code> | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| <code>language</code> | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| <code>cache</code> | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| <code>cache_connection</code> | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| <code>disconnect_db</code> | Defaults to TRUE. If FALSE, leaves the connection open. |

Value

If data present in cache, returns a data frame with cached data.

Examples

```
if (interactive()) {
  tw_set_cache_folder(path = tempdir())
  tw_enable_cache()
  tw_create_cache_folder(ask = FALSE)

  df_from_api <- tw_get_wikipedia_page_qid(title = "Margaret Mead", language = "en")

  df_from_cache <- tw_get_cached_wikipedia_page_links(
    title = "Margaret Mead",
    language = "en"
  )

  df_from_cache
}
```

tw_get_cached_wikipedia_page_qid
Gets id of Wikipedia pages from local cache

Description

Mostly used internally.

Usage

```
tw_get_cached_wikipedia_page_qid(  
  title,  
  language = tidywikidatar::tw_get_language(),  
  cache = NULL,  
  cache_connection = NULL,  
  disconnect_db = TRUE  
)
```

Arguments

| | |
|------------------|--|
| title | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection open. |

Value

If data present in cache, returns a data frame with cached data.

Examples

```
if (interactive()) {  
  tw_set_cache_folder(path = tempdir())  
  tw_enable_cache()  
  tw_create_cache_folder(ask = FALSE)  
  
  df_from_api <- tw_get_wikipedia_page_qid(title = "Margaret Mead", language = "en")  
  
  df_from_cache <- tw_get_cached_wikipedia_page_qid(  
    title = "Margaret Mead",
```

```

    language = "en"
  )

  df_from_cache
}

```

tw_get_cached_wikipedia_page_sections

Gets sections of Wikipedia pages from local cache

Description

Mostly used internally.

Usage

```

tw_get_cached_wikipedia_page_sections(
  title,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE
)

```

Arguments

| | |
|------------------|--|
| title | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection open. |

Value

If data present in cache, returns a data frame with cached data.

Examples

```

if (interactive()) {
  tw_set_cache_folder(path = tempdir())
  tw_enable_cache()
  tw_create_cache_folder(ask = FALSE)

  df_from_api <- tw_get_wikipedia_page_qid(title = "Margaret Mead", language = "en")

  df_from_cache <- tw_get_cached_wikipedia_page_sections(
    title = "Margaret Mead",
    language = "en"
  )

  df_from_cache
}

```

| | |
|-----------------|--|
| tw_get_cache_db | <i>Get database connection settings from the environment</i> |
|-----------------|--|

Description

Typically set with `tw_set_cache_db()`

Usage

```
tw_get_cache_db()
```

Value

A list with all database parameters as stored in environment variables.

Examples

```
tw_get_cache_db()
```

| | |
|-------------------|------------------------------------|
| tw_get_cache_file | <i>Gets location of cache file</i> |
|-------------------|------------------------------------|

Description

Gets location of cache file

Usage

```
tw_get_cache_file(type = NULL, language = tidywikidatar::tw_get_language())
```

Arguments

| | |
|----------|--|
| type | Defaults to NULL. Deprecated. If given, type of cache file to output. Values typically used by tidywikidatar in versions up to 4.2 include "item", "search", and "qualifier". |
| language | Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |

Value

A character vector of length one with location of item cache file.

Examples

```
tw_set_cache_folder(path = tempdir())
sqlite_cache_file_location <- tw_get_cache_file() # outputs location of cache file
```

```
tw_get_cache_table_name
```

Gets name of table inside the database

Description

Gets name of table inside the database

Usage

```
tw_get_cache_table_name(
  type = "item",
  language = tidywikidatar::tw_get_language()
)
```

Arguments

| | |
|----------|--|
| type | Defaults to "item". Type of cache file to output. Values typically used by tidywikidatar include "item", "search", and "qualifier". |
| language | Defaults to language set with tw_set_language(); "en" if not set. Used to limit the data to be cached. Use "all_available" to keep all data. For available values, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |

Value

A character vector of length one with the name of the relevant table in the cache file.

Examples

```
# outputs name of table used in the cache database
tw_get_cache_table_name(type = "item", language = "en")
```

| | |
|--------------------|---|
| tw_get_description | <i>Get Wikidata description in given language</i> |
|--------------------|---|

Description

Get Wikidata description in given language

Usage

```
tw_get_description(  
  id,  
  language = tidywikidatar::tw_get_language(),  
  id_df = NULL,  
  cache = NULL,  
  overwrite_cache = FALSE,  
  cache_connection = NULL,  
  disconnect_db = TRUE,  
  wait = 0  
)
```

Arguments

| | |
|------------------|--|
| id | A character vector, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| id_df | Default to NULL. If given, it should be a dataframe typically generated with <code>tw_get_()</code> , and is used instead of calling Wikidata or using SQLite cache. Ignored when <code>id</code> is of length more than one. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A character vector of length 1, with the Wikidata description in the requested language.

Examples

```
tw_get_description(
  id = c(
    "Q180099",
    "Q228822"
  ),
  language = "en"
)
```

| | |
|--------------|--|
| tw_get_field | <i>Gets a field such a label or description from a dataframe typically generated with tw_get()</i> |
|--------------|--|

Description

Gets a field such a label or description from a dataframe typically generated with tw_get()

Usage

```
tw_get_field(df, field, id, language = tidywikidatar::tw_get_language())
```

Arguments

| | |
|----------|--|
| df | A data frame typically generated with tw_get(). It should include data for the id included in the dedicated parameter. |
| field | A character vector of length one. Typically, either "label" or "description". |
| id | A character vector, typically of Wikidata identifiers. The output will be of the same length and in the same order as the identifiers provided with this parameter. |
| language | Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |

Value

A character vector of the same length, and with data in the same order, as id.

Examples

```
tw_get("Q180099") %>%
  tw_get_field(field = "label", id = "Q180099")
```

| | |
|--------------|---|
| tw_get_image | <i>Get image from Wikimedia Commons</i> |
|--------------|---|

Description

Please consult the relevant documentation for reusing content outside Wikimedia: <https://commons.wikimedia.org/wiki/Com>

Usage

```
tw_get_image(
  id,
  format = "filename",
  width = NULL,
  language = tidywikidatar::tw_get_language(),
  id_df = NULL,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)
```

Arguments

| | |
|------------------|--|
| id | A character vector of length 1, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| format | A character vector, defaults to 'filename'. If set to 'commons', outputs the link to the Wikimedia Commons page. If set to "embed", outputs a link that can be used to embed. |
| width | A numeric value, defaults to NULL, relevant only if format is set to 'embed'. If not given, defaults to full resolution image. |
| language | Needed for caching, defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
| id_df | Default to NULL. If given, it should be a dataframe typically generated with tw_get_(), and is used instead of calling Wikidata or using SQLite cache. Ignored when id is of length more than one. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with tw_enable_cache() or tw_disable_cache(). |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |

`disconnect_db` Defaults to TRUE. If FALSE, leaves the connection to cache open.

`wait` In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries.

Value

A data frame of two columns, `id` and `image`, corresponding to reference to the image in the requested format.

Examples

```
tw_get_image("Q180099",
  format = "filename"
)

if (interactive()) {
  tw_get_image("Q180099",
    format = "commons"
  )

  tw_get_image("Q180099",
    format = "embed",
    width = 300
  )
}
```

`tw_get_image_metadata` *Get metadata for images from Wikimedia Commons*

Description

Please consult the relevant documentation for reusing content outside Wikimedia: https://commons.wikimedia.org/wiki/Commons:Reusing_content_outside_Wikimedia

Usage

```
tw_get_image_metadata(
  id,
  image_filename = NULL,
  only_first = TRUE,
  language = tidywikidatar::tw_get_language(),
  id_df = NULL,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 1,
  attempts = 5
)
```

Arguments

| | |
|-------------------------------|--|
| <code>id</code> | A character vector of length 1, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| <code>image_filename</code> | Defaults to NULL. If NULL, <code>image_filename</code> is obtained from the Wikidata id. If given, must be of the same length as <code>id</code> . |
| <code>only_first</code> | Defaults to TRUE. If TRUE, returns metadata only for the first image associated with a given Wikidata id. If FALSE, returns all images available. |
| <code>language</code> | Needed for caching, defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
| <code>id_df</code> | Default to NULL. If given, it should be a dataframe typically generated with <code>tw_get_()</code> , and is used instead of calling Wikidata or using SQLite cache. Ignored when <code>id</code> is of length more than one. |
| <code>cache</code> | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| <code>overwrite_cache</code> | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| <code>cache_connection</code> | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| <code>disconnect_db</code> | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| <code>wait</code> | In seconds, defaults to 1. Time to wait between queries to the APIs. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| <code>attempts</code> | Defaults to 5. Number of times it re-attempts to reach the API before failing. |

Value

A character vector, corresponding to reference to the image in the requested format.

Examples

```
if (interactive()) {
  tw_get_image_metadata("Q180099")
}
```

tw_get_image_metadata_single

Get metadata for images from Wikimedia Commons

Description

Please consult the relevant documentation for reusing content outside Wikimedia: https://commons.wikimedia.org/wiki/Commons:Reusing_content_outside_Wikimedia

Usage

```
tw_get_image_metadata_single(
    id,
    image_filename = NULL,
    only_first = TRUE,
    language = tidywikidatar::tw_get_language(),
    id_df = NULL,
    cache = NULL,
    overwrite_cache = FALSE,
    read_cache = TRUE,
    cache_connection = NULL,
    disconnect_db = TRUE,
    wait = 1,
    attempts = 5
)
```

Arguments

| | |
|-----------------|--|
| id | A character vector of length 1, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| image_filename | Defaults to NULL. If NULL, image_filename is obtained from the Wikidata id. If given, must be of the same length as id. |
| only_first | Defaults to TRUE. If TRUE, returns metadata only for the first image associated with a given Wikidata id. If FALSE, returns all images available. |
| language | Needed for caching, defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
| id_df | Default to NULL. If given, it should be a dataframe typically generated with tw_get_(), and is used instead of calling Wikidata or using SQLite cache. Ignored when id is of length more than one. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with tw_enable_cache() or tw_disable_cache(). |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |

| | |
|------------------|--|
| read_cache | Logical, defaults to TRUE. Mostly used internally to prevent checking if an item is in cache if it is already known that it is not in cache. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 1. Time to wait between queries to the APIs. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| attempts | Defaults to 5. Number of times it re-attempts to reach the API before failing. |

Value

A character vector, corresponding to reference to the image in the requested format.

Examples

```
if (interactive()) {
  tw_get_image_metadata_single("Q180099")
}
```

tw_get_image_same_length

Get image from Wikimedia Commons

Description

Please consult the relevant documentation for reusing content outside Wikimedia: https://commons.wikimedia.org/wiki/Commons:Reusing_content_outside_Wikimedia

Usage

```
tw_get_image_same_length(
  id,
  format = "filename",
  as_tibble = FALSE,
  only_first = TRUE,
  width = NULL,
  language = tidywikidatar::tw_get_language(),
  id_df = NULL,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)
```

Arguments

| | |
|-------------------------------|--|
| <code>id</code> | A character vector of length 1, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| <code>format</code> | A character vector, defaults to 'filename'. If set to 'commons', outputs the link to the Wikimedia Commons page. If set to "embed", outputs a link that can be used to embed. |
| <code>as_tibble</code> | Defaults to FALSE. If TRUE, returns a data frame instead of a character vector. |
| <code>only_first</code> | Defaults to TRUE. If TRUE, returns only the first image associated with a given Wikidata id. If FALSE, returns all images available. |
| <code>width</code> | A numeric value, defaults to NULL, relevant only if format is set to 'embed'. If not given, defaults to full resolution image. |
| <code>language</code> | Needed for caching, defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
| <code>id_df</code> | Default to NULL. If given, it should be a dataframe typically generated with <code>tw_get_()</code> , and is used instead of calling Wikidata or using SQLite cache. Ignored when <code>id</code> is of length more than one. |
| <code>cache</code> | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| <code>overwrite_cache</code> | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| <code>cache_connection</code> | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| <code>disconnect_db</code> | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| <code>wait</code> | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A character vector, corresponding to reference to the image in the requested format.

Examples

```
tw_get_image_same_length("Q180099",
  format = "filename"
)

if (interactive()) {
  tw_get_image_same_length("Q180099",
    format = "commons"
  )
}
```

```

tw_get_image_same_length("Q180099",
  format = "embed",
  width = 300
)
}

```

tw_get_label

*Get Wikidata label in given language***Description**

Get Wikidata label in given language

Usage

```

tw_get_label(
  id,
  language = tidywikidatar::tw_get_language(),
  id_df = NULL,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)

```

Arguments

| | |
|------------------|--|
| id | A character vector, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| id_df | Default to NULL. If given, it should be a dataframe typically generated with <code>tw_get_()</code> , and is used instead of calling Wikidata or using SQLite cache. Ignored when id is of length more than one. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A character vector of the same length as the vector of `id` given, with the Wikidata label in the requested language.

Examples

```
tw_get_label(  
  id = c(  
    "Q180099",  
    "Q228822"  
  ),  
  language = "en"  
)  
  
# If a label is not available, a NA value is returned  
if (interactive()) {  
  tw_get_label(  
    id = c(  
      "Q64733534",  
      "Q4773904",  
      "Q220480"  
    ),  
    language = "sc"  
  )  
}
```

`tw_get_property`*Get Wikidata property of one or more items as a tidy data frame*

Description

Get Wikidata property of one or more items as a tidy data frame

Usage

```
tw_get_property(  
  id,  
  p,  
  language = tidywikidatar::tw_get_language(),  
  id_df = NULL,  
  cache = NULL,  
  overwrite_cache = FALSE,  
  cache_connection = NULL,  
  disconnect_db = TRUE,  
  wait = 0  
)
```


Arguments

| | |
|------------------|--|
| id | A character vector, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| p | A character vector, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| id_df | Default to NULL. If given, it should be a dataframe typically generated with <code>tw_get_()</code> , and is used instead of calling Wikidata or using SQLite cache. Ignored when id is of length more than one. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A tibble, corresponding to the value for the given property. A tibble of zero rows if no relevant property found.

Examples

```
# Who were the doctoral advisors - P184 - of Margaret Mead - Q180099?
advisors <- tw_get_property(id = "Q180099", p = "P184")
advisors

# tw_get_label(advisors)

# It is also possible to get one property for many id

if (interactive()) {
  tw_get_property(
    id = c(
      "Q180099",
      "Q228822"
    ),
    p = "P31"
  )
}
```

```

# Or many properties for a single id

tw_get_property(
  id = "Q180099",
  p = c("P21", "P31")
)
}

```

tw_get_property_description

Get description of a Wikidata property in a given language

Description

Get description of a Wikidata property in a given language

Usage

```

tw_get_property_description(
  property,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)

```

Arguments

| | |
|------------------|--|
| property | A character vector of length 1, must start with P, e.g. "P31". |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A character vector of length 1, with the Wikidata label in the requested language.

Examples

```
tw_get_property_description(property = "P31")
```

tw_get_property_label *Get label of a Wikidata property in a given language*

Description

Get label of a Wikidata property in a given language

Usage

```
tw_get_property_label(  
  property,  
  language = tidywikidatar::tw_get_language(),  
  cache = NULL,  
  overwrite_cache = FALSE,  
  cache_connection = NULL,  
  disconnect_db = TRUE,  
  wait = 0  
)
```

Arguments

| | |
|------------------|--|
| property | A character vector. Each element must start with P, e.g. "P31". |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A character vector, with the Wikidata label in the requested language.

Examples

```
tw_get_property_label(property = "P31")
```

```
tw_get_property_label_single
```

Get label of a Wikidata property in a given language

Description

Get label of a Wikidata property in a given language

Usage

```
tw_get_property_label_single(
  property,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)
```

Arguments

| | |
|-------------------------------|--|
| <code>property</code> | A character vector. Each element must start with P, e.g. "P31". |
| <code>language</code> | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| <code>cache</code> | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| <code>overwrite_cache</code> | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| <code>cache_connection</code> | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| <code>disconnect_db</code> | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| <code>wait</code> | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A character vector of length 1, with the Wikidata label in the requested language.

Examples

```
tw_get_property_label_single(property = "P31")
```

```
tw_get_property_same_length
```

Get Wikidata property of an item as a character vector of the same length as input

Description

Get Wikidata property of an item as a character vector of the same length as input

Usage

```
tw_get_property_same_length(  
  id,  
  p,  
  only_first = FALSE,  
  preferred = FALSE,  
  latest_start_time = FALSE,  
  language = tidywikidatar::tw_get_language(),  
  id_df = NULL,  
  cache = NULL,  
  overwrite_cache = FALSE,  
  cache_connection = NULL,  
  disconnect_db = TRUE,  
  wait = 0  
)
```

```
tw_get_p(  
  id,  
  p,  
  only_first = FALSE,  
  preferred = FALSE,  
  latest_start_time = FALSE,  
  language = tidywikidatar::tw_get_language(),  
  id_df = NULL,  
  cache = NULL,  
  overwrite_cache = FALSE,  
  cache_connection = NULL,  
  disconnect_db = TRUE,  
  wait = 0  
)
```

Arguments

| | |
|-------------------|---|
| id | A character vector, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| p | A character vector, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |
| only_first | Logical, defaults to FALSE. If TRUE, it just keeps the first relevant property value for each id (or NA if none is available), and returns a character vector. Warning: this likely discards valid values, so make sure this is really what you want. If FALSE, returns a list of the same length as input, with all values for each id stored in a list if more than one is found. |
| preferred | Logical, defaults to FALSE. If TRUE, returns properties that have rank "preferred" if available; if no "preferred" property is found, then it is ignored. |
| latest_start_time | Logical, defaults to FALSE. If TRUE, returns the property that has the most recent start time ("P580") as qualifier. If no such qualifier is found, then it is ignored. |
| language | Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| id_df | Default to NULL. If given, it should be a dataframe typically generated with tw_get_(), and is used instead of calling Wikidata or using SQLite cache. Ignored when id is of length more than one. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with tw_enable_cache() or tw_disable_cache(). |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A list of the same length of input (or a character vector is only_first is set to TRUE)

Examples

```
# By default, it returns a list of the same length as input,
# no matter how many values for each id/property
```

```

if (interactive()) {
  tw_get_property_same_length(
    id = c(
      "Q180099",
      "Q228822",
      "Q76857"
    ),
    p = "P26"
  )
  # Notice that if no relevant match is found, it returns a NA
  # This is useful for piped operations

  tibble::tibble(id = c(
    "Q180099",
    "Q228822",
    "Q76857"
  )) %>%
    dplyr::mutate(spouse = tw_get_property_same_length(id, "P26"))

  # Consider unnesting for further analysis

  tibble::tibble(id = c(
    "Q180099",
    "Q228822",
    "Q76857"
  )) %>%
    dplyr::mutate(spouse = tw_get_property_same_length(id, "P26")) %>%
    tidyr::unnest(cols = spouse)

  # If you are sure that you are interested only in the first return value,
  # consider setting only_first=TRUE to get a character vector rather than a list
  # Be mindful: you may well be discarding valid values.
  tibble::tibble(id = c(
    "Q180099",
    "Q228822",
    "Q76857"
  )) %>%
    dplyr::mutate(spouse = tw_get_property_same_length(id, "P26",
      only_first = TRUE
    ))
}
tw_get_p(id = "Q180099", "P26")

```

tw_get_property_with_details

Gets all details of a property

Description

Gets all details of a property

Usage

```
tw_get_property_with_details(id, p, wait = 0)
```

Arguments

| | |
|------|--|
| id | A character vector, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| p | A character vector, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A tibble, corresponding to the details for the given property. NULL if no relevant property found.

Examples

```
# Get "female form of label", including language
tw_get_property_with_details(id = "Q64733534", p = "P2521")
```

```
tw_get_property_with_details_single
Gets all details of a property
```

Description

Gets all details of a property

Usage

```
tw_get_property_with_details_single(id, p)
```

Arguments

| | |
|----|--|
| id | A character vector, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| p | A character vector, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |

Value

A tibble, corresponding to the details for the given property. NULL if no relevant property found.

Examples

```
# Get "female form of label", including language
tw_get_property_with_details_single(id = "Q64733534", p = "P2521")
```

| | |
|-------------------|---|
| tw_get_qualifiers | <i>Get Wikidata qualifiers for a given property of a given item</i> |
|-------------------|---|

Description

N.B. In order to provide for consistently structured output, this function outputs either id or value for each qualifier. The user should keep in mind that some of these come with additional detail (e.g. the unit, precision, or reference calendar).

Usage

```
tw_get_qualifiers(
  id,
  p,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)
```

Arguments

| | |
|------------------|--|
| id | A character vector of length 1, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| p | A character vector of length 1, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A data frame (a tibble) with eight columns: id for the input id, property, qualifier_id, qualifier_property, qualifier_value, rank, qualifier_value_type, and set (to distinguish sets of data when a property is present more than once)

Examples

```
tw_get_qualifiers(id = "Q180099", p = "P26", language = "en")
```

```
tw_get_qualifiers_single
```

Get Wikidata qualifiers for a given property of a given item

Description

N.B. In order to provide for consistently structured output, this function outputs either id or value for each qualifier. The user should keep in mind that some of these come with additional detail (e.g. the unit, precision, or reference calendar).

Usage

```
tw_get_qualifiers_single(  
  id,  
  p,  
  language = tidywikidatar::tw_get_language(),  
  cache = NULL,  
  overwrite_cache = FALSE,  
  cache_connection = NULL,  
  disconnect_db = TRUE,  
  wait = 0  
)
```

Arguments

| | |
|-----------------|--|
| id | A character vector of length 1, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart. |
| p | A character vector of length 1, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of". |
| language | Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with tw_enable_cache() or tw_disable_cache(). |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |

| | |
|------------------|--|
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A data frame (a tibble) with eight columns: id for the input id, property, qualifier_id, qualifier_property, qualifier_value, rank, qualifier_value_type, and set (to distinguish sets of data when a property is present more than once)

Examples

```
tw_get_qualifiers_single(id = "Q180099", p = "P26", language = "en")
```

| | |
|---------------|--|
| tw_get_single | <i>Return (most) information from a Wikidata item in a tidy format</i> |
|---------------|--|

Description

Return (most) information from a Wikidata item in a tidy format

Usage

```
tw_get_single(
  id,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  read_cache = TRUE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)
```

Arguments

| | |
|----------|--|
| id | A character vector, must start with Q, e.g. "Q180099" for the anthropologist Margaret Mead. Can also be a data frame of one row, typically generated with tw_search() or a combination of tw_search() and tw_filter_first(). |
| language | Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |

| | |
|------------------|--|
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with tw_enable_cache() or tw_disable_cache(). |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| read_cache | Logical, defaults to TRUE. Mostly used internally to prevent checking if an item is in cache if it is already known that it is not in cache. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A data.frame (a tibble) with three columns (id, property, and value). If item not found or trouble connecting with the server, an data frame with three columns and zero rows is returned, with the warning as an attribute, which can be retrieved with attr(output, "warning")

Examples

```
tw_get_single(
  id = "Q180099",
  language = "en"
)
```

| | |
|------------------|--|
| tw_get_wikipedia | <i>Get Wikipedia article in given language</i> |
|------------------|--|

Description

Get Wikipedia article in given language

Usage

```
tw_get_wikipedia(
  id,
  language = tidywikidatar::tw_get_language(),
  id_df = NULL,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)
```

Arguments

| | |
|------------------|--|
| id | A character vector, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart |
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| id_df | Default to NULL. If given, it should be a dataframe typically generated with <code>tw_get_()</code> , and is used instead of calling Wikidata or using SQLite cache. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A character vector of length 1, with the Wikidata label in the requested language.

Examples

```
tw_get_wikipedia(id = "Q180099")
```

```
tw_get_wikipedia_base_api_url
```

Facilitates the creation of MediaWiki API base URLs

Description

Mostly used internally

Usage

```
tw_get_wikipedia_base_api_url(
  url = NULL,
  title = NULL,
  language = tidywikidatar::tw_get_language(),
  action = "query"
)
```

Arguments

| | |
|----------|--|
| url | A character vector with the full URL to one or more Wikipedia pages. If given, title and language can be left empty. |
| title | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| language | Two-letter language code used to define the Wikipedia version to use. Defaults to language set with tw_set_language(); if not set, "en". If url given, this can be left empty. |
| action | Defaults to "query". Usually either "query" or "parse". In principle, any valid action value, see: "https://www.mediawiki.org/w/api.php" |

Value

A character vector of base urls to be used with the MediaWiki API

Examples

```
if (interactive()) {
  tw_get_wikipedia_base_api_url(title = "Margaret Mead", language = "en")
}
```

tw_get_wikipedia_page_links

Get all Wikidata Q identifiers of all Wikipedia pages that appear in one or more pages

Description

Get all Wikidata Q identifiers of all Wikipedia pages that appear in one or more pages

Usage

```
tw_get_wikipedia_page_links(
  url = NULL,
  title = NULL,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 1,
  attempts = 5
)
```

Arguments

| | |
|-------------------------------|---|
| <code>url</code> | Full URL to a Wikipedia page. If given, title and language can be left empty. |
| <code>title</code> | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| <code>language</code> | Two-letter language code used to define the Wikipedia version to use. Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". If url given, this can be left empty. |
| <code>cache</code> | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| <code>overwrite_cache</code> | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| <code>cache_connection</code> | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| <code>disconnect_db</code> | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| <code>wait</code> | In seconds, defaults to 1 due to time-outs with frequent queries. Time to wait between queries to the APIs. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| <code>attempts</code> | Defaults to 5. Number of times it re-attempts to reach the API before failing. |

Value

A data frame (a tibble) with eight columns: `source_title_url`, `source_wikipedia_title`, `source_qid`, `wikipedia_title`, `wikipedia_id`, `qid`, `description`, and `language`.

Examples

```
if (interactive()) {
  tw_get_wikipedia_page_links(title = "Margaret Mead", language = "en")
}
```

`tw_get_wikipedia_page_links_single`

Get all Wikidata Q identifiers of all Wikipedia pages that appear in a given page

Description

Get all Wikidata Q identifiers of all Wikipedia pages that appear in a given page

Usage

```
tw_get_wikipedia_page_links_single(
  url = NULL,
  title = NULL,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 1,
  attempts = 5,
  wikipedia_page_qid_df = NULL
)
```

Arguments

| | |
|------------------------------------|---|
| <code>url</code> | Full URL to a Wikipedia page. If given, title and language can be left empty. |
| <code>title</code> | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| <code>language</code> | Two-letter language code used to define the Wikipedia version to use. Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". If url given, this can be left empty. |
| <code>cache</code> | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| <code>overwrite_cache</code> | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| <code>cache_connection</code> | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| <code>disconnect_db</code> | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| <code>wait</code> | In seconds, defaults to 1 due to time-outs with frequent queries. Time to wait between queries to the APIs. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| <code>attempts</code> | Defaults to 5. Number of times it re-attempts to reach the API before failing. |
| <code>wikipedia_page_qid_df</code> | Defaults to NULL. If given, used to reduce calls to cache. A data frame |

Value

A data frame (a tibble) with four columns: `wikipedia_title`, `wikipedia_id`, `wikidata_id`, `wikidata_description`.

Examples

```
if (interactive()) {  
  tw_get_wikipedia_page_links_single(title = "Margaret Mead", language = "en")  
}
```

tw_get_wikipedia_page_qid

Gets the Wikidata Q identifier of one or more Wikipedia pages

Description

Gets the Wikidata Q identifier of one or more Wikipedia pages

Usage

```
tw_get_wikipedia_page_qid(  
  url = NULL,  
  title = NULL,  
  language = tidywikidatar::tw_get_language(),  
  cache = NULL,  
  overwrite_cache = FALSE,  
  cache_connection = NULL,  
  disconnect_db = TRUE,  
  wait = 1,  
  attempts = 5  
)
```

Arguments

| | |
|------------------|---|
| url | A character vector with the full URL to one or more Wikipedia pages. If given, title and language can be left empty. |
| title | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| language | Two-letter language code used to define the Wikipedia version to use. Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". If url given, this can be left empty. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |

| | |
|---------------|---|
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 1 due to time-outs with frequent queries. Time to wait between queries to the APIs. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| attempts | Defaults to 5. Number of times it re-attempts to reach the API before failing. |

Value

A data frame with six columns, including qid with Wikidata identifiers, and a logical disambiguation to flag when disambiguation pages are returned.

Examples

```
if (interactive()) {
  tw_get_wikipedia_page_qid(title = "Margaret Mead", language = "en")

  # check when Wikipedia returns disambiguation page
  tw_get_wikipedia_page_qid(title = c("Rome", "London", "New York", "Vienna"))
}
```

```
tw_get_wikipedia_page_qid_single
```

Gets the Wikidata id of a Wikipedia page

Description

Gets the Wikidata id of a Wikipedia page

Usage

```
tw_get_wikipedia_page_qid_single(
  title = NULL,
  url = NULL,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 1,
  attempts = 5
)
```

Arguments

| | |
|------------------|---|
| title | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| url | Full URL to a Wikipedia page. If given, title and language can be left empty. |
| language | Two-letter language code used to define the Wikipedia version to use. Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". If url given, this can be left empty. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 1 due to time-outs with frequent queries. Time to wait between queries to the APIs. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| attempts | Defaults to 5. Number of times it re-attempts to reach the API before failing. |

Value

A data frame (a tibble) with eight columns: `title`, `wikipedia_title`, `wikipedia_id`, `qid`, `description`, `disambiguation`, and `language`.

Examples

```
if (interactive()) {
  tw_get_wikipedia_page_qid_single(title = "Margaret Mead", language = "en")
}
```

```
tw_get_wikipedia_page_sections
```

Get sections of a Wikipedia page

Description

Get sections of a Wikipedia page

Usage

```
tw_get_wikipedia_page_sections(
  url = NULL,
  title = NULL,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 1,
  attempts = 5
)
```

Arguments

| | |
|-------------------------------|---|
| <code>url</code> | Full URL to a Wikipedia page. If given, title and language can be left empty. |
| <code>title</code> | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| <code>language</code> | Two-letter language code used to define the Wikipedia version to use. Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". If url given, this can be left empty. |
| <code>cache</code> | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| <code>overwrite_cache</code> | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| <code>cache_connection</code> | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| <code>disconnect_db</code> | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| <code>wait</code> | In seconds, defaults to 1 due to time-outs with frequent queries. Time to wait between queries to the APIs. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| <code>attempts</code> | Defaults to 5. Number of times it re-attempts to reach the API before failing. |

Value

A data frame (a tibble), with the same columns as `tw_empty_wikipedia_page_sections`.

Examples

```
if (interactive()) {
  tw_get_wikipedia_page_sections(title = "Margaret Mead", language = "en")
}
```

```
tw_get_wikipedia_page_sections_single
```

Get all Wikidata Q identifiers of all Wikipedia pages that appear in a given page

Description

Get all Wikidata Q identifiers of all Wikipedia pages that appear in a given page

Usage

```
tw_get_wikipedia_page_sections_single(
    url = NULL,
    title = NULL,
    language = tidywikidatar::tw_get_language(),
    cache = NULL,
    overwrite_cache = FALSE,
    cache_connection = NULL,
    disconnect_db = TRUE,
    wait = 1,
    attempts = 5,
    wikipedia_page_qid_df = NULL
)
```

Arguments

| | |
|-------------------------------|---|
| <code>url</code> | Full URL to a Wikipedia page. If given, title and language can be left empty. |
| <code>title</code> | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| <code>language</code> | Two-letter language code used to define the Wikipedia version to use. Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". If url given, this can be left empty. |
| <code>cache</code> | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| <code>overwrite_cache</code> | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| <code>cache_connection</code> | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| <code>disconnect_db</code> | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| <code>wait</code> | In seconds, defaults to 1 due to time-outs with frequent queries. Time to wait between queries to the APIs. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

attempts Defaults to 5. Number of times it re-attempts to reach the API before failing.
 wikipedia_page_qid_df Defaults to NULL. If given, used to reduce calls to cache. A data frame

Value

A data frame (a tibble) with four columns: wikipedia_title, wikipedia_id, wikidata_id, wikidata_description.

Examples

```
if (interactive()) {
  tw_get_wikipedia_page_sections_single(title = "Margaret Mead", language = "en")
}
```

```
tw_get_wikipedia_page_section_links
```

Get links from a specific section of a Wikipedia page

Description

Get links from a specific section of a Wikipedia page

Usage

```
tw_get_wikipedia_page_section_links(
  url = NULL,
  title = NULL,
  section_title = NULL,
  section_index = NULL,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 1,
  attempts = 5,
  wikipedia_page_qid_df = NULL
)
```

Arguments

url Full URL to a Wikipedia page. If given, title and language can be left empty.
 title Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided.
 section_title Defaults to NULL. If given, it should correspond to the human-readable title of a section of the relevant Wikipedia page. See also tw_get_wikipedia_page_sections()

| | |
|-----------------------|---|
| section_index | Defaults to NULL. If given, it should correspond to the ordinal of a section of the relevant Wikipedia page. See also tw_get_wikipedia_page_sections() |
| language | Two-letter language code used to define the Wikipedia version to use. Defaults to language set with tw_set_language(); if not set, "en". If url given, this can be left empty. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with tw_enable_cache() or tw_disable_cache(). |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 1 due to time-outs with frequent queries. Time to wait between queries to the APIs. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| attempts | Defaults to 5. Number of times it re-attempts to reach the API before failing. |
| wikipedia_page_qid_df | Defaults to NULL. If given, used to reduce calls to cache. A data frame |

Value

A data frame (a tibble).

Examples

```
if (interactive()) {
  tw_get_wikipedia_page_section_links(title = "Margaret Mead", language = "en", section_index = 1)
}
```

tw_get_wikipedia_sections_api_url

Facilitates the creation of MediaWiki API base URLs to retrieve sections of a page

Description

Mostly used internally

Usage

```
tw_get_wikipedia_sections_api_url(
    url = NULL,
    title = NULL,
    language = tidywikidatar::tw_get_language()
)
```

Arguments

| | |
|----------|--|
| url | A character vector with the full URL to one or more Wikipedia pages. If given, title and language can be left empty. |
| title | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| language | Two-letter language code used to define the Wikipedia version to use. Defaults to language set with tw_set_language(); if not set, "en". If url given, this can be left empty. |

Value

A character vector of base urls to be used with the MediaWiki API

Examples

```
tw_get_wikipedia_sections_api_url(title = "Margaret Mead", language = "en")
```

```
tw_get_wikipedia_section_links_api_url
```

Facilitates the creation of MediaWiki API base URLs to retrieve sections of a page

Description

Mostly used internally

Usage

```
tw_get_wikipedia_section_links_api_url(
    url = NULL,
    title = NULL,
    section_index,
    language = tidywikidatar::tw_get_language()
)
```


Arguments

| | |
|---------------|--|
| url | A character vector with the full URL to one or more Wikipedia pages. If given, title and language can be left empty. |
| title | Title of a Wikipedia page or final parts of its url. If given, url can be left empty, but language must be provided. |
| section_index | Required. It should correspond to the ordinal of a section of the relevant Wikipedia page. See also <code>tw_get_wikipedia_page_sections()</code> . |
| language | Two-letter language code used to define the Wikipedia version to use. Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". If url given, this can be left empty. |

Value

A character vector of base urls to be used with the MediaWiki API

Examples

```
tw_get_wikipedia_section_links_api_url(title = "Margaret Mead", section_index = 1, language = "en")
```

| | |
|----------|--|
| tw_label | <i>Gets labels for all columns with names such as "id" and "property".</i> |
|----------|--|

Description

Gets labels for all columns with names such as "id" and "property".

Usage

```
tw_label(
  df,
  value = TRUE,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)
```

Arguments

| | |
|-------|---|
| df | A data frame, typically generated with other tidywikidatar functions such as <code>tw_get_property()</code> |
| value | Logical, defaults to TRUE. If TRUE, it tries to get labels for all supposed id in the column called value. May break if the columns include some value which starts with Q and some digits, but is not a wikidata id. |

| | |
|------------------|--|
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A data frame, with the same shape as the input data frame, but with labels instead of identifiers.

Examples

```
tw_get_qualifiers(id = "Q180099", p = "P26", language = "en") %>%
  head(2) %>%
  tw_label()
```

| | |
|-----------------|---|
| tw_qid_airports | <i>The Wikidata Q identifier of European airports found in Eurostat's avia_par_ dataset</i> |
|-----------------|---|

Description

The Wikidata Q identifier of European airports found in Eurostat's `avia_par_ dataset`

Usage

```
tw_qid_airports
```

Format

A data frame with 429 rows and 1 column:

id Q identifiers

Source

https://www.wikidata.org/wiki/Wikidata:Main_Page

| | |
|-------------|--|
| tw_qid_meps | <i>The Wikidata Q identifier of all members of the European Parliament since its establishment</i> |
|-------------|--|

Description

A dataset with all the Wikidata items that have "Q27169" (member of the European Parliament) for the property "P39" (position held).

Usage

```
tw_qid_meps
```

Format

A data frame with 4581 rows and 1 column:

id Q identifiers

Source

https://www.wikidata.org/wiki/Wikidata:Main_Page

| | |
|----------|--|
| tw_query | <i>Perform simple Wikidata queries</i> |
|----------|--|

Description

This function aims to facilitate only the most basic type of queries: return which items have the following property pairs. For more details on Wikidata queries, consult: https://www.wikidata.org/wiki/Wikidata:SPARQL_queries. For complex queries, use `WikidataQueryServiceR::query_wikidata()`.

Usage

```
tw_query(
  query,
  fields = c("item", "itemLabel", "itemDescription"),
  language = tidywikidatar::tw_get_language(),
  return_as_tw_search = TRUE
)
```

Arguments

| | |
|---------------------|---|
| query | A list of named vectors, or a data frame (see example and readme). |
| fields | A character vector of Wikidata fields. Ignored if return_as_tw_search is set to TRUE (as per default). Defaults to ("item", "itemLabel", "itemDescription") |
| language | Defaults to language set with tw_set_language(); if not set, "en". If more than one, can be set in order of preference, e.g. c("it", "fr", "en"). Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/H |
| return_as_tw_search | Logical, defaults to TRUE. If TRUE, returns a data frame with three columns (id, label, and description) that can be piped to other tw_ functions. If FALSE, a data frame with as many columns as fields. |

Details

Consider tw_get_all_with_p() if you want to get all items with a given property, irrespective of the value.

Value

A data frame

Examples

```
if (interactive()) {
  query <- list(
    c(p = "P106", q = "Q1397808"),
    c(p = "P21", q = "Q6581072")
  )
  tw_query(query)
}
```

tw_reset_item_cache *Reset qualifiers cache*

Description

Removes the table where qualifiers are cached

Usage

```
tw_reset_item_cache(
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE,
  ask = TRUE
)
```

Arguments

| | |
|------------------|--|
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| ask | Logical, defaults to TRUE. If FALSE, and cache folder does not exist, it just creates it without asking (useful for non-interactive sessions). |

Value

Nothing, used for its side effects.

Examples

```
if (interactive()) {
  tw_reset_item_cache()
}
```

```
tw_reset_qualifiers_cache
Reset qualifiers cache
```

Description

Removes the table where qualifiers are cached

Usage

```
tw_reset_qualifiers_cache(
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE,
  ask = TRUE
)
```

Arguments

| | |
|------------------|--|
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| ask | Logical, defaults to TRUE. If FALSE, and cache folder does not exist, it just creates it without asking (useful for non-interactive sessions). |

Value

Nothing, used for its side effects.

Examples

```
if (interactive()) {
  tw_reset_qualifiers_cache()
}
```

```
tw_reset_wikipedia_page_cache
Reset Wikipedia page cache
```

Description

Removes the table where data typically gathered with `tw_get_wikipedia_page_qid()` from cache

Usage

```
tw_reset_wikipedia_page_cache(
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE,
  ask = TRUE
)
```

Arguments

| | |
|------------------|--|
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| ask | Logical, defaults to TRUE. If FALSE, and cache folder does not exist, it just creates it without asking (useful for non-interactive sessions). |

Value

Nothing, used for its side effects.

Examples

```
if (interactive()) {
  tw_reset_wikipedia_page_cache()
}
```

```
tw_reset_wikipedia_page_links_cache
Reset Wikipedia page link cache
```

Description

Removes from cache the table where data typically gathered with `tw_get_wikipedia_page_links()` are stored

Usage

```
tw_reset_wikipedia_page_links_cache(
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE,
  ask = TRUE
)
```

Arguments

| | |
|------------------|--|
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database by default. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| ask | Logical, defaults to TRUE. If FALSE, and cache folder does not exist, it just creates it without asking (useful for non-interactive sessions). |

Value

Nothing, used for its side effects.

Examples

```
if (interactive()) {
  tw_reset_wikipedia_page_links_cache()
}
```

```
tw_reset_wikipedia_page_sections_cache
Reset Wikipedia page link cache
```

Description

Removes from cache the table where data typically gathered with `tw_get_wikipedia_page_sections()` are stored

Usage

```
tw_reset_wikipedia_page_sections_cache(
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE,
  ask = TRUE
)
```


Arguments

| | |
|------------------|--|
| language | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database by default. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| ask | Logical, defaults to TRUE. If FALSE, and cache folder does not exist, it just creates it without asking (useful for non-interactive sessions). |

Value

Nothing, used for its side effects.

Examples

```
if (interactive()) {
  tw_reset_wikipedia_page_sections_cache()
}
```

| | |
|-----------|--|
| tw_search | <i>Search for Wikidata items or properties and return Wikidata id, label, and description.</i> |
|-----------|--|

Description

By defaults, this search returns items. Set type to property or use `tw_search_property()` for properties.

Usage

```
tw_search(
  search,
  type = "item",
  language = tidywikidatar::tw_get_language(),
  response_language = tidywikidatar::tw_get_language(),
  limit = 10,
  include_search = FALSE,
  wait = 0,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|-------------------|--|
| search | A string to be searched in Wikidata |
| type | Defaults to "item". Either "item" or "property". |
| language | Language to be used for the search. Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes |
| response_language | Language to be used for the returned labels and descriptions. Corresponds to the <code>uselang</code> parameter of the MediaWiki API: https://www.wikidata.org/w/api.php?action=help&modules=w . Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
| limit | Maximum numbers of responses to be given. |
| include_search | Logical, defaults to FALSE. If TRUE, the search is returned as an additional column. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Defaults to FALSE. If TRUE, overwrites cache. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

A data frame (a tibble) with three columns (id, label, and description), and as many rows as there are results (by default, limited to 10). Four columns when `include_search` is set to TRUE.

Examples

```
tw_search(search = c("Margaret Mead", "Ruth Benedict"))
```

| | |
|----------------|---|
| tw_search_item | <i>Search for Wikidata properties in Wikidata and return Wikidata id, label, and description.</i> |
|----------------|---|

Description

This search returns only items, use `tw_search_property()` for properties.

Usage

```
tw_search_item(
  search,
  language = tidywikidatar::tw_get_language(),
  response_language = tidywikidatar::tw_get_language(),
  limit = 10,
  include_search = FALSE,
  wait = 0,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|-------------------|--|
| search | A string to be searched in Wikidata |
| language | Language to be used for the search. Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes |
| response_language | Language to be used for the returned labels and descriptions. Corresponds to the <code>uselang</code> parameter of the MediaWiki API: https://www.wikidata.org/w/api.php?action=help&modules=wgLanguages . Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
| limit | Maximum numbers of responses to be given. |
| include_search | Logical, defaults to FALSE. If TRUE, the search is returned as an additional column. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Defaults to FALSE. If TRUE, overwrites cache. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

A data frame (a tibble) with three columns (id, label, and description), and as many rows as there are results (by default, limited to 10).

Examples

```
tw_search_item(search = "Sylvia Pankhurst")
```

| | |
|--------------------|---|
| tw_search_property | <i>Search for Wikidata properties in Wikidata and return Wikidata id, label, and description.</i> |
|--------------------|---|

Description

This search returns only properties, use `tw_search_items()` for properties.

Usage

```
tw_search_property(
  search,
  language = tidywikidatar::tw_get_language(),
  response_language = tidywikidatar::tw_get_language(),
  limit = 10,
  include_search = FALSE,
  wait = 0,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|-------------------|--|
| search | A string to be searched in Wikidata |
| language | Language to be used for the search. Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes |
| response_language | Language to be used for the returned labels and descriptions. Corresponds to the <code>uselang</code> parameter of the MediaWiki API: https://www.wikidata.org/w/api.php?action=help&modules=tw . Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
| limit | Maximum numbers of responses to be given. |
| include_search | Logical, defaults to FALSE. If TRUE, the search is returned as an additional column. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |

`overwrite_cache` Defaults to FALSE. If TRUE, overwrites cache.
`cache_connection` Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details).
`disconnect_db` Defaults to TRUE. If FALSE, leaves the connection to cache open.

Value

A data frame (a tibble) with three columns (id, label, and description), and as many rows as there are results (by default, limited to 10).

Examples

```
tw_search_property(search = "gender")
```

| | |
|-------------------------------|--|
| <code>tw_search_single</code> | <i>Search for Wikidata items or properties and return Wikidata id, label, and description.</i> |
|-------------------------------|--|

Description

This search returns only items, use `tw_search_property()` for properties.

Usage

```
tw_search_single(
  search,
  type = "item",
  language = tidywikidatar::tw_get_language(),
  response_language = tidywikidatar::tw_get_language(),
  limit = 10,
  include_search = FALSE,
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 0
)
```

Arguments

| | |
|-----------------------|--|
| <code>search</code> | A string to be searched in Wikidata |
| <code>type</code> | Defaults to "item". Either "item" or "property". |
| <code>language</code> | Language to be used for the search. Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_co |

| | |
|-------------------|--|
| response_language | Language to be used for the returned labels and descriptions. Corresponds to the <code>uselang</code> parameter of the MediaWiki API: https://www.wikidata.org/w/api.php?action=help&modules=w . Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
| limit | Maximum numbers of responses to be given. |
| include_search | Logical, defaults to FALSE. If TRUE, the search is returned as an additional column. |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Defaults to FALSE. If TRUE, overwrites cache. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |
| wait | In seconds, defaults to 0. Time to wait between queries to Wikidata. If data are cached locally, wait time is not applied. If you are running many queries systematically you may want to add some waiting time between queries. |

Value

A data frame (a tibble) with three columns (`id`, `label`, and `description`), and as many rows as there are results (by default, limited to 10). Four columns when `include_search` is set to TRUE.

Examples

```
tw_search_single(search = "Sylvia Pankhurst")
```

| | |
|-----------------|---|
| tw_set_cache_db | <i>Set database connection settings for the session</i> |
|-----------------|---|

Description

Set database connection settings for the session

Usage

```
tw_set_cache_db(
  db_settings = NULL,
  driver = NULL,
  host = NULL,
  server = NULL,
  port = NULL,
  database = NULL,
```

```

    user = NULL,
    pwd = NULL
  )

```

Arguments

| | |
|-------------|---|
| db_settings | A list of database connection settings (see example) |
| driver | A database driver. Common database drivers include MySQL, PostgreSQL, and MariaDB. See <code>unique(odbc::odbcListDrivers()[[1]])</code> for a list of locally available drivers. |
| host | Host address, e.g. "localhost". Different drivers use server or host parameter, only one of them is likely needed. |
| server | Server address, e.g. "localhost". Different drivers use server or host parameter, only one of them is likely needed. |
| port | Port to use to connect to the database. |
| database | Database name. |
| user | Database user name. |
| pwd | Password for the database user. |

Value

A list with all given parameters (invisibly).

Examples

```

if (interactive()) {

  # Settings can be provided either as a list
  db_settings <- list(
    driver = "MySQL",
    host = "localhost",
    server = "localhost",
    port = 3306,
    database = "tidywikidatar",
    user = "secret_username",
    pwd = "secret_password"
  )

  tw_set_cache_db(db_settings)

  # or as parameters

  tw_set_cache_db(
    driver = "MySQL",
    host = "localhost",
    server = "localhost",
    port = 3306,
    database = "tidywikidatar",

```

```

    user = "secret_username",
    pwd = "secret_password"
  )

# or ignoring fields that can be left to default values, such as "localhost" and port 3306

tw_set_cache_db(
  driver = "MySQL",
  database = "tidywikidatar",
  user = "secret_username",
  pwd = "secret_password"
)
}

```

tw_set_cache_folder *Set folder for caching data*

Description

Consider using a folder out of your current project directory, e.g. `tw_set_cache_folder("~/R/tw_data/")`: you will be able to use the same cache in different projects, and prevent cached files from being sync-ed if you use services such as Nextcloud or Dropbox.

Usage

```
tw_set_cache_folder(path = NULL)
```

```
tw_get_cache_folder(path = NULL)
```

Arguments

path A path to a location used for caching data. If the folder does not exist, it will be created.

Value

The path to the caching folder, if previously set; the same path as given to the function; or the default, `tw_data` is none is given.

Examples

```

if (interactive()) {
  tw_set_cache_folder(fs::path(fs::path_home_r(), "R", "tw_data"))
}

tw_get_cache_folder()

```

| | |
|-----------------|---|
| tw_set_language | <i>Set language to be used by all functions</i> |
|-----------------|---|

Description

Defaults to "en".

Usage

```
tw_set_language(language = NULL)
```

```
tw_get_language(language = NULL)
```

Arguments

| | |
|----------|--|
| language | A character vector of length one, with a string of two letters such as "en". For a full list of available values, see: https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
|----------|--|

Value

A two letter code for the language, if previously set; the same language as given to the function; or the default, en is none is given.

Examples

```
if (interactive()) {  
  tw_set_language(language = "en")  
}
```

```
tw_get_language()
```

| |
|------------------------|
| tw_write_item_to_cache |
|------------------------|

Writes item to cache

Description

Writes item to cache. Typically used internally, but exported to enable custom caching solutions.

Usage

```
tw_write_item_to_cache(
  item_df,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|-------------------------------|--|
| <code>item_df</code> | A data frame with three columns typically generated with <code>tw_get()</code> . |
| <code>language</code> | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| <code>cache</code> | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| <code>overwrite_cache</code> | Logical, defaults to FALSE. If TRUE, it first deletes all rows associated with the item(s) included in <code>item_df</code> . Useful if the original Wikidata object has been updated. |
| <code>cache_connection</code> | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| <code>disconnect_db</code> | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

Nothing, used for its side effects.

Examples

```
tw_set_cache_folder(path = fs::path(tempdir(), paste(sample(letters, 24), collapse = "")))
tw_create_cache_folder(ask = FALSE)
tw_disable_cache()

df_from_api <- tw_get(id = "Q180099", language = "en")

df_from_cache <- tw_get_cached_item(
  id = "Q180099",
  language = "en"
)

is.null(df_from_cache) # expect TRUE, as nothing has yet been stored in cache

tw_write_item_to_cache(
  item_df = df_from_api,
```

```

  language = "en",
  cache = TRUE
)

df_from_cache <- tw_get_cached_item(
  id = "Q180099",
  language = "en",
  cache = TRUE
)

is.null(df_from_cache) # expect a data frame, same as df_from_api

```

tw_write_qid_of_wikipedia_page_to_cache

Write Wikidata identifier (qid) of Wikipedia page to cache

Description

Mostly used internally by tidywikidatar, use with caution to keep caching consistent.

Usage

```

tw_write_qid_of_wikipedia_page_to_cache(
  df,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)

```

Arguments

| | |
|------------------|--|
| df | A data frame typically generated with tw_get_wikipedia_page_qid(). |
| language | Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with tw_enable_cache() or tw_disable_cache(). |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

Silently returns the same data frame provided as input. Mostly used internally for its side effects.

Examples

```
if (interactive()) {
  df <- tw_get_wikipedia_page_qid(
    title = "Margaret Mead",
    language = "en",
    cache = FALSE
  )

  tw_write_qid_of_wikipedia_page_to_cache(
    df = df,
    language = "en"
  )
}
```

```
tw_write_qualifiers_to_cache
      Write qualifiers to cache
```

Description

Mostly to be used internally by tidywikidatar, use with caution to keep caching consistent.

Usage

```
tw_write_qualifiers_to_cache(
  qualifiers_df,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

| | |
|-----------------|--|
| qualifiers_df | A data frame typically generated with tw_get_qualifiers(). |
| language | Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with tw_enable_cache() or tw_disable_cache(). |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |

`cache_connection` Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details).

`disconnect_db` Defaults to TRUE. If FALSE, leaves the connection to cache open.

Value

Silently returns the same data frame provided as input. Mostly used internally for its side effects.

Examples

```
q_df <- tw_get_qualifiers(  
  id = "Q180099",  
  p = "P26",  
  language = "en",  
  cache = FALSE  
)  
  
tw_write_qualifiers_to_cache(  
  qualifiers_df = q_df,  
  language = "en",  
  cache = TRUE  
)
```

`tw_write_search_to_cache`
Writes search to cache

Description

Writes search to cache. Typically used internally, but exported to enable custom caching solutions.

Usage

```
tw_write_search_to_cache(  
  search_df,  
  type = "item",  
  language = tidywikidatar::tw_get_language(),  
  response_language = tidywikidatar::tw_get_language(),  
  cache = NULL,  
  overwrite_cache = FALSE,  
  cache_connection = NULL,  
  disconnect_db = TRUE  
)
```

Arguments

| | |
|-------------------|--|
| search_df | A data frame with four columns typically generated with <code>tw_search(include_search = TRUE)</code> . |
| type | Defaults to "item". Either "item" or "property". |
| language | Language to be used for the search. Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes |
| response_language | Language to be used for the returned labels and descriptions. Corresponds to the <code>uselang</code> parameter of the MediaWiki API: https://www.wikidata.org/w/api.php?action=help&modules=wikidata . Can be set once per session with <code>tw_set_language()</code> . If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_codes/lists/all |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| overwrite_cache | Defaults to FALSE. If TRUE, overwrites cache. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, <code>tidywikidatar</code> will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

Nothing, used for its side effects.

Examples

```
tw_set_cache_folder(path = fs::path(tempdir(), paste(sample(letters, 24), collapse = "")))
tw_create_cache_folder(ask = FALSE)
tw_disable_cache()

search_from_api <- tw_search(search = "Sylvia Pankhurst", include_search = TRUE)

search_from_cache <- tw_get_cached_search("Sylvia Pankhurst")

nrow(search_from_cache) == 0 # expect TRUE, as nothing has yet been stored in cache

tw_write_search_to_cache(search_df = search_from_api)

search_from_cache <- tw_get_cached_search("Sylvia Pankhurst")

search_from_cache
```

`tw_write_wikipedia_page_links_to_cache`*Write Wikipedia page links to cache*

Description

Mostly used internally by tidywikidatar, use with caution to keep caching consistent.

Usage

```
tw_write_wikipedia_page_links_to_cache(  
  df,  
  language = tidywikidatar::tw_get_language(),  
  cache = NULL,  
  overwrite_cache = FALSE,  
  cache_connection = NULL,  
  disconnect_db = TRUE  
)
```

Arguments

| | |
|-------------------------------|--|
| <code>df</code> | A data frame typically generated with <code>tw_get_wikipedia_page_links()</code> . |
| <code>language</code> | Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia |
| <code>cache</code> | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with <code>tw_enable_cache()</code> or <code>tw_disable_cache()</code> . |
| <code>overwrite_cache</code> | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| <code>cache_connection</code> | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| <code>disconnect_db</code> | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

Silently returns the same data frame provided as input. Mostly used internally for its side effects.

Examples

```
if (interactive()) {  
  df <- tw_get_wikipedia_page_links(  
    title = "Margaret Mead",  
    language = "en",  
    cache = FALSE  
  )  
}
```

```

)

tw_write_wikipedia_page_links_to_cache(
  df = df,
  language = "en"
)
}

```

```

tw_write_wikipedia_page_sections_to_cache
  Write Wikipedia page links to cache

```

Description

Mostly used internally by tidywikidatar, use with caution to keep caching consistent.

Usage

```

tw_write_wikipedia_page_sections_to_cache(
  df,
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE
)

```

Arguments

| | |
|------------------|--|
| df | A data frame typically generated with tw_get_wikipedia_page_sections(). |
| language | Defaults to language set with tw_set_language(); if not set, "en". Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Wikimedia_ |
| cache | Defaults to NULL. If given, it should be given either TRUE or FALSE. Typically set with tw_enable_cache() or tw_disable_cache(). |
| overwrite_cache | Logical, defaults to FALSE. If TRUE, it overwrites the table in the local sqlite database. Useful if the original Wikidata object has been updated. |
| cache_connection | Defaults to NULL. If NULL, and caching is enabled, tidywikidatar will use a local sqlite database. A custom connection to other databases can be given (see vignette caching for details). |
| disconnect_db | Defaults to TRUE. If FALSE, leaves the connection to cache open. |

Value

Silently returns the same data frame provided as input. Mostly used internally for its side effects.

Examples

```
if (interactive()) {  
  df <- tw_get_wikipedia_page_sections(  
    title = "Margaret Mead",  
    language = "en",  
    cache = FALSE  
  )  
  
  tw_write_wikipedia_page_sections_to_cache(  
    df = df,  
    language = "en"  
  )  
}
```

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