

Package ‘tidywikidatar’

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Title Explore 'Wikidata' Through Tidy Data Frames

Version 0.5.8

Description Query 'Wikidata' API <https://www.wikidata.org/wiki/Wikidata:Main_Page> with ease, get tidy data frames in response, and cache data in a local database.

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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	<i>Check if given items are present in cache</i>
-----------------------	--

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 <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_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_cache_index *Check if cache table is indexed*

Description

Tested only with SQLite and MySQL. May work with other drivers. Used to check if given cache table is indexed (if created with any version of tidywikidatar before 0.6, they are probably not indexed and less efficient).

Usage

```
tw_check_cache_index(
  table_name = NULL,
  type = "item",
  show_details = FALSE,
  language = tidywikidatar::tw_get_language(),
  response_language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

table_name	Name of the table in the database. If given, it takes precedence over other parameters.
type	Defaults to "item". Type of cache file to output. Values typically used by tidywikidatar include "item", "search_item", "search_property", and "qualifier".
show_details	Logical, defaults to FALSE. If FALSE, return a logical vector of length one (TRUE if the table was indexed, FALSE if it was not). If TRUE, returns a data frame with more details about the index.
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
response_language	Defaults to language set with tw_set_language(); "en" if not set. Relevant only when type is set to "search_item" or "search_property". See tw_search() for details.
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 to cache open.

Value

If show_details is set to FALSE, return a logical vector of length one (TRUE if the table was indexed, FALSE if it was not). If show_details is set to TRUE, returns a data frame with more details about the index.

Examples

```
if (interactive()) {
  tw_enable_cache()
  tw_set_cache_folder(path = fs::path(
    fs::path_home_r(),
    "R",
    "tw_data"
  ))

  tw_set_language(language = "en")

  tw_check_cache_index()
}
```

tw_check_pid	<i>Ensures that input appears to be a valid Wikidata property id (i.e. it starts with P and is followed only by digits)</i>
--------------	---

Description

Mostly used internally by other functions.

Usage

```
tw_check_pid(property, logical_vector = FALSE, non_pid_as_NA = FALSE)
```

Arguments

property	A character vector of one or more Wikidata property identifiers.
logical_vector	Logical, defaults to FALSE. If TRUE, returns a logical vector of the same length as input, where TRUE corresponds to seemingly meaningful property identifiers.
non_pid_as_NA	Logical, defaults to FALSE. If TRUE (and if logical_vector is set to FALSE), a vector of the same length is returned, with NA replacing items that are seemingly not meaningful property identifiers.

Value

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

Examples

```
tw_check_pid(property = c("P19", "p20", "Not an property id", "20", NA, "Q5", ""))

tw_check_pid(
  property = c("P19", "p20", "Not an property id", "20", NA, "Q5", ""),
  logical_vector = TRUE
)

tw_check_pid(
  property = c("P19", "p20", "Not an property id", "20", NA, "Q5", ""),
  non_pid_as_NA = TRUE
)
```

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, logical_vector = FALSE, non_id_as_NA = FALSE)
```

Arguments

id	A character vector of one or more Wikidata id.
logical_vector	Logical, defaults to FALSE. If TRUE, returns a logical vector of the same length as input, where TRUE corresponds to seemingly meaningful Q identifiers.
non_id_as_NA	Logical, defaults to FALSE. If TRUE (and if logical_vector is set to FALSE), a vector of the same length is returned, with NA replacing items that are seemingly not meaningful Q identifiers.

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, "Q5"))
```

```
tw_check_qid(  
  id = c("Q180099", "q228822", "Not an id", "00180099", NA, "Q5"),  
  logical_vector = TRUE  
)
```

```
tw_check_qid(  
  id = c("Q180099", "q228822", "Not an id", "00180099", NA, "Q5"),  
  non_id_as_NA = TRUE  
)
```

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_co
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 = tidywikidatar::tw_get_language(),
  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 tw_set_cache_db() as environment variables.
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().

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 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 to cache open.
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

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_category_members

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

Description

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

Usage

```
tw_empty_wikipedia_category_members
```

Format

A data frame with 0 rows and 3 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	<i>Enable caching for the current session</i>
-----------------	---

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)
```

<code>tw_extract_single</code>	<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

<code>w</code>	An object of class Wikidata created with WikidataR, typically created with <code>WikidataR::get_item(id = id)</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_

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]])
  }
)

tidywikidatar::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 tw_search(), 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 tw_set_language(). If not set, defaults to "en". For a full list, see https://www.wikidata.org/wiki/Help:Wikimedia_language_co
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 tw_enable_cache() or tw_disable_cache().
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 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")
```

tw_filter_first	<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 tw_search(), 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 tw_enable_cache() or tw_disable_cache()
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 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,
  include_search = FALSE,
  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.
include_search	Logical, defaults to FALSE. If TRUE, the search is returned as an additional column.
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, 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 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

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

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,
  id_l = NULL
)

```

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.
id_l	Defaults to NULL. If given, must be an object or list such as the one generated with <code>WikidataR::get_item()</code> . If given, and the requested id is actually present in <code>id_l</code> , then no query to Wikidata servers is made.

Value

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

Examples

```

if (interactive()) {
  tw_get(
    id = c("Q180099", "Q228822"),
    language = "en"
  )
}

## using `tw_test_items` in examples in order to show output without calling
## on Wikidata servers

tw_get(

```



```

    id = c("Q180099", "Q228822"),
    language = "en",
    id_l = tw_test_items
  )

```

tw_get_all_with_p *Get all items that have a given property (irrespective of the value)*

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 <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> .
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 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=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
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_category_members
```

Gets members of Wikipedia categories from local cache

Description

Mostly used internally.

Usage

```
tw_get_cached_wikipedia_category_members(
  category,
  type = "page",
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  cache_connection = NULL,
  disconnect_db = TRUE
)
```

Arguments

category	Title of a Wikipedia category page or final parts of its url. Must include "Category:", or equivalent in other languages. If given, url can be left empty, but language must be provided.
type	Defaults to "page", defines which kind of members of a category are returned. Valid values include "page", "file", and "subcat" (for sub-category). Corresponds to cmtype. For details, see https://www.mediawiki.org/wiki/API:Categorymembers
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().
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

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(category = "Margaret Mead", language = "en")

  df_from_cache <- tw_get_cached_wikipedia_category_members(
    category = "Margaret Mead",
    language = "en"
  )
}
```

```

    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

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_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

<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, <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 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

Get database connection settings from the environment

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 *Gets location of cache file*

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(),  
  response_language = tidywikidatar::tw_get_language()  
)
```

Arguments

type	Defaults to "item". Type of cache file to output. Values typically used by tidywikidatar include "item", "search_item", "search_property", 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
response_language	Defaults to language set with tw_set_language(); "en" if not set. Relevant only when type is set to "search_item" or "search_property". See tw_search() for details.

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 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 <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 the same length as the vector of `id` given, 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 <code>tw_get()</code></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 <code>tw_get()</code> . It should include data for the <code>id</code> 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 <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

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

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(
  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 = 10
)

```

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.

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 10. 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 = 10  
)
```

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>read_cache</code>	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.
<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 10. 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

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.
as_tibble	Defaults to FALSE. If TRUE, returns a data frame instead of a character vector.
only_first	Defaults to TRUE. If TRUE, returns only the first image associated with a given Wikidata id. If FALSE, returns all images available.
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().

<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 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_pl	<i>Get Wikidata property of an item as a character vector of the same length as input</i>
-----------	---

Description

This function wraps `tw_get_p()`, but always sets `only_first` and `preferred` to `TRUE` in order to give back always a character vector.

Usage

```

tw_get_pl(
  id,
  p,
  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

<code>id</code>	A character vector, must start with Q, e.g. "Q254" for Wolfgang Amadeus Mozart.
<code>p</code>	A character vector, a property. Must always start with the capital letter "P", e.g. "P31" for "instance of".
<code>latest_start_time</code>	Logical, defaults to <code>FALSE</code> . If <code>TRUE</code> , returns the property that has the most recent start time ("P580") as qualifier. If no such qualifier is found, then it is ignored.
<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>id_df</code>	Default to <code>NULL</code> . If given, it should be a dataframe typically generated with <code>tw_get_()</code> , and is used instead of calling Wikidata or replying on cache.

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 character vector of the same length as the input.

Examples

```
tw_get_p1(id = "Q180099", "P26")
```

tw_get_property	<i>Get Wikidata property of one or more items as a tidy data frame</i>
-----------------	--

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

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

```
tw_get_property_same_length
```

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

Description

Get Wikidata property of an item as a vector or list 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 replying on cache.
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 if 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
tidywikidatar::tw_get_property_with_details_single(id = "Q64733534", p = "P2521")
```

tw_get_p_wide	<i>Efficiently get a wide table with various properties of a given set of Wikidata identifiers</i>
---------------	--

Description

Efficiently get a wide table with various properties of a given set of Wikidata identifiers

Usage

```
tw_get_p_wide(
  id,
  p,
  label = FALSE,
  property_label_as_column_name = FALSE,
  both_id_and_label = FALSE,
  only_first = FALSE,
  preferred = FALSE,
  unlist = FALSE,
  collapse = ";",
  language = tidywikidatar::tw_get_language(),
  id_df = NULL,
  id_df_label = 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".
label	Logical, defaults to FALSE. If TRUE labels of Wikidata Q identifiers are reported instead of the identifiers themselves (or labels are presented along of them, if both_id_and_label is set to TRUE)
property_label_as_column_name	Logical, defaults to FALSE. If FALSE, names of columns with properties are the "P" identifiers of the property. If TRUE, the label of the correspondent property is assigned as column name.
both_id_and_label	Logical, defaults to FALSE. Relevant only if label is set to TRUE, otherwise ignored. If TRUE, the label is added as a separate column along the original one. Column name is the same as the property column, followed by "_label".

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.
unlist	Logical, defaults to FALSE. Typically used sharing or exporting data as csv files. Collapses all properties in a single string. The separator is defined by the collapse parameter. Relevant only when only_first is set to FALSE.
collapse	Defaults to ";". Character used to separate results when unlist is set to TRUE.
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 relying on cache.
id_df_label	Defaults to NULL. If given, it should be a dataframe typically generated with tw_get() with <i>all</i> items for which labels will be requested. It is used instead of calling Wikidata or relying on cache.
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, with a column for each given property.

Examples

```
if (interactive()) {
  tw_get_p_wide(
    id = c("Q180099", "Q228822", "Q191095"),
    p = c("P27", "P19", "P20"),
    label = TRUE,
    only_first = TRUE
  )
}
```

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

`id_l` Defaults to NULL. If given, must be an object or list such as the one generated with `WikidataR::get_item()`. If given, and the requested id is actually present in `id_l`, then no query to Wikidata servers is made.

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

```
if (interactive()) {
  tidywikidatar::tw_get_qualifiers(id = "Q180099", p = "P26", language = "en")
}

#' ## using `tw_test_items` in examples in order to show output without calling
## on Wikidata servers

tidywikidatar::tw_get_qualifiers(
  id = "Q180099",
  p = "P26",
  language = "en",
  id_l = tw_test_items
)
```

`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,
  id_l = 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".
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.
id_l	Defaults to NULL. If given, must be an object or list such as the one generated with <code>WikidataR::get_item()</code> . If given, and the requested id is actually present in <code>id_l</code> , then no query to Wikidata servers is made.

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

```
if (interactive()) {
  tidywikidatar::tw_get_qualifiers_single(id = "Q180099", p = "P26", language = "en")
}

#' ## using `tw_test_items` in examples in order to show output without calling
## on Wikidata servers

tidywikidatar::tw_get_qualifiers_single(
  id = "Q180099",
  p = "P26",
  language = "en",
  id_l = tw_test_items
)
```

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

Description

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

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,
  id_l = NULL
)
```

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.
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, <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.

`id_l` Defaults to NULL. If given, must be an object or list such as the one generated with `WikidataR::get_item()`. If given, and the requested id is actually present in `id_l`, then no query to Wikidata servers is made.

Value

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

Examples

```
if (interactive()) {
  tidywikidatar::tw_get_single(
    id = "Q180099",
    language = "en"
  )
}

#' ## using `tw_test_items` in examples in order to show output without calling
## on Wikidata servers

tidywikidatar::tw_get_single(
  id = "Q180099",
  language = "en",
  id_l = tw_test_items
)
```

<code>tw_get_wikipedia</code>	<i>Get URL to a Wikipedia article corresponding to a Wikidata Q identifier in given language</i>
-------------------------------	--

Description

Get URL to a Wikipedia article corresponding to a Wikidata Q identifier in given language

Usage

```
tw_get_wikipedia(
  id,
  full_link = TRUE,
  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
full_link	Logical, defaults to TRUE. If FALSE, returns only the part of the url that corresponds to the title.
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.
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 character vector of the same length as the vector of id given, with the Wikipedia link 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",
    type = "page"
)
```

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.
action	Defaults to "query". Usually either "query" or "parse". In principle, any valid action value, see: https://www.mediawiki.org/w/api.php
type	Defaults to "page". Either "page" or "category".

Value

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

Examples

```
tw_get_wikipedia_base_api_url(title = "Margaret Mead", language = "en")
tw_get_wikipedia_base_api_url(
  title = "Category:American women anthropologists",
  type = "category",
  language = "en"
)
```

tw_get_wikipedia_category_members

Get all Wikidata Q identifiers of all Wikipedia pages (or files, or subcategories) that are members of the given category.

Description

Get all Wikidata Q identifiers of all Wikipedia pages (or files, or subcategories) that are members of the given category,

Usage

```
tw_get_wikipedia_category_members(
    url = NULL,
    category = NULL,
    type = "page",
    language = tidywikidatar::tw_get_language(),
    cache = NULL,
    overwrite_cache = FALSE,
    cache_connection = NULL,
    disconnect_db = TRUE,
    wait = 1,
    attempts = 10
)
```

Arguments

url	Full URL to a Wikipedia category page. If given, title and language can be left empty.
category	Title of a Wikipedia category page or final parts of its url. Must include "Category:", or equivalent in other languages. If given, url can be left empty, but language must be provided.
type	Defaults to "page", defines which kind of members of a category are returned. Valid values include "page", "file", and "subcat" (for sub-category). Corresponds to cmttype. For details, see https://www.mediawiki.org/wiki/API:Categorymembers
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 10. 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()) {
  sub_categories <- tw_get_wikipedia_category_members(
    category = "Category:American women anthropologists",
    type = "subcat"
  )

  sub_categories

  tw_get_wikipedia_category_members(
    category = sub_categories$wikipedia_title,
    type = "page"
  )
}
```

tw_get_wikipedia_category_members_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_category_members_single(
  url = NULL,
  category = NULL,
  type = "page",
  language = tidywikidatar::tw_get_language(),
  cache = NULL,
  overwrite_cache = FALSE,
  cache_connection = NULL,
  disconnect_db = TRUE,
  wait = 1,
  attempts = 10
)
```

Arguments

url	Full URL to a Wikipedia category page. If given, title and language can be left empty.
category	Title of a Wikipedia category page or final parts of its url. Must include "Category:", or equivalent in other languages. If given, url can be left empty, but language must be provided.
type	Defaults to "page", defines which kind of members of a category are returned. Valid values include "page", "file", and "subcat" (for sub-category). Corresponds to cmtpe. For details, see https://www.mediawiki.org/wiki/API:Categorymembers
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 10. Number of times it re-attempts to reach the API before failing.

Value

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

Examples

```
if (interactive()) {
  tidywikidatar::tw_get_wikipedia_category_members_single(
    category = "Category:American women anthropologists",
    type = "subcat"
  )

  tidywikidatar::tw_get_wikipedia_category_members_single(
    category = "Category:Puerto Rican women anthropologists",
    type = "page"
  )
}
```

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 = 10
)
```

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.
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, 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 10. 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 = 10,
  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.
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 10. 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_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 = 10
)
```

Arguments

<code>url</code>	A character vector with the full URL to one or more Wikipedia pages. 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 10. 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 = 10
)
```

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, 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 10. 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 = 10  
)
```

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.
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 10. 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 = 10,
  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.

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 10. 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 = 10,  
  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>section_title</code>	Defaults to NULL. If given, it should correspond to the human-readable title of a section of the relevant Wikipedia page. See also <code>tw_get_wikipedia_page_sections()</code>
<code>section_index</code>	Defaults to NULL. If given, it should correspond to the ordinal of a section of the relevant Wikipedia page. See also <code>tw_get_wikipedia_page_sections()</code>
<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 10. 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).

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

<code>url</code>	A character vector with the full URL to one or more Wikipedia pages. 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.

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_index_cache_item *Add index to caching table for search queries for increased speed*

Description

Tested only with SQLite and MySQL. May work with other drivers.

Usage

```
tw_index_cache_item(
    table_name = NULL,
    check_first = TRUE,
    type = "item",
    show_details = FALSE,
    language = tidywikidatar::tw_get_language(),
    cache = NULL,
    cache_connection = NULL,
    disconnect_db = TRUE
)
```

Arguments

table_name	Name of the table in the database. If given, it takes precedence over other parameters.
check_first	Logical, defaults to TRUE. If TRUE, then before executing anything on the database it checks if the given table has already been indexed. If it has, it does nothing and returns only an informative message.
type	Defaults to "item". Type of cache file to output. Values typically used by tidywikidatar include "item", "search_item", "search_property", and "qualifier".
show_details	Logical, defaults to FALSE. If FALSE, return the function adds the index to the database, but does not return anything. If TRUE, returns a data frame with more details about the index.
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
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 to cache open.

Details

To ensure smooth functioning, the search column in the cache table is transformed into a column of type varchar and length 255.

Value

If show_details is set to FALSE, nothing, used only for its side effects (add index to caching table). If TRUE, a data frame, same as the output of tw_check_cache_index(show_details = TRUE).

Examples

```
if (interactive()) {
  tw_enable_cache()
  tw_set_cache_folder(path = fs::path(
    fs::path_home_r(),
    "R",
    "tw_data"
  ))

  tw_index_cache_search()
}
```

tw_index_cache_search *Add index to caching table for search queries for increased speed*

Description

Tested only with SQLite and MySQL. May work with other drivers.

Usage

```
tw_index_cache_search(
    table_name = NULL,
    check_first = TRUE,
    type = "item",
    show_details = FALSE,
    language = tidywikidatar::tw_get_language(),
    response_language = tidywikidatar::tw_get_language(),
    cache = NULL,
    cache_connection = NULL,
    disconnect_db = TRUE
)
```

Arguments

table_name	Name of the table in the database. If given, it takes precedence over other parameters.
check_first	Logical, defaults to TRUE. If TRUE, then before executing anything on the database it checks if the given table has already been indexed. If it has, it does nothing and returns only an informative message.
type	Defaults to "item". Type of cache file to output. Values typically used by tidywikidatar include "item", "search_item", "search_property", and "qualifier".
show_details	Logical, defaults to FALSE. If FALSE, return the function adds the index to the database, but does not return anything. If TRUE, returns a data frame with more details about the index.
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
response_language	Defaults to language set with tw_set_language(); "en" if not set. Relevant only when type is set to "search_item" or "search_property". See tw_search() for details.
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 to cache open.

Details

To ensure smooth functioning, the search column in the cache table is transformed into a column of type varchar and length 255.

Value

If `show_details` is set to FALSE, nothing, used only for its side effects (add index to caching table). If TRUE, a data frame, same as the output of `tw_check_cache_index(show_details = TRUE)`.

Examples

```
if (interactive()) {
  tw_enable_cache()
  tw_set_cache_folder(path = fs::path(
    fs::path_home_r(),
    "R",
    "tw_data"
  ))

  tw_index_cache_search()
}
```

<code>tw_label</code>	<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 tw_get_property()
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 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, with the same shape as the input data frame, but with labels instead of identifiers.

Examples

```
if (interactive()) {
  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

The Wikidata Q identifier of all members of the European Parliament since its establishment

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 <code>return_as_tw_search</code> is set to TRUE (as per default). Defaults to <code>("item", "itemLabel", "itemDescription")</code>
language	Defaults to language set with <code>tw_set_language()</code> ; if not set, "en". If more than one, can be set in order of preference, e.g. <code>c("it", "fr", "en")</code> . Use "all_available" to keep all languages. For available language values, see https://www.wikidata.org/wiki/Help:Languages
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 <code>tw_</code> 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, <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.
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_category_members_cache
```

Reset Wikipedia category members cache

Description

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

Usage

```
tw_reset_wikipedia_category_members_cache(
    language = tidywikidatar::tw_get_language(),
    type = "page",
    cache = NULL,
    cache_connection = NULL,
    disconnect_db = TRUE,
    ask = TRUE
)
```

Arguments

<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>type</code>	Defaults to "page", defines which kind of members of a category are returned. Valid values include "page", "file", and "subcat" (for sub-category). Corresponds to <code>cmtype</code> . For details, see https://www.mediawiki.org/wiki/API:Categorymembers
<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 by default. 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>ask</code>	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_category_members_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, 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). 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 tw_set_language(). 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.
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, <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_property(search = "gender")
```

tw_search_single	<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

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.
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

```
tidywikidatar:::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_test_items	<i>A list mostly used for testing with some Wikidata items in the format resulting from WikidataR::get_item()</i>
---------------	---

Description

A list mostly used for testing with some Wikidata items in the format resulting from WikidataR::get_item()

Usage

```
tw_test_items
```

Format

A list, an object such as the one resulting from WikidataR::get_item()

tw_write_item_to_cache	<i>Writes item to cache</i>
------------------------	-----------------------------

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 <code>tw_get_wikipedia_page_qid()</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, 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=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 tw_enable_cache() or tw_disable_cache().
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

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_category_members_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_category_members_to_cache(
  df,
  language = tidywikidatar::tw_get_language(),
  type = "page",
  cache = NULL,
```



```

    overwrite_cache = FALSE,
    cache_connection = NULL,
    disconnect_db = TRUE
  )

```

Arguments

df	A data frame typically generated with <code>tw_get_wikipedia_category_members()</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
type	Defaults to "page", defines which kind of members of a category are returned. Valid values include "page", "file", and "subcat" (for sub-category). Corresponds to <code>cmtype</code> . For details, see https://www.mediawiki.org/wiki/API:Categorymembers
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.

Value

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

Examples

```

if (interactive()) {
  df <- tw_get_wikipedia_category_members(
    category = "American women anthropologists",
    language = "en",
    cache = FALSE
  )

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

```

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

df	A data frame typically generated with <code>tw_get_wikipedia_page_links()</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, 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_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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