Package ‘idbr’

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Type Package
Title R Interface to the US Census Bureau International Data Base API
Version 0.3
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Description Use R to make requests to the US Census Bureau's International Data Base API. Results are returned as R data frames. For more information about the IDB API, visit <http://www.census.gov/data/developers/data-sets/international-database.html>.
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LazyData TRUE
Depends R (>= 3.0.0)
Suggests tidy, plotly
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Retrieve data from the single-year-of-age IDB dataset.

Description

Retrieve data from the single-year-of-age IDB dataset.

Usage

```r
idb1(country, year, variables = c("AGE", "AREA_KM2", "NAME", "POP"),
    start_age = NULL, end_age = NULL, sex = NULL, api_key = NULL)
```

Arguments

- `country`: The two-character country FIPS code, or a valid country name.
- `year`: The year for which you’d like to retrieve data.
- `variables`: A vector of variables. If left blank, will return age, area in square kilometers, the name of the country, and the population size of the age group.
- `start_age`: (optional) The first age for which you’d like to retrieve data.
- `end_age`: (optional) The second age group for which you’d like to retrieve data.
- `sex`: (optional) One of 'both', 'male', or 'female'.
- `api_key`: The user’s Census API key. Can be supplied here or set globally in an idbr session with `idb_api_key(api_key)`.

Value

A data frame with the requested data.

See Also

[https://api.census.gov/data/timeseries/idb/1year.html](https://api.census.gov/data/timeseries/idb/1year.html)

Examples

```r
## Not run:

# Projected population pyramid of China in 2050 with idbr and plotly

library(idbr)
library(plotly)
library(dplyr)

idb_api_key('Your API key goes here')

male <- idb1('CH', 2050, sex = 'male') %>%
    mutate(POP = POP * -1,
        SEX = 'Male')
```
female <- idb('CH', 2050, sex = 'female') ##
mutate(SEX = 'Female')
china <- rbind(male, female) ##
mutate(abs_pop = abs(POP))
plot_ly(china, x = POP, y = AGE, color = SEX, type = 'bar', orientation = 'h',
        hoverinfo = 'y+text+name', text = abs_pop, colors = c('red', 'gold'))
layout(bargap = 0.1, barmode = 'overlay',
       xaxis = list(tickmode = 'array', tickvals = c(-10000000, -5000000, 0, 5000000, 10000000),
                   ticktext = c('10M', '5M', '0', '5M', '10M')),
       title = 'Projected population structure of China, 2050')

## End(Not run)

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**idb5**

*Retrieve data from the five-year-age-group IDB dataset.*

**Description**

Retrieve data from the five-year-age-group IDB dataset.

**Usage**

```r
idb5(country, year, variables = NULL, concept = NULL,
     country_name = FALSE, api_key = NULL)
```

**Arguments**

- **country**: A two-character FIPS code or country name, or a vector of FIPS codes or country names, of the countries for which you’d like to retrieve data.
- **year**: A year, or a vector of years, for which you’d like to retrieve data.
- **variables**: A vector of variables. Use `idb_variables()` for a full list.
- **concept**: A concept for which you’d like to retrieve data. Use `idb_concepts()` for a list of options.
- **country_name**: If TRUE, returns a column with the long country name along with the FIPS code.
- **api_key**: The user’s Census API key. Can be supplied here or set globally in an idbr session with `idb_api_key(api_key)`.

**Value**

A data frame with the requested data.

**See Also**

[https://api.census.gov/data/timeseries/idb/5year.html](https://api.census.gov/data/timeseries/idb/5year.html)
Examples

```r
## Not run:

# World map of infant mortality rates by country for 2016 with plotly

library(idbr)
library(plotly)
library(viridis)

idb_api_key('Your API key goes here')

df <- idb5(country = 'all', year = 2016, variable = 'IMR', country_name = TRUE)

plot_ly(df, z = IMR, text = NAME, locations = NAME, locationmode = 'country names',
        type = 'choropleth', colors = viridis(99), hoverinfo = 'text+z')

layout(title = 'Infant mortality rate (per 1000 live births), 2016',
       geo = list(projection = list(type = 'robinson')))
```

## End(Not run)

idbr Access the Census International Data Base (IDB) from R

Description

This R package grants users access to the US Census Bureau’s International Data Base (IDB) API, and returns queries as R data frames. The IDB includes historical demographic data, current population estimates, and demographic projections to 2050 for countries of population 5,000 or greater that are recognized by the US Department of State. Demographic indicators in the IDB include mid-year population; population counts by sex and age; and fertility, mortality, and migration variables such as net migration, infant mortality rates, and total fertility rates. Future projections of these indicators are estimated using the cohort-component method. For details on the US Census Bureau's methodology for producing population estimates, please visit [https://www2.census.gov/programs-surveys/international-programs/technical-documentation/methodology/idb-methodology.pdf](https://www2.census.gov/programs-surveys/international-programs/technical-documentation/methodology/idb-methodology.pdf).

Note

This product uses the Census Bureau Data API but is not endorsed or certified by the Census Bureau.

Author(s)

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**idb_api_key**

**Set the Census API key**

**Description**

Use to set the Census API key in an idbr session so that the key does not have to be passed to each idb1 or idb5 function call.

**Usage**

```r
idb_api_key(api_key)
```

**Arguments**

- **api_key**
  
  The idbr user's Census API key. Can be obtained from [https://api.census.gov/data/key_signup.html](https://api.census.gov/data/key_signup.html).

**Examples**

```r
# Not run:

idb_api_key('Your API key goes here')

# End(Not run)
```

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**idb_concepts**

**Print the available concepts to pass to the ‘idb5’ function.**

**Description**

Print the available concepts to pass to the ‘idb5’ function.

**Usage**

```r
idb_concepts()
```
Print the available variables to pass to the ‘idb5()’ function.

Description
The first column, "Name", details the variable names that can be passed the function. The second column, "Label", describes the content of the variables.

Usage
idb_variables()

variables5

Dataset with variable and concept descriptions for the IDB

Description
Built-in dataset for use with the idb_variables and idb_concepts functions. To access the data directly, issue the command data(variables5).

- Name: The variable name; can be passed to the idb5 function
- Label: Description of the variable
- Concept: The concept that a given variable belongs to
- Required: Whether or not the variable is required in the API call (idbr users can ignore this)
- Predicate.Type: variable type from the Census; idbr will convert these appropriately

Usage
data(variables5)

Format
A data frame with 98 rows and 5 columns

Details
Dataset with variable and concept descriptions for the IDB
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