Package 'nettskjemar'

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Type Package

Title Connect to the 'nettskjema.no' API of the University of Oslo

Version 0.1.4

Description Enables users to retrieve data, meta-data, and codebooks
from <https://nettskjema.no/>. The data from the API is richer than from the
online data portal. Mowinckel (2021) <doi:10.5281/zenodo.4745481>.

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Suggests knitr, rmarkdown, testthat (>= 2.1.0), covr, spelling

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URL <https://github.com/LCBC-UiO/nettskjemar>,
<https://zenodo.org/badge/latestdoi/206264675>

BugReports <https://github.com/LCBC-UiO/nettskjemar/issues>

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R topics documented:

codebook   *Constructor for nettskjema codebook*

Description

Function works on meta-data downloaded from a form. It will return a data.frame in long format with meta-data information from a specific nettskjema form.

Usage

```
codebook(meta_data, form_id)
```

Arguments

meta_data   form meta-data from nettskjema_get_meta

form_id   integer. Number of the form to retrieve

Value

long format tibble with meta-data for a specific nettskjema

Examples

```
## Not run:
meta_110000 <- nettskjema_get_meta(110000)
codebook(meta_110000)

## End(Not run)
```

---

get_raw_codebook *Get the raw codebook*

Description

The raw codebook is a list of answers and questions with unique ids for both, and the text associated with them. This information can be retrieved from the raw nettskjema data. This can be useful if the nettskjema submission data has been returned with as_is = TRUE.

Usage

```
get_raw_codebook(form_id, token_name = "NETTSKJEMA_API_TOKEN", ...)
```

Arguments

form_id	integer. Number of the form to retrieve
token_name	character. Name to give the token, defaults to 'NETTSKJEMA_API_TOKEN'
...	other arguments to GET

Value

long format tibble with meta-data for a specific nettskjema

Examples

```
## Not run:
form_id <- 100000
get_raw_codebook(form_id)

Or if the token is saved in a non-standard name
get_raw_codebook(form_id, token_name = "MY_NETTSKJEMA_TOKEN_NAME")

## End(Not run)
```

---

nettskjema_get_codebook

Get codebook for a form

Description

With the given API token, will retrieve a list of all the forms you have access to

Usage

```
nettskjema_get_codebook(
  form_id,
  as_is = FALSE,
  token_name = "NETTSKJEMA_API_TOKEN",
  ...
)
```

Arguments

form_id	integer. Number of the form to retrieve
as_is	logical. Whether to return the raw content from nettskjema. Default is FALSE.
token_name	character. Name to give the token, defaults to 'NETTSKJEMA_API_TOKEN'
...	arguments passed to GET

Value

list of class nettskjema_meta_data

Examples

```
## Not run:
codebook_110000 <- nettskjema_get_codebook(110000)

## End(Not run)
```

---

nettskjema_get_data   *Get data from a form*

Description

This function connects to a specific form and fetches all answers. The responses are placed in a data.frame for easy use. For large data sets, toggle the incremental option, which while slow, will be better able to retrieve all responses. For retrieving responses only from a specific date on, or all responses after a certain submission, use the from_date and from_submission arguments. Forms that are anonymous and do not collect personal information do not record date, and as such the from_date will not work on those and an error will be thrown.

Usage

```
nettskjema_get_data(
  form_id,
  information = NULL,
  use_codebook = TRUE,
  checkbox_type = c("string", "list", "columns"),
  checkbox_delim = ";",
```

```
    as_is = FALSE,
    from_date = "",
    from_submission = "",
    incremental = FALSE,
    token_name = "NETTSKJEMA_API_TOKEN",
    ...
)
```

Arguments

form_id	integer. Number of the form to retrieve
information	character or list vector of additional answer information to add (One or more of "order", "option", "correct" "preselected"). If the list is named, the additional information suffixes will be changed to the list names. If NULL (default) nothing is added. Currently not combinable with use_codebook = TRUE.
use_codebook	logical. Use codebook for retrieving answers (default TRUE). If you have not set up the codebook in nettskjema, then turning this off will return the data as is.
checkbox_type	string of either "string" (default), "list" or "columns" for how to handle checkbox answers
checkbox_delim	delimiter string if checkbox:type is "string". Ignored else.
as_is	logical. Whether to return the raw content from nettskjema. Default is FALSE.
from_date	date. From which date on should data be fetched for
from_submission	integer. From which SubmissionId should data be collected from.
incremental	logical. False fetches all at once, TRUE fetches each submission individually. Slower but more stable for larger datasets.
token_name	character. Name to give the token, defaults to 'NETTSKJEMA_API_TOKEN'
...	arguments passed to [GET](#)

Details

Checkbox types

- "string" - returns a delimited character value per submission, where checkbox_delim denotes the options that the respondent has chosen
- "list" - returns a list column, where each submission has a character vector with all the chosen options as separate elements in the list
- "columns" - returns checkbox answers as separate binarized columns (column names are appended with response names), where 1 means the option was selected and 0 it was not.

Value

tibble data.frame

Examples

```
## Not run:

# Retrieve all data
data_110000 <- nettskjema_get_data(110000)
# Retrieve all data, and add answer order and option text
data_110000 <- nettskjema_get_data(110000, information = list(dummy = "order", text = "option"))

# Retrieve all data after a certain date
data_110000 <- nettskjema_get_data(110000, from_date = "2019-01-01")

# Retrieve all submissions after a specific submission id
data_110000 <- nettskjema_get_data(110000, from_submission = "12000000")

# For large data
data_110000 <- nettskjema_get_data(110000, incremental = TRUE)


## End(Not run)
```

---

nettskjema_get_extra   *Add additional answer data*

Description

The answers in the nettskjema forms have some extra information attached that is not returned by
default. This is for instance information on the order of the answer options, the true text, whether
the answer is correct or if it is preselected. This function makes it possible to retrieve and add this
information to the nettskjema data, using the codebook.

Usage

```
nettskjema_get_extra(data, codebook, information, use_codebook = TRUE, ...)
```

Arguments

data	tibble. Data retrieved from nettskjema
codebook	codebook object retrieved by [nettskjema_get_codebook](#)
information	character vector of information to add. One or more of "order", "option", "correct" "preselected".
use_codebook	logical. Use codebook for retrieving answers (default TRUE). If you have not set up the codebook in nettskjema, then turning this off will return the data as is.
...	arguments passed to [GET](#)

Value

tibble with added columns

Examples

```
## Not run:
form_id <- 100000

my_data <- nettskjema_get_data(form_id)
cb <-  nettskjema_get_codebook(form_id)

my_data <- nettskjema_get_extra(my_data, cb, "order")


## End(Not run)
```

---

nettskjema_get_meta *Get metadata for a form*

Description

With the given API token, will retrieve the meta-data connected to a form.

Usage

```
nettskjema_get_meta(
  form_id,
  as_is = FALSE,
  token_name = "NETTSKJEMA_API_TOKEN",
  ...
)
```

Arguments

form_id	integer. Number of the form to retrieve
as_is	logical. Whether to return the raw content from nettskjema. Default is FALSE.
token_name	character. Name to give the token, defaults to 'NETTSKJEMA_API_TOKEN'
...	arguments passed to GET

Value

list of class nettskjema_meta_data

Examples

```
## Not run:
meta_110000 <- nettskjema_get_meta(110000)


## End(Not run)
```

---

nettskjema_renviron_edit

Open .Renviron file for editing

Description

Will open the .Renviron file for editing. In this file you set environment variables that might be required for using certain command line arguments through functions. In this package the .Renviron stores the API access tokens necessary to communicate securely with nettskjema.

Usage

```
nettskjema_renviron_edit()
```

Value

No return value. Opens Renviron file.

Examples

```
## Not run:
nettskjema_renviron_edit()

## End(Not run)
```

---

nettskjema_token2renviron

Write token to .Renviron

Description

This function will write a token to the .Renviron file with the name you provide.

Usage

```
nettskjema_token2renviron(
  token,
  token_name = "NETTSKJEMA_API_TOKEN",
  action = c("create", "overwrite", "delete")
)
```

Arguments

token	character. Token generated in the UiO portal `api_user_create`
token_name	character. Name to give the token, defaults to 'NETTSKJEMA_API_TOKEN'
action	character. One of three actions: 'create', 'overwrite' or 'delete'. Defaults to 'create'.

Details

Possible actions

- create - create Renviron token, default
- overwrite - overwrite Renviron token, default
- delete - delete Renviron token, default

Value

No return value. Writes a token to Renviron

Examples

```
## Not run:
my_token <- "aoiehtvo09e7h"
nettskjema_token2renviron(my_token)
nettskjema_token2renviron(my_token, action = "overwrite")
nettskjema_token2renviron(my_token, action = "delete")

# Under a custom name
nettskjema_token2renviron(my_token,
                          token_name = "NETTAKJEMA_TOKEN_ALT")

## End(Not run)
```

---

nettskjema_token_expiry

Check nettskjema API token expiry date

Description

Given an API token, will retrieve the expiry date of the said token.

Usage

```
nettskjema_token_expiry(token_name = "NETTSKJEMA_API_TOKEN")
```

Arguments

token_name   character. Name to give the token, defaults to 'NETTSKJEMA_API_TOKEN'

Value

character date string

---

nettskjema_user_create

Create Nettskjema API user

Description

Opens OS browser to create API user.

Usage

```
nettskjema_user_create(ip = TRUE)
```

Arguments

ip	logical. Output current IP address (default) or not

Value

No return value, opens a browser for creating a API user.

Examples

```
## Not run:
nettskjema_user_create()

# Turn off ip detection
nettskjema_user_create(ip = FALSE)

## End(Not run)
```

---

nettskjema_write_codebook

Write codebook to file

Description

Save codebook information to a file for safe keeping. Depending on the type of codebook (raw or tidy) the file will either be stored as a json-file through `write_json` or a text table through `write.table`.

Usage

```
nettskjema_write_codebook(codebook, file, ...)

## Default S3 method:
nettskjema_write_codebook(codebook, file, ...)

## S3 method for class 'nettskjema_codebook_raw'
nettskjema_write_codebook(codebook, file, pretty = TRUE, ...)

## S3 method for class 'nettskjema_codebook'
nettskjema_write_codebook(codebook, file, sep = "\t", ...)
```

Arguments

codebook	object of class nettskjema_codebook
file	filename or path
...	arguments to write_json or write.table
pretty	logical. If writing json-file, make it pretty
sep	character. If writing text table, column delimiter.

Details

Given the two types of codebooks, writes different types of files.

- codebook - writes a tab-separated table
- codebook_raw - writes a json-file

Value

no return value. Writes a file to path.

Examples

```
## Not run:
form_id <- 1100000
my_cb <- nettskjema_get_codebook(form_id)
nettskjema_write_codebook(my_cb, "my/path/codebook_110000.txt")

## End(Not run)
```

nettskjema_write_meta   *Write meta-data to file*

Description

Save meta-data information to a file for safe keeping. The function saves the data in json-format, which best preserves the information.

Usage

```
nettskjema_write_meta(meta, file, pretty = TRUE, ...)

## Default S3 method:
nettskjema_write_meta(meta, file, pretty = TRUE, ...)

## S3 method for class 'nettskjema_meta_raw'
nettskjema_write_meta(meta, file, pretty = TRUE, ...)

## S3 method for class 'nettskjema_meta_data'
nettskjema_write_meta(meta, file, pretty = TRUE, ...)
```

Arguments

meta	object of class nettskjema_meta class
file	file name or path
pretty	logical. If json-file should be made "pretty"
...	other arguments to [write_json](#)

Value

no return value. Writes a file to path.

Examples

```
## Not run:
form_id <- 1100000
my_meta <- nettskjema_get_meta(form_id)
nettskjema_write_meta(my_meta, "my/path/meta_110000.json")

## End(Not run)
```

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