Package ‘rock’

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Title Reproducible Open Coding Kit

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Description The Reproducible Open Coding Kit (‘ROCK’, and this package, ’rock’) was developed to facilitate reproducible and open coding, specifically geared towards qualitative research methods. Although it is a general-purpose toolkit, three specific applications have been implemented, specifically an interface to the ‘rENA’ package that implements Epistemic Network Analysis (‘ENA’), means to process notes from Cognitive Interviews (‘CIs’), and means to work with decentralized construct taxonomies (‘DCTs’).

BugReports https://gitlab.com/r-packages/rock/-/issues

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**add_html_tags**

Add HTML tags to a source

**Description**

This function adds HTML tags to a source to allow pretty printing/viewing.

**Usage**

```r
add_html_tags(
  x,
  context = NULL,
  codeClass = rock::opts$get(codeClass),
  codeValueClass = rock::opts$get(codeValueClass),
  idClass = rock::opts$get(idClass),
  sectionClass = rock::opts$get(sectionClass),
  uidClass = rock::opts$get(uidClass),
  contextClass = rock::opts$get(contextClass),
  utteranceClass = rock::opts$get(utteranceClass)
)
```

**Arguments**

- `x` A character vector with the source
- `context` Optionally, lines to pass the contextClass
- `codeClass`, `codeValueClass`, `idClass`, `sectionClass`, `uidClass`, `contextClass`, `utteranceClass`

The classes to use for, respectively, codes, code values, class instance identifiers (such as case identifiers or coder identifiers), section breaks, utterance identifiers, context, and full utterances. All `<span>` elements except for the full utterances, which are placed in `<div>` elements.
apply_graph_theme

Value

The character vector with the replacements made.

Examples

```r
### Add tags to a mini example source
add_html_tags("[[cid=participant1]]
This is something this participant may have said.
Just like this. [[thisIsACode]]
---paragraph-break---
And another utterance."");
```

apply_graph_theme  Apply multiple DiagrammeR global graph attributes

Description

Apply multiple DiagrammeR global graph attributes

Usage

```r
apply_graph_theme(graph, ...)
```

Arguments

- `graph`  The DiagrammeR::DiagrammeR graph to apply the attributes to.
- `...`  One or more character vectors of length three, where the first element is the attribute, the second the value, and the third, the attribute type (graph, node, or edge).

Value

The DiagrammeR::DiagrammeR graph.

Examples

```r
exampleSource <- '---
codes:
  - id: parentCode
    label: Parent code
    children:
      - id: childCode1
        - id: childCode2
```
### base30toNumeric  

Conversion between base10 and base30

#### Description

The conversion functions from base10 to base30 and vice versa are used by the `generate_uids()` functions.

#### Usage

- `base30toNumeric(x)`
- `numericToBase30(x)`

#### Arguments

- `x`  
The vector to convert (numeric for `numericToBase30`, character for `base30toNumeric`).

#### Details

The symbols to represent the 'base 30' system are the 0-9 followed by the alphabet without vowels but including the y. This vector is available as `base30`.

#### Value

The converted vector (numeric for `base30toNumeric`, character for `numericToBase30`).

#### Examples

```r
numericToBase30(654321);
base30toNumeric(numericToBase30(654321));
```
cat0

Concatenate to screen without spaces

Description

The cat0 function is to cat what paste0 is to paste; it simply makes concatenating many strings without a separator easier.

Usage

cat0(..., sep = "")

Arguments

... The character vector(s) to print; passed to cat.
sep The separator to pass to cat, of course, "" by default.

Value

Nothing (invisible NULL, like cat).

Examples

cat0("The first variable is "", names(mtcars)[1], ";

ci_heatmap

Create a heatmap showing issues with items

Description

When conducting cognitive interviews, it can be useful to quickly inspect the code distributions for each item. These heatmaps facilitate that process.

Usage

ci_heatmap(
  x,
  itemIdentifier = "uiid",
  codingScheme = "peterson",
  itemlab = "Item",
  codelab = "Code",
  freqlab = "Frequency",
  plotTitle = "Cognitive Interview Heatmap",
  fillScale = ggplot2::scale_fill_viridis_c(),
  theme = ggplot2::theme_minimal()
)
Arguments

x The object with the parsed coded source(s) as resulting from a call to \texttt{parse_source()} or \texttt{parse_sources()}.

itemIdentifier The column identifying the items.

codingScheme The coding scheme, either as a string if it represents one of the cognitive interviewing coding schemes provided with the \texttt{rock} package, or as a coding scheme resulting from a call to \texttt{create_codingScheme()}.

itemlab, codelab, freqlab Labels to use for the item and code axes and for the frequency color legend.

plotTitle The title to use for the plot

fillScale Convenient way to specify the fill scale (the colours)

theme Convenient way to specify the \texttt{ggplot2::ggplot()} theme.

Value

The heatmap

Examples

\begin{verbatim}
examplePath <- file.path(system.file(package="rock"), 'extdata');
parsedCI <- parse_source(file.path(examplePath,  
    "ci_example_1.rock"));

ci_heatmap(parsedCI,  
    codingScheme = "peterson");
\end{verbatim}

---

\texttt{cleaned_source_to_utterance_vector}

\textit{Convert a character vector into an utterance vector}

Description

Utterance vectors are split by the utterance marker. Note that if \texttt{x} has more than one element, the separate elements will remain separate.

Usage

\begin{verbatim}
cleaned_source_to_utterance_vector(  
    x,  
    utteranceMarker = \texttt{rock::opts$get("utteranceMarker")},  
    fixed = \texttt{FALSE},  
    perl = \texttt{TRUE}
)
\end{verbatim}
Arguments

- `x`: The character vector.
- `utteranceMarker`: The utterance marker (by default, a newline character conform the ROCK standard).
- `fixed`: Whether the `utteranceMarker` is a regular expression.
- `perl`: If the `utteranceMarker` is a regular expression, whether it is a perl regular expression.

Examples

```r
cleaned_source_to_utterance_vector("first
second
third");
```

---

**clean_source**  
*Cleaning & editing sources*

**Description**

These functions can be used to 'clean' one or more sources or perform search and replace tasks. Cleaning consists of two operations: splitting the source at utterance markers, and conducting search and replaces using regular expressions.

**Usage**

```r
clean_source(
  input,  
  output = NULL,  
  replacementsPre = rock::opts$get(replacementsPre),  
  replacementsPost = rock::opts$get(replacementsPost),  
  extraReplacementsPre = NULL,  
  extraReplacementsPost = NULL,  
  removeNewlines = FALSE,  
  removeTrailingNewlines = TRUE,  
  rlWarn = rock::opts$get(rlWarn),  
  utteranceSplits = rock::opts$get(utteranceSplits),  
  preventOverwriting = rock::opts$get(preventOverwriting),  
  encoding = rock::opts$get(encoding),  
  silent = rock::opts$get(silent)
)
```

```r
clean_sources(
  input,  
  output,  
  outputPrefix = "",  
  outputSuffix = "_cleaned",  
  recursive = TRUE,
```
clean_source

filenameRegex = ".*",
replacementsPre = rock::opts$get(replacementsPre),
replacementsPost = rock::opts$get(replacementsPost),
extraReplacementsPre = NULL,
extraReplacementsPost = NULL,
removeNewlines = FALSE,
utteranceSplits = rock::opts$get(utteranceSplits),
preventOverwriting = rock::opts$get(preventOverwriting),
encoding = rock::opts$get(encoding),
silent = rock::opts$get(silent)
)

search_and_replace_in_source(
  input,
  replacements = NULL,
  output = NULL,
  preventOverwriting = TRUE,
  encoding = "UTF-8",
  rlWarn = rock::opts$get(rlWarn),
  silent = FALSE
)

search_and_replace_in_sources(
  input,
  output,
  replacements = NULL,
  outputPrefix = "",
  outputSuffix = ".postReplacing",
  preventOverwriting = rock::opts$"preventOverwriting",
  recursive = TRUE,
  filenameRegex = ".*",
  encoding = rock::opts$"encoding",
  silent = rock::opts$"silent"
)

Arguments

input For clean_source and search_and_replace_in_source, either a character vector containing the text of the relevant source or a path to a file that contains the source text; for clean_sources and search_and_replace_in_sources, a path to a directory that contains the sources to clean.

output For clean_source and search_and_replace_in_source, if not NULL, this is the name (and path) of the file in which to save the processed source (if it is NULL, the result will be returned visibly). For clean_sources and search_and_replace_in_sources, output is mandatory and is the path to the directory where to store the processed sources. This path will be created with a warning if it does not exist. An exception is if "same" is specified - in that case, every file will be written to the same directory it was read from.
replacementsPre, replacementsPost
Each is a list of two-element vectors, where the first element in each vector contains a regular expression to search for in the source(s), and the second element contains the replacement (these are passed as perl regular expressions; see regex for more information). Instead of regular expressions, simple words or phrases can also be entered of course (since those are valid regular expressions). replacementsPre are executed before the utteranceSplits are applied; replacementsPost afterwards.

extraReplacementsPre, extraReplacementsPost
To perform more replacements than the default set, these can be conveniently specified in extraReplacementsPre and extraReplacementsPost. This prevents you from having to manually copypaste the list of defaults to retain it.

removeNewlines
Whether to remove all newline characters from the source before starting to clean them. Be careful: if the source contains YAML fragments, these will also be affected by this, and will probably become invalid!

removeTrailingNewlines
Whether to remove trailing newline characters (i.e. at the end of a character value in a character vector);

rlWarn
Whether to let readLines() warn, e.g. if files do not end with a newline character.

utteranceSplits
This is a vector of regular expressions that specify where to insert breaks between utterances in the source(s). Such breaks are specified using utteranceMarker.

preventOverwriting
Whether to prevent overwriting of output files.

encoding
The encoding of the source(s).

silent
Whether to suppress the warning about not editing the cleaned source.

outputPrefix, outputSuffix
The prefix and suffix to add to the filenames when writing the processed files to disk.

recursive
Whether to search all subdirectories (TRUE) as well or not.

filenameRegex
A regular expression to match against located files; only files matching this regular expression are processed.

replacements
The strings to search & replace, as a list of two-element vectors, where the first element in each vector contains a regular expression to search for in the source(s), and the second element contains the replacement (these are passed as perl regular expressions; see regex for more information). Instead of regular expressions, simple words or phrases can also be entered of course (since those are valid regular expressions).

Details
The cleaning functions, when called with their default arguments, will do the following:

- Double periods (..) will be replaced with single periods (.)
- Four or more periods (.... or ......) will be replaced with three periods
• Three or more newline characters will be replaced by one newline character (which will be-
come more, if the sentence before that character marks the end of an utterance)
• All sentences will become separate utterances (in a semi-smart manner; specifically, breaks in
speaking, if represented by three periods, are not considered sentence ends, whereas ellipses
("..." or unicode 2026, see the example) are.
• If there are comma’s without a space following them, a space will be inserted.

Value
A character vector for clean_source, or a list of character vectors, for clean_sources.

Examples

exampleSource <-
"Do you like icecream?

Well, that depends\u2026 Sometimes, when it's..... Nice. Then I do,
but otherwise... not really, actually."

### Default settings:
cat(clean_source(exampleSource));

### First remove existing newlines:
cat(clean_source(exampleSource,
removeNewlines=TRUE));

### Example with a YAML fragment
eampleWithYAML <-
c( 
"Do you like icecream?",
"",
"Well, that depends\u2026 Sometimes, when it's..... Nice.",
"Then I do",
"but otherwise... not really, actually."
"
"---",
"This acts as some YAML. So this won't be split."
"Not real YAML, mind... It just has the delimiters, really."
"---",
"This is an utterance again."
);

cat(
rock::clean_source( 
exampleWithYAML
),
sep="\n"
);

eampleSource <-
"Do you like icecream?

Well, that depends... Sometimes, when it's..... Nice. Then I do, but otherwise... not really, actually."

### Simple text replacements:

```r
cat(search_and_replace_in_source(exampleSource,
    replacements=list(c("\u2026", "..."),
    c("Nice", "Great"))));
```

### Using a regular expression to capitalize all words following a period:

```r
cat(search_and_replace_in_source(exampleSource,
    replacements=list(c("\s*(\[a-z])", ".\1\U\2"))));
```

---

## codeIds_to_codePaths

**Replace code identifiers with their full paths**

### Description

This function replaces the column names in the mergedSourceDf data frame in a rock_parsedSource or rock_parsedSources object with the full paths to those code identifiers.

### Usage

```r
codeIds_to_codePaths(
  x,
  stripRootsFromCodePaths = rock::opts$get("stripRootsFromCodePaths")
)
```

### Arguments

- **x**: A rock_parsedSource or rock_parsedSources object as returned by a call to `parse_source()` or `parse_sources()`.
- **stripRootsFromCodePaths**: Whether to strip the roots first (i.e. the type of code)

### Value

An adapted rock_parsedSource or rock_parsedSources object.
**codePaths_to_namedVector**

*Get a vector to find the full paths based on the leaf code identifier*

**Description**

This function names a vector with the leaf code using the `codeTreeMarker` stored in the `opts` object as marker.

**Usage**

```r
codePaths_to_namedVector(x)
```

**Arguments**

- `x`: A vector of code paths.

**Value**

The named vector of code paths.

**Examples**

```r
codePaths_to_namedVector(
  c("codes>reason>parent_feels",
     "codes>reason>child_feels")
);
```

---

**code_freq_hist**

*Create a frequency histogram for codes*

**Description**

Create a frequency histogram for codes

**Usage**

```r
code_freq_hist(
  x,
  codes = ".*",
  sortByFreq = "decreasing",
  forceRootStripping = FALSE,
  trimSourceIdentifiers = 20,
  ggplot2Theme = ggplot2::theme(legend.position = "bottom"),
  silent = rock::opts$get("silent")
)
```
code_source

Arguments

- `x`: A parsed source(s) object.
- `codes`: A regular expression to select codes to include.
- `sortByFreq`: Whether to sort by frequency decreasingly (decreasing, the default), increasing (increasing), or alphabetically (NULL).
- `forceRootStripping`: Force the stripping of roots, even if they are different.
- `trimSourceIdentifiers`: If not NULL, the number of character to trim the source identifiers to.
- `ggplot2Theme`: Can be used to specify theme elements for the plot.
- `silent`: Whether to be chatty or silent.

Value

A `ggplot2::ggplot()`.

code_source

Add one or more codes to one or more sources

Description

These functions add codes to one or more sources that were read with one of the `loading_sources` functions.

Usage

code_source(
  input,
  codes,
  indices = NULL,
  output = NULL,
  preventOverwriting = rock::opts$get("preventOverwriting"),
  rlWarn = rock::opts$get(rlWarn),
  encoding = rock::opts$get("encoding"),
  silent = rock::opts$get("silent")
)

code_sources(
  input,
  codes,
  output = NULL,
  indices = NULL,
  outputPrefix = "",
  outputSuffix = ".coded",
  recursive = TRUE,
filenameRegex = ".*",
preventOverwriting = rock::opts$get("preventOverwriting"),
encoding = rock::opts$get("encoding"),
silent = rock::opts$get("silent")
)

Arguments

input The source, or list of sources, as produced by one of the loading_sources functions.
codes A named character vector, where each element is the code to be added to the matching utterance, and the corresponding name is either an utterance identifier (in which case the utterance with that identifier will be coded with that code), a code (in which case all utterances with that code will be coded with the new code as well), a digit (in which case the utterance at that line number in the source will be coded with that code), or a regular expression, in which case all utterances matching that regular expression will be coded with that source. If specifying an utterance ID or code, make sure that the code delimiters are included (normally, two square brackets).
indices If input is a source as loaded by loading_sources, indices can be used to pass a logical vector of the same length as input that indicates to which utterance the code in codes should be applied. Note that if indices is provided, only the first element of codes is used, and its name is ignored.
output If specified, the coded source will be written here.
preventOverwriting Whether to prevent overwriting existing files.
rlWarn Whether to let readLines() warn, e.g. if files do not end with a newline character.
encoding The encoding to use.
silent Whether to be chatty or quiet.
outputPrefix, outputSuffix A prefix and/or suffix to prepend and/or append to the filenames to distinguish them from the input filenames.
recursive Whether to also read files from all subdirectories of the input directory
filenameRegex Only input files matching this patterns will be read.

Value

Invisibly, the coded source object.

Examples

### Get path to example source
eexamplePath <-
  system.file("extdata", package="rock");

### Get a path to one example file
exampleFile <-
  file.path(examplePath, "example-1.rock");

### Parse single example source
loadedExample <- rock::load_source(exampleFile);

### Show line 71
cat(loadedExample[71]);

### Specify the rules to code all utterances
### containing "Ipsum" with the code 'ipsum' and
### all utterances containing the code
codeSpecs <-
c("(?i)ipsum" = "ipsum",
   "BC[AD]\d\d\d\d\d\d\d\d" = "timeRef");

### Apply rules
codedExample <- code_source(loadedExample,
                          codeSpecs);

### Show line 71
cat(codedExample[71]);

### Also add code "foo" to utterances with code 'ipsum'
moreCodedExample <- code_source(codedExample,
c("[[ipsum]]" = "foo");

### Show line 71
cat(moreCodedExample[71]);

### Use the 'indices' argument to add the code 'bar' to
### line 71
overCodedExample <- code_source(moreCodedExample,
                          "bar",
                          indices=71);

  cat(overCodedExample[71]);

---

codingSchemes_get_all  Conveninece function to get a list of all available coding schemes

Description

Convenience function to get a list of all available coding schemes

Usage

codingSchemes_get_all()
collapse_occurrences

**Value**

A list of all available coding schemes

**Examples**

rock::codingSchemes_get_all();

---

collapse_occurrences  *Collapse the occurrences in utterances into groups*

**Description**

This function collapses all occurrences into groups sharing the same identifier, by default the stanzaId identifier ([sid=..]).

**Usage**

```r
collapse_occurrences(
  parsedSource,
  collapseBy = "stanzaId",
  columns = NULL,
  logical = FALSE
)
```

**Arguments**

- **parsedSource**: The parsed sources as provided by `parse_source()`.
- **collapseBy**: The column in the sourceDf (in the parsedSource object) to collapse by (i.e. the column specifying the groups to collapse).
- **columns**: The columns to collapse; if unspecified (i.e. NULL), all codes stored in the code object in the codings object in the parsedSource object are taken (i.e. all used codes in the parsedSource object).
- **logical**: Whether to return the counts of the occurrences (FALSE) or simply whether any code occurred in the group at all (TRUE).

**Value**

A dataframe with one row for each value of of collapseBy and columns for collapseBy and each of the columns, with in the cells the counts (if logical is FALSE) or TRUE or FALSE (if logical is TRUE).
Examples

```r
### Get path to example source
exampleFile <-
    system.file("extdata", "example-1.rock", package="rock");

### Parse example source
parsedExample <-
    rock::parse_source(exampleFile);

### Collapse logically, using a code (either occurring or not):
collapsedExample <-
    rock::collapse_occurrences(parsedExample,
        collapseBy = 'childCode1');

### Show result: only two rows left after collapsing,
### because 'childCode1' is either 0 or 1:
collapsedExample;

### Collapse using weights (i.e. count codes in each segment):
collapsedExample <-
    rock::collapse_occurrences(parsedExample,
        collapseBy = 'childCode1',
        logical=FALSE);
```

---

collect_coded_fragments

*Create an overview of coded fragments*

---

### Description

Collect all coded utterances and optionally add some context (utterances before and utterances after) to create an overview of all coded fragments per code.

### Usage

```r
collect_coded_fragments(
  x,
  codes = "\.*",
  context = 0,
  attributes = NULL,
  heading = NULL,
  headingLevel = 3,
  add_html_tags = TRUE,
  cleanUtterances = FALSE,
  output = NULL,
  outputViewer = "viewer",
```
collect_coded_fragments

template = "default",
rawResult = FALSE,
includeCSS = TRUE,
includeBootstrap = rock::opts$get("includeBootstrap"),
preventOverwriting = rock::opts$get(preventOverwriting),
silent = rock::opts$get(silent)
)

Arguments

x
The parsed source(s) as provided by rock::parse_source or rock::parse_sources.

codes
The regular expression that matches the codes to include.

context
How many utterances before and after the target utterances to include in the fragments.

attributes
To only select coded utterances matching one or more values for one or more attributes, pass a list where every element's name is a valid (i.e., occurring) attribute name, and every element is a character value with a regular expression specifying all values for that attribute to select.

heading
Optionally, a title to include in the output. The title will be prefixed with headingLevel hashes (#), and the codes with headingLevel+1 hashes. If NULL (the default), a heading will be generated that includes the collected codes if those are five or less. If a character value is specified, that will be used. To omit a heading, set to anything that is not NULL or a character vector (e.g., FALSE). If no heading is used, the code prefix will be headingLevel hashes, instead of headingLevel+1 hashes.

headingLevel
The number of hashes to insert before the headings.

add_html_tags
Whether to add HTML tags to the result.

cleanUtterances
Whether to use the clean or the raw utterances when constructing the fragments (the raw versions contain all codes). Note that this should be set to FALSE to have add_html_tags be of the most use.

output
Here, a path and filename can be provided where the result will be written. If provided, the result will be returned invisibly.

outputViewer
If showing output, where to show the output: in the console (outputViewer='console') or in the viewer (outputViewer='viewer'), e.g., the RStudio viewer. You'll usually want the latter when outputting HTML, and otherwise the former.

template
The template to load; either the name of one of the ROCK templates (currently, only 'default' is available), or the path and filename of a CSS file.

rawResult
Whether to return the raw result, a list of the fragments, or one character value in markdown format.

includeCSS
Whether to include the ROCK CSS in the returned HTML.

includeBootstrap
Whether to include the default bootstrap CSS.

preventOverwriting
Whether to prevent overwriting of output files.

silent
Whether to provide (FALSE) or suppress (TRUE) more detailed progress updates.
convert_df_to_source

Details

By default, the output is optimized for inclusion in an R Markdown document. To optimize output for the R console or a plain text file, without any HTML codes, set add_html_tags to FALSE, and potentially set cleanUtterances to only return the utterances, without the codes.

Value

Either a list of character vectors, or a single character value.

Examples

```r
### Get path to example source
eamplePath <-
  system.file("extdata", package="rock");

### Get a path to one example file
eexampleFile <-
  file.path(
    examplePath, "example-1.rock"
  );

### Parse single example source
parsedExample <-
  rock::parse_source(
    exampleFile
  );

### Show organised coded fragments in Markdown
cat(
  rock::collect_coded_fragments(
    parsedExample
  )
);

### Only for the codes containing 'Code2'
cat(
  rock::collect_coded_fragments(
    parsedExample,
    'Code2'
  )
);
```
convert_df_to_source

Description
These functions first import data from a 'data format', such as spreadsheets in .xlsx format, comma-separated values files (.csv), or SPSS data files (.sav). You can also just use R data frames (imported however you want). These functions then use the columns you specified to convert these data to one (oneFile=TRUE) or more (oneFile=FALSE) rock source file(s), optionally including class instance identifiers (such as case identifiers to identify participants, or location identifiers, or moment identifiers, etc) and using those to link the utterances to attributes from columns you specified. You can also precode the utterances with codes you specify (if you ever would want to for some reason).

Usage

convert_df_to_source(
  data,
  output = NULL,
  omit_empty_rows = TRUE,
  cols_to_utterances = NULL,
  cols_to_ciids = NULL,
  cols_to_codes = NULL,
  cols_to_attributes = NULL,
  oneFile = TRUE,
  cols_to_sourceFilename = cols_to_ciids,
  cols_in_sourceFilename_sep = "=",
  sourceFilename_prefix = "source_",
  sourceFilename_suffix = "",
  ciid_labels = NULL,
  ciid_separator = "=",
  attributesFile = NULL,
  preventOverwriting = rock::opts$get(preventOverwriting),
  encoding = rock::opts$get(encoding),
  silent = rock::opts$get(silent)
)

convert_csv_to_source(
  file,
  importArgs = NULL,
  omit_empty_rows = TRUE,
  output = NULL,
  cols_to_utterances = NULL,
  cols_to_ciids = NULL,
  cols_to_codes = NULL,
  cols_to_attributes = NULL,
  oneFile = TRUE,
  cols_to_sourceFilename = cols_to_ciids,
  cols_in_sourceFilename_sep = "=",
  sourceFilename_prefix = "source_",
  sourceFilename_suffix = "",
  ciid_labels = NULL,
ciid_separator = "=",
attributesFile = NULL,
preventOverwriting = rock::opts$get(preventOverwriting),
encoding = rock::opts$get(encoding),
silent = rock::opts$get(silent)
)

convert_csv2_to_source(
    file,
    importArgs = NULL,
    omit_empty_rows = TRUE,
    output = NULL,
    cols_to_utterances = NULL,
    cols_to_ciids = NULL,
    cols_to_codes = NULL,
    cols_to_attributes = NULL,
    oneFile = TRUE,
    cols_to_sourceFilename = cols_to_ciids,
    cols_in_sourceFilename_sep = "=",
    sourceFilename_prefix = "source_",
    sourceFilename_suffix = "",
    ciid_labels = NULL,
    ciid_separator = "=",
    attributesFile = NULL,
    preventOverwriting = rock::opts$get(preventOverwriting),
    encoding = rock::opts$get(encoding),
    silent = rock::opts$get(silent)
)

convert_xlsx_to_source(
    file,
    importArgs = list(overwrite = !preventOverwriting),
    omit_empty_rows = TRUE,
    output = NULL,
    cols_to_utterances = NULL,
    cols_to_ciids = NULL,
    cols_to_codes = NULL,
    cols_to_attributes = NULL,
    oneFile = TRUE,
    cols_to_sourceFilename = cols_to_ciids,
    cols_in_sourceFilename_sep = "=",
    sourceFilename_prefix = "source_",
    sourceFilename_suffix = "",
    ciid_labels = NULL,
    ciid_separator = "=",
    attributesFile = NULL,
    preventOverwriting = rock::opts$get(preventOverwriting),
    encoding = rock::opts$get(encoding),
    silent = rock::opts$get(silent)
)
silent = rock::opts$get(silent)
)

convert_sav_to_source(
  file,
  importArgs = NULL,
  omit_empty_rows = TRUE,
  output = NULL,
  cols_to_utterances = NULL,
  cols_to_ciids = NULL,
  cols_to_codes = NULL,
  cols_to_attributes = NULL,
  oneFile = TRUE,
  cols_to_sourceFilename = cols_to_ciids,
  cols_in_sourceFilename_sep = "=",
  sourceFilename_prefix = "source_",
  sourceFilename_suffix = "",
  ciid_labels = NULL,
  ciid_separator = "=",
  attributesfile = NULL,
  preventOverwriting = rock::opts$get(preventOverwriting),
  encoding = rock::opts$get(encoding),
  silent = rock::opts$get(silent)
)

Arguments

data                  The data frame containing the data to convert.
output                If oneFile=TRUE (the default), the name (and path) of the file in which to save the processed source (if it is NULL, the resulting character vector will be returned visibly instead of invisibly). Note that the ROCK convention is to use .rock as extension. If oneFile=FALSE, the path to which to write the sources (if it is NULL, as a result a list of character vectors will be returned visibly instead of invisibly).
omit_empty_rows       Whether to omit rows where the values in the columns specified to convert to utterances are all empty (or contain only whitespace).
cols_to_utterances    The names of the columns to convert to utterances, as a character vectors.
cols_to_ciids         The names of the columns to convert to class instance identifiers (e.g. case identifiers), as a named character vector, with the values being the column names in the data frame, and
cols_to_codes          The names of the columns to convert to codes (i.e. codes appended to every utterance), as a character vectors.
cols_to_attributes    The names of the columns to convert to attributes, as a named character vector, where each name is the name of the class instance identifier to attach the attribute
convert_df_to_source

to. If only one column is passed in cols_to_ciids, names can be omitted and a regular unnames character vector can be passed.

oneFile Whether to store everything in one source, or create one source for each row of the data (if this is set to FALSE, make sure that cols_to_sourceFilename specifies one or more columns that together uniquely identify each row; also, in that case, output must be an existing directory on your PC).

cols_to_sourceFilename The columns to use as unique part of the filename of each source. These will be concatenated using cols_in_sourceFilename_sep as a separator. Note that the final string must be unique for each row in the dataset, otherwise the filenames for multiple rows will be the same and will be overwritten! By default, the columns specified with class instance identifiers are used.

cols_in_sourceFilename_sep The separator to use when concatenating the cols_to_sourceFilename.

sourceFilename_prefix, sourceFilename_suffix Strings that are prepended and appended to the col_to_sourceFilename to create the full filenames. Note that .rock will always be added to the end as extension.

ciid_labels The labels for the class instance identifiers. Class instance identifiers have brief codes used in coding (e.g. 'cid' is the default for Case Identifiers, often used to identify participants) as well as more 'readable' labels that are used in the attributes (e.g. 'caseId' is the default class instance identifier for Case Identifiers). These can be specified here as a named vector, with each element being the label and the element's name the identifier.

ciid_separator The separator for the class instance identifier - by default, either an equals sign (=) or a colon (:) are supported, but an equals sign is less ambiguous, as a colon is also used for different types of codes (e.g. codes for cognitive interviews start with ci:, and unique construct identifiers (UCIDs) from psyverse start with dct:.

attributesFile Optionally, a file to write the attributes to if you don’t want them to be written to the source file(s).

preventOverwriting Whether to prevent overwriting of output files.

encoding The encoding of the source(s).

silent Whether to suppress the warning about not editing the cleaned source.

file The path to a file containing the data to convert.

importArgs Optionally, a list with named elements representing arguments to pass when importing the file.

Value A source as a character vector.

Examples

```## Get path to example files```
Create a coding scheme

Description

This function can be used to specify a coding scheme that can then be used in analysis.

Usage

create_codingScheme(
  id,
  label,
  codes,
  codingInstructions = NULL,
  description = "",
  source = ""
)

codingScheme_peterson
codingScheme_levine
create_cooccurrence_matrix

codingScheme_willis

Arguments

- **id**: An identifier for this coding scheme, consisting only of letters, numbers, and underscores (and not starting with a number).
- **label**: A short human-readable label for the coding scheme.
- **codes**: A character vector with the codes in this scheme.
- **codingInstructions**: Coding instructions; a named character vector, where each element is a code’s coding instruction, and each element’s name is the corresponding code.
- **description**: A description of this coding scheme (i.e., for information that does not fit in the label).
- **source**: Optionally, a description, reference, or URL of a source for this coding scheme.

Format

An object of class `rock_codingScheme` of length 5.

Details

A number of coding schemes for cognitive interviews are provided:

- **codingScheme_peterson**: Coding scheme from Peterson, Peterson & Powell, 2017
- **codingScheme_levine**: Coding scheme from Levine, Fowler & Brown, 2005
- **codingScheme_willis**: Coding scheme from Willis, 1999

Value

The coding scheme object.

create_cooccurrence_matrix

Create a co-occurrence matrix

Description

This function creates a co-occurrence matrix based on one or more coded sources. Optionally, it plots a heatmap, simply by calling the `stats::heatmap()` function on that matrix.
Usage

create_cooccurrence_matrix(
  x,
  codes = x$convenience$codingLeaves,
  plotHeatmap = FALSE
)

Arguments

x       The parsed source(s) as provided by rock::parse_source or rock::parse_sources.
codes   The codes to include; by default, takes all codes.
plotHeatmap  Whether to plot the heatmap.

Value

The co-occurrence matrix; a matrix.

Examples

### Get path to example source
examplePath <-
  system.file("extdata", package="rock");

### Parse all example sources in that directory
parsedExamples <- rock::parse_sources(examplePath);

### Create cooccurrence matrix
rock::create_cooccurrence_matrix(parsedExamples);

---

Create HTML fragment with CSS styling

Description

Create HTML fragment with CSS styling

Usage

css(
  template = "default",
  includeBootstrap = rock::opts$get("includeBootstrap")
)
expand_attributes

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>template</td>
<td>The template to load; either the name of one of the ROCK templates (currently, only 'default' is available), or the path and filename of a CSS file.</td>
</tr>
<tr>
<td>includeBootstrap</td>
<td>Whether to include the default bootstrap CSS.</td>
</tr>
</tbody>
</table>

Value

A character vector with the HTML fragment.

Description

Expand categorical attribute variables to a series of dichotomous variables.

Usage

```r
expand_attributes(
  data,
  attributes,
  valueLabels = NULL,
  prefix = "",
  glue = "__",
  suffix = ",",
  falseValue = 0,
  trueValue = 1,
  valueFirst = TRUE,
  append = TRUE
)
```

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>data</td>
<td>The data frame, normally the $mergedSources data frame that exists in the object returned by a call to <code>parse_sources()</code>.</td>
</tr>
<tr>
<td>attributes</td>
<td>The name of the attribute(s) to expand.</td>
</tr>
<tr>
<td>valueLabels</td>
<td>It’s possible to use different names for the created variables than the values of the attributes. This can be set with the valueLabels argument. If only one attribute is specified, pass a named vector for valueLabels, and if multiple attributes are specified, pass a named list of named vectors, where the name of each vector corresponds to an attribute passed in attributes. The names of the vector elements must correspond to the values of the attributes (see the example).</td>
</tr>
<tr>
<td>prefix, suffix</td>
<td>The prefix and suffix to add to the variables names that are returned.</td>
</tr>
</tbody>
</table>
**expand_attributes**

- **glue**  
  The glue to paste the first part ad the second part of the composite variable name together.

- **falseValue, trueValue**  
  The values to set for rows that, respectively, do not match and do match an attribute value.

- **valueFirst**  
  Whether to insert the attribute value first, or the attribute name, in the composite variable names.

- **append**  
  Whether to append the columns to the supplied data frame or not.

**Value**

A data.frame

**Examples**

```r
### Get path to example source
eamplePath <-
  system.file("extdata", package="rock");

### Get a path to one example file
eampleFile <-
  file.path(eamplePath, "example-1.rock");

### Parse single example source
parsedExample <- rock::parse_source(exampleFile);

### Create a categorical attribute column
parsedExample$mergedSourceDf$age_group <-
  rep(c("<18", "18-30", "31-60", ">60"), each=13);

### Expand to four logical columns
parsedExample$mergedSourceDf <-
  rock::expand_attributes(  
    parsedExample$mergedSourceDf,  
    "age_group",  
    valueLabels =
      c(  
          "<18" = "youngest",  
          "18-30" = "youngish",  
          "31-60" = "oldish",  
          ">60" = "oldest"  
      ),  
    valueFirst = FALSE
  );

### Show result
table(parsedExample$mergedSourceDf$age_group,  
      parsedExample$mergedSourceDf$age_group__youngest);  
table(parsedExample$mergedSourceDf$age_group,  
      parsedExample$mergedSourceDf$age_group__oldish);
```
exportToHTML  

Exporting tables to HTML

Description

This function exports data frames or matrices to HTML, sending output to one or more of the console, viewer, and one or more files.

Usage

```r
exportToHTML(
  input,
  output = rock::opts$get("tableOutput"),
  tableOutputCSS = rock::opts$get("tableOutputCSS")
)
```

Arguments

- **input**: Either a `data.frame`, `table`, or `matrix`, or a list with three elements: `pre`, `input`, and `post`. The `pre` and `post` are simply prepended and postpended to the HTML generated based on the `input$input` element.
- **output**: The output: a character vector with one or more of "console" (the raw concatenated input, without conversion to HTML), "viewer", which uses the RStudio viewer if available, and one or more filenames in existing directories.
- **tableOutputCSS**: The CSS to use for the HTML table.

Value

Invisibly, the (potentially concatenated) `input` as character vector.

Examples

```r
exportToHTML(mtcars[1:5, 1:5]);
```

export_codes_to_txt  

Export codes to a plain text file

Description

These function can be used to convert one or more parsed sources to HTML, or to convert all sources to tabbed sections in Markdown.
Usage

```r
export_codes_to_txt(
  input,
  output = NULL,
  codeTree = "fullyMergedCodeTrees",
  codingScheme = "codes",
  regex = ".*",
  onlyChildrenOf = NULL,
  leavesOnly = TRUE,
  includePath = TRUE,
  preventOverwriting = rock::opts$get(preventOverwriting),
  encoding = rock::opts$get(encoding),
  silent = rock::opts$get(silent)
)
```

Arguments

- **input**: An object of class `rock_parsedSource` (as resulting from a call to `parse_source`) or of class `rock_parsedSources` (as resulting from a call to `parse_sources`).
- **output**: The filename to write to.
- **codeTree**: Codes from which code tree to export the codes. Valid options are `fullyMergedCodeTrees`, `extendedDeductiveCodeTrees`, `deductiveCodeTrees`, and `inductiveCodeTrees`.
- **codingScheme**: With the ROCK, it's possible to use multiple coding scheme's in parallel. The ROCK default is called `codes` (using the double square brackets as code delimiters), but other delimiters can be used as well, and give a different name. Use `codingScheme` to specify which code tree you want to export, if you have multiple.
- **regex**: An optional regular expression: only codes matching this regular expression will be selected.
- **onlyChildrenOf**: A character vector of one or more regular expressions that specify codes within which to search. For example, if the code tree contains codes `parent1` and `parent2`, and each have a number of child codes, and `parent` is passed as `onlyChildrenOf`, only the codes within `parent` are selected.
- **leavesOnly**: Whether to only write the leaves (i.e. codes that don’t have children) or all codes in the code tree.
- **includePath**: Whether to only return the code itself (e.g. code) or also include the path to the root (e.g. code1>code2>code).
- **preventOverwriting**: Whether to prevent overwriting of output files.
- **encoding**: The encoding to use when writing the exported source(s).
- **silent**: Whether to suppress messages.

Value

A character vector.
Examples

```r
### Get path to example source
directoryPath <-
  system.file("extdata", package="rock");

### Parse all example sources in that directory
parsedExamples <- rock::parse_sources(directoryPath);

### Show results of exporting the codes
export_codes_to_txt(parsedExamples);

### Only show select a narrow set of codes
export_codes_to_txt(parsedExamples,
  leavesOnly=TRUE,
  includePath=FALSE,
  onlyChildrenOf = "parentCode2",
  regex="5|6");
```

---

`export_mergedSourceDf_to_csv`

*Export a merged source data frame*

Description

Export a merged source data frame

Usage

```r
export_mergedSourceDf_to_csv(
  x,
  file,
  exportArgs = list(fileEncoding = rock::opts$get("encoding")),
  preventOverwriting = rock::opts$get("preventOverwriting"),
  silent = rock::opts$get("silent")
)
```

```r
export_mergedSourceDf_to_csv2(
  x,
  file,
  exportArgs = list(fileEncoding = rock::opts$get("encoding")),
  preventOverwriting = rock::opts$get("preventOverwriting"),
  silent = rock::opts$get("silent")
)
```

```r
export_mergedSourceDf_to_xlsx(
  x,
  file,
)```
export_to_html

exportArgs = list(overwrite = !preventOverwriting),
preventOverwriting = rock::opts$get("preventOverwriting"),
silent = rock::opts$get("silent")
)

export_mergedSourceDf_to_sav(
  x,
  file,
  exportArgs = NULL,
  preventOverwriting = rock::opts$get("preventOverwriting"),
  silent = rock::opts$get("silent")
)

Arguments

x The object with parsed sources.
file The file to export to.
exportArgs Optionally, arguments to pass to the function to use to export.
preventOverwriting Whether to prevent overwriting if the file already exists.
silent Whether to be silent or chatty.

Value

Silently, the object with parsed sources.

Description

These functions can be used to convert one or more parsed sources to HTML, or to convert all sources to tabbed sections in Markdown.

Usage

export_to_html(
  input,
  output = NULL,
  template = "default",
  fragment = FALSE,
  preventOverwriting = rock::opts$get(preventOverwriting),
  encoding = rock::opts$get(encoding),
  silent = rock::opts$get(silent)
)
export_to_markdown(
    input,
    heading = "Sources",
    headingLevel = 2,
    template = "default",
    silent = rock::opts$get(silent)
)

**Arguments**

- **input**: An object of class `rock_parsedSource` (as resulting from a call to `parse_source`) or of class `rock_parsedSources` (as resulting from a call to `parse_sources`.
- **output**: For `export_to_html`, either `NULL` to not write any files, or, if `input` is a single `rock_parsedSource`, the filename to write to, and if `input` is a `rock_parsedSources` object, the path to write to. This path will be created with a warning if it does not exist.
- **template**: The template to load; either the name of one of the ROCK templates (currently, only 'default' is available), or the path and filename of a CSS file.
- **fragment**: Whether to include the CSS and HTML tags (`FALSE`) or just return the fragment(s) with the source(s) (`TRUE`).
- **preventOverwriting**: For `export_to_html`, whether to prevent overwriting of output files.
- **encoding**: For `export_to_html`, the encoding to use when writing the exported source(s).
- **silent**: Whether to suppress messages.
- **heading, headingLevel**

**Value**

A character vector or a list of character vectors.

**Examples**

```r
### Get path to example source
eexamplePath <-
    system.file("extdata", package="rock");

### Parse all example sources in that directory
parsedExamples <- rock::parse_sources(examplePath);

### Export results to a temporary directory
tmpDir <- tempdir(check = TRUE);
prettySources <-
    export_to_html(input = parsedExamples,
                   output = tmpDir);

### Show first one
print(prettySources[[1]]);
```
**extract_codings_by_coderId**

*Extract the codings by each coder using the coderId*

Description

Extract the codings by each coder using the coderId

Usage

```r
extract_codings_by_coderId(
  input,
  recursive = TRUE,
  filenameRegex = ".*",
  postponeDeductiveTreeBuilding = TRUE,
  ignoreOddDelimiters = FALSE,
  encoding = rock::opts$get(encoding),
  silent = rock::opts$get(silent)
)
```

Arguments

- **input**: The directory with the sources.
- **recursive**: Whether to also process subdirectories.
- **filenameRegex**: Only files matching this regular expression will be processed.
- **postponeDeductiveTreeBuilding**: Whether to build deductive code trees, or only store YAML fragments.
- **ignoreOddDelimiters**: Whether to throw an error when encountering an odd number of YAML delimiters.
- **encoding**: The encoding of the files to read.
- **silent**: Whether to be chatty or silent.

Value

An object with the read sources.
**generate_uids**

*Generate utterance identifiers (UIDs)*

**Description**

This function generates utterance identifiers.

**Usage**

```r
generate_uids(x, origin = Sys.time())
```

**Arguments**

- `x`: The number of identifiers to generate.
- `origin`: The origin to use when generating the actual identifiers. These identifiers are the present UNIX timestamp (i.e. the number of seconds elapsed since the UNIX epoch, the first of January 1970), accurate to two decimal places (i.e. to centiseconds), converted to the base 30 system using `numericToBase30()`. By default, the present time is used as origin, one one centisecond is added for every identifiers to generate. `origin` can be set to other values to work with different origins (of course, don’t use this unless you understand very well what you’re doing!).

**Value**

A vector of UIDs.

**Examples**

```r
generate_uids(5);
```
**Usage**

```r
generic_recoding(
  input,
  codes,
  func,
  filter = TRUE,
  output = NULL,
  outputPrefix = "",
  outputSuffix = ".recoded",
  decisionLabel = NULL,
  justification = NULL,
  justificationFile = NULL,
  preventOverwriting = rock::opts$get("preventOverwriting"),
  encoding = rock::opts$get("encoding"),
  silent = rock::opts$get("silent"),
  ...
)
```

**Arguments**

- `input` One of 1) a character string specifying the path to a file with a source; 2) an object with a loaded source as produced by a call to `load_source()`; 3) a character string specifying the path to a directory containing one or more sources; 4) an object with a list of loaded sources as produced by a call to `load_sources()`.
- `codes` The codes to process.
- `func` The function to apply.
- `filter` Optionally, a filter to apply to specify a subset of the source(s) to process (see `get_source_filter()`).
- `output` If specified, the coded source will be written here.
- `outputPrefix`, `outputSuffix` The prefix and suffix to add to the filenames when writing the processed files to disk, in case multiple sources are passed as input.
- `decisionLabel` A description of the (recoding) decision that was taken.
- `justification` The justification for this action.
- `justificationFile` If specified, the justification is appended to this file. If not, it is saved to the `justifier::workspace()`. This can then be saved or displayed at the end of the R Markdown file or R script using `justifier::save_workspace()`.
- `preventOverwriting` Whether to prevent overwriting existing files when writing the files to output.
- `encoding` The encoding to use.
- `silent` Whether to be chatty or quiet.
- `...` Other arguments to pass to `fnc`. 
get_source_filter

**Value**

Invisibly, the recoded source(s) or source(s) object.

---

get_childCodeIds  
*Get the code identifiers of the children of a code with a given identifier*

---

**Description**

Get the code identifiers of the children of a code with a given identifier

**Usage**

```r
get_childCodeIds(x, parentCodeId, returnNodes = FALSE)
```

**Arguments**

- `x`  
The parsed sources object
- `parentCodeId`  
The code identifier of the parent code
- `returnNodes`  
Set to `TRUE` to return a list of nodes, not just the code identifiers

**Value**

A character vector with code identifiers (or a list of nodes)

---

get_source_filter  
*Create a filter to select utterances in a source*

---

**Description**

This function takes a character vector with regular expressions, a numeric vector with numeric indices, or a logical vector that is either as long as the source or has length 1; and then always returns a logical vector of the same length as the source.

**Usage**

```r
get_source_filter(
    source,
    filter,
    ignore.case = TRUE,
    invert = FALSE,
    perl = TRUE,
    ...
)
```
heading

Arguments

source The source to produce the filter for.
filter The filtering criterion: a character vector with regular expressions, a numeric vector with numeric indices, or a logical vector that is either as long as the source or has length 1.
ignore.case Whether to apply the regular expression case sensitively or not (see base::grepl()).
invert Whether to invert the result or not (i.e. whether the filter specifies what you want to select (invert=FALSE) or what you don’t want to select (invert=TRUE)).
perl Whether the regular expression (if filter is a character vector) is a perl regular expression or not (see base::grepl()).
... Any additional arguments are passed on to base::grepl().

Value

A logical vector of the same length as the source.

Description

This is just a convenience function to print a markdown or HTML heading at a given 'depth'.

Usage

heading(
  ..., 
  headingLevel = rock::opts$get("defaultHeadingLevel"),
  output = "markdown",
  cat = TRUE
)

Arguments

... The heading text: pasted together with no separator.
headingLevel The level of the heading: the default can be set with e.g. rock::opts$set(defaultHeadingLevel=1).
output Whether to output to HTML ("html") or markdown (anything else).
cat Whether to cat (print) the heading or just invisibly return it.

Value

The heading, invisibly.

Examples

heading("Hello ", "World", headingLevel=5);
## This produces: "

\n\n##### Hello World

"
**inspect_coded_sources**  
*Read sources from a directory, parse them, and show coded fragments and code tree*

### Description

This function combines successive calls to `parse_sources()`, `collect_coded_fragments()` and `show_inductive_code_tree()`.

### Usage

```
inspect_coded_sources(  
  path,  
  parse_args = list(extension = "rock|dct", regex = NULL, recursive = TRUE,  
                     ignoreOddDelimiters = FALSE, encoding = rock::opts$get("encoding"), silent =  
                     rock::opts$get("silent")),  
  fragments_args = list(codes = ".*", context = 0),  
  inductive_tree_args = list(codes = ".*", output = "both", headingLevel = 3),  
  deductive_tree_args = list()  
)
```

### Arguments

- **path**  
The path containing the sources to parse and inspect.
- **parse_args**  
The arguments to pass to `parse_sources()`.
- **fragments_args**  
The arguments to pass to `collect_coded_fragments()`.
- **inductive_tree_args**  
The arguments to pass to `show_inductive_code_tree()`.
- **deductive_tree_args**  
  Not yet implemented.

### Value

The parsedSources object.

### Examples

```r
### Get path to example source  
extamplePath <-  
  system.file("extdata", package="rock");

### Inspect sources  
rock::inspect_coded_sources(examplePath);
```


**load_source**  
Load a source from a file or a string

**Description**

These functions load one or more source(s) from a file or a string and store it in memory for further processing. Note that you’ll probably want to clean the sources first, using one of the `clean_sources()` functions, and you’ll probably want to add utterance identifiers to each utterance using one of the `prepending_uids()` functions.

**Usage**

```r
load_source(
  input,
  encoding = rock::opts$get("encoding"),
  silent = rock::opts$get("silent"),
  rlWarn = rock::opts$get(rlWarn),
  diligentWarnings = rock::opts$get("diligentWarnings")
)

load_sources(
  input,
  filenameRegex = ".*",
  ignoreRegex = NULL,
  recursive = TRUE,
  full.names = FALSE,
  encoding = rock::opts$get("encoding"),
  silent = rock::opts$get("silent")
)
```

**Arguments**

- `input` The filename or contents of the source for `load_source` and the directory containing the sources for `load_sources`.
- `encoding` The encoding of the file(s).
- `silent` Whether to be chatty or quiet.
- `rlWarn` Whether to let `readLines()` warn, e.g. if files do not end with a newline character.
- `diligentWarnings` Whether to display very diligent warnings.
- `filenameRegex` A regular expression to match against located files; only files matching this regular expression are processed.
- `ignoreRegex` Regular expression indicating which files to ignore. This is a perl-style regular expression (see `base::regex`).
- `recursive` Whether to search all subdirectories (TRUE) as well or not.
- `full.names` Whether to store source names as filenames only or whether to include paths.
mask_source

Value

Invisibly, an R character vector of classes `rock_source` and `character`.

Examples

```r
### Get path to example source
examplePath <- system.file("extdata", package="rock");

### Get a path to one example file
exampleFile <- file.path(examplePath, "example-1.rock");

### Parse single example source
loadedSource <- rock::load_source(exampleFile);
```

mask_source

Masking sources

Description

These functions can be used to mask a set of utterances or one or more sources.

Usage

```r
mask_source(
  input,  # Input source
  output = NULL,  # Output path
  proportionToMask = 1,  # Proportion of source to mask
  preventOverwriting = rock::opts$get(preventOverwriting),  # Prevent overwriting
  encoding = rock::opts$get(encoding),  # Encoding
  rlWarn = rock::opts$get(rlWarn),  # RL warn
  maskRegex = "[:alnum:]",  # Mask regex
  maskChar = "X",  # Mask character
  perl = TRUE,  # Perl
  silent = rock::opts$get(silent)
)
```

```r
mask_sources(
  input,  # Input sources
  output,  # Output path
  proportionToMask = 1,  # Proportion of source to mask
  outputPrefix = "",  # Output prefix
  outputSuffix = "_masked",  # Output suffix
  maskRegex = "[:alnum:]",  # Mask regex
  maskChar = "X",  # Mask character
  perl = TRUE,  # Perl
)
```
recursive = TRUE,
filenameRegex = ".*",
filenameReplacement = c("_PRIVATE_", "_public_"),
preventOverwriting = rock::opts$get(preventOverwriting),
encoding = rock::opts$get(encoding),
silent = rock::opts$get(silent)
)

mask_utterances(
  input,
  proportionToMask = 1,
  maskRegex = "[[[:alnum:]]]",
  maskChar = "X",
  perl = TRUE
)

Arguments

input For mask_utterance, a character vector where each element is one utterance; for mask_source, either a character vector containing the text of the relevant source or a path to a file that contains the source text; for mask_sources, a path to a directory that contains the sources to mask.

output For mask_source, if not NULL, this is the name (and path) of the file in which to save the processed source (if it is NULL, the result will be returned visibly). For mask_sources, output is mandatory and is the path to the directory where to store the processed sources. This path will be created with a warning if it does not exist. An exception is if "same" is specified - in that case, every file will be written to the same directory it was read from.

proportionToMask The proportion of utterances to mask, from 0 (none) to 1 (all).

preventOverwriting Whether to prevent overwriting of output files.

encoding The encoding of the source(s).

rlWarn Whether to let readLines() warn, e.g. if files do not end with a newline character.

maskRegex A regular expression (regex) specifying the characters to mask (i.e. replace with the masking character).

maskChar The character to replace the character to mask with.

perl Whether the regular expression is a perl regex or not.

silent Whether to suppress the warning about not editing the cleaned source.

outputPrefix, outputSuffix The prefix and suffix to add to the filenames when writing the processed files to disk.

recursive Whether to search all subdirectories (TRUE) as well or not.

filenameRegex A regular expression to match against located files; only files matching this regular expression are processed.
filenameReplacement

A character vector with two elements that represent, respectively, the pattern and replacement arguments of the `gsub()` function. In other words, the first argument specifies a regular expression to search for in every processed filename, and the second argument specifies a regular expression that replaces any matches with the first argument. Set to `NULL` to not perform any replacement on the output filename.

**Value**

A character vector for `mask_utterance` and `mask_source`, or a list of character vectors, for `mask_sources`.

**Examples**

```r
## Mask text but not the codes
rock::mask_utterances(
paste0(
  "Lorem ipsum dolor sit amet, consectetur adipiscing ",
  "elit. [[expAttitude_expectation_73dnt5z1>earplugsFeelUnpleasant]]"
)
)
```

---

**match_consecutive_delimiters**

*Match the corresponding indices of (YAML) delimiters in a sequential list*

**Description**

Match the corresponding indices of (YAML) delimiters in a sequential list

**Usage**

```r
match_consecutive_delimiters(
  x,
  errorOnInvalidX = FALSE,
  errorOnOdd = FALSE,
  onOddIgnoreFirst = FALSE
)
```

**Arguments**

- `x` The vector with delimiter indices
- `errorOnInvalidX` Whether to return `NA` (if `FALSE`) or throw an error (if `TRUE`) when `x` is `NULL`, `NA`, or has less than 2 elements.
- `errorOnOdd` Whether to throw an error if the number of delimiter indices is odd.
merge_sources

onOddIgnoreFirst
If the number of delimiter indices is odd and no error is thrown, whether to ignore the first (TRUE) or the last (FALSE) delimiter.

merge_sources Merge source files by different coders

Description
This function takes sets of sources and merges them using the utterance identifiers (UIDs) to match them.

Usage

merge_sources(
  input,
  output,
  outputPrefix = "", outputSuffix = "_merged",
  primarySourcesRegex = ".*",
  primarySourcesIgnoreRegex = outputSuffix,
  primarySourcesPath = input,
  recursive = TRUE,
  primarySourcesRecursive = recursive,
  filenameRegex = ".*",
  postponeDeductiveTreeBuilding = TRUE,
  ignoreOddDelimiters = FALSE,
  preventOverwriting = rock::opts$get(preventOverwriting),
  encoding = rock::opts$get(encoding),
  silent = rock::opts$get(silent),
  inheritSilence = FALSE
)

Arguments

input The directory containing the input sources.
output The path to the directory where to store the merged sources. This path will be created with a warning if it does not exist. An exception is if "same" is specified - in that case, every file will be written to the same directory it was read from.
outputPrefix, outputSuffix A pre- and/or suffix to add to the filename when writing the merged sources (especially useful when writing them to the same directory).
primarySourcesRegex A regular expression that specifies how to recognize the primary sources (i.e. the files used as the basis, to which the codes from other sources are added).
primarySourcesIgnoreRegex A regular expression that specifies which files to ignore as primary files.
primarySourcesPath
   The path containing the primary sources.
recursive, primarySourcesRecursive
   Whether to read files from sub-directories (TRUE) or not.
filenameRegex
   Only files matching this regular expression are read.
postponeDeductiveTreeBuilding
   Whether to immediately try to build the deductive tree(s) based on the information in this file (FALSE) or whether to skip that. Skipping this is useful if the full tree information is distributed over multiple files (in which case you should probably call parse_sources instead of parse_source).
ignoreOddDelimiters
   If an odd number of YAML delimiters is encountered, whether this should result in an error (FALSE) or just be silently ignored (TRUE).
preventOverwriting
   Whether to prevent overwriting existing files or not.
encoding
   The encoding of the file to read (in file).
silent
   Whether to provide (FALSE) or suppress (TRUE) more detailed progress updates.
inheritSilence
   If not silent, whether to let functions called by merge_sources inherit that setting.

Value
Invisibly, a list of the parsed, primary, and merged sources.

---

opts

Options for the rock package

Description
The rock::opts object contains three functions to set, get, and reset options used by the rock package. Use rock::opts$set to set options, rock::opts$get to get options, or rock::opts$reset to reset specific or all options to their default values.

Usage
opts

Format
An object of class list of length 4.
Details

It is normally not necessary to get or set rock options. The defaults implement the Reproducible Open Coding Kit (ROCK) standard, and deviating from these defaults therefore means the processed sources and codes are not compatible and cannot be processed by other software that implements the ROCK. Still, in some cases this degree of customization might be desirable.

The following arguments can be passed:

... For rock::opts$set, the dots can be used to specify the options to set, in the format option = value, for example, utteranceMarker = "\n". For rock::opts$reset, a list of options to be reset can be passed.

option For rock::opts$set, the name of the option to set.

default For rock::opts$get, the default value to return if the option has not been manually specified.

The following options can be set:

codeRegexes A named character vector with one or more regular expressions that specify how to extract the codes (that were used to code the sources). These regular expressions must each contain one capturing group to capture the codes.

idRegexes A named character vector with one or more regular expressions that specify how to extract the different types of identifiers. These regular expressions must each contain one capturing group to capture the identifiers.

sectionRegexes A named character vector with one or more regular expressions that specify how to extract the different types of sections.

autoGenerateIds The names of the idRegexes that, if missing, should receive autogenerated identifiers (which consist of 'autogenerated_' followed by an incrementing number).

persistentIds The names of the idRegexes for the identifiers which, once attached to an utterance, should be attached to all following utterances as well (until a new identifier with the same name is encountered, after which that identifier will be attached to all following utterances, etc).

noCodes This regular expression is matched with all codes after they have been extracted using the codeRegexes regular expression (i.e. they're matched against the codes themselves without, for example, the square brackets in the default code regex). Any codes matching this noCodes regular expression will be ignored, i.e., removed from the list of codes.

inductiveCodingHierarchyMarker For inductive coding, this marker is used to indicate hierarchical relationships between codes. The code at the left hand side of this marker will be considered the parent code of the code on the right hand side. More than two levels can be specified in one code (for example, if the inductiveCodingHierarchyMarker is '>', the code grandparent>child>grandchild would indicate codes at three levels.

attributeContainers The name of YAML fragments containing case attributes (e.g. metadata, demographic variables, quantitative data about cases, etc).

codesContainers The name of YAML fragments containing (parts of) deductive coding trees.

delimiterRegEx The regular expression that is used to extract the YAML fragments.
**parsed_sources_to_ena_network**

Create an ENA network out of one or more parsed sources

**Description**

Create an ENA network out of one or more parsed sources

**Usage**

```r
parsed_sources_to_ena_network(
  x,
  unitCols,
  conversationCols = "originalSource",
  codes = x$convenience$codingLeaves,
  metadata = x$convenience$attributesVars
)
```
**parse_source**

**Parsing sources**

**Description**

These functions parse one (parse_source) or more (parse_sources) sources and the contained identifiers, sections, and codes.

**Arguments**

- **x**: The parsed source(s) as provided by rock::parse_source or rock::parse_sources.
- **unitCols**: The columns that together define units (e.g., utterances in each source that belong together, for example because they’re about the same topic).
- **conversationCols**: The columns that together define conversations (e.g., separate sources, but can be something else, as well).
- **codes**: The codes to include; by default, takes all codes.
- **metadata**: The columns in the merged source dataframe that contain the metadata. By default, takes all read metadata.

**Value**

The result of a call to rENA::ena.plot.network().

**Examples**

```r
### Get path to example source
examplePath <- system.file("extdata", package="rock");

### Parse all example sources in that directory
parsedExamples <- rock::parse_sources(examplePath);

### Add something to indicate which units belong together; normally, these would probably be indicated using one of the identifier, for example the stanza identifiers, the sid's
nChunks <- nrow(parsedExamples$mergedSourceDf) %/% 10;
parsedExamples$mergedSourceDf$units <- c(rep(1:nChunks, each=10), rep(max(nChunks), nrow(parsedExamples$mergedSourceDf) - (10*nChunks)));

### Generate ENA plot
enaPlot <- rock::parsed_sources_to_ena_network(parsedExamples, unitCols='units');

### Show the resulting plot
print(enaPlot);
```
Usage

parse_source(
  text, file,
  utteranceLabelRegexes = NULL,
  ignoreOddDelimiters = FALSE,
  checkClassInstanceIds = rock::opts$get(checkClassInstanceIds),
  postponeDeductiveTreeBuilding = FALSE,
  rlWarn = rock::opts$get(rlWarn),
  encoding = rock::opts$get(encoding),
  silent = rock::opts$get(silent)
)

## S3 method for class 'rock_parsedSource'
print(x, prefix = "### ", ...)

parse_sources(
  path,
  extension = "rock|dct",
  regex = NULL,
  recursive = TRUE,
  ignoreOddDelimiters = FALSE,
  checkClassInstanceIds = rock::opts$get(checkClassInstanceIds),
  mergeInductiveTrees = FALSE,
  encoding = rock::opts$get(encoding),
  silent = rock::opts$get(silent)
)

## S3 method for class 'rock_parsedSources'
print(x, prefix = "### ", ...)

## S3 method for class 'rock_parsedSources'
plot(x, ...)

Arguments

text, file  As text or file, you can specify a file to read with encoding encoding, which will then be read using base::readLines(). If the argument is named text, whether it is the path to an existing file is checked first, and if it is, that file is read. If the argument is named file, and it does not point to an existing file, an error is produced (useful if calling from other functions). A text should be a character vector where every element is a line of the original source (like provided by base::readLines()); although if a character vector of one element and including at least one newline character (\n) is provided as text, it is split at the newline characters using base::strsplit(). Basically, this behavior means that the first argument can be either a character vector or the path to a file; and if you’re specifying a file and you want to be certain that an error is thrown if it doesn’t exist, make sure to name it file.
parse_source

utteranceLabelRegexes
  Optionally, a list with two-element vectors to preprocess utterances before they are stored as labels (these 'utterance perl regular expression!)

ignoreOddDelimiters
  If an odd number of YAML delimiters is encountered, whether this should result in an error (FALSE) or just be silently ignored (TRUE).

checkClassInstanceIds
  Whether to check for the occurrence of class instance identifiers specified in the attributes.

postponeDeductiveTreeBuilding
  Whether to immediately try to build the deductive tree(s) based on the information in this file (FALSE) or whether to skip that. Skipping this is useful if the full tree information is distributed over multiple files (in which case you should probably call parse_sources instead of parse_source).

rlWarn
  Whether to let readLines() warn, e.g. if files do not end with a newline character.

encoding
  The encoding of the file to read (in file).

silent
  Whether to provide (FALSE) or suppress (TRUE) more detailed progress updates.

x
  The object to print.

prefix
  The prefix to use before the 'headings' of the printed result.

...
  Any additional arguments are passed on to the default print method.

path
  The path containing the files to read.

extension
  The extension of the files to read; files with other extensions will be ignored. Multiple extensions can be separated by a pipe (|).

regex
  Instead of specifying an extension, it's also possible to specify a regular expression; only files matching this regular expression are read. If specified, regex takes precedence over extension.

recursive
  Whether to also process subdirectories (TRUE) or not (FALSE).

mergeInductiveTrees
  Merge multiple inductive code trees into one; this functionality is currently not yet implemented.

Examples

### Get path to example source
def egalPath <-
  system.file("extdata", package="rock");

### Get a path to one example file
def egalFile <-
  file.path(egalPath, "example-1.rock");

### Parse single example source
def egalExample <- rock::parse_source(egalFile);

### Show inductive code tree for the codes
### extracted with the regular expression specified with
### the name 'codes':
parsedExample$inductiveCodeTrees$codes;

### If you want 'rock' to be chatty, use:
parsedExample <- rock::parse_source(exampleFile, 
silent=FALSE);

### Parse all example sources in that directory
parsedExamples <- rock::parse_sources(examplePath);

### Show combined inductive code tree for the codes
### extracted with the regular expression specified with
### the name 'codes':
parsedExamples$inductiveCodeTrees$codes;

---

**parse_source_by_coderId**

*Parsing sources separately for each coder*

---

**Description**

Parsing sources separately for each coder

**Usage**

```r
parse_source_by_coderId(
  input, 
  ignoreOddDelimiters = FALSE, 
  postponeDeductiveTreeBuilding = TRUE, 
  rlWarn = rock::opts$get(rlWarn), 
  encoding = "UTF-8", 
  silent = TRUE 
)
```

```r
parse_sources_by_coderId(
  input, 
  recursive = TRUE, 
  filenameRegex = ".\.*", 
  ignoreOddDelimiters = FALSE, 
  postponeDeductiveTreeBuilding = TRUE, 
  encoding = rock::opts$get(encoding), 
  silent = rock::opts$get(silent) 
)```
prepend_ids_to_source

Arguments

- **input**: For `parse_source_by_coderId`, either a character vector containing the text of the relevant source or a path to a file that contains the source text; for `parse_sources_by_coderId`, a path to a directory that contains the sources to parse.
- **ignoreOddDelimiters**: If an odd number of YAML delimiters is encountered, whether this should result in an error (FALSE) or just be silently ignored (TRUE).
- **postponeDeductiveTreeBuilding**: Whether to immediately try to build the deductive tree(s) based on the information in this file (FALSE) or whether to skip that. Skipping this is useful if the full tree information is distributed over multiple files (in which case you should probably call `parse_sources` instead of `parse_source`).
- **rlWarn**: Whether to let `readLines()` warn, e.g. if files do not end with a newline character.
- **encoding**: The encoding of the file to read (in file).
- **silent**: Whether to provide (FALSE) or suppress (TRUE) more detailed progress updates.
- **recursive**: Whether to search all subdirectories (TRUE) as well or not.
- **filenameRegex**: A regular expression to match against located files; only files matching this regular expression are processed.

Examples

```r
### Get path to example source
eexamplePath <-
  system.file("extdata", package="rock");

### Get a path to one example file
eexampleFile <-
  file.path(examplePath, "example-1.rock");

### Parse single example source
parsedExample <- rock::parse_source_by_coderId(exampleFile);
```

Description

This function prepends unique utterance identifiers to each utterance (line) in a source. Note that you’ll probably want to clean the sources using `clean_sources()` first.
prepend_ids_to_source

Usage

prepend_ids_to_source(
  input,
  output = NULL,
  origin = Sys.time(),
  rlWarn = rock::opts$get(rlWarn),
  preventOverwriting = rock::opts$get(preventOverwriting),
  encoding = rock::opts$get(encoding),
  silent = rock::opts$get(silent)
)

prepend_ids_to_sources(
  input,
  output = NULL,
  outputPrefix = "",
  outputSuffix = "_withUIDs",
  origin = Sys.time(),
  preventOverwriting = rock::opts$get(preventOverwriting),
  encoding = rock::opts$get(encoding),
  silent = rock::opts$get(silent)
)

Arguments

input      The filename or contents of the source for prepend_ids_to_source and the directory containing the sources for prepend_ids_to_sources.
output     The filename where to write the resulting file for prepend_ids_to_source and the directory where to write the resulting files for prepend_ids_to_sources
origin     The time to use for the first identifier.
rlWarn     Whether to let readLines() warn, e.g. if files do not end with a newline character.
preventOverwriting Whether to overwrite existing files (FALSE) or prevent that from happening (TRUE).
encoding   The encoding of the file(s).
silent     Whether to be chatty or quiet.
outputPrefix, outputSuffix The prefix and suffix to add to the filenames when writing the processed files to disk.

Value

The source with prepended uids, either invisible (if output if specified) or visibly (if not).

Examples

### Simple example
print.rock_graphList

rock::prepend_ids_to_source(
  "brief
  "example
  "source"
);

### Example including fake YAML fragments
longerExampleText <-
  c(
    "---",
    "First YAML fragment",
    "---",
    "So this is an utterance (i.e. outside of YAML)",
    "This, too.",
    "---",
    "Second fragment",
    "---",
    "Another real utterance outside of YAML",
    "Another one outside",
    "Last 'real utterance'
  );

rock::prepend_ids_to_source(
  longerExampleText
);

print.rock_graphList  Plot the graphs in a list of graphs

Description

Plot the graphs in a list of graphs

Usage

## S3 method for class 'rock_graphList'
print(x, ...)

Arguments

x       The list of graphs
...

Any other arguments are passed to DiagrammeR::render_graph().

Value

x, invisibly
**rbind_dfs**  
*Simple alternative for rbind.fill or bind_rows*

**Description**
Simple alternative for rbind.fill or bind_rows

**Usage**
rbind_dfs(x, y, clearRowNames = TRUE)

**Arguments**
- **x**: One dataframe
- **y**: Another dataframe
- **clearRowNames**: Whether to clear row names (to avoid duplication)

**Value**
The merged dataframe

**Examples**
rbind_dfs(Orange, mtcars);

---

**rbind_df_list**  
*Bind lots of dataframes together rowwise*

**Description**
Bind lots of dataframes together rowwise

**Usage**
rbind_df_list(x)

**Arguments**
- **x**: A list of dataframes

**Value**
A dataframe

**Examples**
rbind_df_list(list(Orange, mtcars, ChickWeight));
recode_addChildCodes

Add child codes under a parent code

Description

This function conditionally splits a code into multiple codes. Note that you may want to use `recode_addChildCodes()` instead to not lose the original coding.

Usage

```r
recode_addChildCodes(
  input,
  codes,
  childCodes,
  filter = TRUE,
  output = NULL,
  decisionLabel = NULL,
  justification = NULL,
  justificationFile = NULL,
  preventOverwriting = rock::opts$get("preventOverwriting"),
  encoding = rock::opts$get("encoding"),
  silent = rock::opts$get("silent")
)
```

Arguments

- **input**: One of 1) a character string specifying the path to a file with a source; 2) an object with a loaded source as produced by a call to `load_source()`; 3) a character string specifying the path to a directory containing one or more sources; 4) or an object with a list of loaded sources as produced by a call to `load_sources()`.
- **codes**: A single character value with the code to add the child codes to.
- **childCodes**: A named list with specifying when to add which child code. Each element of this list is a filtering criterion that will be passed on to `get_source_filter()` to create the actual filter that will be applied. The name of each element is the code that will be applied to utterances matching that filter. When calling `recode_addChildCodes()` for a single source, instead of passing the filtering criterion, it is also possible to pass a filter (i.e. the result of the call to `get_source_filter()`), which allows more finegrained control. Note that these 'child code filters' and the corresponding codes are processed sequentially in the order specified in `childCodes`. Any utterances coded with the code specified in `codes` that do not match with any of the 'child code filters' specified as the `childCodes` elements will remain unchanged. To create a catch-all ('else') category, pass ".*" or TRUE as a filter (see the example).
- **filter**: Optionally, a filter to apply to specify a subset of the source(s) to process (see `get_source_filter()`).
- **output**: If specified, the recoded source(s) will be written here.
decisionLabel  A description of the (recoding) decision that was taken.
justification  The justification for this action.
justificationFile  If specified, the justification is appended to this file. If not, it is saved to the justifier::workspace(). This can then be saved or displayed at the end of the R Markdown file or R script using justifier::save_workspace().
preventOverwriting  Whether to prevent overwriting existing files when writing the files to output.
encoding  The encoding to use.
silent  Whether to be chatty or quiet.

Value
Invisibly, the changed source(s) or source(s) object.

Examples

```r
### Get path to example source
extdataPath <-
  system.file("extdata", package="rock");

### Get a path to one example file
testFile <-
  file.path(examplePath, "example-1.rock");

### Load example source
loadedExampleSource <- rock::load_source(testFile);

### Split a code into two codes, showing progress (the backticks are used to be able to specify a name that starts with an underscore)
recodedSource <-
  rock::recode_addChildCodes(
    loadedExampleSource,
    codes="childCode1",
    childCodes = list(
      "_and_" = " and ",
      "_book_" = "book",
      "_else_" = TRUE
    ),
    silent=FALSE
  );
```

---

**recode_delete**  Remove one or more codes

Description
These functions remove one or more codes from a source, and make it easy to justify that decision.
recode_delete

Usage

recode_delete(
  input,
  codes,
  filter = TRUE,
  output = NULL,
  childrenReplaceParents = TRUE,
  recursiveDeletion = FALSE,
  decisionLabel = NULL,
  justification = NULL,
  justificationFile = NULL,
  preventOverwriting = rock::opts$get("preventOverwriting"),
  encoding = rock::opts$get("encoding"),
  silent = rock::opts$get("silent")
)

Arguments

input One of 1) a character string specifying the path to a file with a source; 2) an object with a loaded source as produced by a call to load_source(); 3) a character string specifying the path to a directory containing one or more sources; 4) or an object with a list of loaded sources as produced by a call to load_sources().

codes A character vector with codes to remove.

filter Optionally, a filter to apply to specify a subset of the source(s) to process (see get_source_filter()).

output If specified, the recoded source(s) will be written here.

childrenReplaceParents Whether children should be deleted (FALSE) or take their parent code’s place (TRUE). This is ignored if recursiveDeletion=TRUE, in which case children are always deleted.

recursiveDeletion Whether to also delete a code’s parents (TRUE), if they have no other children, and keep doing this until the root is reached, or whether to leave parent codes alone (FALSE). This takes precedence over childrenReplaceParents.

decisionLabel A description of the (recoding) decision that was taken.

justification The justification for this action.

justificationFile If specified, the justification is appended to this file. If not, it is saved to the justifier::workspace(). This can then be saved or displayed at the end of the R Markdown file or R script using justifier::save_workspace().

preventOverwriting Whether to prevent overwriting existing files when writing the files to output.

encoding The encoding to use.

silent Whether to be chatty or quiet.
Value

Invisibly, the recoded source(s) or source(s) object.

Examples

### Get path to example source
```
examplePath <-
  system.file("extdata", package="rock");
```

### Get a path to one example file
```
exampleFile <-
  file.path(examplePath, "example-1.rock");
```

### Load example source
```
loadedExample <- rock::load_source(exampleFile);
```

### Delete two codes, moving children to the codes' parents
```
recoded_source <-
  rock::recode_delete(
    loadedExample,
    codes=c("childCode2", "childCode1"),
    silent=FALSE
  );
```

### Process an entire directory
```
list_of_recoded_sources <-
  rock::recode_delete(
    examplePath,
    codes=c("childCode2", "childCode1"),
    silent=FALSE
  );
```

---

**recode_merge**

*Merge two or more codes*

Description

This function merges two or more codes into one.

Usage

```
recode_merge(
  input,
  codes,
  mergeToCode,
  filter = TRUE,
  output = NULL,
  decisionLabel = NULL,
)```

recode_merge

justification = NULL,
justificationFile = NULL,
preventOverwriting = rock::opts$get("preventOverwriting"),
encoding = rock::opts$get("encoding"),
silent = rock::opts$get("silent")
)

Arguments

input One of 1) a character string specifying the path to a file with a source; 2) an object with a loaded source as produced by a call to load_source(); 3) a character string specifying the path to a directory containing one or more sources; 4) or an object with a list of loaded sources as produced by a call to load_sources().
codes A character vector with the codes to merge.
mergeToCode A single character vector with the merged code.
filter Optionally, a filter to apply to specify a subset of the source(s) to process (see get_source_filter()).
output If specified, the recoded source(s) will be written here.
decisionLabel A description of the (recoding) decision that was taken.
justification The justification for this action.
justificationFile If specified, the justification is appended to this file. If not, it is saved to the justifier::workspace(). This can then be saved or displayed at the end of the R Markdown file or R script using justifier::save_workspace().
preventOverwriting Whether to prevent overwriting existing files when writing the files to output.
encoding The encoding to use.
silent Whether to be chatty or quiet.

Value

Invisibly, the changed source(s) or source(s) object.

Examples

### Get path to example source
examplePath <-
  system.file("extdata", package="rock");

### Get a path to one example file
directoryPath <-
  file.path(examplePath, "example-1.rock");

### Load example source
directoryPath <- rock::load_source(directoryPath);

### Move two codes to a new parent, showing progress
recoded_source <-
  rock::recode_merge(
    loadedExample,
    codes=c("childCode2", "grandchildCode2"),
    mergeToCode="mergedCode",
    silent=FALSE
  );

# recode_move

Move one or more codes to a different parent

Description

These functions move a code to a different parent (and therefore, ancestry) in one or more sources.

Usage

recode_move(
  input,
  codes,
  newAncestry,
  filter = TRUE,
  output = NULL,
  decisionLabel = NULL,
  justification = NULL,
  justificationFile = NULL,
  preventOverwriting = rock::opts$get("preventOverwriting"),
  encoding = rock::opts$get("encoding"),
  silent = rock::opts$get("silent")
)

Arguments

- `input`: One of 1) a character string specifying the path to a file with a source; 2) an object with a loaded source as produced by a call to `load_source()`; 3) a character string specifying the path to a directory containing one or more sources; 4) or an object with a list of loaded sources as produced by a call to `load_sources()`.
- `codes`: A character vector with codes to move.
- `newAncestry`: The new parent code, optionally including the partial or full ancestry (i.e. the path of parent codes all the way up to the root).
- `filter`: Optionally, a filter to apply to specify a subset of the source(s) to process (see `get_source_filter()`).
- `output`: If specified, the recoded source(s) will be written here.
- `decisionLabel`: A description of the (recoding) decision that was taken.
- `justification`: The justification for this action.
Justification File

If specified, the justification is appended to this file. If not, it is saved to the `justifier::workspace()`. This can then be saved or displayed at the end of the R Markdown file or R script using `justifier::save_workspace()`.

Prevent Overwriting

Whether to prevent overwriting existing files when writing the files to output.

Encoding

The encoding to use.

Silent

Whether to be chatty or quiet.

Value

Invisibly, the changed source(s) or source(s) object.

Examples

```r
### Get path to example source
eexamplePath <-
  system.file("extdata", package="rock");

### Get a path to one example file
eexampleFile <-
  file.path(examplePath, "example-1.rock");

### Load example source
loadedExample <- rock::load_source(exampleFile);

### Move two codes to a new parent, showing progress
recoded_source <-
  rock::recode_move(
    loadedExample,
    codes=c("childCode2", "childCode1"),
    newAncestry = "parentCode2",
    silent=FALSE
  );
```

---

<table>
<thead>
<tr>
<th>recode_rename</th>
<th>Rename one or more codes</th>
</tr>
</thead>
</table>

Description

These functions rename one or more codes in one or more sources.

Usage

```r
recode_rename(
  input,
  codes,
  filter = TRUE,
```
recode_rename

```r
output = NULL,
decisionLabel = NULL,
justification = NULL,
justificationFile = NULL,
preventOverwriting = rock::opts$get("preventOverwriting"),
encoding = rock::opts$get("encoding"),
silent = rock::opts$get("silent")
)
```

### Arguments

- **input**: One of 1) a character string specifying the path to a file with a source; 2) an object with a loaded source as produced by a call to `load_source()`; 3) a character string specifying the path to a directory containing one or more sources; 4) or an object with a list of loaded sources as produced by a call to `load_sources()`.

- **codes**: A named character vector with codes to rename. Each element should be the new code, and the element’s name should be the old code (so e.g. `codes = c(oldcode1 = 'newcode1', oldcode2 = 'newcode2')`).

- **filter**: Optionally, a filter to apply to specify a subset of the source(s) to process (see `get_source_filter()`).

- **output**: If specified, the recoded source(s) will be written here.

- **decisionLabel**: A description of the (recoding) decision that was taken.

- **justification**: The justification for this action.

- **justificationFile**: If specified, the justification is appended to this file. If not, it is saved to the `justifier::workspace()`.

- **preventOverwriting**: Whether to prevent overwriting existing files when writing the files to `output`.

- **encoding**: The encoding to use.

- **silent**: Whether to be chatty or quiet.

### Value

Invisibly, the changed source(s) or source(s) object.

### Examples

```r
### Get path to example source
devicePath <-
  system.file("extdata", package="rock");

### Get a path to one example file
deviceFile <-
  file.path(devicePath, "example-1.rock");

### Load example source
```
**recode_split**

---

**Split a code into multiple codes**

### Description

This function conditionally splits a code into multiple codes. Note that you may want to use `recode_addChildCodes()` instead to not lose the original coding.

### Usage

```r
recode_split(
  input, 
  codes, 
  splitToCodes, 
  filter = TRUE, 
  output = NULL, 
  decisionLabel = NULL, 
  justification = NULL, 
  justificationFile = NULL, 
  preventOverwriting = rock::opts$get("preventOverwriting"), 
  encoding = rock::opts$get("encoding"), 
  silent = rock::opts$get("silent")
)
```

### Arguments

- **input**
  - One of 1) a character string specifying the path to a file with a source; 2) an object with a loaded source as produced by a call to `load_source()`; 3) a character string specifying the path to a directory containing one or more sources; 4) or an object with a list of loaded sources as produced by a call to `load_sources()`.

- **codes**
  - A single character value with the code to split.

- **splitToCodes**
  - A named list with specifying when to split to which new code. Each element of this list is a filtering criterion that will be passed on to `get_source_filter()` to create the actual filter that will be applied. The name of each element is the code that will be applied to utterances matching that filter. When calling `recode_split()` for a single source, instead of passing the filtering criterion, it
is also possible to pass a filter (i.e. the result of the call to `get_source_filter()`),
which allows more finegrained control. Note that these split filters and the corre-
sponding codes are processed sequentially in the order specified in `splitToCodes`.
This means that once an utterance that was coded with codes has been matched
to one of these 'split filters' (and so, recoded with the corresponding 'split code',
i.e., with the name of that split filter in `splitToCodes`), it will not be recoded
again even if it also matches with other split filters down the line. Any utter-
ances coded with the code to split up (i.e. specified in `codes`) that do not match
with any of the split filters specified as the `splitToCodes` elements will not be
recoded and so remain coded with codes. To create a catch-all ('else') category,
pass ".*" or TRUE as a filter (see the example).

**filter**
Optionally, a filter to apply to specify a subset of the source(s) to process (see
`get_source_filter()`).

**output**
If specified, the recoded source(s) will be written here.

**decisionLabel**
A description of the (recoding) decision that was taken.

**justification**
The justification for this action.

**justificationFile**
If specified, the justification is appended to this file. If not, it is saved to the
`justifier::workspace()`. This can then be saved or displayed at the end of
the R Markdown file or R script using `justifier::save_workspace()`.

**preventOverwriting**
Whether to prevent overwriting existing files when writing the files to output.

**encoding**
The encoding to use.

**silent**
Whether to be chatty or quiet.

**Value**
Invisibly, the changed source(s) or source(s) object.

**Examples**

```r
### Get path to example source
examplePath <-
  system.file("extdata", package="rock");

### Get a path to one example file
exampleFile <-
  file.path(examplePath, "example-1.rock");

### Load example source
loadedExample <- rock::load_source(exampleFile);

### Split a code into two codes, showing progress (the backticks are
### used to be able to specify a name that starts with an underscore)
recoded_source <-
  rock::recode_split(
    loadedExample,
    codes="childCode1",
```
repeatStr

Description
Repeat a string a number of times

Usage
repeatStr(n = 1, str = " ")

Arguments
n, str
Normally, respectively the frequency with which to repeat the string and the string to repeat; but the order of the inputs can be switched as well.

Value
A character vector of length 1.

Examples
### 10 spaces:
repStr(10);

### Three euro symbols:
repStr("\u20ac", 3);

rock

Description
This package implements an open standard for working with qualitative data, as such, it has two parts: a file format/convention and this R package that facilitates working with .rock files.
The ROCK File Format

The .rock files are plain text files where a number of conventions are used to add metadata. Normally these are the following conventions:

- The smallest 'codeable unit' is called an utterance, and utterances are separated by newline characters (i.e. every line of the file is an utterance);
- Codes are in between double square brackets: [[code1]] and [[code2]];
- Hierarchy in inductive code trees can be indicated using the greater than sign (>): [[parent1>child1]];
- Utterances can have unique identifiers called 'utterance identifiers' or 'UIDs', which are unique short alphanumeric strings placed in between double square brackets after 'uid:', e.g. [[uid:73xk2q07]];
- Deductive code trees can be specified using YAML

The rock R Package Functions

The most important functions are parse_source() to parse one source and parse_sources() to parse multiple sources simultaneously. clean_source() and clean_sources() can be used to clean sources, and prepend_ids_to_source() and prepend_ids_to_sources() can be used to quickly generate UIDs and prepend them to each utterance in a source.

For analysis, create_cooccurrence_matrix(), collapse_occurrences(), and collect_coded_fragments() can be used.

root_from_codePaths

Get the roots from a vector with code paths

Description

Get the roots from a vector with code paths

Usage

root_from_codePaths(x)

Arguments

x A vector of code paths.

Value

A vector with the root of each element.

Examples

root_from_codePaths(
c("codes>reason>parent_feels", "codes>reason>child_feels")
);
Description

When conducting analyses, you make many choices that ideally, you document and justify. This function saves stored justifications to a file.

Usage

```r
save_workspace(
  file = rock::opts$get("justificationFile"),
  encoding = rock::opts$get("encoding"),
  append = FALSE,
  preventOverwriting = rock::opts$get("preventOverwriting"),
  silent = rock::opts$get("silent")
)
```

Arguments

- `file` If specified, the file to export the justification to.
- `encoding` The encoding to use when writing the file.
- `append` Whether to append to the file, or replace its contents.
- `preventOverwriting` Whether to prevent overwriting an existing file.
- `silent` Whether to be silent or chatty.

Value

The result of a call to `justifier::export_justification()`.

Examples

```r
### Get path to example source
examplePath <-
  system.file("extdata", package="rock");

### Get a path to one example file
exampleFile <-
  file.path(examplePath, "example-1.rock");

### Load example source
loadedExample <- rock::load_source(exampleFile);

### Split a code into two codes, showing progress (the backticks are
### used to be able to specify a name that starts with an underscore)
recoded_source <-
```
show_attribute_table

Show a table with all attributes in the RStudio viewer and/or console

Description

Show a table with all attributes in the RStudio viewer and/or console

Usage

show_attribute_table(
  x,
  output = rock::opts$get("tableOutput"),
  tableOutputCSS = rock::opts$get("tableOutputCSS")
)

Arguments

x A rock_parsedSources object (the result of a call to rock::parse_sources).
output The output: a character vector with one or more of "console" (the raw concatenated input, without conversion to HTML), "viewer", which uses the RStudio viewer if available, and one or more filenames in existing directories.
tableOutputCSS The CSS to use for the HTML table.

Value

x, invisibly, unless being knitted into R Markdown, in which case a knitr::asis_output()-wrapped character vector is returned.
**show_inductive_code_tree**

*Show the inductive code tree(s)*

**Description**

This function shows one or more inductive code trees.

**Usage**

```
show_inductive_code_tree(
  x,
  codes = ".*",
  output = "both",
  headingLevel = 3,
  nodeStyle = list(shape = "box", fontname = "Arial"),
  edgeStyle = list(arrowhead = "none"),
  graphStyle = list(rankdir = "LR")
)
```

**Arguments**

- **x** A `rock_parsedSources` object (the result of a call to `rock::parse_sources`).
- **codes** A regular expression: only code trees from codes coded with a coding pattern with this name will be shown.
- **output** Whether to show the code tree in the console (`text`), as a plot (`plot`), or both (`both`).
- **headingLevel** The level of the heading to insert when showing the code tree as text.
- **nodeStyle, edgeStyle, graphStyle** Arguments to pass on to, respectively, `data.tree::SetNodeStyle()`, `data.tree::SetEdgeStyle()`, and `data.tree::SetGraphStyle()`.

**Value**

x, invisibly, unless being knitted into R Markdown, in which case a `knitr::asis_output()`-wrapped character vector is returned.
stripCodePathRoot

Strip the root from a code path

Description

This function strips the root (just the first element) from a code path, using the codeTreeMarker stored in the opts object as marker.

Usage

stripCodePathRoot(x)

Arguments

x

A vector of code paths.

Value

The modified vector of code paths.

Examples

stripCodePathRoot("codes>reason>parent_feels");

vecTxt

Easily parse a vector into a character value

Description

Easily parse a vector into a character value

Usage

vecTxt(
  vector,
  delimiter = "", ",",
  useQuote = "", 
  firstDelimiter = NULL,
  lastDelimiter = " & ",
  firstElements = 0,
  lastElements = 1,
  lastHasPrecedence = TRUE
)

vecTxtQ(vector, useQuote = "'", ...)
Arguments

vector The vector to process.
delimiter, firstDelimiter, lastDelimiter The delimiters to use for respectively the middle, first firstElements, and last lastElements elements.
useQuote This character string is pre- and appended to all elements; so use this to quote all elements (useQuote=""""), doublequote all elements (useQuote=''''), or anything else (e.g. useQuote='|'). The only difference between vecTxt and vecTxtQ is that the latter by default quotes the elements.
firstElements, lastElements The number of elements for which to use the first respective last delimiters
lastHasPrecedence If the vector is very short, it's possible that the sum of firstElements and lastElements is larger than the vector length. In that case, downwardly adjust the number of elements to separate with the first delimiter (TRUE) or the number of elements to separate with the last delimiter (FALSE)?

... Any addition arguments to vecTxtQ are passed on to vecTxt.

Value

A character vector of length 1.

Examples

vecTxtQ(names(mtcars));

wrapVector

Wrap all elements in a vector

Description

Wrap all elements in a vector

Usage

wrapVector(x, width = 0.9 * getOption("width"), sep = "\n", ...)

Arguments

x The character vector
width The number of
sep The glue with which to combine the new lines
... Other arguments are passed to strwrap().
Value
A character vector

Examples
```
res <- wrapVector(
  c(
    "This is a sentence ready for wrapping",
    "So is this one, although it's a bit longer"
  ),
  width = 10
);
print(res);
cat(res, sep="\n");
```

---

**yaml_delimiter_indices**

*Get indices of YAML delimiters*

### Description
Get indices of YAML delimiters

### Usage
```
yaml_delimiter_indices(x)
```

### Arguments
- **x**
  
  The character vector.

### Value
A numeric vector.

### Examples
```
yaml_delimiter_indices(
  c("not here",
    
```
  "---",
  "above this one",
  "but nothing here",
  "below this one, too",
  "---")
);
```
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