Package ‘flattabler’

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Title Obtaining a Flat Table from Pivot Tables

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Description Transformations that allow obtaining a flat table from reports in text or Excel format that contain data in the form of pivot tables. They can be defined for a single report and applied to a set of reports.

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define_labels

Define the quantity of rows and columns that contain labels

Description
A pivot table should only contain label rows and columns, and an array of values, usually numeric data. This function defines the quantity of rows and columns that contain labels.

Usage

```r
define_labels(pt, n_col, n_row)
```

```r
## S3 method for class 'pivot_table'
define_labels(pt, n_col, n_row)
```
**Description**

Divides a table into tables separated by some empty row or column. Returns a table list.

**Usage**

```r
divide(pt)
```

## S3 method for class 'pivot_table'
divide(pt)

**Arguments**

- `pt` A `pivot_table` object.
extract_labels

Details

Sometimes multiple pivot tables are placed in a text document, imported as one text table. This operation recursively divides the initial table into tables separated by some empty row or column. Once a division has been made, it tries to divide each part of the result. An object is generated for each indivisible pivot table. Returns a list of pivot_table objects.

If individual tables have a header or footer, they should not be separated from the table by empty rows. If they were, objects would be generated from them that must later be removed from the list of objects in the result.

The operation can be applied to tables located horizontally, vertically or in a grid on the initial table. The only requirement to be able to divide it is that there is some empty row or column between them.

Value

A pivot_table object list.

See Also

Other pivot table definition functions: define_labels(), get_page(), remove_bottom(), remove_cols(), remove_empty(), remove_left(), remove_right(), remove_rows(), remove_top(), set_page(), view_table_attr()

Examples

library(tidyr)

lpt <- pt_set_h %>% divide()

lpt <- pt_set_v %>% divide()

lpt <- pt_set_h_v %>% divide()

extract_labels Extract labels

Description

Extract the given set of labels from a table column in compact format to generate a new column in the table.

Usage

extract_labels(pt, col = 1, labels = c())

## S3 method for class 'pivot_table'
extract_labels(pt, col = 1, labels = c())
fill_labels

Arguments

- **pt**: A pivot_table object.
- **col**: A number, column from which labels are extracted.
- **labels**: A vector of strings, set of labels to extract.

Details

Sometimes a table column includes values of multiple label fields, this is generally known as compact table format. Given a column number and a set of labels, it generates a new column with the labels located at the positions they occupied in the original column and removes them from it.

Value

A pivot_table object.

See Also

Other pivot table transformation functions: fill_labels(), fill_values(), get_col_values(), remove_agg(), remove_k(), replace_dec()

Examples

library(tidyr)

pt <- pt_m4_compact %>%
    extract_labels(col = 1, labels = c("b1", "b2", "b3", "b4", "Total general"))

pt <- pt_ine2871 %>%
    extract_labels(col = 1, labels = c("18 Granada"))

---

**fill_labels**  
*Fill in missing labels*

Description

Fills missing values in row and column labels for a pivot table. In columns they are filled down; in rows to the right.

Usage

fill_labels(pt)

```r
## S3 method for class 'pivot_table'
fill_labels(pt)
```
Arguments

pt       A pivot_table object.

Details

A pivot table should only contain label rows and columns, and an array of values, usually numeric data.
To correctly carry out this operation, the number of rows and columns that contain labels must be defined, and the table must only contain the pivot table rows and columns.

Value

A pivot_table object.

See Also

Other pivot table transformation functions: extract_labels(), fill_values(), get_col_values(), remove_agg(), remove_k(), replace_dec()

Examples

library(tidyr)

pt <-
 pt_m4 %>%
 remove_top(1) %>%
 define_labels(n_col = 2, n_row = 2) %>%
 fill_labels()
pt <-
 pt_ine2871 %>%
 remove_top(6) %>%
 remove_bottom(9) %>%
 define_labels(n_col = 1, n_row = 2) %>%
 fill_labels()

fill_values Fill in missing values

Description

Fills with NA missing values in a pivot table value array.

Usage

fill_values(pt)

## S3 method for class 'pivot_table'
fill_values(pt)
Arguments

pt A pivot_table object.

Details

A pivot table should only contain label rows and columns, and an array of values, usually numeric data.

To correctly carry out this operation, the number of rows and columns that contain labels must be defined, and the table must only contain the pivot table rows and columns.

Value

A pivot_table object.

See Also

Other pivot table transformation functions: extract_labels(), fill_labels(), get_col_values(), remove_agg(), remove_k(), replace_dec()

Examples

library(tidyrr)

pt <-
  pt_m4 %>%
  remove_top(1) %>%
  define_labels(n_col = 2, n_row = 2) %>%
  fill_values()

pt <-
  pt_ine2871 %>%
  remove_top(6) %>%
  remove_bottom(9) %>%
  define_labels(n_col = 1, n_row = 2) %>%
  fill_values()
Details

A pivot table should only contain label rows and columns, and an array of values, usually numeric data.

flattabler package provides four categories of functions: Pivot table import, pivot table definition, pivot table transformation, and flat table generation.

Pivot table import

Functions to import pivot tables from a text or Excel file or set of files, or to generate it from a data frame.

- read_text_file()
- read_text_folder()
- read_excel_sheet()
- read_excel_file()
- read_excel_folder()
- pivot_table()

Pivot table definition

Functions to view the object, to split a table into several, to define its characteristics, and to remove the rows and columns that are not part of the pivot table.

- view_table_attr()
- divide()
- get_page()
- set_page()
- define_labels()
- remove_empty()
- remove_rows()
- remove_cols()
- remove_top()
- remove_bottom()
- remove_left()
- remove_right()

Pivot table transformation

Functions to transform the rows and columns of labels, or the array of values of the pivot table.

- fill_labels()
- remove_agg()
- extract_labels()
• `get_col_values()`
• `fill_values()`
• `remove_k()`
• `replace_dec()`

Flat table generation

Functions to generate a flat table from a pivot table and to apply a set of transformations to a list of tables.

• `unpivot()`
• `flatten_table_list()`

---

`flatten_table_list` *Transform a pivot table list into a flat table*

**Description**

Given a list of pivot tables and a transformation function that flattens a `pivot_table` object, transforms each table using the function and merges the results into a flat table.

**Usage**

`flatten_table_list(lpt = list(), FUN)`

**Arguments**

- **lpt** A list of `pivot_table` objects.
- **FUN** A function, transformation function that flattens a `pivot_table` object (it returns a `tibble`).

**Value**

A `tibble`, a flat table implemented by a `tibble`.

**See Also**

Other flat table generation functions: `unpivot()`
Examples

```r
library(tidyr)

f <- function(pt) {
  pt %>%
    set_page(1, 1) %>%
    remove_top(1) %>%
    define_labels(n_col = 2, n_row = 2) %>%
    remove_k() %>%
    replace_dec() %>%
    fill_values() %>%
    fill_labels() %>%
    remove_agg() %>%
    unpivot()
}

ft <- flatten_table_list(list_pt, f)
```

---

**get_col_values**

**Get column values**

**Description**

Gets the values of the indicated column of each table in a list of tables, avoiding the rows at the beginning or the end of each table that are indicated.

**Usage**

```r
get_col_values(lpt, col = 1, start_row = 2, rows_left = 0)
```

**Arguments**

- `lpt` List of tables.
- `col` A number, column to consider.
- `start_row` A number, start row in each table.
- `rows_left` A number, rows to ignore at the end of each table.

**Details**

Sometimes a column includes values of multiple label fields. To facilitate the study of the labels included in the same column of several tables, this function gets the values of the indicated column in a list of tables.

**Value**

Data frame with two columns: Labels in the column, and the index of the table in the list of tables from which they come.
See Also

Other pivot table transformation functions: `extract_labels()`, `fill_labels()`, `fill_values()`, `remove_agg()`, `remove_k()`, `replace_dec()`

Examples

```r
df <- get_col_values(list_pt_compact, start_row = 4)
labels <- sort(unique(df$label))
```

---

Description

Get the page information associated with the pivot table represented by the object.

Usage

```r
get_page(pt)
```

### S3 method for class 'pivot_table'

```r
get_page(pt)
```

Arguments

- `pt` A `pivot_table` object.

Details

Each pivot table implements a report. The pivot table page represents the context of that report. It is useful when we work with several pivot tables with the same structure: for example, the page can allow us to differentiate their origin, date or author. This information is often included in the file name, sheet name, or cells attached to the pivot table.

Value

A vector of strings.

See Also

Other pivot table definition functions: `define_labels()`, `divide()`, `remove_bottom()`, `remove_cols()`, `remove_empty()`, `remove_left()`, `remove_right()`, `remove_rows()`, `remove_top()`, `set_page()`, `view_table_attr()`

Examples

```r
page <- get_page(pt_m4)
```
list_pt  

List of pivot tables

Description
List of pivot tables.

Usage
list_pt

Format
List of pivot_table objects.

list_pt_compact  

Pivot tables with a column with data from two label fields

Description
List of pivot tables with a column with data from two label fields (this is generally known as compact table format).

Usage
list_pt_compact

Format
List of pivot_table objects.

list_pt_ie  

List of pivot tables used in the vignette

Description
List of pivot tables used in the vignette, an illustrative example.

Usage
list_pt_ie

Format
List of pivot_table objects.
**Description**

Creates a `pivot_table` object from a data frame. Additional information associated with the pivot table can be indicated. Data frame data is converted to character type.

**Usage**

```r
pivot_table(df, page = vector("character"))
```

**Arguments**

- `df`: A data frame, contains one or more pivot tables.
- `page`: A string, additional information associated with the pivot table.

**Value**

A `pivot_table` object.

**See Also**

Other import functions: `read_excel_file()`, `read_excel_folder()`, `read_excel_sheet()`, `read_text_file()`, `read_text_folder()`

**Examples**

```r
df <- data.frame(unclass(pt_m4)[c(1:7)])
pt <- pivot_table(df)
pt <- pivot_table(df, page = "M4")
```

---

**pt_ine2871**

*Official population in the municipalities of Granada (Spain)*

**Description**

A dataset containing official population figures resulting from the revision of the Municipal Register on January 1 for the municipalities of Granada (Spain). It is a pivot table that has rows before and after it.

**Usage**

```r
pt_ine2871
```
Format

A pivot_table object.

Source


<table>
<thead>
<tr>
<th>pt_m4</th>
<th>Pivot table with with thousands indicator and decimal numbers</th>
</tr>
</thead>
</table>

Description

Pivot table with with thousands indicator and decimal numbers.

Usage

pt_m4

Format

A pivot_table object.

<table>
<thead>
<tr>
<th>pt_m4_compact</th>
<th>Pivot table with a column with data from two label fields</th>
</tr>
</thead>
</table>

Description

Pivot table in compact table format: with a column with data from two label fields.

Usage

pt_m4_compact

Format

A pivot_table object.
**pt_pivottabler**

**Pivot table with basic and subtotal labels in the same column**

**Description**

A dataset containing number of train passengers, generated with the pivottabler package. It contains basic and subtotal labels in the same column.

**Usage**

`pt_pivottabler`

**Format**

A `pivot_table` object.

**Source**

[https://CRAN.R-project.org/package=pivottabler](https://CRAN.R-project.org/package=pivottabler)

---

**pt_set_h**

*Set of pivot tables placed horizontally on one sheet*

**Description**

Set of pivot tables placed horizontally on one sheet.

**Usage**

`pt_set_h`

**Format**

A `pivot_table` object.
**pt_set_h_v**  
*Set of pivot tables on one sheet*

**Description**
Example of a set of pivot tables located horizontally and vertically on one sheet.

**Usage**
```
pt_set_h_v
```

**Format**
A `pivot_table` object.

---

**pt_set_v**  
*Set of pivot tables placed vertically on one sheet*

**Description**
Set of pivot tables placed vertically on one sheet.

**Usage**
```
pt_set_v
```

**Format**
A `pivot_table` object.

---

**read_excel_file**  
*Import Excel file*

**Description**
Reads sheets from an Excel file and creates a `pivot_table` object list, one from each sheet. Each sheet is expected to contain a pivot table. Each line in a sheet corresponds to a row in a table. The file and sheet names are included as part of each object attributes.

**Usage**
```
read_excel_file(file, sheetIndexes = NULL, sheetNames = NULL)
```
read_excel_folder

Arguments

- **file**: A string, name of an Excel file.
- **sheetIndexes**: A vector of numbers, sheet indexes in the workbook.
- **sheetNames**: A vector of strings, sheet names.

Details

When multiple files or sheets are handled, the file and/or sheet names may contain information associated with the pivot table, they could be the table page information. In order not to lose this information, they are always stored in each pivot_table object.

Value

A pivot_table object list.

See Also

Other import functions: pivot_table(), read_excel_folder(), read_excel_sheet(), read_text_file(), read_text_folder()

Examples

```r
file <- system.file("extdata", "excel/set_sheets.xlsx", package = "flattabler")
lpt <- read_excel_file(file)
lpt <- read_excel_file(file, sheetIndexes = 1:4)
lpt <- read_excel_file(file, sheetNames = c("M1", "M2", "M3", "M4"))
```

---

**Description**

Reads one sheet (or all sheets) from each of the Excel files in a folder and creates a list of pivot_table objects, one from each sheet. Each sheet is expected to contain a pivot table. Each line in a file corresponds to a row in a table. File and sheet names are included as part of each object attributes.

**Usage**

```
read_excel_folder(folder, sheetIndex = 1, sheetName = NULL, allSheets = FALSE)
```

**Arguments**

- **folder**: A string, folder name.
- **sheetIndex**: A number, sheet index in the workbook.
- **sheetName**: A string, sheet name.
- **allSheets**: A boolean.
read_excel_sheet

Details
When multiple files or sheets are handled, the file and/or sheet names may contain information associated with the pivot table, they could be the table page information. In order not to lose this information, they are always stored in each pivot_table object.

Value
A pivot_table object list.

See Also
Other import functions: pivot_table(), read_excel_file(), read_excel_sheet(), read_text_file(), read_text_folder()

Examples
folder <- system.file("extdata", "excelfolder", package = "flattabler")
lpt <- read_excel_folder(folder)

lpt <- read_excel_folder(folder, allSheets = TRUE)

---

read_excel_sheet
Import Excel file sheet

Description
Reads an Excel file sheet and creates a pivot_table object. The sheet is expected to contain one or more pivot tables. Each line in the sheet corresponds to a row in a table. The file and sheet names are included as part of the object attributes.

Usage
read_excel_sheet(file, sheetIndex = 1, sheetName = NULL)

Arguments
file A string, name of an Excel file.
sheetIndex A number, sheet index in the workbook.
sheetName A string, sheet name.

Details
When multiple files or sheets are handled, the file and/or sheet names may contain information associated with the pivot table, they could be the table page information. In order not to lose this information, they are always stored in the pivot_table object.
**read_text_file**

**Value**

A `pivot_table` object.

**See Also**

Other import functions: `pivot_table()`, `read_excel_file()`, `read_excel_folder()`, `read_text_file()`, `read_text_folder()`

**Examples**

```r
file <- system.file("extdata", "excel/ine2871.xlsx", package = "flattabler")
pt <- read_excel_sheet(file)
pt <- read_excel_sheet(file, sheetName = "tabla-2871")
```

---

**Description**

Reads a text file and creates a `pivot_table` object. The file is expected to contain one or more pivot tables. Each line in the file corresponds to a row in a table; within each row, columns are defined by a separator character. The file name is included as part of the object attributes.

**Usage**

```r
read_text_file(file, sep = ";", encoding = "UTF-8")
```

**Arguments**

- **file**
  A string, name of a text file.
- **sep**
  Column separator character.
- **encoding**
  A string, encoding to be assumed for input strings.

**Details**

When multiple files are handled, the file name may contain information associated with the pivot table, it could be the table page information. In order not to lose this information, it is always stored in the `pivot_table` object.

**Value**

A `pivot_table` object.
See Also

Other import functions: `pivot_table()`, `read_excel_file()`, `read_excel_folder()`, `read_excel_sheet()`, `read_text_folder()`

Examples

```r
file <- system.file("extdata", "csv/ine2871.csv", package = "flattabler")
pt <- read_text_file(file)
```

Description

Reads all text files in a folder and creates a list of `pivot_table` objects, one from each file. Each file is expected to contain a pivot table. Each line in a file corresponds to a row in a table; within each row, columns are defined by a separator character. File name is included as part of each object attributes.

Usage

```r
read_text_folder(folder, sep = ";", encoding = "UTF-8")
```

Arguments

- `folder` A string, folder name.
- `sep` Column separator character.
- `encoding` A string, encoding to be assumed for input strings.

Details

When multiple files are handled, the file name may contain information associated with the pivot table, it could be the table page information. In order not to lose this information, it is always stored in each `pivot_table` object.

Value

A `pivot_table` object list.

See Also

Other import functions: `pivot_table()`, `read_excel_file()`, `read_excel_folder()`, `read_excel_sheet()`, `read_text_file()`
Examples

```r
folder <- system.file("extdata", "csvfolder", package = "flattabler")
lpt <- read_text_folder(folder)
```

---

### remove_agg

#### Remove rows and columns with aggregated data

**Description**

Removes pivot table rows and columns that contain aggregated data.

**Usage**

```r
remove_agg(pt, indicator)
```

```r
## S3 method for class 'pivot_table'
remove_agg(pt, indicator = "")
```

**Arguments**

- `pt`: A `pivot_table` object.
- `indicator`: A string, row or column label for aggregates.

**Details**

A pivot table should only contain label rows and columns, and an array of values, usually numeric data.

Aggregated data is recognized because the label of the row or column closest to the array of values is empty or has a special value as an indicator.

To correctly carry out this operation, the number of rows and columns that contain labels must be defined, and the table must only contain the pivot table rows and columns.

**Value**

A `pivot_table` object.

**See Also**

Other pivot table transformation functions: `extract_labels()`, `fill_labels()`, `fill_values()`, `get_col_values()`, `remove_k()`, `replace_dec()`
Examples

```r
library(tidyr)

pt <-
  pt_m4 %>%
  remove_top(1) %>%
  define_labels(n_col = 2, n_row = 2) %>%
  remove_agg()

pt <-
  pt_pivottabler %>%
  define_labels(n_col = 2, n_row = 2) %>%
  remove_agg("Total") %>%
  remove_agg()
```

---

remove_bottom

Remove bottom rows from a pivot table

Description

Remove bottom rows from the pivot table represented by the object.

Usage

```r
remove_bottom(pt, n)
```

### S3 method for class 'pivot_table'

```r
remove_bottom(pt, n)
```

Arguments

- **pt** A `pivot_table` object.
- **n** A number, number of rows to remove.

Details

A pivot table should only contain label rows and columns, and an array of values, usually numeric data.

All rows not belonging to the pivot table must be removed. It is common to find rows with footer information, which must be removed.

This function is very useful because it is not necessary to know the number of rows in the table.

Value

A `pivot_table` object.
remove_cols

See Also
Other pivot table definition functions: define_labels(), divide(), get_page(), remove_cols(), remove_empty(), remove_left(), remove_right(), remove_rows(), remove_top(), set_page(), view_table_attr()

Examples
library(tidyrl)

pt <- pt_m4 %>% remove_bottom(1)
pt <- pt_ine2871 %>% remove_bottom(9)

remove_cols Remove columns from a pivot table

Description
Remove the columns whose numbers are indicated from the pivot table represented by the object.

Usage
remove_cols(pt, c)

## S3 method for class 'pivot_table'
remove_cols(pt, c)

Arguments
pt A pivot_table object.
c A vector of numbers, column numbers.

Details
A pivot table should only contain label rows and columns, and an array of values, usually numeric data.
All columns not belonging to the pivot table must be removed.

Value
A pivot_table object.

See Also
Other pivot table definition functions: define_labels(), divide(), get_page(), remove_cols(), remove_empty(), remove_left(), remove_right(), remove_rows(), remove_top(), set_page(), view_table_attr()
Examples

```r
library(tidyr)

pt <- pt_m4 %>% remove_cols(7)
pt <- pt_m4 %>% remove_cols(c(6,7))
```

---

**remove_empty**  
*Remove empty rows and columns from a pivot table*

**Description**

Remove rows and columns without data from the pivot table represented by the object.

**Usage**

```r
remove_empty(pt)
```

```r
## S3 method for class 'pivot_table'
remove_empty(pt)
```

**Arguments**

- `pt`  
  A pivot_table object.

**Details**

A pivot table should only contain label rows and columns, and an array of values, usually numeric data.

All rows and columns not belonging to the pivot table must be removed, including those without data.

**Value**

A pivot_table object.

**See Also**

Other pivot table definition functions: `define_labels()`, `divide()`, `get_page()`, `remove_bottom()`, `remove_cols()`, `remove_left()`, `remove_right()`, `remove_rows()`, `remove_top()`, `set_page()`, `view_table_attr()`
Examples

library(tidyr)

pt <- pt_m4 %>% remove_empty()

pt <- pt_ine2871 %>% remove_empty()

remove_k

Remove thousands separator

Description

A pivot table should only contain label rows and columns, and an array of values, usually numeric data. Values, even though they are numbers, are represented as text and sometimes include a thousands separator that can be removed using this function.

Usage

remove_k(pt, sep = ".")

## S3 method for class 'pivot_table'
remove_k(pt, sep = ".")

Arguments

pt A pivot_table object.

sep A character, thousands separator to remove.

Details

To correctly carry out this operation, the number of rows and columns that contain labels must be defined, and the table must only contain the pivot table rows and columns.

Value

A pivot_table object.

See Also

Other pivot table transformation functions: extract_labels(), fill_labels(), fill_values(), get_col_values(), remove_agg(), replace_dec()
Examples

library(tidyr)

pt <-
  pt_m4 %>%
  remove_top(1) %>%
  define_labels(n_col = 2, n_row = 2) %>%
  remove_k()

pt <-
  pt_ine2871 %>%
  remove_top(6) %>%
  remove_bottom(9) %>%
  define_labels(n_col = 1, n_row = 2) %>%
  remove_k()

---

remove_left

Remove left columns from a pivot table

Description

Remove left columns from the pivot table represented by the object.

Usage

remove_left(pt, n)

## S3 method for class 'pivot_table'
remove_left(pt, n)

Arguments

pt

A pivot_table object.

n

A number, number of columns to remove.

Details

A pivot table should only contain label rows and columns, and an array of values, usually numeric data.

All columns not belonging to the pivot table must be removed.

Value

A pivot_table object.
remove_right

See Also

Other pivot table definition functions: define_labels(), divide(), get_page(), remove_bottom(), remove_cols(), remove_empty(), remove_right(), remove_rows(), remove_top(), set_page(), view_table_attr()

Examples

library(tidyrr)

pt <- pt_m4 %>% remove_left(2)

remove_right Remove right columns from a pivot table

Description

Remove right columns from the pivot table represented by the object.

Usage

remove_right(pt, n)

## S3 method for class 'pivot_table'
remove_right(pt, n)

Arguments

pt A pivot_table object.
n A number, number of columns to remove.

Details

A pivot table should only contain label rows and columns, and an array of values, usually numeric data.

All columns not belonging to the pivot table must be removed.

This function is very useful because it is not necessary to know the number of columns in the table.

Value

A pivot_table object.

See Also

Other pivot table definition functions: define_labels(), divide(), get_page(), remove_bottom(), remove_cols(), remove_empty(), remove_left(), remove_rows(), remove_top(), set_page(), view_table_attr()
remove_rows

Examples

```r
library(tidyr)
pt <- pt_m4 %>% remove_right(2)
```

---

remove_rows  
**Remove rows from a pivot table**

Description

Remove the rows whose numbers are indicated from the pivot table represented by the object.

Usage

```r
remove_rows(pt, r)
```

## S3 method for class 'pivot_table'

```r
remove_rows(pt, r)
```

Arguments

- `pt` A `pivot_table` object.
- `r` A vector of numbers, row numbers.

Details

A pivot table should only contain label rows and columns, and an array of values, usually numeric data.

All rows not belonging to the pivot table must be removed. It is common to find rows with header or footer information, which must be removed.

Value

A `pivot_table` object.

See Also

Other pivot table definition functions: `define_labels()`, `divide()`, `get_page()`, `remove_bottom()`, `remove_cols()`, `remove_empty()`, `remove_left()`, `remove_right()`, `remove_top()`, `set_page()`, `view_table_attr()`
Examples

```r
library(tidyr)
pt <- pt_m4 %>% remove_rows(1)
pt <- pt_m4 %>% remove_rows(c(1, 8, 14, 19, 25, 26))
```

remove_top  Remove top rows from a pivot table

Description
Remove top rows from the pivot table represented by the object.

Usage

```r
remove_top(pt, n)
```

## S3 method for class 'pivot_table'
remove_top(pt, n)

Arguments

- `pt`: A `pivot_table` object.
- `n`: A number, number of rows to remove.

Details
A pivot table should only contain label rows and columns, and an array of values, usually numeric data.
All rows not belonging to the pivot table must be removed. It is common to find rows with header information, which must be removed.

Value
A `pivot_table` object.

See Also
Other pivot table definition functions: `define_labels()`, `divide()`, `get_page()`, `remove_bottom()`, `remove_cols()`, `remove_empty()`, `remove_left()`, `remove_right()`, `remove_rows()`, `set_page()`, `view_table_attr()`
Examples

```r
library(tidyr)

pt <- pt_m4 %>% remove_top(1)
pt <- pt_ine2871 %>% remove_top(6)
```

---

**replace_dec**

*Replace decimal separator*

**Description**

A pivot table should only contain label rows and columns, and an array of values, usually numeric data. Values, even though they are numbers, are represented as text and sometimes include a decimal separator different from the one needed; it can be replaced using this function.

**Usage**

```r
replace_dec(pt, sep = ".")
```

## S3 method for class 'pivot_table'

```
replace_dec(pt, sep = ".")
```

**Arguments**

- **pt**
  - A pivot_table object.
- **sep**
  - A character, new decimal separator to use.

**Details**

To correctly carry out this operation, the number of rows and columns that contain labels must be defined, and the table must only contain the pivot table rows and columns.

The only decimal separators considered are "." and ",".

**Value**

A pivot_table object.

**See Also**

Other pivot table transformation functions: `extract_labels()`, `fill_labels()`, `fill_values()`, `get_col_values()`, `remove_agg()`, `remove_k()`
Examples

```r
library(tidyr)

pt <-
  pt_m4 %>%
  remove_top(1) %>%
  define_labels(n_col = 2, n_row = 2) %>%
  replace_dec()
```

Description

Define the page information associated with a pivot table. Previously existing information is re-
placed by new information.

Usage

```r
set_page(pt, row = 0, col = 0, page = "")

## S3 method for class 'pivot_table'
set_page(pt, row = 0, col = 0, page = "")
```

Arguments

- `pt` A `pivot_table` object.
- `row, col` A cell (row and column number), page information included in the table.
- `page` A string, page information.

Details

Each pivot table implements a report. The pivot table page represents the context of that report. It
is useful when we work with several pivot tables with the same structure: for example, the page can
allow us to differentiate their origin, date or author. This information is often included in the file
name, sheet name, or a cell attached to the pivot table.

Value

A `pivot_table` object.

See Also

Other pivot table definition functions: `define_labels()`, `divide()`, `get_page()`, `remove_bottom()`,
`remove_cols()`, `remove_empty()`, `remove_left()`, `remove_right()`, `remove_rows()`, `remove_top()`,
`view_table_attr()`
unpivot

**Unpivot a pivot table**

**Description**

Transforms a pivot table into a flat table (implemented by a tibble). An additional column with page information can be included. NA values can be excluded from the array of values.

**Usage**

```r
unpivot(pt, include_page = TRUE, na.rm = TRUE)
```

## S3 method for class 'pivot_table'

```r
unpivot(pt, include_page = TRUE, na.rm = TRUE)
```

**Arguments**

- `pt` A pivot_table object.
- `include_page` A boolean, indicates whether a column with the page information is included or not.
- `na.rm` A boolean, indicates whether NA values from the array of values are removed or not.

**Details**

A pivot table should only contain label rows and columns, and an array of values, usually numeric data.

To correctly carry out this operation, the number of rows and columns that contain labels must be defined, and the table must only contain the pivot table rows and columns.

**Value**

A tibble.

**See Also**

Other flat table generation functions: `flatten_table_list()`
Examples

```r
library(tidyrr)

a_tibble <-
  pt_m4 %>%
  remove_top(1) %>%
  define_labels(n_col = 2, n_row = 2) %>%
  unpivot(include_page = FALSE)

a_tibble <-
  pt_m4 %>%
  set_page(1, 1) %>%
  remove_top(1) %>%
  define_labels(n_col = 2, n_row = 2) %>%
  remove_k() %>%
  replace_dec() %>%
  fill_values() %>%
  fill_labels() %>%
  remove_agg() %>%
  unpivot()

a_tibble <-
  pt_pivotabler %>%
  define_labels(n_col = 2, n_row = 2) %>%
  fill_values() %>%
  fill_labels() %>%
  remove_agg("Total") %>%
  remove_agg() %>%
  unpivot(include_page = FALSE, na.rm = FALSE)
```

---

**view_table_attr**  
*View table and attributes*

Description

Displays the table and attributes of the object.

Usage

```r
view_table_attr(pt)
```

## S3 method for class 'pivot_table'

view_table_attr(pt)

Arguments

- `pt`  
  A pivot_table object.
Value

A pivot_table object.

See Also

Other pivot table definition functions: `define_labels()`, `divide()`, `get_page()`, `remove_bottom()`, `remove_cols()`, `remove_empty()`, `remove_left()`, `remove_right()`, `remove_rows()`, `remove_top()`, `set_page()`
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