Package 'clinify'

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Type Package

Title Clinical Table Styling Tools and Utilities

Version 0.1.2

Depends R (>= 4.2)

Imports flextable, officer, magrittr, dplyr, knitr, htmltools,
tidyselect, zoo

Suggests rmarkdown, testthat (>= 3.0.0), Tplyr, rvest, withr, xml2

Description

The primary motivation of this package is to take the things that are great about the R packages 'flextable' <https://davidgohel.github.io/flextable/> and 'officer' <https://davidgohel.github.io/officer/>, take the standard and complex pieces of formatting clinical tables for regulatory use, and simplify the tedious pieces.

License Apache License (>= 2)

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VignetteBuilder knitr

URL https://atorus-research.github.io/clinify/

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Contents

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as_clintable   *Convert a flextable into a clintable object*

Description

Convert a flextable into a clintable object

Usage

```
as_clintable(x, page_by = NULL, group_by = NULL)
```

Arguments

x	A flextable object
page_by	A variable in the input dataframe to use for pagination
group_by	A variable which will be used for grouping and attached as a label above the table headers

Value

A clintable object

Examples

```
ft <- flextable::flextable(mtcars)
as_clintable(ft)
```

---

clinify_docx_default   *Function to create a default officer docx object*

Description

Default document attributes assume landscape A4 paper size

Usage

```
clinify_docx_default()
```

Value

An rdocx object from the officer package

---

clinify_footnotes_default

The function to apply default footnote styling

Description

Next styling is applied: – font colour - black
– page footer should have single black top border over the top row that is width of 1
– all borders are removed
– font style - Courier New, 9pt, not bold, not italic
– interval between rows - 1 space
– padding - bottom = 0, top = 0

Usage

```
clinify_footnotes_default(x, ...)
```

Arguments

x	flextable object that is modified by the function.
...	any additional arguments

Details

One has to specify the width of the page header "table", which in this case is landscape page width (11.42 in) minus two times 1 in margin. ALL headers would have 3 columns underneath the hood (for left, center and right-aligned text). Hence we divide by 3 to specify the width of a single column

Value

None

---

clinify_table_default   *The function to apply default table styling*

Description

Headers with the same value are merged both horizontally and vertically All borders are clear except for the header (bleck, solid, 0.2pt) As well as top horizontal line for the table header. font style - Courier New, 9pt, not bold, not italic padding for table body - bottom = 0.1, top = 0.1 padding for table first header - top = 9 padding for table last header - bottom = 9 table's layout is set to be fixed.

Usage

```
clinify_table_default(x, ...)
```

Arguments

x   flextable object that is modified by the function.

...   any additional arguments

Value

None

---

clinify_titles_default

The function to apply default title styling

Description

Next styling is applied: – font colour - black
– all borders are removed
– font style - Courier New, 9pt, not bold, not italic
– interval between rows - 1 space
– padding - bottom = 0, top = 0

Usage

```
clinify_titles_default(x, ...)
```

Arguments

x   flextable object that is modified by the function.

...   any additional arguments

Details

One has to specify the width of the page header "table", which in this case is landscape page width (11.42 in) minus two times 1 in margin. ALL headers would have 3 columns underneath the hood (for left, center and right-aligned text). Hence we divide by 3 to specify the width of a single column

Value

None

---

clintable   *Create a new clintable object*

Description

A clintable object directly inherits from a flextable object. This function will pass all necessary parameters `flextable::flextable()` and conver the object to a `clintable`

Usage

```
clintable(x, page_by = NULL, group_by = NULL, use_labels = TRUE, ...)
```

Arguments

x	A data frame
page_by	A variable in the input dataframe to use for pagination
group_by	A character vector of variable names which will be used for grouping and attached as a label above the table headers
use_labels	Use variable labels as column headers. Nested levels can be achieved using the string "‖" as a delimitter. Horizontal and vertical levels using identical words will be merged.
...	Parameters to pass to `flextable::flextable()`

Value

A clintable object

Examples

```
clintable(mtcars)
```

---

clin_add_titles   *Add page footer*

Description

This function adds a text, passed as argument, into .docx bottom colontitle (page footer). As a result, the text is repeated on each page of the document. Takes a list of lists as an input parameter, where each sublist represents a separate line (or row) of text. There is also a possibility to add a row with both left- and right-aligned text. To do so - simply pass two items to a sublist instead of one.

Usage

```
clin_add_titles(x, ls = NULL, ft = NULL)

clin_add_footnotes(x, ls = NULL, ft = NULL)
```

Arguments

x	a clintable object
ls	a list of character vectors, no more than 3 elements to a vector
ft	A flextable object to use as the header

Value

A clintable object

Examples

```
clintable(mtcars) |>
  clin_add_titles(
    list(
      c("Left", "Center", "Right"),
      c("Just the middle")
    )
  ) |>
  clin_add_footnotes(
    list(
      c(
        "Here's a footnote.",
        format(Sys.time(), "%H:%M %A, %B %d, %Y")
      )
    )
  )
```

---

clin_alt_pages *Configure alternating pages during pagination of a clintable*

Description

This function configures alternating pages on a clintable object.

Usage

```
clin_alt_pages(x, key_cols, col_groups)
```

Arguments

x	A clintable object
key_cols	A character vector of variable names
col_groups	A list of character vectors of variable names

Value

A clintable object

Examples

```
ct <- clintable(mtcars)

clin_alt_pages(
  ct,
  key_cols = c('mpg', 'cyl', 'hp'),
  col_groups = list(
    c('disp', 'drat', 'wt'),
    c('qsec', 'vs', 'am'),
    c('gear', 'carb')
  )
)
```

---

clin_column_headers *Set the column headers of the output clintable*

Description

This function allows you to apply column headers named arguments and character vectors. Separate elements of the character vector are converted to separate levels of the output table header. The in which the headers are applied goes from top to bottom, so if you provide 3 elements for a column header, the first element is applied to the top and the second to the bottom. If one variable has three levels and other variable only have one or two, the columns with less levels to the header will bind to the bottom. So a column with two levels will apply to the second and third row, and a column with one level with apply the bottom row. Spanners are determined using cells of the same text value, where horizontal and vertical merging is performed.

Usage

```
clin_column_headers(x, ...)
```

Arguments

x	A clintable object
...	Named arguments providing the column header text. Separate levels of the header are determined using separate elements of a character vector.

Details

The same result can be achieved using column labels on the input dataframe to the clintable. If labels are present, header levels will be separated using the delimitter "‖" within the label string.

Value

A clintable object

Examples

```
clintable(iris) |>
  clin_column_headers(
    Sepal.Length = c("Flowers", "Sepal", "Length"),
    Sepal.Width = c("Flowers", "Sepal", "Width"),
    Petal.Length = c("Petal", "Length"),
    Petal.Width = c("Petal", "Width")
 )
```

---

clin_col_widths   *Set column widths using percent*

Description

Extraction of flextable print method with special handling of clintable pages and

Usage

```
clin_col_widths(x, ...)
```

Arguments

x	A clintable object
...	Named parameters where the names are columns in the flextable and the values are decimals representing the percent of total width of the table

Value

A clintable object

Examples

```
ct <- clintable(mtcars)

ct <- clin_alt_pages(
  ct,
  key_cols = c('mpg', 'cyl', 'hp'),
  col_groups = list(
    c('disp', 'drat', 'wt'),
    c('qsec', 'vs', 'am'),
    c('gear', 'carb')
  )
) |>
clin_col_widths(mpg = .2, cyl=.2, disp=.15, vs=.15)

print(ct)
```

---

clin_default_table_width

Helper function to get the total page width

Description

Using the document dimensions stored in options, calculate the width that can be used in table body, titles, and footnotes. Calculation uses the page width subtracting right and left margins.

Usage

```
clin_default_table_width()
```

Value

An rdocx object from the officer package

---

clin_group_by   *Configure a clintable to table by a grouping variable, which will be*
                                 used as a label

Description

Configure a clintable to table by a grouping variable, which will be used as a label

Usage

```
clin_group_by(x, group_by)
```

Arguments

x   A clintable object

group_by   A character vector of variable names which will be used for grouping and at-
                     tached as a label above the table headers

Value

A clintable object

Examples

```
clintable(iris) |>
  clin_group_by('Species')
```

---

clin_page_by   *Configure pagination using a page variable*

Description

Configure pagination using a page variable

Usage

```
clin_page_by(x, page_by, max_rows = 10)
```

Arguments

x   A clintable object

page_by   A variable in the input dataframe to use for pagination

max_rows   If no page_by, the maximum rows allowed per page

Value

A clintable object

Examples

```
dat <- mtcars
dat['page'] <- c(
  rep(1, 10),
  rep(2, 10),
  rep(3, 10),
  c(4, 4)
)

clintable(dat) |>
  clin_page_by('page')

clintable(mtcars) |>
  clin_page_by(max_rows=10)
```

---

new_title_footnote   *Create a new title or footnote flextable*

Description

Create a new title or footnote flextable

Usage

```
new_title_footnote(x, sect = c("titles", "footnotes"))
```

Arguments

x   a list of character vectors, no more than 3 elements to a vector.

sect   Either "titles" or "footnotes"

Value

A flextable object

Examples

```
#TODO:
```

print.clintable	*Clintable print method*

Description

Extraction of flextable print method with special handling of clintable pages and

Usage

```
## S3 method for class 'clintable'
print(x, n = 3, nrows = 15, apply_defaults = TRUE, ...)

## S3 method for class 'clintable'
knit_print(x, n = 3, nrows = 15, apply_defaults = TRUE, ...)
```

Arguments

x	A clintable object
n	Number of pages within the clintable to print. Only used when pagination is configured
nrows	Number of rows to print. Only used when rows aren't configured within the pagination method
apply_defaults	Apply default styles. These styles are stored in the options clinify_header_default, clinify_footer_default, and clinify_table_default respectively. Defaults to true.
...	Additional parameters passed to flextable print method

Value

Invisible

Examples

```
ct <- clintable(mtcars)

print(ct)

ct <- clin_alt_pages(
  ct,
  key_cols = c('mpg', 'cyl', 'hp'),
  col_groups = list(
    c('disp', 'drat', 'wt'),
    c('qsec', 'vs', 'am'),
    c('gear', 'carb')
  )
)

print(ct)
```

---

write_clintable   *Clintable write method*

Description

Write a clinify table out to a docx file

Usage

```
write_clintable(x, file, apply_defaults = TRUE)
```

Arguments

x   a clintable object

file   The file path to which the file should be written

apply_defaults   Apply default styles. These styles are stored in the options clinify_header_default,
                 clinify_footer_default, and clinify_table_default respectively. Defaults to true.

Value

Invisible

Examples

```
ct <- clintable(mtcars)

ct <- clin_alt_pages(
  ct,
  key_cols = c('mpg', 'cyl', 'hp'),
  col_groups = list(
    c('disp', 'drat', 'wt'),
    c('qsec', 'vs', 'am'),
    c('gear', 'carb')
  )
)

write_clintable(ct, file.path(tempdir(), 'demo.docx'))
```

Index