Package ‘pharmaRTF’

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Type Package
Title Enhanced RTF Wrapper for Use with Existing Table Packages
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Description Enhanced RTF wrapper written in R for use with existing R tables packages such as 'Huxtable' or 'GT'. This package fills a gap where tables in certain packages can be written out to RTF, but cannot add certain metadata or features to the document that are required/expected in a report for a regulatory submission, such as multiple levels of titles and footnotes, making the document landscape, and controlling properties such as margins.

Depends R (>= 3.5.0)
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Description

Enhanced RTF wrapper written in R for use with existing R tables packages such as huxtable or GT. This package fills a gap where tables in certain packages can be written out to RTF, but cannot add certain metadata or features to the document that are required/expected in a report for a regulatory submission, such as multiple levels of titles and footnotes, making the document landscape, and controlling properties such as margins.

This package intends to provide a flexible and reliable framework to connect R to a pharmaceutical reporting workflow.

Future Plans

- colors
- graphs
**add_titles**

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**See Also**

Useful links:

- Report bugs at [https://github.com/atorus-research/pharmaRTF/issues](https://github.com/atorus-research/pharmaRTF/issues)

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### Description

Add hf_line title(s) and footnote(s) to a rtf_doc object.

### Usage

```r
add_titles(doc, ..., replace = FALSE)
add_footnotes(doc, ..., replace = FALSE)
```

### Arguments

- `doc` rtf_doc on which hf_line object(s) (i.e. titles/footnotes) will be attached
- `...` A vector of hf_line objects to add passed to add_hf()
- `replace` If FALSE, lines will be appended/ordered with current header/footer lines. If TRUE, lines will replace the existing content.

### Value

hf_line object(s) (i.e. titles/footnotes) to be added
Examples

```r
# Adding titles after rtf_doc construction
ht <- huxtable::huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht)

rtf <- add_titles(rtf, hf_line("The Title"))

# Adding footnotes after rtf_doc construction
ht <- huxtable::huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht)

rtf <- add_footnotes(rtf, hf_line("The Footnote"))
```

---

align  

**Return or set text alignment**

**Description**

These property functions modify or return the text alignment in a hf_line object. Supported options are: 'left', 'right', 'center', and 'split'.

An alignment option of 'split' requires that two text elements are provided in the titles/footnotes hf_line object. The first text element will be aligned on the left and the second on the right.

**Usage**

```r
align(x, ...) 
align(x) <- value 
set_align(x, value) 
```

**Arguments**

- **x**  
  hf_line object

- **...**  
  Additional arguments passed to method dispatch.

- **value**  
  A string representing the alignment.

**Value**

For `align()`, the alignment of the supplied hf_line object. For `set_align()` and `align<-()`, the modified object.
**bold**

**Return or set bold**

---

**Description**

These property functions modify or return the bold attribute of a hf_line object.

**Usage**

```r
bold(x, ...) 

bold(x) <- value 

set_bold(x, value) 
```

**Arguments**

- `x` A hf_line object
- `...` Additional arguments passed to method dispatch
- `value` A logical vector to set the value of the bold attribute

**Value**

For `bold()`, the bold attribute of the supplied hf_line object. For `bold<-()` and `set_bold()`, the modified object.
Examples

```r
column_header_buffer
library(huxtable)
ht <- huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht, list(hf_line("aTitle")))
pharmaRTF::bold(rtf$titles[[1]])
# Returns FALSE
pharmaRTF::bold(rtf$titles[[1]]) <- TRUE
# Sets bold to TRUE
```

Description

These property functions modify and return the column header buffers of a `rtf_doc` object. These are stored as a named vector. Names should be `top` and `bottom`. This attribute adds rows to the top or bottom of the table column headers to pad it from the titles above or the table below.

Usage

```r
column_header_buffer(x, ...)
column_header_buffer(x) <- value
set_column_header_buffer(x, ...)
```

Arguments

- `x` A `rtf_doc` object
- `...` Additional arguments passed to method dispatch. Should include argument `top` and `bottom` with numeric elements.
- `value` A named vector detailing the top and bottom buffer.

Value

For `column_header_buffer`, the `column_header_buffer` attribute of the supplied `rtf_doc`. For `column_header_buffer<-`() and `set_column_header_buffer()`, the modified object.
Examples

```r
library(huxtable)
ht <- huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht, list(hf_line("aTitle")))

column_header_buffer(rtf)
# Returns c(top = 0, bottom = 0), the default

column_header_buffer(rtf) <- c(bottom = 1)
# Sets the bottom column_header_buffer to 1
```

<table>
<thead>
<tr>
<th>font</th>
<th>Return or set font</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Description

These property functions modify or return the fonts of an `rtf_doc` object or individual titles/footnotes objects of the `hf_line` class.

When used on an `rtf_doc` object to retrieve fonts, the distinct set of fonts of all objects contained within the `rtf_doc` are returned. When used on an `rtf_doc` to set fonts, the default font for the RTF document is set.

When used on titles/footnotes (`hf_line` objects), the font is either returned or set for that individual line.

Usage

```r
font(x, ...)
font(x) <- value
set_font(x, value)
```

Arguments

- `x` : `rtf_doc` object, the table of a `rtf_doc` object, or a `hf_line` object
- `...` : Additional arguments passed to method dispatch
- `value` : A string representing a font

Value

For `font()`, the font attribute of the object in the case of `hf_line` and the table, or each unique font in the table, titles, footnotes, and the overall document in the case of `rtf_doc`. For `set_font()` and `font<-()`, the modified object.
Examples

```r
library(huxtable)
ht <- huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht, list(hf_line("text", font = "Comic Sans")))

pharmaRTF::font(rtf)
# Returns "Courier New" "Comic Sans"

pharmaRTF::font(rtf) <- "Times"

pharmaRTF::font(rtf)
# Returns "Times" "Comic Sans"

pharmaRTF::font(rtf$titles[[1]]) <- "Windings"

pharmaRTF::font(rtf)
# Returns "Times" "Windings"
```

---

font_size  

Return or set font size

Description

These property functions modify or return the font sizes of an rtf_doc object or individual titles/footnotes objects of the hf_line class.

When used on an rtf_doc object to retrieve font sizes, the document level default font size within the rtf_doc is returned. When used on an rtf_doc to set fonts, the default font size for the RTF document is set.

When used on titles/footnotes (hf_line objects), the font size is either returned of set for that individual line.

Usage

```r
font_size(x, ...)

font_size(x) <- value

set_font_size(x, value)
```

Arguments

- **x**: rtf_doc object or a hf_line object.
- **...**: Additional arguments passed to method dispatch.
- **value**: A numeric value for font size in points.
header_height

Value

For font_size(), the font_size attribute of the supplied rtf_doc or hf_line. For `font_size<-`() and set_font_size, the modified object.

Examples

```r
library(huxtable)
ht <- huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht, list(hf_line("aTitle", font_size = 15)))

pharmaRTF::font_size(rtf)
# Returns 12

pharmaRTF::font_size(rtf) <- 14

pharmaRTF::font_size(rtf$titles[[1]])
# Returns 15
pharmaRTF::font_size(rtf)
# Returns 14
```

header_height

Return or set header/footer height

Description

These property functions modify or return the header_height/footer_height attribute of a rtf_doc object. The header/footer height is the default amount of space allocated to the header/footer from the margin. If the content of the header/footer exceeds this amount of space, it will be expanded.

Usage

```r
header_height(x, ...)

header_height(x) <- value

set_header_height(x, value)

footer_height(x, ...)

footer_height(x) <- value

set_footer_height(x, value)
```
header_rows

Arguments

x A rtf_doc object

... Additional arguments passed to method dispatch

value A numeric value to set the header_height/footer_height

Value

For header_height()/footer_height(), the header_height/footer_height attribute of the supplied rtf_doc object. For `header_height<-()`/`footer_height<-()` and set_header_height()/set_footer_height(), the modified object.

Examples

library(huxtable)
ht <- huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht, list(hf_line("aTitle")))

header_height(rtf)
# Returns 0.5, the default

footer_height(rtf) <- 1
# Sets footer_height to 1

header_rows

Return or set the header_rows

Description

These property functions modify or return the header_rows attribute of a rtf_doc object. Only required and valid when the rtf_doc table object is a huxtable.

The header rows control the number of rows taken from a huxtable table into the header of the document as the column header. When pulled into the headers, these rows are repeated on each page. Can be set to 0 to disable repeating column headers.

Usage

header_rows(x, ...)

header_rows(x) <- value

set_header_rows(x, value)
Arguments

x A rtf_doc object

... Additional arguments passed to method dispatch

value A numeric value to change the header_rows attribute.

Value

For header_rows(), the header_rows attribute of the rtf_doc object. For `header_rows<-`() and set_header_rows(), the modified object.

Examples

ht <- huxtable::huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht, list(hf_line("aTitle")))

header_rows(rtf)
# This is a wrapper for header_rows(x$table)
header_rows(rtf$table)
# Both of these return 1, the default

header_rows(rtf$table) <- 0
# Sets header_rows to 0

hf_line

Create a title line container

Description

hf_line objects represent individual title or footnote lines and their associated metadata. These objects are passed to an rtf_doc for display in the header or footer of an RTF document.

A character vector of length <= 2 describes the text to display. Using a single text element, the text can be aligned left, right, or center. Using two text elements, the alignment can be set to “split”, which will left align the first element, and right align the second. If alignment is set to anything else, the text elements will be pasted together.

Lines can either be passed to the titles/footnotes arguments in the call to rtf_doc or added later with the add_titles or add_footnotes functions. Supported properties are detailed in the arguments section.
Usage

hf_line(
  ..., 
  align = c("center", "left", "right", "split"), 
  bold = FALSE, 
  italic = FALSE, 
  font = NA, 
  font_size = NA, 
  index = NA
)

Arguments

... A character list/vector. If length(...) is 2 and align is not 'split', values are pasted together.

align Text alignment in document. Options are 'center', 'left', 'right', and 'split'. A 'split' alignment will left align the string in the first text item and right align the second. Defaults to center.

bold TRUE or FALSE. Defaults to FALSE.

italic TRUE or FALSE. Defaults to FALSE.

font A string to specify the font display. Ensure the intended RTF reader can display the selected font. Fonts for all fields will default to the default font of the rtf_doc object, which unless otherwise assigned, is Courier New.

font_size Font size in points. Font sizes for all fields will default to the default font size of the rtf_doc object, which unless otherwise assigned, is 12

index Position to display header or footnote lines in the RTF document. Orders in ascending order with NAs last. Defaults to NA.

Value

An object of class hf_line with the properties described in the Arguments section.

Supported Formatting

Several special display formats are supported to display document data. When the rtf_doc is written, the package will determine if the text of an hf_line object starts with a keyword. Regular expression matching and replacement is used for formatting.

- PAGE_FORMAT: - Can take up to two replacements to format current page(first), and total number of pages(second). Page numbers are replaced in the string using %s For example, for a format of Page 1 of 5, use PAGE_FORMAT: Page %s of %s. For a format of just 5, use PAGE_FORMAT: %s.

- DATE_FORMAT: - Describes the date/time the document was generated. Formats are specified using standard R date formatting tokens. Details on formatting dates can be found here.

- FILE_PATH: - Describes the file path the R session was executed from. The location of the executing file will be populated over the token replacement string "%s". Formats can be
specified like "FILE_PATH: Executed from: %s" or simply "FILE_PATH: %s". Note that the location of the executing file in R may not be intuitive. There are multiple ways to determine the containing R file based on how it was executed.

– When the file is executed using Rscript, this field will populated as the executed Rscript file.
– When the file is sourced, this field will populate with the location of the sourced file.
– When a file is run interactively (i.e. from the R console), this field will populate as <run interactively>.

Examples

```r
# Adding lines during rtf_doc construction
ht <- huxtable::huxtable(  
  column1 = 1:5,  
  column2 = letters[1:5]
)

titles_l <- list(  
  hf_line(c("The Title Left", "The Titles Right"), align = "split"),  
  hf_line("A Bold, italic Title", bold = TRUE, italic = TRUE,  
    align = "left", font_size = 20, font = "Times New Roman")
)

rtf <- rtf_doc(ht, titles = titles_l)

# Adding lines after rtf_doc construction
rtf <- add_footnotes(rtf,  
  hf_line("PAGE_FORMAT: Page %s of %s"),  
  hf_line("DATE_FORMAT: %H:%M %A, %B %d, %Y"),  
  hf_line("FILE_PATH: Source: %s")
)
```

**Description**

These property functions modify and return the `ignore_cell_padding` attribute of a `rtf_doc` object. By default, the huxtable package will pad rows of a table. This attribute will remove those default settings – which allow the cells to have a smaller amount of padding than setting the cell padding to 0. See the Details section for a more thorough description of the implementation.

**Usage**

```r
ignore_cell_padding(x, ...)

ignore_cell_padding(x) <- value

set_ignore_cell_padding(x, value)
```
ignore_cell_padding

Arguments

x A rtf_doc object

... Additional arguments passed to method dispatch

value A logical value to set the attribute

Details

Cell padding in RTF code has multiple command words associated with it. Huxtable uses the command word `\clpad<t,b,l,r>N` to control the cell padding. This command word is additionally controlled by the command word `\clpadf<t,b,l,r>N`. There are two possible values for N in `\clpadf<t,b,l,r>N`:

- 0: Null. This ignores `\clpad<t,b,l,r>` in favor of `\trgap` (Word 97 style cell padding).
- 3: Twips

The `ignore_cell_padding` function toggles the `\clpadf<t,b,l,r>N` command words in the RTF document to 0 instead of 3. By using Word 97 style cell padding, the minimum amount of space is closer than using the 0 twips setting when the RTF is rendered inside Word. This effectively closes the gap between rows, which may be a desirable appearance in some outputs.

More information on these RTF settings can be found here.

Value

For `ignore_cell_padding()`, the `ignore_cell_padding` attribute of the supplied `rtf_doc` object. For `\ignore_cell_padding<-` and `set_ignore_cell_padding()`, the modified object.

Examples

```r
library(huxtable)
ht <- huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht, list(hf_line("aTitle")))

ignore_cell_padding(rtf)
# Returns FALSE, the default

ignore_cell_padding(rtf) <- TRUE
# Sets ignore_cell_padding to TRUE
```
**Description**

These property functions modify or return the index of a hf_line object. The index sets the order in which a title will appear. Indices can be any numeric value as long as they are not duplicated.

**Usage**

```r
index(x, ...)  
index(x) <- value  
set_index(x, value)
```

**Arguments**

- `x`: A hf_line object
- `...`: Additional arguments passed to method dispatch
- `value`: Numeric value to order index

**Value**

For `index()`, the index attribute of the supplied hf_line object. For `index<-()` and `set_index()`, the modified object.

**Examples**

```r
library(huxtable)  
ht <- huxtable(  
column1 = 1:5,  
column2 = letters[1:5]  
)  
rtf <- rtf_doc(ht, list(hf_line("aTitle")))
```

```r
index(rtf$titles[[1]])  
# Returns NULL
```

```r
index(rtf$titles[[1]]) <- 2  
# Sets index of first titles to 2
```
italic

Return or set italics

Description

These property functions modify or return the italics attribute of a hf_line object. The italic attribute takes on a logical value of TRUE or FALSE, where TRUE italicizes the text of the line.

Usage

italic(x, ...)
italic(x) <- value
set_italic(x, value)

Arguments

x A hf_line object
... Additional arguments passed to method dispatch
value A logical vector to set the value of the bold attribute

Value

For italic(), the italic attribute of the supplied hf_line. For `italic<-()` and set_italic() the modified object.

Examples

library(huxtable)
ht <- huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht, list(hf_line("aTitle")))

pharmaRTF::italic(rtf$titles[[1]])
# Returns FALSE

pharmaRTF::italic(rtf$titles[[1]]) <- TRUE
# Sets italic to TRUE
margins  

Return or set margins

Description

These property functions return or set the margin attribute of a rtf_doc object. These are stored as a named vector. Names should be top, bottom, left, and right. Margins are measured in inches.

Usage

margins(x, ...)

margins(x) <- value

set_margins(x, value)

Arguments

x  A rtf_doc object

...  Additional arguments passed to method dispatch

value  A named list or vector detailing the page margins

Value

For margin(), a named vector of the margin attribute of the supplied rtf_doc. For `margin<-()` and set_margin() the modified object.

Examples

library(huxtable)
ht <- huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht, list(hf_line("aTitle")))

margins(rtf)
# Returns c(top = 1, bottom = 1, left = 1, right = 1)

margins(rtf) <- c(top = 2)
# Sets top margin to 2
orientation

Return or set orientation

Description

These property functions modify or return the orientation attribute of a rtf_doc object. Options are landscape or portrait. See the rtf_doc help page for important notes about this property.

Usage

orientation(x, ...)  
orientation(x) <- value  
set_orientation(x, value)

Arguments

x A rtf_doc object  
... Additional arguments passed to method dispatch  
value A character vector of either 'landscape' or 'portrait'

Value

For orientation(), the orientation attribute of the supplied rtf_doc object. For `orientation<-()` and set_orientation() the modified object.

Examples

library(huxtable)  
ht <- huxtable(  
  column1 = 1:5,  
  column2 = letters[1:5]  
)  
rtf <- rtf_doc(ht, list(hf_line("aTitle")))  

orientation(rtf)  
# Returns landscape

orientation(rtf) <- "portrait"  
# Sets orientation to portrait
pagesize

Return or set pagesize

Description
These property functions modify or return the pagesize attribute of a rtf_doc object. Stored as a named vector with height and width names.

Usage
pagesize(x, ...)
pagesize(x) <- value
set_pagesize(x, value)

Arguments
x             A rtf_doc object
...            Additional arguments passed to method dispatch
value         A named numeric vector with the names height and width.

Details
Note that when the orientation of the document is switched to 'portrait', the height and width will reverse when the RTF document is being written - but the attribute values will not change. This is because the default rtf_doc orientation is 'landscape', and switching the attributes of the object allows for a possibility of inadvertently overriding the functionality of the orientation attribute.

Value
For pagesize(), the pagesize attribute of the rtf_doc object. For `pagesize<-`() and set_pagesize(), the modified object.

Examples
library(huxtable)
ht <- huxtable(
    column1 = 1:5,
    column2 = letters[1:5]
  )
rtf <- rtf_doc(ht, list(hf_line("aTitle")))

pagesize(rtf)
# Returns c(height = 8.5, width = 11.0)
pagesize(rtf) <- c(height = 12)
# Sets height of page to 12 inches
orientation(rtf) <- 'portrait'
pagesize(rtf)
# width height
# 8.5 12.0
# Note: Despite changing orientation, attributes don't change

---

**rtf_doc**

Create a rtf_doc object

---

**Description**

This constructs the main object that will be used for an RTF document. The object is composed of a table, titles(s), and footnote(s).

A table contained in the rtf_doc object should be a supported class. The huxtable package is the most supported, however our intention is to support other packages capable of writing RTF tables as well. Currently, it is planned to support the gt package, but the gt package’s RTF methods are not functional.

The titles and footnotes are composed of hf_line objects.

See the vignette for a more complete view of intended usage.

**Usage**

```r
tft_doc(table, titles = list(), footnotes = list(), header_rows = 1)
```

**Arguments**

- **table**: A table of a supported class.
- **titles**: A list of hf_line objects containing table titles and associated formatting.
- **footnotes**: A list of hf_line objects containing table footnotes and associated formatting.
- **header_rows**: An integer determining how many rows of the table are column headers. Only used for huxtable tables. Can be set to 0 to disable repeating column headers.

**Value**

A list with a table, titles, and footnotes component. Class of "rtf_doc" with the properties described below.

**rtf_doc Properties**

Document level properties set the defaults and will be used where they are not overridden by hf_line or table properties.

- **font**: A string representing the font to display when it is not specified by the table or hf_line. Defaults to Courier New.
• font_size - A numeric value representing the size of the font in points. Defaults to 12.
• margins - Inches of margins in the document as a named vector. Names are top, bottom, left, and right. Defaults to 1 for all.
• orientation - Orientation of the document. Defaults to 'landscape'. When 'portrait', the height and width are switched while writing the document to effectively rotate the document 90 degrees. For example, if width is 11" and height is 8.5", while writing the document will have a height of 11" and a width of 8.5". Additionally, when 'landscape', a keyword is written to the RTF to indicate that the document is landscape.
• header_height - Height of the header where the titles and column headers are displayed. Defaults to .5 inches.
• footer_height - Height of the footer where the footnotes are displayed. Defaults to .5 inches.
• pagesize - Size of the page in inches. Defaults to 8.5(height) by 11(width). These defaults align with the default orientation of 'landscape'. When the orientation is switched to 'portrait', the height and width will switch while the RTF document is being generated, but the document attributes themselves will not change.
• header_rows - Huxtable table only. Number of rows that are defined as the header that will be repeated across pages. Defaults to 1. Can be set to 0 to disable repeating column headers.
• ignore_cell_padding - Huxtable table only. Flag to ignore cell padding padding that is added during RTF encoding. Minimizes the amount of space between rows. Defaults to FALSE.
• column_header_buffer - This attribute adds rows to the top or bottom of the table column headers to pad it from the titles above or the table below. Defaults to 0 and 0.

See Also

hf_line

Examples

# Adding lines during rtf_doc construction
ht <- huxtable::huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
# Set table properties
library(magrittr) #load in a pipe
ht %>%
  huxtable::set_bold(1, 1:ncol(ht), TRUE) %>%
  huxtable::set_escape_contents(TRUE) %>%
  huxtable::set_col_width(c(0.25, 0.75))

rtf <- rtf_doc(ht, titles = list(hf_line("My Header")))
# Set document properties
rtf <- rtf %>%
  set_font_size(15) %>%
  set_ignore_cell_padding(TRUE)

names(rtf)
write_rtf(rtf, file = tempfile())

**text**

<table>
<thead>
<tr>
<th>Return or set text</th>
</tr>
</thead>
</table>

**Description**

These property functions modify or return the fonts of a rtf_doc object. `text()` will always return a vector of length 2. If the text is only of length one an empty string will be appended.

**Usage**

text(x, ...)

text(x) <- value

set_text(x, value)

**Arguments**

x A hf_line object

... Additional arguments passed to method dispatch

value A character vector of length 0, 1, or 2 to set the text value of a hf_line object.

**Value**

For `text()`, the text vector of the supplied hf_line object. For `text<-()` and `set_text()`, the modified object.

**Examples**

```r
library(huxtable)
ht <- huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht, list(hf_line("aTitle")))

text(rtf$titles[[1]])
# Returns "aTitle" ""

text(rtf$titles[[1]]) <- "aDifferentTitle"
# Sets titles to "aDifferentTitle"
```
**titles_and_footnotes_from_df**

*Read titles and footnotes from a dataframe*

**Description**

Reads a data frame with header/footnote information and attaches it to an `rtf_doc` object. The most effective way to use this function is to pass information to a custom reader for your process. See Details section for more information.

**Usage**

```r
titles_and_footnotes_from_df(
  doc, 
  from.df = NULL, 
  from.file = NULL, 
  reader = NULL, 
  ...
)
```

**Arguments**

- `doc`: A `rtf_doc` object to append header and footnote information.
- `from.df`: A `data.frame` object with title and footnote information.
- `from.file`: A file path to a file with title and footnote information.
- `reader`: A function to read the data from the `from.file` argument.
- `...`: Parameters passed to `read_hf` where they are processed and constructed into `hf_line` objects.

**Details**

`titles_and_footnotes_from_df` allows you to attach titles and footnotes (as `hf_line` objects) from a `data.frame`. This `data.frame` could be a `data.frame` in your local environment, or read in from an external file. The best way to utilize this method is to create a custom reader function. This custom reader function is a function that you develop to:

- Read a source file into a `data.frame`
- Preprocess as necessary to keep only necessary records and variables
- Ensure that variables are the correct data type

`titles_and_footnotes_from_df` allows you to pass arguments into the reader function, which gives you the capability to keep titles and footnotes for all of your outputs in a central file and pass a filtering option, or any additional parameters as necessary. For an example implementation, see our vignette.
Value

A `rtf_doc` object with header/footnote information attached.

Required Columns

The following columns are required fields in a data.frame passed to `titles_and_footnotes_from_df`:

- `type` (character - 'title' or 'footnote')
- `text1` (character)
- `text2` (character)
- `align` (character - left, right, center, or split)
- `bold` (logical)
- `italic` (logical)
- `font` (character)
- `index` (numeric)

---

| view_footnotes | View footnote information |

Description

View footnotes attached to an `rtf_doc` as a data.frame.

Usage

`view_footnotes(doc)`

Arguments

- `doc` `rtf_doc` object

Value

`data.frame` of the footnote information
**view_titles** View title information

**Description**

View titles attached to an rtf_doc as a data.frame.

**Usage**

```r
view_titles(doc)
```

**Arguments**

- `doc` rtf_doc object

**Value**

data.frame of the title information

---

**write_rtf** Write RTF document

**Description**

Writes the RTF document to a specified file.

**Usage**

```r
write_rtf(doc, file = NULL)
```

**Arguments**

- `doc` The RTF document to be written.
- `file` A character string naming a file open for writing.

**Value**

File is written to the file provided by sinking the console output. No output is returned to the R environment.

**See Also**

Examples

```r
## Create and write RTF document
ht <- huxtable::huxtable(
  column1 = 1:5,
  column2 = letters[1:5]
)
rtf <- rtf_doc(ht)

document <- write_rtf(rtf, file=tempfile()) # writes a table with no header/footnotes to 'test.rtf'
```

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