Package 'officer'

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Type Package

Title Manipulation of Microsoft Word and PowerPoint Documents

Version 0.3.8

Description Access and manipulate 'Microsoft Word' and 'Microsoft PowerPoint' documents from R. The package focuses on tabular and graphical reporting from R; it also provides two functions that let users get document content into data objects. A set of functions lets add and remove images, tables and paragraphs of text in new or existing documents. When working with 'PowerPoint' presentations, slides can be added or removed; shapes inside slides can also be added or removed. When working with 'Word' documents, a cursor can be used to help insert or delete content at a specific location in the document. The package does not require any installation of Microsoft products to be able to write Microsoft files.

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LazyData TRUE

Imports R6, grDevices, zip (>= 2.0.3), uuid,stats, magrittr,utils, xml2 (>= 1.1.0), graphics

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Author David Gohel [aut, cre],
Frank Hangler [ctb] (function body_replace_all_text),
Liz Sander [ctb] (several documentation fixes),
Anton Victorson [ctb] (fixes xml structures),
Jon Calder [ctb] (update vignettes),
John Harrold [ctb] (fuction annotate_base),
John Muschelli [ctb] (google doc compatibility)

Maintainer David Gohel <david.gohel@ardata.fr>

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R topics documented:

`add_sheet` *add a sheet*

Description

add a sheet into an xlsx worksheet

Usage

```
add_sheet(x, label)
```

Arguments

`x`	rxlsx object
`label`	sheet label

Examples

```
my_ws <- read_xlsx()
my_pres <- add_sheet(my_ws, label = "new sheet")
```

add_slide *add a slide*

Description

add a slide into a pptx presentation

Usage

```
add_slide(x, layout = "Title and Content", master = "Office Theme")
```

Arguments

x	an rpptx object
layout	slide layout name to use
master	master layout name where layout is located

See Also

print.rpptx read_pptx ph_with, layout_summary

Other functions slide manipulation: move_slide(), on_slide(), remove_slide()

Examples

```
my_pres <- read_pptx()
layout_summary(my_pres)
my_pres <- add_slide(my_pres,
  layout = "Two Content", master = "Office Theme")
```

annotate_base *PowerPoint placeholder parameters annotation*

Description

generates a slide from each layout in the base document to identify the placeholder indexes, types, names, master names and layout names.

This is to be used when need to know what parameters should be used with ph_location* calls. The parameters are printed in their corresponding shapes.

Note that if there are duplicated ph_label, you should not use ph_location_label.

Usage

```
annotate_base(path = NULL, output_file = "annotated_layout.pptx")
```

Arguments

path	path to the pptx file to use as base document or NULL to use the officer default
output_file	filename to store the annotated powerpoint file or NULL to suppress generation

Value

rpptx object of the annotated PowerPoint file

See Also

Other functions for reading presentation informations: color_scheme(), layout_properties(), layout_summary(), length.rpptx(), slide_size(), slide_summary()

Examples

```
# To generate an anotation of the default base document with officer:
annotate_base(output_file = tempfile(fileext = ".pptx"))

# To generate an annotation of the base document 'mydoc.pptx' and place the
# annotated output in 'mydoc_annotate.pptx'
# annotate_base(path = 'mydoc.pptx', output_file='mydoc_annotate.pptx')
```

---

block_caption *caption block*

Description

Create a representation of a caption that can be used for cross reference. The caption can also be an auto numbered paragraph.

Usage

```
block_caption(label, style, id, autonum = NULL)
```

Arguments

label	a scalar character representing label to display
style	paragraph style name
id	cross reference identifier
autonum	an object generated with function run_autonum

See Also

Other block functions for reporting: block_list(), block_section(), block_table(), block_toc(), fpar(), plot_instr(), unordered_list()

Examples

```
library(magrittr)
library(officer)

run_num <- run_autonum(seq_id = "tab", pre_label = "tab. ")
caption <- block_caption("iris table",
                         style = "Normal", id = "iris_table",
                         autonum = run_num )

doc <- read_docx() %>%
  body_add("A title", style = "heading 1") %>%
  body_add("Hello world!", style = "Normal") %>%
  body_add(caption) %>%
  body_add(iris, style = "table_template")

print(doc, target = tempfile(fileext = ".docx") )
```

---

block_list *create paragraph blocks*

Description

a list of blocks can be used to gather several blocks (paragraphs or tables) into a single object. The function is to be used when adding footnotes or formatted paragraphs into a new slide.

Usage

```
block_list(...)
```

Arguments

...	a list of objects of class fpar or flextable. When output is only for Word, objects of class external_img can also be used in fpar construction to mix text and images in a single paragraph.

See Also

ph_with(), body_add()

Other block functions for reporting: block_caption(), block_section(), block_table(), block_toc(), fpar(), plot_instr(), unordered_list()

Examples

```
#' # block list ------

img.file <- file.path( R.home("doc"), "html", "logo.jpg" )
```

```
fpt_blue_bold <- fp_text(color = "#006699", bold = TRUE)
fpt_red_italic <- fp_text(color = "#C32900", italic = TRUE)


## This can be only be used in a MS word output as pptx does
## not support paragraphs made of text and images.
## (actually it can be used but image will not appear in the
## pptx output)
value <- block_list(
  fpar(ftext("hello world", fpt_blue_bold)),
  fpar(ftext("hello", fpt_blue_bold), " ",
       ftext("world", fpt_red_italic)),
  fpar(
    ftext("hello world", fpt_red_italic),
          external_img(
            src = img.file, height = 1.06, width = 1.39)))
value

doc <- read_docx()
doc <- body_add(doc, value)
print(doc, target = tempfile(fileext = ".docx"))


value <- block_list(
  fpar(ftext("hello world", fpt_blue_bold)),
  fpar(ftext("hello", fpt_blue_bold), " ",
       ftext("world", fpt_red_italic)),
  fpar(
    ftext("blah blah blah", fpt_red_italic)))
value

doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(doc, value, location = ph_location_type(type = "body"))
print(doc, target = tempfile(fileext = ".pptx"))
```

`block_section` *new section*

Description

Create a representation of a section

Usage

```
block_section(property)
```

Arguments

property	section properties defined with function prop_section

See Also

Other block functions for reporting: block_caption(), block_list(), block_table(), block_toc(), fpar(), plot_instr(), unordered_list()

Examples

```
prop_section(
  page_size = page_size(orient = "landscape"),
  page_margins = page_mar(top = 2),
  type = "continuous"
)
```

---

block_table *table*

Description

Create a representation of a table

Usage

```
block_table(
  x,
  style = NULL,
  header = TRUE,
  first_row = TRUE,
  first_column = FALSE,
  last_row = FALSE,
  last_column = FALSE,
  no_hband = FALSE,
  no_vband = TRUE
)
```

Arguments

x	a data.frame to add as a table
style	table style
header	display header if TRUE
first_row	Specifies that the first column conditional formatting should be applied. Details for this and other conditional formatting options can be found at http://officeopenxml.com/WPtblLook.php
first_column	Specifies that the first column conditional formatting should be applied.
last_row	Specifies that the first column conditional formatting should be applied.

last_column	Specifies that the first column conditional formatting should be applied.
no_hband	Specifies that the first column conditional formatting should be applied.
no_vband	Specifies that the first column conditional formatting should be applied.

See Also

Other block functions for reporting: block_caption(), block_list(), block_section(), block_toc(), fpar(), plot_instr(), unordered_list()

Examples

```
block_table(x = mtcars)
```

---

block_toc *table of content*

Description

Create a representation of a table of content.

Usage

```
block_toc(level = 3, style = NULL, separator = ";")
```

Arguments

level	max title level of the table
style	optional. style in the document that will be used to build entries of the TOC.
separator	optional. Some configurations need "," (i.e. from Canada) separator instead of ";"

See Also

Other block functions for reporting: block_caption(), block_list(), block_section(), block_table(), fpar(), plot_instr(), unordered_list()

Examples

```
block_toc(level = 2)
block_toc(style = "Table title")
```

body_add *add content into a Word document*

Description

This function add objects into a Word document. Values are added as new paragraphs or tables.

Usage

```
body_add(x, value, ...)

## S3 method for class 'character'
body_add(x, value, style = NULL, ...)

## S3 method for class 'numeric'
body_add(x, value, style = NULL, format_fun = formatC, ...)

## S3 method for class 'factor'
body_add(x, value, style = NULL, format_fun = as.character, ...)

## S3 method for class 'fpar'
body_add(x, value, style = NULL, ...)

## S3 method for class 'data.frame'
body_add(
  x,
  value,
  style = NULL,
  header = TRUE,
  first_row = TRUE,
  first_column = FALSE,
  last_row = FALSE,
  last_column = FALSE,
  no_hband = FALSE,
  no_vband = TRUE,
  ...
)

## S3 method for class 'block_caption'
body_add(x, value, ...)

## S3 method for class 'block_list'
body_add(x, value, ...)

## S3 method for class 'block_toc'
body_add(x, value, ...)
```

```
## S3 method for class 'external_img'
body_add(x, value, style = "Normal", ...)

## S3 method for class 'run_pagebreak'
body_add(x, value, style = NULL, ...)

## S3 method for class 'run_columnbreak'
body_add(x, value, style = NULL, ...)

## S3 method for class 'gg'
body_add(x, value, width = 6, height = 5, res = 300, style = "Normal", ...)

## S3 method for class 'plot_instr'
body_add(x, value, width = 6, height = 5, res = 300, style = "Normal", ...)
```

Arguments

x	an rdocx object
value	object to add in the document. Supported objects are vectors, data.frame, graphics, block of formatted paragraphs, unordered list of formatted paragraphs, pretty tables with package flextable, 'Microsoft' charts with package mschart.
...	further arguments passed to or from other methods. When adding a ggplot object or plot_instr, these arguments will be used by png function.
style	paragraph style name. These names are available with function styles_info and are the names of the Word styles defined in the base document (see argument path from read_docx).
format_fun	a function to be used to format values.
header	display header if TRUE
first_row	Specifies that the first column conditional formatting should be applied.
first_column	Specifies that the first column conditional formatting should be applied.
last_row	Specifies that the first column conditional formatting should be applied.
last_column	Specifies that the first column conditional formatting should be applied.
no_hband	Specifies that the first column conditional formatting should be applied.
no_vband	Specifies that the first column conditional formatting should be applied.
width	height in inches
height	height in inches
res	resolution of the png image in ppi

Methods (by class)

- character: add a character vector.
- numeric: add a numeric vector.
- factor: add a factor vector.

- `fpar`: add a fpar object. These objects enable the creation of formatted paragraphs made of formatted chunks of text.
- `data.frame`: add a data.frame object.
- `block_caption`: add a block_caption object. These objects enable the creation of set of formatted paragraphs made of formatted chunks of text.
- `block_list`: add a block_list object.
- `block_toc`: add a table of content (a block_toc object).
- `external_img`: add an image (a external_img object).
- `run_pagebreak`: add a run_pagebreak object.
- `run_columnbreak`: add a run_columnbreak object.
- gg: add a ggplot object.
- `plot_instr`: add a base plot

Examples

```
doc <- read_docx()
doc <- body_add(doc, "A title", style = "heading 1")
doc <- body_add(doc, head(iris), style = "table_template")
doc <- body_add(doc, "Another title", style = "heading 1")
doc <- body_add(doc, letters, style = "Normal")
doc <- body_add(doc, "Table of content", style = "heading 1")
doc <- body_add(doc, block_toc())
print(doc, target = tempfile(fileext = ".docx"))
# print(doc, target = "test.docx")
```

`body_add_blocks` *add a list of blocks into a document*

Description

add a list of blocks produced by `block_list` into into an rdocx object

Usage

```
body_add_blocks(x, blocks, pos = "after")
```

Arguments

`x`	an rdocx object
`blocks`	set of blocks to be used as footnote content returned by function `block_list`.
`pos`	where to add the new element relative to the cursor, one of "after", "before", "on".

Examples

```
library(magrittr)

img.file <- file.path( R.home("doc"), "html", "logo.jpg" )
bl <- block_list(
  fpar(ftext("hello", shortcuts$fp_bold())),
  fpar(
    ftext("hello world", shortcuts$fp_bold()),
    external_img(src = img.file, height = 1.06, width = 1.39)
  )
)

x <- read_docx() %>%
  body_add_blocks( blocks = bl ) %>%
  print(target = tempfile(fileext = ".docx"))
```

---

body_add_break *add page break*

Description

add a page break into an rdocx object

Usage

```
body_add_break(x, pos = "after")
```

Arguments

x	an rdocx object
pos	where to add the new element relative to the cursor, one of "after", "before", "on".

Examples

```
library(magrittr)
doc <- read_docx() %>% body_add_break()
print(doc, target = tempfile(fileext = ".docx"))
```

body_add_docx *insert an external docx*

Description

add content of a docx into an rdocx object.

Usage

```
body_add_docx(x, src, pos = "after")
```

Arguments

x	an rdocx object
src	docx filename
pos	where to add the new element relative to the cursor, one of "after", "before", "on".

Note

The function is using a 'Microsoft Word' feature: when the document will be edited, the content of the file will be inserted in the main document.

This feature is unlikely to work as expected if the resulting document is edited by another software.

Examples

```
library(magrittr)
file1 <- tempfile(fileext = ".docx")
file2 <- tempfile(fileext = ".docx")
file3 <- tempfile(fileext = ".docx")
read_docx() %>%
  body_add_par("hello world 1", style = "Normal") %>%
  print(target = file1)
read_docx() %>%
  body_add_par("hello world 2", style = "Normal") %>%
  print(target = file2)

read_docx(path = file1) %>%
  body_add_break() %>%
  body_add_docx(src = file2) %>%
  print(target = file3)
```

body_add_fpar *add fpar*

Description

add an fpar (a formatted paragraph) into an rdocx object

Usage

```
body_add_fpar(x, value, style = NULL, pos = "after")
```

Arguments

x	a docx device
value	a character
style	paragraph style. If NULL, paragraph settings from fpar will be used. If not NULL, it must be a paragraph style name (located in the template provided as read_docx(path = ...)); in that case, paragraph settings from fpar will be ignored.
pos	where to add the new element relative to the cursor, one of "after", "before", "on".

See Also

fpar

Examples

```
library(magrittr)
bold_face <- shortcuts$fp_bold(font.size = 30)
bold_redface <- update(bold_face, color = "red")
fpar_ <- fpar(ftext("Hello ", prop = bold_face),
              ftext("World", prop = bold_redface ),
              ftext(", how are you?", prop = bold_face ) )
doc <- read_docx() %>% body_add_fpar(fpar_)

print(doc, target = tempfile(fileext = ".docx"))

# a way of using fpar to center an image in a Word doc ----
rlogo <- file.path( R.home("doc"), "html", "logo.jpg" )
img_in_par <- fpar(
  external_img(src = rlogo, height = 1.06/2, width = 1.39/2),
  fp_p = fp_par(text.align = "center") )

read_docx() %>% body_add_fpar(img_in_par) %>%
  print(target = tempfile(fileext = ".docx") )
```

body_add_gg *add ggplot*

Description

add a ggplot as a png image into an rdocx object

Usage

```
body_add_gg(x, value, width = 6, height = 5, res = 300, style = "Normal", ...)
```

Arguments

x	an rdocx object
value	ggplot object
width	height in inches
height	height in inches
res	resolution of the png image in ppi
style	paragraph style
...	Arguments to be passed to png function.

Examples

```
if( require("ggplot2") ){
  doc <- read_docx()

  gg_plot <- ggplot(data = iris ) +
    geom_point(mapping = aes(Sepal.Length, Petal.Length))

  if( capabilities(what = "png") )
    doc <- body_add_gg(doc, value = gg_plot, style = "centered" )

  print(doc, target = tempfile(fileext = ".docx") )
}
```

body_add_img *add image*

Description

add an image into an rdocx object.

Usage

```
body_add_img(x, src, style = NULL, width, height, pos = "after")
```

Arguments

x	an rdocx object
src	image filename, the basename of the file must not contain any blank.
style	paragraph style
width	height in inches
height	height in inches
pos	where to add the new element relative to the cursor, one of "after", "before", "on".

Examples

```
doc <- read_docx()

img.file <- file.path( R.home("doc"), "html", "logo.jpg" )
if( file.exists(img.file) ){
  doc <- body_add_img(x = doc, src = img.file, height = 1.06, width = 1.39 )
}

print(doc, target = tempfile(fileext = ".docx"))
```

---

body_add_par *add paragraph of text*

Description

add a paragraph of text into an rdocx object

Usage

```
body_add_par(x, value, style = NULL, pos = "after")
```

Arguments

x	a docx device
value	a character
style	paragraph style name
pos	where to add the new element relative to the cursor, one of "after", "before", "on".

Examples

```
library(magrittr)

doc <- read_docx() %>%
  body_add_par("A title", style = "heading 1") %>%
  body_add_par("Hello world!", style = "Normal") %>%
  body_add_par("centered text", style = "centered")

print(doc, target = tempfile(fileext = ".docx") )
```

---

body_add_table *add table*

Description

add a table into an rdocx object

Usage

```
body_add_table(
  x,
  value,
  style = NULL,
  pos = "after",
  header = TRUE,
  first_row = TRUE,
  first_column = FALSE,
  last_row = FALSE,
  last_column = FALSE,
  no_hband = FALSE,
  no_vband = TRUE
)
```

Arguments

x	a docx device
value	a data.frame to add as a table
style	table style
pos	where to add the new element relative to the cursor, one of after", "before", "on".
header	display header if TRUE
first_row	Specifies that the first column conditional formatting should be applied. Details for this and other conditional formatting options can be found at http://officeopenxml.com/WPtblLook.php
first_column	Specifies that the first column conditional formatting should be applied.
last_row	Specifies that the first column conditional formatting should be applied.
last_column	Specifies that the first column conditional formatting should be applied.
no_hband	Specifies that the first column conditional formatting should be applied.
no_vband	Specifies that the first column conditional formatting should be applied.

Examples

```
library(magrittr)

doc <- read_docx() %>%
  body_add_table(iris, style = "table_template")

print(doc, target = tempfile(fileext = ".docx") )
```

---

body_add_toc *add table of content*

Description

add a table of content into an rdocx object. The TOC will be generated by Word, if the document is not edited with Word (i.e. Libre Office) the TOC will not be generated.

Usage

```
body_add_toc(x, level = 3, pos = "after", style = NULL, separator = ";")
```

Arguments

x	an rdocx object
level	max title level of the table
pos	where to add the new element relative to the cursor, one of "after", "before", "on".
style	optional. style in the document that will be used to build entries of the TOC.
separator	optional. Some configurations need "," (i.e. from Canada) separator instead of ";"

Examples

```
library(magrittr)
doc <- read_docx() %>% body_add_toc()

print(doc, target = tempfile(fileext = ".docx") )
```

body_add_xml *add an xml string as document element*

Description

Add an xml string as document element in the document. This function is to be used to add custom openxml code.

Usage

```
body_add_xml(x, str, pos)
```

Arguments

x	an rdocx object
str	a wml string
pos	where to add the new element relative to the cursor, one of "after", "before", "on".

body_bookmark *add bookmark*

Description

Add a bookmark at the cursor location. The bookmark is added on the first run of text in the current paragraph.

Usage

```
body_bookmark(x, id)
```

Arguments

x	an rdocx object
id	bookmark name

Examples

```
# cursor_bookmark ----
library(magrittr)

doc <- read_docx() %>%
  body_add_par("centered text", style = "centered") %>%
  body_bookmark("text_to_replace")
```

body_remove *remove an element*

Description

remove element pointed by cursor from a Word document

Usage

```
body_remove(x)
```

Arguments

x	an rdocx object

Examples

```
library(officer)
library(magrittr)

str1 <- "Lorem ipsum dolor sit amet, consectetur adipiscing elit. " %>%
  rep(20) %>% paste(collapse = "")
str2 <- "Drop that text"
str3 <- "Aenean venenatis varius elit et fermentum vivamus vehicula. " %>%
  rep(20) %>% paste(collapse = "")

my_doc <- read_docx()  %>%
  body_add_par(value = str1, style = "Normal") %>%
  body_add_par(value = str2, style = "centered") %>%
  body_add_par(value = str3, style = "Normal")

new_doc_file <- print(my_doc,
  target = tempfile(fileext = ".docx"))

my_doc <- read_docx(path = new_doc_file)  %>%
  cursor_reach(keyword = "that text") %>%
  body_remove()

print(my_doc, target = tempfile(fileext = ".docx"))
```

body_replace_all_text *Replace text anywhere in the document, or at a cursor*

Description

Replace all occurrences of old_value with new_value. This method uses grepl/gsub for pattern matching; you may supply arguments as required (and therefore use regex features) using the optional ... argument.

Note that by default, grepl/gsub will use `fixed=FALSE`, which means that `old_value` and `new_value` will be interepreted as regular expressions.

Chunking of text

Note that the behind-the-scenes representation of text in a Word document is frequently not what you might expect! Sometimes a paragraph of text is broken up (or "chunked") into several "runs," as a result of style changes, pauses in text entry, later revisions and edits, etc. If you have not styled the text, and have entered it in an "all-at-once" fashion, e.g. by pasting it or by outputing it programmatically into your Word document, then this will likely not be a problem. If you are working with a manually-edited document, however, this can lead to unexpected failures to find text.

You can use the officer function docx_show_chunk to show how the paragraph of text at the current cursor has been chunked into runs, and what text is in each chunk. This can help troubleshoot unexpected failures to find text.

Usage

```
body_replace_all_text(
  x,
  old_value,
  new_value,
  only_at_cursor = FALSE,
  warn = TRUE,
  ...
)

headers_replace_all_text(
  x,
  old_value,
  new_value,
  only_at_cursor = FALSE,
  warn = TRUE,
  ...
)

footers_replace_all_text(
  x,
  old_value,
  new_value,
  only_at_cursor = FALSE,
  warn = TRUE,
  ...
)
```

Arguments

x	a docx device
old_value	the value to replace
new_value	the value to replace it with
only_at_cursor	if TRUE, only search-and-replace at the current cursor; if FALSE (default), search-and-replace in the entire document (this can be slow on large documents!)
warn	warn if old_value could not be found.
...	optional arguments to grepl/gsub (e.g. fixed=TRUE)

header_replace_all_text

Replacements will be performed in each header of all sections.

Replacements will be performed in each footer of all sections.

Author(s)

Frank Hangler, <frank@plotandscatter.com>

See Also

grep, regex, docx_show_chunk

Examples

```
library(magrittr)

doc <- read_docx() %>%
  body_add_par("Placeholder one") %>%
  body_add_par("Placeholder two")

# Show text chunk at cursor
docx_show_chunk(doc)  # Output is 'Placeholder two'

# Simple search-and-replace at current cursor, with regex turned off
doc <- body_replace_all_text(doc, old_value = "Placeholder",
  new_value = "new", only_at_cursor = TRUE, fixed = TRUE)
docx_show_chunk(doc)  # Output is 'new two'

# Do the same, but in the entire document and ignoring case
doc <- body_replace_all_text(doc, old_value = "placeholder",
  new_value = "new", only_at_cursor=FALSE, ignore.case = TRUE)
doc <- cursor_backward(doc)
docx_show_chunk(doc) # Output is 'new one'

# Use regex : replace all words starting with "n" with the word "example"
doc <- body_replace_all_text(doc, "\\bn.*?\\b", "example")
docx_show_chunk(doc) # Output is 'example one'
```

body_replace_text_at_bkm *replace text at a bookmark location*

Description

replace text content enclosed in a bookmark with different text. A bookmark will be considered as valid if enclosing words within a paragraph; i.e., a bookmark along two or more paragraphs is invalid, a bookmark set on a whole paragraph is also invalid, but bookmarking few words inside a paragraph is valid.

Usage

```
body_replace_text_at_bkm(x, bookmark, value)

body_replace_img_at_bkm(x, bookmark, value)

headers_replace_text_at_bkm(x, bookmark, value)

headers_replace_img_at_bkm(x, bookmark, value)

footers_replace_text_at_bkm(x, bookmark, value)

footers_replace_img_at_bkm(x, bookmark, value)
```

Arguments

x	a docx device
bookmark	bookmark id
value	the replacement string, of type character

Examples

```
library(magrittr)
doc <- read_docx() %>%
  body_add_par("centered text", style = "centered") %>%
  slip_in_text(". How are you", style = "strong") %>%
  body_bookmark("text_to_replace") %>%
  body_replace_text_at_bkm("text_to_replace", "not left aligned")


# demo usage of bookmark and images ----
template <- system.file(package = "officer", "doc_examples/example.docx")

img.file <- file.path( R.home("doc"), "html", "logo.jpg" )

doc <- read_docx(path = template)
doc <- headers_replace_img_at_bkm(x = doc, bookmark = "bmk_header",
```

```
                            value = external_img(src = img.file, width = .53, height = .7))
doc <- footers_replace_img_at_bkm(x = doc, bookmark = "bmk_footer",
                            value = external_img(src = img.file, width = .53, height = .7))
print(doc, target = tempfile(fileext = ".docx"))
```

---

change_styles *replace paragraphs styles*

Description

Replace styles with others in a Word document.

Usage

```
change_styles(x, mapstyles)
```

Arguments

x	an rdocx object
mapstyles	a named list, names are the replacement style, content (as a character vector) are the styles to be replaced.

Examples

```
library(magrittr)

mapstyles <- list( "centered" = c("Normal"),
    "heading 3" = c("heading 1", "heading 2") )
doc <- read_docx() %>%
  body_add_par("A title", style = "heading 1") %>%
  body_add_par("Another title", style = "heading 2") %>%
  body_add_par("Hello world!", style = "Normal") %>%
  change_styles( mapstyles = mapstyles )

print(doc, target = tempfile(fileext = ".docx"))
```

---

color_scheme *color scheme*

Description

get master layout color scheme into a data.frame.

Usage

```
color_scheme(x)
```

Arguments

x	an rpptx object

See Also

Other functions for reading presentation informations: annotate_base(), layout_properties(), layout_summary(), length.rpptx(), slide_size(), slide_summary()

Examples

```
x <- read_pptx()
color_scheme ( x = x )
```

---

cursor_begin *set cursor in an rdocx object*

Description

a set of functions is available to manipulate the position of a virtual cursor. This cursor will be used when inserting, deleting or updating elements in the document.

Usage

```
cursor_begin(x)

cursor_bookmark(x, id)

cursor_end(x)

cursor_reach(x, keyword)

cursor_forward(x)

cursor_backward(x)
```

Arguments

x	a docx device
id	bookmark id
keyword	keyword to look for as a regular expression

cursor_begin

Set the cursor at the beginning of the document, on the first element of the document (usually a paragraph or a table).

cursor_bookmark

Set the cursor at a bookmark that has previously been set.

cursor_end

Set the cursor at the end of the document, on the last element of the document.

cursor_reach

Set the cursor on the first element of the document that contains text specified in argument `keyword`. The argument `keyword` is a regexpr pattern.

cursor_forward

Move the cursor forward, it increments the cursor in the document.

cursor_backward

Move the cursor backward, it decrements the cursor in the document.

Examples

```
library(officer)
library(magrittr)

doc <- read_docx() %>%
  body_add_par("paragraph 1", style = "Normal") %>%
  body_add_par("paragraph 2", style = "Normal") %>%
  body_add_par("paragraph 3", style = "Normal") %>%
  body_add_par("paragraph 4", style = "Normal") %>%
  body_add_par("paragraph 5", style = "Normal") %>%
  body_add_par("paragraph 6", style = "Normal") %>%
  body_add_par("paragraph 7", style = "Normal") %>%

  # default template contains only an empty paragraph
  # Using cursor_begin and body_remove, we can delete it
  cursor_begin() %>% body_remove() %>%

  # Let add text at the beginning of the
  # paragraph containing text "paragraph 4"
  cursor_reach(keyword = "paragraph 4") %>%
  slip_in_text("This is ", pos = "before", style = "Default Paragraph Font") %>%

  # move the cursor forward and end a section
  cursor_forward() %>%
  body_add_par("The section stop here", style = "Normal") %>%
  body_end_section_landscape() %>%

  # move the cursor at the end of the document
  cursor_end() %>%
  body_add_par("The document ends now", style = "Normal")
```

```
print(doc, target = tempfile(fileext = ".docx"))

# cursor_bookmark ----
library(magrittr)

doc <- read_docx() %>%
  body_add_par("centered text", style = "centered") %>%
  body_bookmark("text_to_replace") %>%
  body_add_par("A title", style = "heading 1") %>%
  body_add_par("Hello world!", style = "Normal") %>%
  cursor_bookmark("text_to_replace") %>%
  body_add_table(value = iris, style = "table_template")

print(doc, target = tempfile(fileext = ".docx"))
```

---

docx_body_relationship *body xml document*

Description

Get the body document as xml. This function is not to be used by end users, it has been implemented to allow other packages to work with officer.

Usage

```
docx_body_relationship(x)
```

Arguments

x	an rdocx object

Examples

```
doc <- read_docx()
docx_body_relationship(doc)
```

---

docx_body_xml *body xml document*

Description

Get the body document as xml. This function is not to be used by end users, it has been implemented to allow other packages to work with officer.

Usage

```
docx_body_xml(x)
```

Arguments

x	an rdocx object

Examples

```
doc <- read_docx()
docx_body_xml(doc)
```

---

docx_bookmarks *List Word bookmarks*

Description

List bookmarks id that can be found in an rdocx object.

Usage

```
docx_bookmarks(x)
```

Arguments

x	an rdocx object

See Also

Other functions for Word document informations: doc_properties(), docx_dim(), length.rdocx(), set_doc_properties(), styles_info()

Examples

```
library(magrittr)

doc <- read_docx() %>%
  body_add_par("centered text", style = "centered") %>%
 body_bookmark("text_to_replace") %>% body_add_par("centered text", style = "centered") %>%
  body_bookmark("text_to_replace2")

docx_bookmarks(doc)

docx_bookmarks(read_docx())
```

docx_dim *Word page layout*

Description

get page width, page height and margins (in inches). The return values are those corresponding to the section where the cursor is.

Usage

```
docx_dim(x)
```

Arguments

x	an rdocx object

See Also

Other functions for Word document informations: doc_properties(), docx_bookmarks(), length.rdocx(), set_doc_properties(), styles_info()

Examples

```
docx_dim(read_docx())
```

docx_reference_img *add images into an rdocx object*

Description

reference images into a Word document. This function is to be used with wml_link_images.

Images need to be referenced into the Word document, this will generate unique identifiers that need to be known to link these images with their corresponding xml code (wml).

Usage

```
docx_reference_img(x, src)
```

Arguments

x	an rdocx object
src	a vector of character containing image filenames.

docx_show_chunk *Show underlying text tag structure*

Description

Show the structure of text tags at the current cursor. This is most useful when trying to troubleshoot search-and-replace functionality using body_replace_all_text.

Usage

```
docx_show_chunk(x)
```

Arguments

x	a docx device

See Also

body_replace_all_text

Examples

```
library(magrittr)

doc <- read_docx() %>%
  body_add_par("Placeholder one") %>%
  body_add_par("Placeholder two")

# Show text chunk at cursor
docx_show_chunk(doc)  # Output is 'Placeholder two'
```

docx_summary *get Word content in a data.frame*

Description

read content of a Word document and return a tidy dataset representing the document.

Usage

```
docx_summary(x)
```

Arguments

x	an rdocx object

Note

Documents included with `body_add_docx()` will not be accessible in the results.

Examples

```
example_pptx <- system.file(package = "officer",
  "doc_examples/example.docx")
doc <- read_docx(example_pptx)
docx_summary(doc)
```

`doc_properties` *read document properties*

Description

read Word or PowerPoint document properties and get results in a data.frame.

Usage

```
doc_properties(x)
```

Arguments

`x`	an `rdocx` or `rpptx` object

See Also

Other functions for Word document informations: `docx_bookmarks()`, `docx_dim()`, `length.rdocx()`, `set_doc_properties()`, `styles_info()`

Examples

```
x <- read_docx()
doc_properties(x)
```

empty_content *create empty blocks*

Description

an empty object to include as an empty placeholder shape in a presentation. This comes in handy when presentation are updated through R, but a user still wants to write the takeaway statements in PowerPoint.

Usage

```
empty_content()
```

See Also

ph_with(), body_add_blocks()

Examples

```
fileout <- tempfile(fileext = ".pptx")
doc <- read_pptx()
doc <- add_slide(doc, layout = "Two Content",
  master = "Office Theme")
doc <- ph_with(x = doc, value = empty_content(),
 location = ph_location_type(type = "title") )
print(doc, target = fileout )
```

external_img *external image*

Description

Wraps an image in an object that can then be embedded in a PowerPoint slide or within a Word paragraph.

The image is added as a shape in PowerPoint (it is not possible to mix text and images in a PowerPoint form). With a Word document, the image will be added inside a paragraph.

Usage

```
external_img(src, width = 0.5, height = 0.2)
```

Arguments

src	image file path
width	height in inches.
height	height in inches

See Also

ph_with, body_add, fpar

Other run functions for reporting: `ftext()`, `run_linebreak()`, `run_pagebreak()`

Examples

```
# wrap r logo with external_img ----
srcfile <- file.path( R.home("doc"), "html", "logo.jpg" )
extimg <- external_img(src = srcfile, height = 1.06/2,
                       width = 1.39/2)

# pptx example ----
doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(x = doc, value = extimg,
               location = ph_location_type(type = "body"),
               use_loc_size = FALSE )
print(doc, target = tempfile(fileext = ".pptx"))

fp_t <- fp_text(font.size = 20, color = "red")
an_fpar <- fpar(extimg, ftext(" is cool!", fp_t))

# docx example ----
x <- read_docx()
x <- body_add(x, an_fpar)
print(x, target = tempfile(fileext = ".docx"))
```

---

fortify_location *eval a location on the current slide*

Description

Eval a shape location against the current slide. This function is to be used to add custom openxml code. A list is returned, it contains informations width, height, left and top positions and other informations necessary to add a content on a slide.

Usage

```
fortify_location(x, doc, ...)
```

Arguments

x	a location for a placeholder.
doc	an rpptx object
...	unused arguments

See Also

ph_location, ph_with

Examples

```
doc <- read_pptx()
doc <- add_slide(doc, layout = "Title and Content",
  master = "Office Theme")
fortify_location(ph_location_fullsize(), doc)
```

---

fpar *concatenate formatted text as a paragraph*

Description

Create a paragraph representation by concatenating formatted text or images.

fpar supports ftext, external_img and simple strings. All its arguments will be concatenated to create a paragraph where chunks of text and images are associated with formatting properties.

Default text and paragraph formatting properties can also be modified with update.

Usage

```
fpar(..., fp_p = fp_par(), fp_t = fp_text())

## S3 method for class 'fpar'
update(object, fp_p = NULL, fp_t = NULL, ...)
```

Arguments

...	cot objects (ftext, external_img)
fp_p	paragraph formatting properties
fp_t	default text formatting properties. This is used as text formatting properties when simple text is provided as argument.
object	fpar object

Details

fortify_fpar, as.data.frame are used internally and are not supposed to be used by end user.

See Also

Other block functions for reporting: block_caption(), block_list(), block_section(), block_table(), block_toc(), plot_instr(), unordered_list()

Examples

```
fpar(ftext("hello", shortcuts$fp_bold()))

# mix text and image -----
img.file <- file.path( R.home("doc"), "html", "logo.jpg" )

bold_face <- shortcuts$fp_bold(font.size = 12)
bold_redface <- update(bold_face, color = "red")
fpar_1 <- fpar(
  "Hello World, ",
  ftext("how ", prop = bold_redface ),
  external_img(src = img.file, height = 1.06/2, width = 1.39/2),
  ftext(" you?", prop = bold_face ) )
fpar_1

img_in_par <- fpar(
  external_img(src = img.file, height = 1.06/2, width = 1.39/2),
  fp_p = fp_par(text.align = "center") )
```

---

fp_border *border properties object*

Description

create a border properties object.

Usage

```
fp_border(color = "black", style = "solid", width = 1)

## S3 method for class 'fp_border'
update(object, color, style, width, ...)
```

Arguments

color	border color - single character value (e.g. "#000000" or "black")
style	border style - single character value : "none" or "solid" or "dotted" or "dashed"
width	border width - an integer value : 0>= value
object	fp_border object
...	further arguments - not used

Examples

```
fp_border()
fp_border(color="orange", style="solid", width=1)
fp_border(color="gray", style="dotted", width=1)
```

```
# modify object ------
border <- fp_border()
update(border, style="dotted", width=3)
```

`fp_cell` *Cell formatting properties*

Description

Create a `fp_cell` object that describes cell formatting properties.

Usage

```
fp_cell(
  border = fp_border(width = 0),
  border.bottom,
  border.left,
  border.top,
  border.right,
  vertical.align = "center",
  margin = 0,
  margin.bottom,
  margin.top,
  margin.left,
  margin.right,
  background.color = "transparent",
  text.direction = "lrtb"
)

## S3 method for class 'fp_cell'
format(x, type = "wml", ...)

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

## S3 method for class 'fp_cell'
update(
  object,
  border,
  border.bottom,
  border.left,
  border.top,
  border.right,
  vertical.align,
  margin = 0,
  margin.bottom,
  margin.top,
```

```
  margin.left,
  margin.right,
  background.color,
  text.direction,
  ...
)
```

Arguments

`border`	shortcut for all borders.
`border.bottom, border.left, border.top, border.right`	fp_border for borders.
`vertical.align`	cell content vertical alignment - a single character value, expected value is one of "center" or "top" or "bottom"
`margin`	shortcut for all margins.
`margin.bottom, margin.top, margin.left, margin.right`	cell margins - 0 or positive integer value.
`background.color`	cell background color - a single character value specifying a valid color (e.g. "#000000" or "black").
`text.direction`	cell text rotation - a single character value, expected value is one of "lrtb", "tbrl", "btlr".
`x, object`	fp_cell object
`type`	output type - one of 'wml', 'pml', 'html'.
`...`	further arguments - not used

Examples

```
obj <- fp_cell(margin = 1)
update( obj, margin.bottom = 5 )
```

---

fp_par *Paragraph formatting properties*

Description

Create a fp_par object that describes paragraph formatting properties.

Usage

```
fp_par(
  text.align = "left",
  padding = 0,
  border = fp_border(width = 0),
  padding.bottom,
```

```
  padding.top,
  padding.left,
  padding.right,
  border.bottom,
  border.left,
  border.top,
  border.right,
  shading.color = "transparent",
  keep_with_next = FALSE
)

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

## S3 method for class 'fp_par'
update(
  object,
  text.align,
  padding,
  border,
  padding.bottom,
  padding.top,
  padding.left,
  padding.right,
  border.bottom,
  border.left,
  border.top,
  border.right,
  shading.color,
  ...
)
```

Arguments

`text.align`	text alignment - a single character value, expected value is one of 'left', 'right', 'center', 'justify'.
`padding`	paragraph paddings - 0 or positive integer value. Argument `padding` overwrites arguments `padding.bottom`, `padding.top`, `padding.left`, `padding.right`.
`border`	shortcut for all borders.
`padding.bottom, padding.top, padding.left, padding.right`	paragraph paddings - 0 or positive integer value.
`border.bottom, border.left, border.top, border.right`	`fp_border` for borders. overwrite other border properties.
`shading.color`	shading color - a single character value specifying a valid color (e.g. "#000000" or "black").
`keep_with_next`	a scalar logical. Specifies that the paragraph (or at least part of it) should be rendered on the same page as the next paragraph when possible.

x, object	fp_par object
...	further arguments - not used

Value

a fp_par object

Examples

```
fp_par(text.align = "center", padding = 5)
obj <- fp_par(text.align = "center", padding = 1)
update( obj, padding.bottom = 5 )
```

---

fp_text *Text formatting properties*

Description

Create a fp_text object that describes text formatting properties.

Usage

```
fp_text(
  color = "black",
  font.size = 10,
  bold = FALSE,
  italic = FALSE,
  underlined = FALSE,
  font.family = "Arial",
  vertical.align = "baseline",
  shading.color = "transparent"
)

## S3 method for class 'fp_text'
format(x, type = "wml", ...)

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

## S3 method for class 'fp_text'
update(
  object,
  color,
  font.size,
  bold = FALSE,
  italic = FALSE,
  underlined = FALSE,
```

```
  font.family,
  vertical.align,
  shading.color,
  ...
)
```

Arguments

color	font color - a single character value specifying a valid color (e.g. "#000000" or "black").
font.size	font size (in point) - 0 or positive integer value.
bold	is bold
italic	is italic
underlined	is underlined
font.family	single character value specifying font name.
vertical.align	single character value specifying font vertical alignments. Expected value is one of the following : default 'baseline' or 'subscript' or 'superscript'
shading.color	shading color - a single character value specifying a valid color (e.g. "#000000" or "black").
x	fp_text object
type	output type - one of 'wml', 'pml', 'html'.
...	further arguments - not used
object	fp_text object to modify
format	format type, wml for MS word, pml for MS PowerPoint and html.

Value

a fp_text object

See Also

ftext, fpar

Examples

```
fp_text()
fp_text(color = "red")
fp_text(bold = TRUE, shading.color = "yellow")
print( fp_text (color="red", font.size = 12) )
```

ftext *formatted chunk of text*

Description

Format a chunk of text with text formatting properties (bold, color, ...).

The function allows you to create pieces of text formatted in a certain way. You should use this function in conjunction with fpar to create paragraphs consisting of differently formatted text parts.

Usage

```
ftext(text, prop)
```

Arguments

text	text value, a string.
prop	formatting text properties returned by fp_text.

See Also

fp_text

Other run functions for reporting: external_img(), run_linebreak(), run_pagebreak()

Examples

```
ftext("hello", fp_text())

properties1 <- fp_text(color = "red")
properties2 <- fp_text(bold = TRUE, shading.color = "yellow")
ftext1 <- ftext("hello", properties1)
ftext2 <- ftext("World", properties2)
paragraph <- fpar(ftext1, " ", ftext2)

x <- read_docx()
x <- body_add(x, paragraph)
print(x, target = tempfile(fileext = ".docx"))
```

get_reference_value *Get the document being used as a template*

Description

Get filename of the document being used as a template in an R Markdown document rendered as HTML, PowerPoint presentation or Word document. It requires packages rmarkdown >= 1.10.14 and knitr.

Usage

```
get_reference_value(format = NULL)
```

Arguments

format	document format, one of 'pptx', 'docx' or 'html'

Value

a name file

Author(s)

Noam Ross

---

layout_properties *slide layout properties*

Description

get information about a particular slide layout into a data.frame.

Usage

```
layout_properties(x, layout = NULL, master = NULL)
```

Arguments

x	an rpptx object
layout	slide layout name to use
master	master layout name where layout is located

See Also

Other functions for reading presentation informations: annotate_base(), color_scheme(), layout_summary(), length.rpptx(), slide_size(), slide_summary()

Examples

```
x <- read_pptx()
layout_properties ( x = x, layout = "Title Slide", master = "Office Theme" )
layout_properties ( x = x, master = "Office Theme" )
layout_properties ( x = x, layout = "Two Content" )
layout_properties ( x = x )
```

layout_summary *presentation layouts summary*

Description

get informations about slide layouts and master layouts into a data.frame. This function returns a data.frame containing all layout and master names.

Usage

```
layout_summary(x)
```

Arguments

x	an rpptx object

See Also

Other functions for reading presentation informations: annotate_base(), color_scheme(), layout_properties(), length.rpptx(), slide_size(), slide_summary()

Examples

```
my_pres <- read_pptx()
layout_summary ( x = my_pres )
```

length.rdocx *number of blocks inside an rdocx object*

Description

return the number of blocks inside an rdocx object. This number also include the default section definition of a Word document - default Word section is an uninvisible element.

Usage

```
## S3 method for class 'rdocx'
length(x)
```

Arguments

x	an rdocx object

See Also

Other functions for Word document informations: doc_properties(), docx_bookmarks(), docx_dim(), set_doc_properties(), styles_info()

Examples

```
# how many elements are there in an new document produced
# with the default template.
length( read_docx() )
```

`length.rpptx` *number of slides*

Description

Function `length` will return the number of slides.

Usage

```
## S3 method for class 'rpptx'
length(x)
```

Arguments

`x`	an rpptx object

See Also

Other functions for reading presentation informations: `annotate_base()`, `color_scheme()`, `layout_properties()`, `layout_summary()`, `slide_size()`, `slide_summary()`

Examples

```
my_pres <- read_pptx()
my_pres <- add_slide(my_pres)
my_pres <- add_slide(my_pres)
length(my_pres)
```

`media_extract` *Extract media from a document object*

Description

Extract files from an `rdocx` or `rpptx` object.

Usage

```
media_extract(x, path, target)
```

Arguments

x	an rpptx object or an rdocx object
path	media path, should be a relative path
target	target file

Examples

```
example_pptx <- system.file(package = "officer",
  "doc_examples/example.pptx")
doc <- read_pptx(example_pptx)
content <- pptx_summary(doc)
image_row <- content[content$content_type %in% "image", ]
media_file <- image_row$media_file
png_file <- tempfile(fileext = ".png")
media_extract(doc, path = media_file, target = png_file)
```

---

move_slide *move a slide*

Description

move a slide in a pptx presentation

Usage

```
move_slide(x, index, to)
```

Arguments

x	an rpptx object
index	slide index, default to current slide position.
to	new slide index.

Note

cursor is set on the last slide.

See Also

Other functions slide manipulation: add_slide(), on_slide(), remove_slide()

Examples

```
x <- read_pptx()
x <- add_slide(x)
x <- ph_with(x, "Hello world 1", location = ph_location_type())
x <- add_slide(x)
x <- ph_with(x, "Hello world 2", location = ph_location_type())
x <- move_slide(x, index = 1, to = 2)
```

officer *officer: Manipulate Microsoft Word and PowerPoint Documents*

Description

The officer package facilitates access to and manipulation of 'Microsoft Word' and 'Microsoft PowerPoint' documents from R.

Details

Examples of manipulations are:

- read Word and PowerPoint files into data objects
- add/edit/remove image, table and text content from documents and slides
- write updated content back to Word and PowerPoint files

To learn more about officer, start with the vignettes: `browseVignettes(package = "officer")`

Author(s)

Maintainer: David Gohel <david.gohel@ardata.fr>

Other contributors:

- Frank Hangler <frank@plotandscatter.com> (function body_replace_all_text) [contributor]
- Liz Sander <lsander@civisanalytics.com> (several documentation fixes) [contributor]
- Anton Victorson <anton@victorson.se> (fixes xml structures) [contributor]
- Jon Calder <jonmcalder@gmail.com> (update vignettes) [contributor]
- John Harrold <john.m.harrold@gmail.com> (fuction annotate_base) [contributor]
- John Muschelli <muschellij2@gmail.com> (google doc compatibility) [contributor]

See Also

https://davidgohel.github.io/officer/

officer-defunct *Defunct Functions in Package officer*

Description

Defunct Functions in Package officer

Usage

```
ph_from_xml(...)

ph_from_xml_at(...)

ph_with_table(...)

ph_with_img(...)

ph_with_gg(...)

ph_with_ul(...)

ph_with_table_at(...)

ph_with_fpars_at(...)

body_end_section(...)

body_default_section(...)

break_column_before(...)
```

Arguments

...	unused arguments

Details

`ph_from_xml()` is replaced by `ph_with.xml_document`.

`ph_from_xml_at()` is replaced by `ph_with.xml_document`.

`ph_with_table()` is replaced by `ph_with.xml_document`.

`ph_with_img()` is replaced by `ph_with.xml_document`.

`ph_with_gg()` is replaced by `ph_with.xml_document`.

`ph_with_ul()` is replaced by `ph_with.xml_document`.

`ph_with_table_at()` is replaced by `ph_with.xml_document`.

`ph_with_fpars_at()` is replaced by `ph_with.xml_document`.

`body_end_section()` is replaced by function body_end_section_*.

`body_default_section()` is replaced by function body_end_section_*.

`break_column_before()` is replaced by function `slip_in_column_break`.

`on_slide` *change current slide*

Description

change current slide index of an rpptx object.

Usage

```
on_slide(x, index)
```

Arguments

`x`	an rpptx object
`index`	slide index

See Also

Other functions slide manipulation: `add_slide()`, `move_slide()`, `remove_slide()`

Examples

```
doc <- read_pptx()
doc <- add_slide(doc, layout = "Title and Content", master = "Office Theme")
doc <- add_slide(doc, layout = "Title and Content", master = "Office Theme")
doc <- add_slide(doc, layout = "Title and Content", master = "Office Theme")
doc <- on_slide( doc, index = 1)
doc <- ph_with(x = doc, "First title",
  location = ph_location_type(type="title"))
doc <- on_slide( doc, index = 3)
doc <- ph_with(x = doc, "Third title",
  location = ph_location_type(type="title"))

file <- tempfile(fileext = ".pptx")
print(doc, target = file )
```

pack_folder *compress a folder*

Description

compress a folder to a target file. The function returns the complete path to target file.

Usage

```
pack_folder(folder, target)
```

Arguments

folder	folder to compress
target	path of the archive to create

page_mar *page margins object*

Description

The margins for each page of a sectionThe function creates a representation of the dimensions of a page. The dimensions are defined by length, width and orientation. If the orientation is in landscape mode then the length becomes the width and the width becomes the length.

Usage

```
page_mar(
  bottom = 1,
  top = 1,
  right = 1,
  left = 1,
  header = 0.5,
  footer = 0.5,
  gutter = 0.5
)
```

Arguments

bottom, top	distance (in inches) between the bottom/top of the text margin and the bottom/top of the page. The text is placed at the greater of the value of this attribute and the extent of the header/footer text. A negative value indicates that the content should be measured from the bottom/topp of the page regardless of the footer/header, and so will overlap the footer/header. For example, header=-0.5, bottom=1 means that the footer must start one inch from the bottom of the page and the main document text must start a half inch from the bottom of the page. In this case, the text and footer overlap since bottom is negative.

left, right	distance (in inches) from the left/right edge of the page to the left/right edge of the text.
header	distance (in inches) from the top edge of the page to the top edge of the header.
footer	distance (in inches) from the bottom edge of the page to the bottom edge of the footer.
gutter	page gutter (in inches).

Examples

```
page_mar()
```

---

page_size *page size object*

Description

The function creates a representation of the dimensions of a page. The dimensions are defined by length, width and orientation. If the orientation is in landscape mode then the length becomes the width and the width becomes the length.

Usage

```
page_size(width = 21/2.54, height = 29.7/2.54, orient = "portrait")
```

Arguments

width, height	page width, page height (in inches).
orient	page orientation, either 'landscape', either 'portrait'.

Examples

```
page_size(orient = "landscape")
```

---

ph_add_fpar *append fpar*

Description

append fpar (a formatted paragraph) in a placeholder The function let you add a new formatted paragraph (fpar) to an existing content in an exiisting shape, existing paragraphs will be preserved.

Usage

```
ph_add_fpar(
  x,
  value,
  type = "body",
  id = 1,
  id_chr = NULL,
  ph_label = NULL,
  level = 1,
  par_default = TRUE
)
```

Arguments

x	an rpptx object
value	fpar object
type	placeholder type
id	placeholder index (integer) for a duplicated type. This is to be used when a placeholder type is not unique in the layout of the current slide, e.g. two placeholders with type 'body'. To add onto the first, use `id = 1` and `id = 2` for the second one. Values can be read from `slide_summary`.
id_chr	deprecated.
ph_label	label associated to the placeholder. Use column `ph_label` of result returned by `slide_summary`.
level	paragraph level
par_default	specify if the default paragraph formatting should be used.

Usage

If your goal is to add formatted text in a new shape, use `ph_with` with a `block_list` instead of this function.

See Also

`fpar`

Examples

```
library(magrittr)

bold_face <- shortcuts$fp_bold(font.size = 30)
bold_redface <- update(bold_face, color = "red")

fpar_ <- fpar(ftext("Hello ", prop = bold_face),
              ftext("World", prop = bold_redface ),
              ftext(", how are you?", prop = bold_face ) )
```

```
doc <- read_pptx() %>%
  add_slide(layout = "Title and Content", master = "Office Theme") %>%
  ph_with("", location = ph_location(bg = "wheat", newlabel = "myph")) %>%
  ph_add_fpar(value = fpar_, ph_label = "myph", level = 2)

print(doc, target = tempfile(fileext = ".pptx"))
```

---

ph_add_par *append paragraph*

Description

append a new empty paragraph in a placeholder. The function let you add a new empty paragraph to an existing content in an exiisting shape, existing paragraphs will be preserved.

Usage

```
ph_add_par(x, type = "body", id = 1, id_chr = NULL, level = 1, ph_label = NULL)
```

Arguments

x	an rpptx object
type	placeholder type
id	placeholder index (integer) for a duplicated type. This is to be used when a placeholder type is not unique in the layout of the current slide, e.g. two placeholders with type 'body'. To add onto the first, use `id = 1` and `id = 2` for the second one. Values can be read from `slide_summary`.
id_chr	deprecated.
level	paragraph level
ph_label	label associated to the placeholder. Use column `ph_label` of result returned by `slide_summary`.

Usage

If your goal is to add formatted text in a new shape, use `ph_with` with a `block_list` instead of this function.

Examples

```
library(magrittr)

fileout <- tempfile(fileext = ".pptx")
default_text <- fp_text(font.size = 0, bold = TRUE, color = "red")

doc <- read_pptx() %>%
  add_slide(layout = "Title and Content", master = "Office Theme") %>%
  ph_with("A text", location = ph_location_type(type = "body")) %>%
```

```
  ph_add_par(level = 2) %>%
  ph_add_text(str = "and another, ", style = default_text ) %>%
  ph_add_par(level = 3) %>%
  ph_add_text(str = "and another!",
              style = update(default_text, color = "blue"))

print(doc, target = fileout)
```

---

ph_add_text *append text*

Description

append text in a placeholder. The function let you add text to an existing content in an exiisting shape, existing text will be preserved.

Usage

```
ph_add_text(
  x,
  str,
  type = "body",
  id = 1,
  id_chr = NULL,
  ph_label = NULL,
  style = fp_text(font.size = 0),
  pos = "after",
  href = NULL,
  slide_index = NULL
)
```

Arguments

x	an rpptx object
str	text to add
type	placeholder type
id	placeholder index (integer) for a duplicated type. This is to be used when a placeholder type is not unique in the layout of the current slide, e.g. two placeholders with type 'body'. To add onto the first, use `id = 1` and `id = 2` for the second one. Values can be read from `slide_summary`.
id_chr	deprecated.
ph_label	label associated to the placeholder. Use column `ph_label` of result returned by `slide_summary`.
style	text style, a `fp_text` object
pos	where to add the new element relative to the cursor, "after" or "before".

href	hyperlink to reach when clicking the text
slide_index	slide index to reach when clicking the text. It will be ignored if href is not NULL.

Usage

If your goal is to add formatted text in a new shape, use ph_with with a block_list instead of this function.

Examples

```
fileout <- tempfile(fileext = ".pptx")
my_pres <- read_pptx()
my_pres <- add_slide(my_pres)
my_pres <- ph_with(my_pres, "",
  location = ph_location_type(type = "body"))

small_red <- fp_text(color = "red", font.size = 14)

my_pres <- ph_add_text(my_pres, str = "A small red text.",
  style = small_red)
my_pres <- ph_add_par(my_pres, level = 2)
my_pres <- ph_add_text(my_pres, str = "Level 2")

print(my_pres, target = fileout)

# another example ----
fileout <- tempfile(fileext = ".pptx")

doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(doc, "Un titre 2",
  location = ph_location_type(type = "title"))
doc <- ph_with(doc, "",
  location = ph_location(rotation = 90, bg = "red",
      newlabel = "myph"))
doc <- ph_add_text(doc, str = "dummy text",
  ph_label = "myph")

print(doc, target = fileout)
```

---

ph_empty *add a new empty shape*

Description

add a new empty shape in the current slide. This function is deprected, function ph_with should be used instead.

Usage

```
ph_empty(x, type = "body", index = 1, location = NULL)

ph_empty_at(
  x,
  left,
  top,
  width,
  height,
  bg = "transparent",
  rot = 0,
  template_type = NULL,
  template_index = 1
)
```

Arguments

x	an pptx object
type	placeholder type (i.e. 'body', 'title')
index	placeholder index (integer). This is to be used when a placeholder type is not unique in the current slide, e.g. two placeholders with type 'body', the first one will be added with index 1 and the second one with index 2. It is recommanded to use argument `location` instead of `type` and `index`.
location	a placeholder location object. This is a convenient argument that can replace usage of arguments `type` and `index`. See ph_location_type, ph_location, ph_location_label, ph_location_left, ph_location_right, ph_location_fullsize.
left, top	location of the new shape on the slide
width, height	shape size in inches
bg	background color
rot	rotation angle
template_type	placeholder template type. If used, the new shape will inherit the style from the placeholder template. If not used, no text property is defined and for example text lists will not be indented.
template_index	placeholder template index (integer). To be used when a placeholder template type is not unique in the current slide, e.g. two placeholders with type 'body'.

---

ph_hyperlink *hyperlink a placeholder*

Description

add hyperlink to a placeholder in the current slide.

Usage

```
ph_hyperlink(x, type = "body", id = 1, id_chr = NULL, ph_label = NULL, href)
```

Arguments

x	an rpptx object
type	placeholder type
id	placeholder index (integer) for a duplicated type. This is to be used when a placeholder type is not unique in the layout of the current slide, e.g. two placeholders with type 'body'. To add onto the first, use `id = 1` and `id = 2` for the second one. Values can be read from `slide_summary`.
id_chr	deprecated.
ph_label	label associated to the placeholder. Use column `ph_label` of result returned by `slide_summary`.
href	hyperlink (do not forget http or https prefix)

See Also

`ph_with`

Other functions for placeholders manipulation: `ph_remove()`, `ph_slidelink()`

Examples

```
fileout <- tempfile(fileext = ".pptx")
loc_manual <- ph_location(bg = "red", newlabel= "mytitle")
doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(x = doc, "Un titre 1", location = loc_manual)
slide_summary(doc) # read column ph_label here
doc <- ph_hyperlink(x = doc, ph_label = "mytitle",
  href = "https://cran.r-project.org")

print(doc, target = fileout )
```

---

ph_location *create a location for a placeholder*

Description

The function will return a list that complies with expected format for argument `location` of functionph_with.

Usage

```
ph_location(
  left = 1,
  top = 1,
  width = 4,
  height = 3,
  newlabel = "",
  bg = NULL,
  rotation = NULL,
  ...
)
```

Arguments

left, top, width, height	place holder coordinates in inches.
newlabel	a label for the placeholder. See section details.
bg	background color
rotation	rotation angle
...	unused arguments

Details

The location of the bounding box associated to a placeholder within a slide is specified with the left top coordinate, the width and the height. These are defined in inches:

left left coordinate of the bounding box

top top coordinate of the bounding box

width width of the bounding box

height height of the bounding box

In addition to these attributes, a label can be associated with the shape. Shapes, text boxes, images and other objects will be identified with that label in the Selection Pane of PowerPoint. This label can then be reused by other functions such as `ph_location_label()`. It can be set with argument `newlabel`.

See Also

Other functions for placeholder location: `ph_location_fullsize()`, `ph_location_label()`, `ph_location_left()`, `ph_location_right()`, `ph_location_template()`, `ph_location_type()`

Examples

```
doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(doc, "Hello world",
  location = ph_location(width = 4, height = 3, newlabel = "hello") )
print(doc, target = tempfile(fileext = ".pptx") )
```

ph_location_fullsize *location of a full size element*

Description

The function will return the location corresponding to a full size display.

Usage

```
ph_location_fullsize(newlabel = "", ...)
```

Arguments

newlabel	a label to associate with the placeholder.
...	unused arguments

See Also

Other functions for placeholder location: ph_location_label(), ph_location_left(), ph_location_right(), ph_location_template(), ph_location_type(), ph_location()

Examples

```
doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(doc, "Hello world", location = ph_location_fullsize() )
print(doc, target = tempfile(fileext = ".pptx") )
```

ph_location_label *location of a named placeholder*

Description

The function will use the label of a placeholder to find the corresponding location.

Usage

```
ph_location_label(ph_label, newlabel = NULL, ...)
```

Arguments

ph_label	placeholder label of the used layout. It can be read in PowerPoint or with function layout_properties() in column ph_label.
newlabel	a label to associate with the placeholder.
...	unused arguments

Details

The location of the bounding box associated to a placeholder within a slide is specified with the left top coordinate, the width and the height. These are defined in inches:

left left coordinate of the bounding box

top top coordinate of the bounding box

width width of the bounding box

height height of the bounding box

In addition to these attributes, a label can be associated with the shape. Shapes, text boxes, images and other objects will be identified with that label in the Selection Pane of PowerPoint. This label can then be reused by other functions such as `ph_location_label()`. It can be set with argument `newlabel`.

See Also

Other functions for placeholder location: `ph_location_fullsize()`, `ph_location_left()`, `ph_location_right()`, `ph_location_template()`, `ph_location_type()`, `ph_location()`

Examples

```
# ph_location_label demo ----

doc <- read_pptx()
doc <- add_slide(doc, layout = "Title and Content")

# all ph_label can be read here
layout_properties(doc, layout = "Title and Content")

doc <- ph_with(doc, head(iris),
  location = ph_location_label(ph_label = "Content Placeholder 2") )
doc <- ph_with(doc, format(Sys.Date()),
  location = ph_location_label(ph_label = "Date Placeholder 3") )
doc <- ph_with(doc, "This is a title",
  location = ph_location_label(ph_label = "Title 1") )

print(doc, target = tempfile(fileext = ".pptx"))
```

---

ph_location_left *location of a left body element*

Description

The function will return the location corresponding to a left bounding box. The function assume the layout 'Two Content' is existing.

Usage

```
ph_location_left(newlabel = NULL, ...)
```

Arguments

newlabel	a label to associate with the placeholder.
...	unused arguments

See Also

Other functions for placeholder location: ph_location_fullsize(), ph_location_label(), ph_location_right(), ph_location_template(), ph_location_type(), ph_location()

Examples

```
doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(doc, "Hello left", location = ph_location_left() )
doc <- ph_with(doc, "Hello right", location = ph_location_right() )
print(doc, target = tempfile(fileext = ".pptx") )
```

---

ph_location_right *location of a right body element*

Description

The function will return the location corresponding to a right bounding box. The function assume the layout 'Two Content' is existing.

Usage

```
ph_location_right(newlabel = NULL, ...)
```

Arguments

newlabel	a label to associate with the placeholder.
...	unused arguments

See Also

Other functions for placeholder location: ph_location_fullsize(), ph_location_label(), ph_location_left(), ph_location_template(), ph_location_type(), ph_location()

Examples

```
doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(doc, "Hello left", location = ph_location_left() )
doc <- ph_with(doc, "Hello right", location = ph_location_right() )
print(doc, target = tempfile(fileext = ".pptx") )
```

---

ph_location_template *create a location for a placeholder based on a template*

Description

The function will return a list that complies with expected format for argument `location` of function `ph_with`. A placeholder will be used as template and its positions will be updated with values `left`, `top`, `width`, `height`.

Usage

```
ph_location_template(
  left = 1,
  top = 1,
  width = 4,
  height = 3,
  newlabel = "",
  type = NULL,
  id = 1,
  ...
)
```

Arguments

`left, top, width, height`	place holder coordinates in inches.
`newlabel`	a label for the placeholder. See section details.
`type`	placeholder type to look for in the slide layout, one of 'body', 'title', 'ctrTitle', 'subTitle', 'dt', 'ftr', 'sldNum'. It will be used as a template placeholder.
`id`	index of the placeholder template. If two body placeholder, there can be two different index: 1 and 2 for the first and second body placeholders defined in the layout.
`...`	unused arguments

Details

The location of the bounding box associated to a placeholder within a slide is specified with the left top coordinate, the width and the height. These are defined in inches:

left left coordinate of the bounding box

top top coordinate of the bounding box

width width of the bounding box

height height of the bounding box

In addition to these attributes, a label can be associated with the shape. Shapes, text boxes, images and other objects will be identified with that label in the Selection Pane of PowerPoint. This label can then be reused by other functions such as `ph_location_label()`. It can be set with argument `newlabel`.

See Also

Other functions for placeholder location: `ph_location_fullsize()`, `ph_location_label()`, `ph_location_left()`, `ph_location_right()`, `ph_location_type()`, `ph_location()`

Examples

```
doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(doc, "Title",
  location = ph_location_type(type = "title") )
doc <- ph_with(doc, "Hello world",
    location = ph_location_template(top = 4, type = "title") )
print(doc, target = tempfile(fileext = ".pptx") )
```

---

ph_location_type *location of a placeholder based on a type*

Description

The function will use the type name of the placeholder (e.g. body, title), the layout name and few other criterias to find the corresponding location.

Usage

```
ph_location_type(
  type = "body",
  position_right = TRUE,
  position_top = TRUE,
  newlabel = NULL,
  id = NULL,
  ...
)
```

Arguments

type	placeholder type to look for in the slide layout, one of 'body', 'title', 'ctrTitle', 'subTitle', 'dt', 'ftr', 'sldNum'.
position_right	the parameter is used when a selection with above parameters does not provide a unique position (for example layout 'Two Content' contains two element of type 'body'). If TRUE, the element the most on the right side will be selected, otherwise the element the most on the left side will be selected.
position_top	same than position_right but applied to top versus bottom.
newlabel	a label to associate with the placeholder.
id	index of the placeholder. If two body placeholder, there can be two different index: 1 and 2 for the first and second body placeholders defined in the layout. If this argument is used, position_right and position_top will be ignored.
...	unused arguments

Details

The location of the bounding box associated to a placeholder within a slide is specified with the left top coordinate, the width and the height. These are defined in inches:

left left coordinate of the bounding box

top top coordinate of the bounding box

width width of the bounding box

height height of the bounding box

In addition to these attributes, a label can be associated with the shape. Shapes, text boxes, images and other objects will be identified with that label in the Selection Pane of PowerPoint. This label can then be reused by other functions such as ph_location_label(). It can be set with argument newlabel.

See Also

Other functions for placeholder location: ph_location_fullsize(), ph_location_label(), ph_location_left(), ph_location_right(), ph_location_template(), ph_location()

Examples

```
# ph_location_type demo ----

loc_title <- ph_location_type(type = "title")
loc_footer <- ph_location_type(type = "ftr")
loc_dt <- ph_location_type(type = "dt")
loc_slidenum <- ph_location_type(type = "sldNum")
loc_body <- ph_location_type(type = "body")


doc <- read_pptx()
```

```
doc <- add_slide(doc)
doc <- ph_with(x = doc, "Un titre", location = loc_title)
doc <- ph_with(x = doc, "pied de page", location = loc_footer)
doc <- ph_with(x = doc, format(Sys.Date()), location = loc_dt)
doc <- ph_with(x = doc, "slide 1", location = loc_slidenum)
doc <- ph_with(x = doc, letters[1:10], location = loc_body)

loc_subtitle <- ph_location_type(type = "subTitle")
loc_ctrtitle <- ph_location_type(type = "ctrTitle")
doc <- add_slide(doc, layout = "Title Slide", master = "Office Theme")
doc <- ph_with(x = doc, "Un sous titre", location = loc_subtitle)
doc <- ph_with(x = doc, "Un titre", location = loc_ctrtitle)

fileout <- tempfile(fileext = ".pptx")
print(doc, target = fileout )
```

---

ph_remove *remove a shape*

Description

remove a shape in a slide

Usage

```
ph_remove(x, type = "body", id = 1, ph_label = NULL, id_chr = NULL)
```

Arguments

x	an rpptx object
type	placeholder type
id	placeholder index (integer) for a duplicated type. This is to be used when a placeholder type is not unique in the layout of the current slide, e.g. two placeholders with type 'body'. To add onto the first, use `id = 1` and `id = 2` for the second one. Values can be read from `slide_summary`.
ph_label	label associated to the placeholder. Use column `ph_label` of result returned by `slide_summary`.
id_chr	deprecated.

See Also

`ph_with`

Other functions for placeholders manipulation: `ph_hyperlink()`, `ph_slidelink()`

Examples

```
fileout <- tempfile(fileext = ".pptx")
dummy_fun <- function(doc){
  doc <- add_slide(doc, layout = "Two Content",
    master = "Office Theme")
  doc <- ph_with(x = doc, value = "Un titre",
    location = ph_location_type(type = "title"))
  doc <- ph_with(x = doc, value = "Un corps 1",
    location = ph_location_type(type = "body", id = 1))
  doc <- ph_with(x = doc, value = "Un corps 2",
    location = ph_location_type(type = "body", id = 2))
  doc
}
doc <- read_pptx()
for(i in 1:3)
  doc <- dummy_fun(doc)

doc <- on_slide(doc, index = 1)
doc <- ph_remove(x = doc, type = "title")

doc <- on_slide(doc, index = 2)
doc <- ph_remove(x = doc, type = "body", id = 2)

doc <- on_slide(doc, index = 3)
doc <- ph_remove(x = doc, type = "body", id = 1)

print(doc, target = fileout )
```

---

ph_slidelink *slide link to a placeholder*

Description

add slide link to a placeholder in the current slide.

Usage

```
ph_slidelink(
  x,
  type = "body",
  id = 1,
  id_chr = NULL,
  ph_label = NULL,
  slide_index
)
```

Arguments

x	an rpptx object
type	placeholder type
id	placeholder index (integer) for a duplicated type. This is to be used when a placeholder type is not unique in the layout of the current slide, e.g. two placeholders with type 'body'. To add onto the first, use `id = 1` and `id = 2` for the second one. Values can be read from `slide_summary`.
id_chr	deprecated.
ph_label	label associated to the placeholder. Use column `ph_label` of result returned by `slide_summary`.
slide_index	slide index to reach

See Also

`ph_with`

Other functions for placeholders manipulation: `ph_hyperlink()`, `ph_remove()`

Examples

```
fileout <- tempfile(fileext = ".pptx")
loc_title <- ph_location_type(type = "title")
doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(x = doc, "Un titre 1", location = loc_title)
doc <- add_slide(doc)
doc <- ph_with(x = doc, "Un titre 2", location = loc_title)
doc <- on_slide(doc, 1)
slide_summary(doc) # read column ph_label here
doc <- ph_slidelink(x = doc, ph_label = "Title 1", slide_index = 2)

print(doc, target = fileout )
```

---

ph_with *add objects into a new shape on the current slide*

Description

add object into a new shape in the current slide. This function is able to add all supported outputs to a presentation and should replace calls to older functions starting with `ph_with_*`.

Usage

```
ph_with(x, value, location, ...)

## S3 method for class 'character'
ph_with(x, value, location, ...)

## S3 method for class 'numeric'
ph_with(x, value, location, format_fun = format, ...)

## S3 method for class 'factor'
ph_with(x, value, location, ...)

## S3 method for class 'logical'
ph_with(x, value, location, format_fun = format, ...)

## S3 method for class 'block_list'
ph_with(x, value, location, is_list = FALSE, ...)

## S3 method for class 'unordered_list'
ph_with(x, value, location, ...)

## S3 method for class 'data.frame'
ph_with(
  x,
  value,
  location,
  header = TRUE,
  first_row = TRUE,
  first_column = FALSE,
  last_row = FALSE,
  last_column = FALSE,
  ...
)

## S3 method for class 'gg'
ph_with(x, value, location, res = 300, ...)

## S3 method for class 'plot_instr'
ph_with(x, value, location, res = 300, ...)

## S3 method for class 'external_img'
ph_with(x, value, location, use_loc_size = TRUE, ...)

## S3 method for class 'fpar'
ph_with(x, value, location, ...)

## S3 method for class 'empty_content'
ph_with(x, value, location, ...)
```

```
## S3 method for class 'xml_document'
ph_with(x, value, location, ...)
```

Arguments

x	an rpptx object
value	object to add as a new shape. Supported objects are vectors, data.frame, graphics, block of formatted paragraphs, unordered list of formatted paragraphs, pretty tables with package flextable, editable graphics with package rvg, 'Microsoft' charts with package mschart.
location	a placeholder location object. It will be used to specify the location of the new shape. This location can be defined with a call to one of the ph_location functions. See section "see also".
...	further arguments passed to or from other methods. When adding a ggplot object or plot_instr, these arguments will be used by png function.
format_fun	format function for non character vectors
is_list	experimental paramater to make block_list formated as an unordered list. This should evolve in the next versions.
header	display header if TRUE
first_row, last_row, first_column, last_column	logical for PowerPoint table options
res	resolution of the png image in ppi
use_loc_size	if set to FALSE, external_img width and height will be used.

Methods (by class)

- character: add a character vector to a new shape on the current slide, values will be added as paragraphs.
- numeric: add a numeric vector to a new shape on the current slide, values will be be first formatted then added as paragraphs.
- factor: add a factor vector to a new shape on the current slide, values will be be converted as character and then added as paragraphs.
- block_list: add a block_list made of fpar to a new shape on the current slide.
- unordered_list: add a unordered_list made of fpar to a new shape on the current slide.
- data.frame: add a data.frame to a new shape on the current slide. Use package flextable instead for more advanced formattings.
- gg: add a ggplot object to a new shape on the current slide. Use package rvg for more advanced graphical features.
- plot_instr: add an R plot to a new shape on the current slide. Use package rvg for more advanced graphical features.
- external_img: add a external_img to a new shape on the current slide.
  When value is a external_img object, image will be copied into the PowerPoint presentation. The width and height specified in call to external_img will be ignored, their values will be those of the location, unless use_loc_size is set to FALSE.

- `fpar`: add an `fpar` to a new shape on the current slide as a single paragraph in a `block_list`.
- `empty_content`: add an `empty_content` to a new shape on the current slide.
- `xml_document`: add an xml_document object to a new shape on the current slide. This function is to be used to add custom openxml code.

See Also

ph_location_type, ph_location, ph_location_label, ph_location_left, ph_location_right, ph_location_fullsize, ph_location_template

Examples

```
fileout <- tempfile(fileext = ".pptx")
doc <- read_pptx()
doc <- add_slide(doc, layout = "Two Content",
  master = "Office Theme")
doc <- ph_with(x = doc, value = c("Un titre", "Deux titre"),
               location = ph_location_left() )
doc <- ph_with(x = doc, value = iris[1:4, 3:5],
               location = ph_location_right() )


anyplot <- plot_instr(code = {
  barplot(1:5, col = 2:6)
})

doc <- add_slide(doc)
doc <- ph_with(
  doc, anyplot,
  location = ph_location_fullsize(),
  bg = "#00000066", pointsize = 12)

if( require("ggplot2") ){
  doc <- add_slide(doc)
  gg_plot <- ggplot(data = iris ) +
    geom_point(mapping = aes(Sepal.Length, Petal.Length),
      size = 3) +
    theme_minimal()
  doc <- ph_with(x = doc, value = gg_plot,
                 location = ph_location_fullsize(),
                 bg = "transparent" )
  doc <- ph_with(x = doc, value = "graphic title",
               location = ph_location_type(type="title") )
}

doc <- add_slide(doc, layout = "Title and Content",
  master = "Office Theme")
img.file <- file.path( R.home("doc"), "html", "logo.jpg" )
doc <- ph_with(x = doc, external_img(img.file, 100/72, 76/72),
               location = ph_location_right(), use_loc_size = FALSE )

svg_file <- file.path(R.home(component = "doc"), "html/Rlogo.svg")
```

```
if( require("rsvg") ){
  doc <- ph_with(x = doc, external_img(svg_file),
    location = ph_location_left(),
    use_loc_size = TRUE )
}
# block list ------
bl <- block_list(
  fpar(ftext("hello world", shortcuts$fp_bold(color = "pink"))),
  fpar(
    ftext("hello", shortcuts$fp_bold()),
    ftext("hello", shortcuts$fp_italic(color="red"))
  ))
doc <- add_slide(doc)
doc <- ph_with(x = doc, value = bl,
               location = ph_location_type(type="body") )

# fpar ------
hw <- fpar(ftext("hello world", shortcuts$fp_bold(color = "pink")))
doc <- add_slide(doc)
doc <- ph_with(x = doc, value = hw,
               location = ph_location_type(type="body") )
# unordered_list ----
ul <- unordered_list(
  level_list = c(1, 2, 2, 3, 3, 1),
  str_list = c("Level1", "Level2", "Level2", "Level3", "Level3", "Level1"),
  style = fp_text(color = "red", font.size = 0) )
doc <- add_slide(doc)
doc <- ph_with(x = doc, value = ul,
               location = ph_location_fullsize() )

print(doc, target = fileout )
```

`ph_with_gg_at` *add ggplot to a pptx presentation*

Description

add a ggplot as a png image into an rpptx object This function is deprecated in favor of `ph_with`.

Usage

```
ph_with_gg_at(x, value, width, height, left, top, ...)
```

Arguments

`x`	an pptx object
`value`	ggplot object
`width, height`	image size in inches
`left, top`	location of the new shape on the slide
`...`	Arguments to be passed to png function.

ph_with_img_at *add image*

Description

add an image as a new shape in the current slide. This function is deprecated in favor of ph_with.

Usage

```
ph_with_img_at(x, src, left, top, width, height, rot = 0)
```

Arguments

x	an pptx object
src	image filename, the basename of the file must not contain any blank.
left, top	location of the new shape on the slide
width, height	image size in inches
rot	rotation angle

ph_with_text *add text into a new shape*

Description

add text into a new shape in a slide. This function is deprecated in favor of ph_with.

Usage

```
ph_with_text(x, str, type = "title", index = 1, location = NULL)
```

Arguments

x	an pptx object
str	text to add
type	placeholder type (i.e. 'body', 'title')
index	placeholder index (integer). This is to be used when a placeholder type is not unique in the current slide, e.g. two placeholders with type 'body', the first one will be added with index 1 and the second one with index 2. It is recommanded to use argument location instead of type and index.
location	a placeholder location object. This is a convenient argument that can replace usage of arguments type and index. See ph_location_type, ph_location, ph_location_label, ph_location_left, ph_location_right, ph_location_fullsize.

plot_instr *Wrap plot instructions for png plotting in Powerpoint or Word*

Description

A simple wrapper to capture plot instructions that will be executed and copied in a document. It produces an object of class 'plot_instr' with a corresponding method ph_with().

The function enable usage of any R plot with argument code. Wrap your code between curly bracket if more than a single expression.

Usage

```
plot_instr(code)
```

Arguments

code	plotting instructions

See Also

ph_with(), body_add()

Other block functions for reporting: block_caption(), block_list(), block_section(), block_table(), block_toc(), fpar(), unordered_list()

Examples

```
# plot_instr demo ----

anyplot <- plot_instr(code = {
  barplot(1:5, col = 2:6)
  })

doc <- read_docx()
doc <- body_add(doc, anyplot, width = 5, height = 4)
print(doc, target = tempfile(fileext = ".docx"))


doc <- read_pptx()
doc <- add_slide(doc)
doc <- ph_with(
  doc, anyplot,
  location = ph_location_fullsize(),
  bg = "#00000066", pointsize = 12)
print(doc, target = tempfile(fileext = ".pptx"))
```

pptx_summary *get PowerPoint content in a data.frame*

Description

read content of a PowerPoint document and return a dataset representing the document.

Usage

```
pptx_summary(x)
```

Arguments

x	an rpptx object

Examples

```
example_pptx <- system.file(package = "officer",
  "doc_examples/example.pptx")
doc <- read_pptx(example_pptx)
pptx_summary(doc)
pptx_summary(example_pptx)
```

print.rpptx *write a 'PowerPoint' file.*

Description

write a 'PowerPoint' file.

Usage

```
## S3 method for class 'rpptx'
print(x, target = NULL, ...)
```

Arguments

x	an rpptx object
target	path to the pptx file to write
...	unused

See Also

read_pptx

Examples

```
# write a rdocx object in a docx file ----
file <- tempfile(fileext = ".pptx")
doc <- read_pptx()
print(doc, target = file)
```

`prop_section` *section properties*

Description

A section is a grouping of blocks (ie. paragraphs and tables) that have a set of properties that define pages on which the text will appear.

A Section properties object stores information about page composition, such as page size, page orientation, borders and margins.

Usage

```
prop_section(page_size, page_margins, type)
```

Arguments

`page_size`	page dimensions, an object generated with function page_size.
`page_margins`	page margins, an object generated with function page_mar.
`type`	Section type. It defines how the contents of the section will be placed relative to the previous section. Available types are "continuous" (begins the section on the next paragraph), "evenPage" (begins on the next even-numbered page), "nextColumn" (begins on the next column on the page), "nextPage" (begins on the following page), "oddPage" (begins on the next odd-numbered page).

See Also

block_section

Examples

```
prop_section(
  page_size = page_size(orient = "landscape"),
  page_margins = page_mar(top = 2),
  type = "continuous")
```

read_docx *open a connection to a 'Word' file*

Description

read and import a docx file as an R object representing the document.

Usage

```
read_docx(path = NULL)

## S3 method for class 'rdocx'
print(x, target = NULL, ...)
```

Arguments

path	path to the docx file to use as base document.
x	an rdocx object
target	path to the docx file to write
...	unused

See Also

print.rdocx, body_add

Examples

```
# create an rdocx object with default template ---
read_docx()

print(read_docx())
# write a rdocx object in a docx file ----
if( require(magrittr) ){
  read_docx() %>% print(target = tempfile(fileext = ".docx"))
}
```

read_pptx *open a connexion to a 'PowerPoint' file*

Description

read and import a pptx file as an R object representing the document. The function is called read_pptx because it allows you to initialize an object of class rpptx from an existing PowerPoint file. Content will be added to the existing presentation. By default, an empty document is used.

Usage

```
read_pptx(path = NULL)
```

Arguments

path	path to the pptx file to use as base document.

master layouts and slide layouts

`read_pptx()` uses a PowerPoint file as the initial document. This is the original PowerPoint document where all slide layouts, placeholders for shapes and styles come from. Major points to be aware of are:

- Slide layouts are relative to a master layout. A document can contain one or more master layouts; a master layout can contain one or more slide layouts.
- A slide layout inherits design properties from its master layout but some properties can be overwritten.
- Designs and formatting properties of layouts and shapes (placeholders in a layout) are defined within the initial document. There is no R function to modify these values - they must be defined in the initial document.

See Also

`print.rpptx` `add_slide`

Examples

```
read_pptx()
```

---

read_xlsx *open a connexion to an 'Excel' file*

Description

read and import an xlsx file as an R object representing the document. This function is experimental.

Usage

```
read_xlsx(path = NULL)

## S3 method for class 'rxlsx'
length(x)

## S3 method for class 'rxlsx'
print(x, target = NULL, ...)
```

Arguments

path	path to the xlsx file to use as base document.
x	an rxlsx object
target	path to the xlsx file to write
...	unused

Examples

```
read_xlsx()
# write a rdocx object in a docx file ----
if( require(magrittr) ){
  read_xlsx() %>% print(target = tempfile(fileext = ".xlsx"))
  # full path of produced file is returned
  print(.Last.value)
}
```

---

remove_slide *remove a slide*

Description

remove a slide from a pptx presentation

Usage

```
remove_slide(x, index = NULL)
```

Arguments

x	an rpptx object
index	slide index, default to current slide position.

Note

cursor is set on the last slide.

See Also

Other functions slide manipulation: add_slide(), move_slide(), on_slide()

Examples

```
my_pres <- read_pptx()
my_pres <- add_slide(my_pres)
my_pres <- remove_slide(my_pres)
```

run_autonum *auto number*

Description

Create a string representation of a number

Usage

```
run_autonum(seq_id = "table", pre_label = "TABLE ", post_label = ": ")
```

Arguments

seq_id	sequence identifier
pre_label, post_label	text to add before and after number

Examples

```
run_autonum()
run_autonum(seq_id = "fig", pre_label = "fig. ")
```

run_columnbreak *column break*

Description

Create a representation of a column break

Usage

```
run_columnbreak()
```

Examples

```
run_columnbreak()
```

run_linebreak *page break for Word*

Description

Object representing a line break for a Word document. The result must be used within a call to fpar.

Usage

```
run_linebreak()
```

See Also

Other run functions for reporting: external_img(), ftext(), run_pagebreak()

Examples

```
fp_t <- fp_text(font.size = 12, bold = TRUE)
an_fpar <- fpar("let's add a line break", run_linebreak(), ftext("and blah blah!", fp_t))

x <- read_docx()
x <- body_add(x, an_fpar)
print(x, target = tempfile(fileext = ".docx"))
```

run_pagebreak *page break for Word*

Description

Object representing a page break for a Word document. The result must be used within a call to fpar.

Usage

```
run_pagebreak()
```

See Also

Other run functions for reporting: external_img(), ftext(), run_linebreak()

Examples

```
fp_t <- fp_text(font.size = 12, bold = TRUE)
an_fpar <- fpar("let's add a break page", run_pagebreak(), ftext("and blah blah!", fp_t))

x <- read_docx()
x <- body_add(x, an_fpar)
print(x, target = tempfile(fileext = ".docx"))
```

---

run_reference *reference*

Description

Create a representation of a reference

Usage

```
run_reference(id)
```

Arguments

id	reference id, a string

Examples

```
run_reference('a_ref')
```

---

run_seqfield *seqfield*

Description

Create a seqfield

Usage

```
run_seqfield(seqfield)
```

Arguments

seqfield	seqfield string

sanitize_images *remove unused media from a document*

Description

the function will scan the media directory and delete images that are not used anymore. This function is to be used when images have been replaced many times.

Usage

```
sanitize_images(x)
```

Arguments

x	rdocx or rpptx object

sections *sections*

Description

Add sections in a Word document. A section affects preceding paragraphs or tables.

Usage

```
body_end_section_continuous(x)

body_end_section_landscape(x, w = 21/2.54, h = 29.7/2.54)

body_end_section_portrait(x, w = 21/2.54, h = 29.7/2.54)

body_end_section_columns(x, widths = c(2.5, 2.5), space = 0.25, sep = FALSE)

body_end_section_columns_landscape(
  x,
  widths = c(2.5, 2.5),
  space = 0.25,
  sep = FALSE,
  w = 21/2.54,
  h = 29.7/2.54
)
```

Arguments

x	an rdocx object
w, h	width and height in inches of the section page. This will be ignored if the default section (of the reference_docx file) already has a width and a height.
widths	columns widths in inches. If 3 values, 3 columns will be produced.
space	space in inches between columns.
sep	if TRUE a line is separating columns.

Details

A section starts at the end of the previous section (or the beginning of the document if no preceding section exists), and stops where the section is declared.

Examples

```
library(magrittr)

str1 <- "Lorem ipsum dolor sit amet, consectetur adipiscing elit. " %>%
  rep(5) %>% paste(collapse = "")
str2 <- "Aenean venenatis varius elit et fermentum vivamus vehicula. " %>%
  rep(5) %>% paste(collapse = "")

my_doc <- read_docx()  %>%
  body_add_par(value = "Default section", style = "heading 1") %>%
  body_add_par(value = str1, style = "centered") %>%
  body_add_par(value = str2, style = "centered") %>%

  body_end_section_continuous() %>%
  body_add_par(value = "Landscape section", style = "heading 1") %>%
  body_add_par(value = str1, style = "centered") %>%
  body_add_par(value = str2, style = "centered") %>%
  body_end_section_landscape() %>%

  body_add_par(value = "Columns", style = "heading 1") %>%
  body_end_section_continuous() %>%
  body_add_par(value = str1, style = "centered") %>%
  body_add_par(value = str2, style = "centered") %>%
  slip_in_column_break() %>%
  body_add_par(value = str1, style = "centered") %>%
  body_end_section_columns(widths = c(2,2), sep = TRUE, space = 1) %>%

  body_add_par(value = str1, style = "Normal") %>%
  body_add_par(value = str2, style = "Normal") %>%
  slip_in_column_break() %>%
  body_end_section_columns_landscape(widths = c(3,3), sep = TRUE, space = 1)

print(my_doc, target = tempfile(fileext = ".docx"))
```

`set_doc_properties` *set document properties*

Description

set Word or PowerPoint document properties. These are not visible in the document but are available as metadata of the document.

Usage

```
set_doc_properties(
  x,
  title = NULL,
  subject = NULL,
  creator = NULL,
  description = NULL,
  created = NULL
)
```

Arguments

`x`	an rdocx or rpptx object
`title, subject, creator, description`	text fields
`created`	a date object

Note

The "last modified" and "last modified by" fields will be automatically be updated when the file is written.

See Also

Other functions for Word document informations: `doc_properties()`, `docx_bookmarks()`, `docx_dim()`, `length.rdocx()`, `styles_info()`

Examples

```
x <- read_docx()
x <- set_doc_properties(x, title = "title",
  subject = "document subject", creator = "Me me me",
  description = "this document is empty",
  created = Sys.time())
x <- doc_properties(x)
```

sheet_select *select sheet*

Description

set a particular sheet selected when workbook will be edited.

Usage

```
sheet_select(x, sheet)
```

Arguments

x	rxlsx object
sheet	sheet name

Examples

```
my_ws <- read_xlsx()
my_pres <- add_sheet(my_ws, label = "new sheet")
my_pres <- sheet_select(my_ws, sheet = "new sheet")
print(my_ws, target = tempfile(fileext = ".xlsx") )
```

shortcuts *shortcuts for formatting properties*

Description

Shortcuts for fp_text, fp_par, fp_cell and fp_border.

Usage

```
shortcuts
```

Examples

```
shortcuts$fp_bold()
shortcuts$fp_italic()
shortcuts$b_null()
```

slide_size *slides width and height*

Description

get the width and height of slides in inches as a named vector.

Usage

```
slide_size(x)
```

Arguments

x	an rpptx object

See Also

Other functions for reading presentation informations: annotate_base(), color_scheme(), layout_properties(), layout_summary(), length.rpptx(), slide_summary()

Examples

```
my_pres <- read_pptx()
my_pres <- add_slide(my_pres,
  layout = "Two Content", master = "Office Theme")
slide_size(my_pres)
```

slide_summary *get PowerPoint slide content in a data.frame*

Description

get content and positions of current slide into a data.frame. Data for any tables, images, or paragraphs are imported into the resulting data.frame.

Usage

```
slide_summary(x, index = NULL)
```

Arguments

x	an rpptx object
index	slide index

Note

The column `id` of the result is not to be used by users. This is a technical string id whose value will be used by office when the document will be rendered. This is not related to argument `index` required by functions `ph_with`.

See Also

Other functions for reading presentation informations: `annotate_base()`, `color_scheme()`, `layout_properties()`, `layout_summary()`, `length.rpptx()`, `slide_size()`

Examples

```
my_pres <- read_pptx()
my_pres <- add_slide(my_pres)
my_pres <- ph_with(my_pres, format(Sys.Date()),
  location = ph_location_type(type="dt"))
my_pres <- add_slide(my_pres)
my_pres <- ph_with(my_pres, iris[1:2,],
  location = ph_location_type(type="body"))
slide_summary(my_pres)
slide_summary(my_pres, index = 1)
```

---

slip_in_column_break *add a column break*

Description

add a column break into a Word document. A column break is used to add a break in a multi columns section in a Word Document.

Usage

```
slip_in_column_break(x, pos = "before")
```

Arguments

`x`	an rdocx object
`pos`	where to add the new element relative to the cursor, "after" or "before".

slip_in_footnote *append a footnote*

Description

append a new footnote into a paragraph of an rdocx object

Usage

```
slip_in_footnote(x, style = NULL, blocks, pos = "after")
```

Arguments

x	an rdocx object
style	text style to be used for the reference note
blocks	set of blocks to be used as footnote content returned by function block_list.
pos	where to add the new element relative to the cursor, "after" or "before".

Examples

```
library(magrittr)

img.file <- file.path( R.home("doc"), "html", "logo.jpg" )
bl <- block_list(
  fpar(ftext("hello", shortcuts$fp_bold())),
  fpar(
    ftext("hello world", shortcuts$fp_bold()),
    external_img(src = img.file, height = 1.06, width = 1.39)
  )
)

x <- read_docx() %>%
  body_add_par("Hello ", style = "Normal") %>%
  slip_in_text("world", style = "strong") %>%
  slip_in_footnote(style = "reference_id", blocks = bl)

print(x, target = tempfile(fileext = ".docx"))
```

slip_in_img *append an image*

Description

append an image into a paragraph of an rdocx object

Usage

```
slip_in_img(x, src, style = NULL, width, height, pos = "after")
```

Arguments

x	an rdocx object
src	image filename, the basename of the file must not contain any blank.
style	text style
width	height in inches
height	height in inches
pos	where to add the new element relative to the cursor, "after" or "before".

Examples

```
library(magrittr)
img.file <- file.path( R.home("doc"), "html", "logo.jpg" )
x <- read_docx() %>%
  body_add_par("R logo: ", style = "Normal") %>%
  slip_in_img(src = img.file, style = "strong", width = .3, height = .3)

print(x, target = tempfile(fileext = ".docx"))
```

---

slip_in_seqfield *append seq field*

Description

append seq field into a paragraph of an rdocx object. This feature is only available when document are edited with Word, when edited with Libre Office or another program, seq field will not be calculated and not displayed.

Usage

```
slip_in_seqfield(x, str, style = NULL, pos = "after")
```

Arguments

x	an rdocx object
str	seq field value
style	text style
pos	where to add the new element relative to the cursor, "after" or "before".

Examples

```
library(magrittr)
x <- read_docx() %>%
  body_add_par("Time is: ", style = "Normal") %>%
  slip_in_seqfield(
    str = "TIME \u005C@ \"HH:mm:ss\" \u005C* MERGEFORMAT",
    style = 'strong') %>%

  body_add_par(" - This is a figure title", style = "centered") %>%
  slip_in_seqfield(str = "SEQ Figure \u005C* roman",
    style = 'Default Paragraph Font', pos = "before") %>%
  slip_in_text("Figure: ", style = "strong", pos = "before") %>%

  body_add_par(" - This is another figure title", style = "centered") %>%
  slip_in_seqfield(str = "SEQ Figure \u005C* roman",
    style = 'strong', pos = "before")  %>%
  slip_in_text("Figure: ", style = "strong", pos = "before") %>%
  body_add_par("This is a symbol: ", style = "Normal") %>%
  slip_in_seqfield(str = "SYMBOL 100 \u005Cf Wingdings",
    style = 'strong')

print(x, target = tempfile(fileext = ".docx"))
```

---

slip_in_text *append text*

Description

append text into a paragraph of an rdocx object

Usage

```
slip_in_text(x, str, style = NULL, pos = "after", hyperlink = NULL)
```

Arguments

x	an rdocx object
str	text
style	text style
pos	where to add the new element relative to the cursor, "after" or "before".
hyperlink	turn the text into an external hyperlink

Examples

```
library(magrittr)
x <- read_docx() %>%
  body_add_par("Hello ", style = "Normal") %>%
  slip_in_text("world", style = "strong") %>%
  slip_in_text("Message is", style = "strong", pos = "before") %>%
  slip_in_text("with a link", style = "strong",
    pos = "after", hyperlink = "https://davidgohel.github.io/officer/")

print(x, target = tempfile(fileext = ".docx"))
```

---

slip_in_xml *add a wml string into a Word document*

Description

The function add a wml string into the document after, before or on a cursor location.

Usage

```
slip_in_xml(x, str, pos)
```

Arguments

x	an rdocx object
str	a wml string
pos	where to add the new element relative to the cursor, "after" or "before".

---

styles_info *read Word styles*

Description

read Word styles and get results in a tidy data.frame.

Usage

```
styles_info(x)
```

Arguments

x	an rdocx object

See Also

Other functions for Word document informations: doc_properties(), docx_bookmarks(), docx_dim(), length.rdocx(), set_doc_properties()

Examples

```
x <- read_docx()
styles_info(x)
```

`to_html` *Convert officer objects to HTML*

Description

Convert an object made with package officer to HTML. The result is a string.

Usage

```
to_html(x, ...)
```

Arguments

x	object
...	Arguments to be passed to methods

`to_pml` *Convert officer objects to PresentationML*

Description

Convert an object made with package officer to PresentationML. The result is a string.

Usage

```
to_pml(x, add_ns = FALSE, ...)
```

Arguments

x	object
add_ns	should namespace be added to the top tag
...	Arguments to be passed to methods

to_wml *Convert officer objects to WordprocessingML*

Description

Convert an object made with package officer to WordprocessingML. The result is a string.

Usage

```
to_wml(x, add_ns = FALSE, ...)
```

Arguments

x	object
add_ns	should namespace be added to the top tag
...	Arguments to be passed to methods

unordered_list *unordered list*

Description

unordered list of text for PowerPoint presentations. Each text is associated with a hierarchy level.

Usage

```
unordered_list(str_list = character(0), level_list = integer(0), style = NULL)
```

Arguments

str_list	list of strings to be included in the object
level_list	list of levels for hierarchy structure
style	text style, a fp_text object list or a single fp_text objects. Use fp_text(font.size = 0, ...) to inherit from default sizes of the presentation.

See Also

ph_with

Other block functions for reporting: block_caption(), block_list(), block_section(), block_table(), block_toc(), fpar(), plot_instr()

Examples

```
unordered_list(
level_list = c(1, 2, 2, 3, 3, 1),
str_list = c("Level1", "Level2", "Level2", "Level3", "Level3", "Level1"),
style = fp_text(color = "red", font.size = 0) )
unordered_list(
level_list = c(1, 2, 1),
str_list = c("Level1", "Level2", "Level1"),
style = list(
  fp_text(color = "red", font.size = 0),
  fp_text(color = "pink", font.size = 0),
  fp_text(color = "orange", font.size = 0)
  ))
```

---

unpack_folder *Extract files from a zip file*

Description

Extract files from a zip file to a folder. The function returns the complete path to destination folder.

Usage

```
unpack_folder(file, folder)
```

Arguments

file	path of the archive to unzip
folder	folder to create

---

wml_link_images *transform an xml string with images references*

Description

The function replace images filenames in an xml string with their id. The wml code cannot be valid without this operation.

Usage

```
wml_link_images(x, str)
```

Arguments

x	an rdocx object
str	wml string

Details

The function is available to allow the creation of valid wml code containing references to images.

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