Package 'huxtable'

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Type Package

Title Easily Create and Style Tables for LaTeX, HTML and Other Formats

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Author David Hugh-Jones [aut, cre]

Maintainer David Hugh-Jones <davidhughjones@gmail.com>

Description Creates styled tables for data presentation. Export to HTML, LaTeX, RTF, 'Word', 'Excel', and 'PowerPoint'. Simple, modern interface to manipulate borders, size, position, captions, colours, text styles and number formatting. Table cells can span multiple rows and/or columns.
Includes a 'huxreg' function for creation of regression tables, and 'quick_*' one-liners to print data to a new document.

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URL https://hughjonesd.github.io/huxtable

BugReports https://github.com/hughjonesd/huxtable/issues

Imports assertthat, generics, glue, memoise, rlang, stats, stringr (>= 1.2.0), tidyselect, utils, commonmark

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huxtable-package *Quick introduction to huxtable*

Description

Huxtable is a package for creating HTML and LaTeX tables. It provides similar functionality to xtable, with a simpler interface.

Quick start

To create a huxtable object, use `huxtable()` or `as_huxtable()`:

```
library(huxtable)
employees <- huxtable(
        Names    = c("Hadley", "Yihui", "Dirk"),
        Salaries = c(1e5, 1e5, 1e5),
        add_colnames = TRUE
      )
car_hux <- as_hux(mtcars)
```

You can then set properties which affect how the huxtable is displayed:

```
# make the first row bold:
bold(employees)[1, ] <- TRUE

# change the font size everywhere:
font_size(employees) <- 10
```

Or you can use a tidyverse style with the pipe operator:

```
library(magrittr)
employees <- employees %>%
      set_font_size(10) %>%
      set_bold(1, everywhere, TRUE)
```

For more information, see the website or read the vignette with `vignette('huxtable')`.

See huxtable-FAQ for frequently asked questions, including ways to get help.

To report a bug, or suggest an enhancement, visit github.

add_colnames *Add column or row names*

Description

Add a first row of column names, or a first column of row names, to the huxtable.

Usage

```
add_colnames(ht, ...)

## S3 method for class 'huxtable'
add_colnames(ht, rowname = NULL, ...)

add_rownames(ht, ...)

## S3 method for class 'huxtable'
add_rownames(ht, colname = "rownames", preserve_rownames = TRUE, ...)
```

Arguments

ht	A huxtable.
...	Arguments passed to methods.
rowname	Optional row name for the new row of column names.
colname	Column name for the new column of row names.
preserve_rownames	Preserve existing row names.

Details

Note that add_colnames will change the mode of all columns to character. Also note that it will move your rows down by one: what was row 1 will now be row 2, and the column names will now be row 1.

add_colnames preserves column names. add_rownames only preserves them if asked to.

Value

The modified object.

Examples

```
ht <- huxtable(
        First  = rnorm(5),
        Second = rnorm(5)
      )
add_rownames(ht)
add_colnames(ht)
```

```
# Out by 1:
add_rownames(add_colnames(ht))

# Better:
add_colnames(add_rownames(ht))

# Alternatively:
add_colnames(add_rownames(ht, ""))
```

`add_footnote` *Add a row with a footnote*

Description

This adds a single row at the bottom. The first cell contains the footnote; it spans all table columns and has an optional border above.

Usage

```
add_footnote(ht, text, border = 0.8, ...)
```

Arguments

`ht`	A huxtable.
`text`	Text for the footnote.
`border`	Width of the footnote's top border. Set to 0 for no border, or `NULL` to leave the border unchanged.
`...`	Other properties, passed to `set_cell_properties()` for the footnote cell.

Value

The modified huxtable

Examples

```
jams <- add_footnote(jams,
      "* subject to availability")
jams
```

add_rows *Insert one huxtable into another.*

Description

These functions combine two huxtables or similar objects and return the result.

Usage

```
add_rows(x, y, after = nrow(x), copy_cell_props = TRUE)

add_columns(x, y, after = ncol(x), copy_cell_props = TRUE)
```

Arguments

x, y	Huxtables or objects that can be converted by as_hux
after	Row or column after which y is inserted. Can be 0. Can be a row or column name. The default adds y to the end of x.
copy_cell_props	Logical. Passed to rbind.huxtable() or cbind.huxtable().

Details

Arguments in ... can include copy_cell_props.

Value

A huxtable.

See Also

insert_row() and insert_column(), which insert multiple values into a single row.

Examples

```
ht <- hux("Gooseberry", 2.15)
add_rows(jams, ht)
add_rows(jams, ht, after = 1)

mx <- matrix(
      c("Sugar", "50%", "60%", "40%",
      "Weight (g)", 300, 250, 300),
      4, 2)
add_columns(jams, mx)
```

`align` *Set the horizontal alignment of cell content*

Description

Values may be "left", "center", "right", `NA` or a single character. If `value` is a single character (e.g. a decimal point), then the cell is aligned on this character.

Usage

```
align(ht)
align(ht) <- value
set_align(ht, row, col, value )
map_align(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`fn`	A mapping function. See mapping-functions for details.
`value`	A character vector or matrix. Set to `NA` to reset to the default, which is `"left"`.

Details

Neither HTML nor LaTeX currently possess reliable ways of aligning cells on a decimal point. Huxtable does this by padding with spaces. This may work better if you use a fixed-width font.

Value

`align()` returns the `align` property. `set_align()` returns the modified huxtable.

Examples

```
numbers <- c(1, 1.5, 1.03, 10, 10.01)
number_hux <- as_hux(matrix(numbers, 5, 4))
number_format(number_hux) <- "%.4g"

number_hux <- map_align(number_hux,
      by_cols("left", "center", "right", "."))

alignments <- c("left", "centre", "right", "decimal (.)")
number_hux <- rbind(
        alignments,
        number_hux
```

```
      )
number_hux
```

`as_flextable` *Convert a huxtable for Word/Powerpoint*

Description

Huxtables can be converted to `flextable::flextable()` objects, for use in Word and Powerpoint documents.

Usage

```
as_flextable(x, ...)

## S3 method for class 'huxtable'
as_flextable(x, colnames_to_header = FALSE, ...)
```

Arguments

`x`	A huxtable.
`...`	Not used.
`colnames_to_header`	Use huxtable column names as the header. If `FALSE`, the flextable will contain only a body and no header.

Details

With recent versions of "flextable" and Pandoc, huxtables can be automatically outputted from rmarkdown `word_document` and/or `powerpoint_presentation` documents. (Powerpoint presentations require pandoc version >= 2.4.0.)

Properties are supported, with the following exceptions:

- Rotation of 0, 90 or 270 is supported.
- Non-numeric widths and heights are not supported. Table heights are treated as a proportion of 9 inches; table widths are treated as a proportion of 6 inches. So e.g. `height(ht) <-0.5` will give a height of 4.5 inches.
- Table wrap and table position are not supported.
- Border style "double" is not supported and becomes "solid".
- Captions are supported with recent versions of flextable, but not `caption_pos()` or `caption_width()`.

Value

an object of class flextable.

Challenge

Try to say `as_flextable.huxtable` ten times without pausing.

Examples

```
ht <- hux(a = 1:3, b = 1:3)
ft <- as_flextable(ht)
## Not run:
  my_doc <- officer::read_docx()
  my_doc <- flextable::body_add_flextable(
        my_doc, ft)
  print(my_doc, target =
        "path/to/my_doc.docx")

## End(Not run)
```

---

as_huxtable *Convert objects to huxtables*

Description

`as_huxtable` or `as_hux` converts an object to a huxtable. Conversion methods exist for data frames, tables, ftables, matrices and (most) vectors. `is_hux[table]` tests if an object is a huxtable.

Usage

```
as_huxtable(x, ...)

as_hux(x, ...)

## Default S3 method:
as_huxtable(
  x,
  add_colnames = getOption("huxtable.add_colnames", TRUE),
  add_rownames = FALSE,
  autoformat = getOption("huxtable.autoformat", TRUE),
  ...
)

is_huxtable(x)

is_hux(x)
```

Arguments

x	Object to convert.
...	Arguments passed on to `huxtable()`.

add_colnames	If TRUE, add a first row of column names to the huxtable.
add_rownames	If TRUE or a character string, add a first column of row names to the huxtable. The string gives the name for the new column (or "rownames" for TRUE).
autoformat	If TRUE, automatically format columns by type. See below.

Details

For table objects, add_colnames and add_rownames are TRUE by default. For matrix objects, they are FALSE. Other classes use options("huxtable.add_colnames"), which is TRUE by default; add_rownames is FALSE.

Value

An object of class "huxtable".

Examples

```
dfr <- data.frame(
        a = 1:5,
        b = letters[1:5],
        stringsAsFactors = FALSE
      )
as_huxtable(dfr)
mx <- matrix(letters[1:12], 4, 3)
as_huxtable(mx, add_colnames = FALSE)
library(stats)
tbl <- table(
        Wool    = warpbreaks$wool,
        Tension = warpbreaks$tension
      )
as_huxtable(tbl) # adds row and column names by default

# adding rownames:
as_hux(mtcars[1:3,], add_colnames = TRUE,
      add_rownames = "Car")
```

---

as_Workbook *Convert a huxtable for Excel*

Description

If the openxlsx package is installed, Huxtables can be converted to openxlsx::openxlsx() Workbook objects, for use in Excel documents.

Usage

```
as_Workbook(ht, ...)

## S3 method for class 'huxtable'
as_Workbook(ht, Workbook = NULL, sheet = "Sheet 1", write_caption = TRUE, ...)
```

Arguments

ht	A huxtable.
...	Not used.
Workbook	An existing Workbook object. By default, a new workbook will be created.
sheet	Name for the worksheet where the huxtable will be created.
write_caption	If TRUE, print any caption in the row above or below the table.

Details

Use openxlsx::saveWorkbook() to save the resulting object to an Excel file.

Properties are supported with the following exceptions:

- Non-numeric column widths and row heights, table width and height.
- Decimal padding.
- Cell padding.
- Table position.
- Caption width.

Huxtable tries to guess appropriate widths and height for rows and columns; numeric width() and height() are treated as scaling factors.

Contents are only stored as numbers if a whole column is "numeric", i.e. can be converted by as.numeric()). Otherwise, they are stored as text.

Value

An object of class Workbook.

Examples

```
wb <- as_Workbook(jams)

## Not run:
  openxlsx::saveWorkbook(wb,
        "my-excel-file.xlsx")

## End(Not run)

# multiple sheets in a single workbook:
wb <- openxlsx::createWorkbook()
wb <- as_Workbook(jams,
```

```
      Workbook = wb, sheet = "sheet1")
wb <- as_Workbook(
      hux("Another", "huxtable"),
      Workbook = wb,
      sheet = "sheet2")
```

`background_color` *Set cell background color*

Description

Colors can be in any format understood by R:

- A color name like `"darkred"`
- A HTML string like `"#FF0000"`
- The result of a function like `rgb(1,0,0)` or `grey(0.5)`

Usage

```
background_color(ht)
background_color(ht) <- value
set_background_color(ht, row, col, value )
map_background_color(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`fn`	A mapping function. See mapping-functions for details.
`value`	A character vector or matrix. Set to `NA` to reset to the default, which is `"NA"`.

Details

Transparent colors are not guaranteed to work at present.

Value

`background_color()` returns the `background_color` property. `set_background_color()` returns the modified huxtable.

See Also

Other formatting functions: `bold()`, `font_size()`, `font()`, `na_string()`, `number_format()`, `text_color()`

Examples

```
background_color(jams) <-  grey(0.7)
background_color(jams)

set_background_color(jams, "yellow")
set_background_color(jams,
      2:3, 1, "yellow")
map_background_color(jams,
      by_rows("yellow", grey(0.7)))
```

`bold` *Make cell text bold or italic*

Description

Make cell text bold or italic

Usage

```
bold(ht)
bold(ht) <- value
set_bold(ht, row, col, value = TRUE)
map_bold(ht, row, col, fn)

italic(ht)
italic(ht) <- value
set_italic(ht, row, col, value = TRUE)
map_italic(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`fn`	A mapping function. See mapping-functions for details.
`value`	A logical vector or matrix. Set to `NA` to reset to the default, which is `FALSE`.

Value

`bold()` returns the `bold` property. `set_bold()` returns the modified huxtable.

See Also

Other formatting functions: `background_color()`, `font_size()`, `font()`, `na_string()`, `number_format()`, `text_color()`

Examples

```
bold(jams) <-  TRUE
bold(jams)

set_bold(jams, FALSE)
set_bold(jams,
      2:3, 1, FALSE)
map_bold(jams,
      by_rows(FALSE, TRUE))
```

---

border-colors *Set border colors*

Description

These functions set border colors.

Usage

```
left_border_color(ht)
left_border_color(ht) <- value
set_left_border_color(ht, row, col, value )
map_left_border_color(ht, row, col, fn)

right_border_color(ht)
right_border_color(ht) <- value
set_right_border_color(ht, row, col, value )
map_right_border_color(ht, row, col, fn)

top_border_color(ht)
top_border_color(ht) <- value
set_top_border_color(ht, row, col, value )
map_top_border_color(ht, row, col, fn)

bottom_border_color(ht)
bottom_border_color(ht) <- value
set_bottom_border_color(ht, row, col, value )
map_bottom_border_color(ht, row, col, fn)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
fn	A mapping function. See mapping-functions for details.
value	A valid R color, e.g. "red", "#FF0000".

Details

Borders are always "collapsed": `right_border_color(ht)[,1]` is the same as `left_border_color(ht)[,2]`, and setting one sets the other.

Limitations

- Transparent borders with the alpha channel set are not guaranteed to work.

See Also

set-multiple, `brdr()`

Other border properties: `border-styles`, `borders`

Examples

```
jams <- set_all_borders(jams)
bottom_border_color(jams)[1, ] <- "red"
jams

set_bottom_border_color(jams, "blue")
```

`border-styles` *Set border styles*

Description

These functions set border styles.

Usage

```
left_border_style(ht)
left_border_style(ht) <- value
set_left_border_style(ht, row, col, value )
map_left_border_style(ht, row, col, fn)

right_border_style(ht)
right_border_style(ht) <- value
set_right_border_style(ht, row, col, value )
map_right_border_style(ht, row, col, fn)

top_border_style(ht)
top_border_style(ht) <- value
set_top_border_style(ht, row, col, value )
map_top_border_style(ht, row, col, fn)
```

```
bottom_border_style(ht)
bottom_border_style(ht) <- value
set_bottom_border_style(ht, row, col, value )
map_bottom_border_style(ht, row, col, fn)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
fn	A mapping function. See mapping-functions for details.
value	One of "solid", "double", "dashed" or "dotted".

Details

Borders are always "collapsed": `right_border_style(ht)[,1]` is the same as `left_border_style(ht)[,2]`, and setting one sets the other.

Limitations

- In HTML, you will need to set a width of at least 3 to get a double border.
- Only "solid" and "double" styles are currently implemented in LaTeX.

See Also

set-multiple, `brdr()`

Other border properties: `border-colors`, `borders`

Examples

```
jams <- set_all_borders(jams)
bottom_border_style(jams)[1, ] <- "dotted"
jams

set_bottom_border_style(jams, "double")
```

`borders` *Set borders*

Description

These functions set borders between cells.

Usage

```
left_border(ht)
left_border(ht) <- value
set_left_border(ht, row, col, value = 0.4)
map_left_border(ht, row, col, fn)

right_border(ht)
right_border(ht) <- value
set_right_border(ht, row, col, value = 0.4)
map_right_border(ht, row, col, fn)

top_border(ht)
top_border(ht) <- value
set_top_border(ht, row, col, value = 0.4)
map_top_border(ht, row, col, fn)

bottom_border(ht)
bottom_border(ht) <- value
set_bottom_border(ht, row, col, value = 0.4)
map_bottom_border(ht, row, col, fn)

## S3 replacement method for class 'huxtable'
left_border(ht) <- value

## S3 replacement method for class 'huxtable'
right_border(ht) <- value

## S3 replacement method for class 'huxtable'
top_border(ht) <- value

## S3 replacement method for class 'huxtable'
bottom_border(ht) <- value
```

Arguments

ht	A huxtable.
value	A numeric thickness or a brdr() object.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
fn	A mapping function. See mapping-functions for details.

Details

Borders are always "collapsed": `right_border(ht)[,1]` is the same as `left_border(ht)[,2]`, and setting one sets the other.

Setting `left_border(ht) <-number` sets the border thickness. You can set multiple properties at once by using `brdr()`.

Currently in LaTeX, all non-zero border widths on a given line must be the same.

Limitations

- In HTML, you will need to set a width of at least 3 to get a double border.
- Only "solid" and "double" styles are currently implemented in LaTeX, and all non-zero horizontal border widths on a given line must be the same.

See Also

set-multiple

Other border properties: `border-colors`, `border-styles`

Examples

```
bottom_border(jams)[1, ] <- 0.4
jams

bottom_border(jams)[1, ] <- brdr(0.4, "solid", "blue")
jams

set_bottom_border(jams, brdr(0.4, "solid", "green"))
```

---

brdr *Create a border object*

Description

Create a border object

Usage

```
brdr(thickness = 0.4, style = "solid", color = NA_character_)
```

Arguments

`thickness`	Thickness of the border in points.
`style`	"solid" (the default), "double", "dashed" or "dotted".
`color`	String representing a valid color (either a color name or a hexadecimalstring like "#00FF00").

Value

An object of class "brdr" which you can pass into huxtable border functions.

Examples

```
set_bottom_border(jams, brdr(1, "solid", "red"))
```

`brdr_thickness` *Get thickness of a* `brdr()` *object.*

Description

Get thickness of a `brdr()` object.

Usage

```
brdr_thickness(x)
```

Arguments

`x`	A `brdr()` object.

Value

A number or numeric matrix.

Examples

```
brdr_thickness(left_border(jams))
brdr_thickness(brdr(1, "solid", "red"))
```

`by_cases` *Map cell contents to properties using* `case_when`

Description

This function uses `dplyr::case_when()` to set cell properties.

Usage

```
by_cases(..., ignore_na = TRUE)
```

Arguments

`...`	A list of two-sided formulas interpreted by `case_when`.
`ignore_na`	If `TRUE`, `NA` values in the result will be left unchanged from their previous values. Otherwise, `NA` normally resets to the default.

Details

Within the formulas, the variable `.` will refer to the content of `ht[rows,cols]`, after conversion by `as.matrix()`.

`case_when` returns `NA` when no formula LHS is matched. To avoid this, set a default in the last formula: `TRUE ~ default`.

`case_when` can't deal with `brdr()` objects, so you cannot use these in `by_cases()`.

Value

A function for use in map_*** functions.

See Also

mapping-functions

Other mapping functions: `by_colorspace()`, `by_function()`, `by_quantiles()`, `by_ranges()`, `by_regex()`, `by_rows()`, `by_values()`

Examples

```
if (! requireNamespace("dplyr")) {
  stop("Please install the 'dplyr' package to run this example")
}

ht <- hux(runif(5), letters[1:5])

map_background_color(ht, by_cases(
        . == "a" ~ "red",
        . %in% letters ~ "green",
        . < 0.5 ~ "pink"
      ))
```

---

by_colorspace *Map numeric cell contents smoothly to colors*

Description

Map numeric cell contents smoothly to colors

Usage

```
by_colorspace(
  ...,
  range = NULL,
  na_color = NA,
  ignore_na = TRUE,
  colwise = FALSE
)
```

Arguments

...	Colors
range	Numeric endpoints. If NULL, these are determined from the data.
na_color	Color to return for NA values. Can be NA itself.
ignore_na	If TRUE, NA values in the result will be left unchanged from their previous values. Otherwise, NA normally resets to the default.
colwise	Logical. Calculate breaks separately within each column?

Details

by_colorspace requires the "scales" package.

Value

A function for use in map_*** functions.

See Also

mapping-functions

Other mapping functions: by_cases(), by_function(), by_quantiles(), by_ranges(), by_regex(), by_rows(), by_values()

Examples

```
if (! requireNamespace("scales")) {
  stop("Please install the \"scales\" package to run this example")
}
ht <- as_hux(matrix(rnorm(25), 5, 5))
map_background_color(ht,
      by_colorspace("red", "yellow", "blue"))
map_background_color(ht,
      by_colorspace("red", "yellow", "blue",
        colwise = TRUE))
```

---

by_function *Map cell contents to cell properties using a function or scale*

Description

This creates a simple wrapper around a function for use in map_xxx. Useful functions include scales and palettes from the scales package.

Usage

```
by_function(inner_fn, ignore_na = TRUE)
```

Arguments

inner_fn	A one-argument function which maps cell values to property values.
ignore_na	If TRUE, NA values in the result will be left unchanged from their previous values. Otherwise, NA normally resets to the default.

Details

The argument of inner_fn will be as.matrix(ht[row,col]). Be aware how matrix conversion affects the mode of cell data.

Value

A function for use in map_*** functions.

See Also

mapping-functions

Other mapping functions: by_cases(), by_colorspace(), by_quantiles(), by_ranges(), by_regex(), by_rows(), by_values()

Examples

```
ht <- as_hux(matrix(runif(20), 5, 4))

map_background_color(ht,
      by_function(grey))

if (requireNamespace("scales")) {
  map_text_color(ht, by_function(
          scales::seq_gradient_pal()
        ))
}
```

---

by_quantiles *Map numeric quantiles to cell properties*

Description

These functions split cell values by quantiles. Non-numeric cells are ignored.

Usage

```
by_quantiles(
  quantiles,
  values,
  right = FALSE,
  extend = TRUE,
```

```
  ignore_na = TRUE,
  colwise = FALSE
)

by_equal_groups(n, values, ignore_na = TRUE, colwise = FALSE)
```

Arguments

quantiles	Vector of quantiles.
values	Vector of values. `length(values)` should be one greater than `length(quantiles)`, or one less if `extend = FALSE`.
right	If `TRUE`, intervals are closed on the right, i.e. if values are exactly equal to a break, they go in the lower group. Otherwise, intervals are closed on the left, so equal values go in the higher group. `FALSE` by default.
extend	Extend `breaks` to `c(-Inf, breaks, Inf)`, i.e. include numbers below and above the outermost breaks. `TRUE` by default.
ignore_na	If `TRUE`, `NA` values in the result will be left unchanged from their previous values. Otherwise, `NA` normally resets to the default.
colwise	Logical. Calculate breaks separately within each column?
n	Number of equal-sized groups. `length(values)` should equal `n`.

Details

`by_equal_groups(n, values)` splits the data into `n` equal-sized groups (i.e. it is a shortcut for `by_quantiles(seq(1/n, 1 - 1/n, 1/n), values)`).

Value

A function for use in map_*** functions.

See Also

mapping-functions

Other mapping functions: `by_cases()`, `by_colorspace()`, `by_function()`, `by_ranges()`, `by_regex()`, `by_rows()`, `by_values()`

Examples

```
ht <- hux(rnorm(5), rnorm(5))

map_background_color(ht,
      by_quantiles(
        c(0.2, 0.8),
        c("red", "yellow", "green")
      ))

map_background_color(ht,
      by_quantiles(
```

```
    c(0.2, 0.8),
    c("red", "yellow", "green"),
    colwise = TRUE
  ))

map_background_color(ht,
  by_equal_groups(
    3,
    c("red", "yellow", "green")
  ))
```

---

by_ranges *Map numeric ranges to cell properties*

Description

by_ranges sets property values for cells falling within different numeric ranges.

Usage

```
by_ranges(breaks, values, right = FALSE, extend = TRUE, ignore_na = TRUE)
```

Arguments

breaks	A vector of numbers in increasing order.
values	A vector of property values. length(values) should be one greater than length(breaks) if extend = TRUE, or one less if extend = FALSE.
right	If TRUE, intervals are closed on the right, i.e. if values are exactly equal to a break, they go in the lower group. Otherwise, intervals are closed on the left, so equal values go in the higher group. FALSE by default.
extend	Extend breaks to c(-Inf,breaks,Inf), i.e. include numbers below and above the outermost breaks. TRUE by default.
ignore_na	If TRUE, NA values in the result will be left unchanged from their previous values. Otherwise, NA normally resets to the default.

Details

Non-numeric cells return NA. The effects of this depend on ignore_na.

Value

A function for use in map_*** functions.

See Also

mapping-functions

Other mapping functions: by_cases(), by_colorspace(), by_function(), by_quantiles(), by_regex(), by_rows(), by_values()

Examples

```
ht <- huxtable(c(1, 3, 5))
map_background_color(ht,
      by_ranges(
        c(2, 4),
        c("red", "yellow", "blue")
      ))

map_background_color(ht,
      by_ranges(
        c(2, 4),
        "pink",
        extend = FALSE
      ))

map_background_color(ht,
      by_ranges(
        c(1, 5),
        c("red", "yellow", "green"),
        right = TRUE
      ))
map_background_color(ht,
      by_ranges(
        c(1, 5),
        c("red", "yellow", "green"),
        right = FALSE
      ))
```

---

by_regex *Map cells matching a string or regex to cell properties*

Description

Map cells matching a string or regex to cell properties

Usage

```
by_regex(..., .grepl_args = list(), ignore_na = TRUE)
```

Arguments

`...`	A list of name-value pairs. The names are regular expressions. If there is a single unnamed argument, this is the default value for unmatched cells. More than one unnamed argument is an error.
`.grepl_args`	A list of arguments to pass to `grepl()`. Useful options include `fixed`, `perl` and `ignore.case`.
`ignore_na`	If `TRUE`, `NA` values in the result will be left unchanged from their previous values. Otherwise, `NA` normally resets to the default.

Value

A function for use in map_*** functions.

See Also

mapping-functions

Other mapping functions: by_cases(), by_colorspace(), by_function(), by_quantiles(), by_ranges(), by_rows(), by_values()

Examples

```
ht <- hux(c("The cat sat", "on the", "mat"))

map_bold(ht, by_regex("at" = TRUE))
map_bold(ht, by_regex("a.*a" = TRUE))

map_bold(ht, by_regex(
        "the" = TRUE,
        .grepl_args = list(
          ignore.case = TRUE
        )
      ))
```

---

by_rows *Set cell properties by row or column*

Description

by_rows and by_cols set properties in horizontal or vertical "stripes".

Usage

```
by_rows(..., from = 1, ignore_na = TRUE)

by_cols(..., from = 1, ignore_na = TRUE)
```

Arguments

...	One or more cell property values.
from	Numeric. Row or column to start at.
ignore_na	If TRUE, NA values in the result will be left unchanged from their previous values. Otherwise, NA normally resets to the default.

Value

A function for use in map_*** functions.

See Also

mapping-functions

Other mapping functions: by_cases(), by_colorspace(), by_function(), by_quantiles(), by_ranges(), by_regex(), by_values()

Examples

```
ht <- as_hux(matrix(rnorm(25), 5, 5))
map_background_color(ht,
      by_rows("green", "grey"))
map_background_color(ht,
      by_cols("green", "grey"))
```

---

by_values *Map specific cell values to cell properties*

Description

Map specific cell values to cell properties

Usage

```
by_values(..., ignore_na = TRUE)
```

Arguments

...	Name-value pairs like name = value. Cells where contents are equal to name will have the property set to value. If there is a single unnamed argument, this is the default value for unmatched cells. More than one unnamed argument is an error.
ignore_na	If TRUE, NA values in the result will be left unchanged from their previous values. Otherwise, NA normally resets to the default.

Value

A function for use in map_*** functions.

See Also

mapping-functions

Other mapping functions: by_cases(), by_colorspace(), by_function(), by_quantiles(), by_ranges(), by_regex(), by_rows()

Examples

```
ht <- hux(letters[1:3])
map_background_color(ht,
      by_values(a = "red", c = "yellow"))
map_background_color(ht,
      by_values(a = "red", c = "yellow", "green"))
```

---

caption *Set the table caption*

Description

By default, captions are displayed above the table. You can change this with caption_pos().

Usage

```
caption(ht)
caption(ht) <- value
set_caption(ht, value)
```

Arguments

ht	A huxtable.
value	A string. Set to NA to reset to the default, which is "NA".

Details

Captions are not escaped. See the example for a workaround.

Value

caption() returns the caption property. set_caption() returns the modified huxtable.

See Also

Other caption properties: caption_pos(), caption_width()

Examples

```
set_caption(jams, "Pots of jam for sale")
# escape caption characters:
caption(jams) <- sanitize(
      "Make $$$ with jam",
      type = "latex")
```

caption_pos *Position the table's caption*

Description

If caption_pos is "top" or "bottom", then the horizontal position ("left", "center" or "right") will be determined by the huxtable"s position().

Usage

```
caption_pos(ht)
caption_pos(ht) <- value
set_caption_pos(ht, value)
```

Arguments

ht	A huxtable.
value	String: "top", "bottom", "topleft", "topcenter", "topright", "bottomleft", "bottomcenter" or "bottomright". Set to NA to reset to the default, which is "top".

Value

caption_pos() returns the caption_pos property. set_caption_pos() returns the modified huxtable.

See Also

Other caption properties: caption_width(), caption()

Examples

```
caption_pos(jams) <-  "topleft"
caption_pos(jams)

caption(jams) <- "Jam for sale"
jams
set_caption_pos(jams, "bottom")
```

caption_width *Set the width of the table caption*

Description

A numeric widths is interpreted as a proportion of text width in LaTeX, or of width of the containing element in HTML. A character width must be a valid LaTeX or CSS dimension. The default, NA, makes the caption the same width as the table.

Usage

```
caption_width(ht)
caption_width(ht) <- value
set_caption_width(ht, value)
```

Arguments

ht	A huxtable.
value	Number or string. Set to NA to reset to the default, which is NA.

Value

caption_width() returns the caption_width property. set_caption_width() returns the modified huxtable.

See Also

Other caption properties: caption_pos(), caption()

Examples

```
caption_width(jams) <-  0.5
caption_width(jams)
```

cbind.huxtable *Combine rows or columns*

Description

Combine rows or columns

Usage

```
## S3 method for class 'huxtable'
cbind(..., deparse.level = 1, copy_cell_props = TRUE)

## S3 method for class 'huxtable'
rbind(..., deparse.level = 1, copy_cell_props = TRUE)
```

Arguments

`...`	Vectors, matrices, or huxtables.
`deparse.level`	Unused.
`copy_cell_props`	Cell properties to copy from neighbours (see below).

Details

Table properties will be taken from the first argument which is a huxtable. So will row properties (for cbind) and column properties (for rbind).

If some of the inputs are not huxtables, and `copy_cell_props` is`TRUE`, then cell properties will be copied to non-huxtables. Objects on the left or above get priority over those on the right or below.

If `copy_cell_props` is `FALSE`, cells from non-huxtable objects will get the default properties.

NB: You cannot bind huxtables with data frames, since the R method dispatch will always call the data frame method instead of the huxtable-specific code. For a solution, see `add_columns()`.

Value

A huxtable.

Examples

```
sugar <- c("Sugar", "40%", "35%", "50%")
jams <- set_bold(jams, 1, everywhere)
cbind(jams, sugar)
cbind(jams, sugar,
     copy_cell_props = FALSE)

jams <- set_text_color(jams,
     everywhere, 1, "red")
rbind(jams, c("Damson", 2.30))
rbind(jams, c("Damson", 2.30),
     copy_cell_props = FALSE)
```

col_width *Set the width of table columns*

Description

Numeric column widths are treated as proportions of the table width. Character widths must be valid CSS or LaTeX dimensions.

Usage

```
col_width(ht)
col_width(ht) <- value
set_col_width(ht, col, value)
```

Arguments

ht	A huxtable.
col	A col specifier. See rowspecs for details.
value	Numeric or character vector.. Set to NA to reset to the default, which is NA.

Details

In LaTeX, if you specify a column width, but set wrap to FALSE and have cells which overrun, then you may have problems with table position and with background colours in other cells. The workaround is to adjust the width, so that your cells no longer overrun.

Value

col_width() returns the col_width property. set_col_width() returns the modified huxtable.

See Also

Other table measurements: height(), row_height(), width()

Examples

```
col_width(jams) <-  c(.2, .8)
col_width(jams)
jams$Notes <- c("Notes",
      "This year's finest", "", "")
jams
set_col_width(jams, c(.4, .5, .1))
```

`escape_contents` *Escape or unescape text in cells*

Description

Setting `escape_contents` to `FALSE` allows you to include raw HTML or TeX code in your cells.

Usage

```
escape_contents(ht)
escape_contents(ht) <- value
set_escape_contents(ht, row, col, value )
map_escape_contents(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`fn`	A mapping function. See mapping-functions for details.
`value`	A logical vector or matrix. Set to `NA` to reset to the default, which is `TRUE`.

Details

If `markdown()` is `TRUE` for a cell, the `escape_contents` property will be ignored.

Value

`escape_contents()` returns the `escape_contents` property. `set_escape_contents()` returns the modified huxtable.

See Also

`sanitize()` for escaping text manually.

Examples

```
ht <- huxtable(
        Text   = "x squared",
        Maths  = "$x^2$"
      )
ht <- set_escape_contents(ht, FALSE)
## Not run:
  quick_pdf(ht)
```

```
## End(Not run)
```

`final` *Return the last n rows or columns*

Description

This is a convenience function to use in row and column specifications. In that context, it returns the last n row or column numbers of the huxtable.

Usage

```
final(n = 1)
```

Arguments

`n`	Number of rows to return.

Details

Technically, `final` returns a two-argument function - see rowspecs for more details.

Examples

```
set_bold(jams, final(2), final(1), TRUE)
```

`fmt_percent` *Format numbers as percent*

Description

Format numbers as percent

Usage

```
fmt_percent(digits = 1)
```

Arguments

`digits`	How many digits to print.

Value

An object you can pass into `number_format()`.

See Also

Other format functions: `fmt_pretty()`

Examples

```
jams$Sugar <-c ("Sugar content",
      0.4, 0.35, 0.45)
set_number_format(jams, -1, "Sugar",
      fmt_percent(1))
```

`fmt_pretty` *Use* `prettyNum()` *to format numbers*

Description

Use `prettyNum()` to format numbers

Usage

```
fmt_pretty(big.mark = ",", ..., scientific = FALSE)
```

Arguments

`big.mark, scientific, ...`
: Passed to `prettyNum()`.

Value

An object you can pass into `number_format()`.

See Also

Other format functions: `fmt_percent()`

Examples

```
jams$Sales <- c("Sales", 35000,
      55500, 20000)
set_number_format(jams, -1, "Sales",
      fmt_pretty())
```

font *Set the font for cell text*

Description

Set the font for cell text

Usage

```
font(ht)
font(ht) <- value
set_font(ht, row, col, value )
map_font(ht, row, col, fn)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
fn	A mapping function. See mapping-functions for details.
value	A character vector or matrix. Set to NA to reset to the default, which is "NA".

Details

To find out what fonts are on your system, `systemfonts::match_font()` is useful.

For HTML, you can use comma-separated lists of font names like `"Times New Roman,Times,Serif"`. This is not portable, though.

LaTeX and HTML use different font names. To use the same font names across document formats, see `options("huxtable.latex_use_fontspec")` in huxtable-options.

Value

`font()` returns the `font` property. `set_font()` returns the modified huxtable.

See Also

Other formatting functions: `background_color()`, `bold()`, `font_size()`, `na_string()`, `number_format()`, `text_color()`

Examples

```
font(jams) <-  "times"
font(jams)

jams2 <- set_font(jams,
      "arial")
font(jams2)

jams3 <- set_font(jams,
      2:3, 1, "arial")
font(jams3)

jams4 <- map_font(jams,
      by_rows(
        "arial",
        "times")
      )
font(jams4)
```

`font_size` *Make text larger or smaller*

Description

Font size is in points.

Usage

```
font_size(ht)
font_size(ht) <- value
set_font_size(ht, row, col, value )
map_font_size(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`fn`	A mapping function. See mapping-functions for details.
`value`	A numeric vector. Set to `NA` to reset to the default, which is `NA`.

Value

`font_size()` returns the `font_size` property. `set_font_size()` returns the modified huxtable.

See Also

Other formatting functions: background_color(), bold(), font(), na_string(), number_format(), text_color()

Examples

```
font_size(jams) <-  14
font_size(jams)

jams2 <- set_font_size(jams,
      12)
font_size(jams2)

jams3 <- set_font_size(jams,
      2:3, 1, 12)
font_size(jams3)

jams4 <- map_font_size(jams,
      by_rows(
        12,
        14)
      )
font_size(jams4)
```

---

guess_knitr_output_format

Guess knitr output format

Description

Convenience function which tries to guess the ultimate output from knitr and rmarkdown.

Usage

```
guess_knitr_output_format()
```

Value

"html", "latex", or something else. If we are not in a knitr document, returns an empty string.

Examples

```
## Not run:
# in a knitr document
guess_knitr_output_format()

## End(Not run)
```

header_cols *Mark rows or columns as headers*

Description

Arbitrary rows and columns can be headers: they do not have to be at the top or left of the table.

Usage

```
header_cols(ht)
header_cols(ht) <- value
set_header_cols(ht, col, value)

header_rows(ht)
header_rows(ht) <- value
set_header_rows(ht, row, value)
```

Arguments

ht	A huxtable.
col	A col specifier. See rowspecs for details.
value	Logical vector. Set to NA to reset to the default, which is FALSE.
row	A row specifier. See rowspecs for details.

Details

By default header rows and columns are not shown differently from other rows, but you can change this with `style_headers()`. Various themes may set properties on headers. Lastly, headers are treated differently when restacking.

Value

`header_cols()` returns the `header_cols` property. `set_header_cols()` returns the modified huxtable.

Examples

```
jams <- set_header_rows(jams, 1, TRUE)
jams <- set_header_cols(jams, 1, TRUE)
style_headers(jams,
       bold       = TRUE,
       text_color = "purple"
     )
```

height *Set the table height*

Description

height()`` sets the height of the entire table, while [row_height()] sets the height of individual rows. A numeric height is treated as a proportion of the containing block (HTML) or \textheight‘ (LaTeX). A character height must be a valid CSS or LaTeX dimension.

Usage

```
height(ht)
height(ht) <- value
set_height(ht, value)
```

Arguments

ht	A huxtable.
value	A number or string. Set to NA to reset to the default, which is NA.

Value

height() returns the height property. set_height() returns the modified huxtable.

See Also

Other table measurements: col_width(), row_height(), width()

Examples

```
height(jams) <-  0.4
height(jams)
```

huxreg *Create a huxtable to display model output*

Description

Create a huxtable to display model output

Usage

```
huxreg(
  ...,
  error_format = "({std.error})",
  error_pos = c("below", "same", "right"),
  number_format = "%.3f",
  align = ".",
  ci_level = NULL,
  tidy_args = NULL,
  stars = c(`***` = 0.001, `**` = 0.01, `*` = 0.05),
  bold_signif = NULL,
  borders = 0.4,
  outer_borders = 0.8,
  note = if (is.null(stars)) NULL else "{stars}.",
  statistics = c(N = "nobs", R2 = "r.squared", "logLik", "AIC"),
  coefs = NULL,
  omit_coefs = NULL
)
```

Arguments

`...`	Models, or a single list of models. Names will be used as column headings.
`error_format`	How to display uncertainty in estimates. See below.
`error_pos`	Display uncertainty "below", to the "right" of, or in the "same" cell as estimates.
`number_format`	Format for numbering. See `number_format()` for details.
`align`	Alignment for table cells. Set to a single character to align on this character.
`ci_level`	Confidence level for intervals. Set to `NULL` to not calculate confidence intervals.
`tidy_args`	List of arguments to pass to `generics::tidy()`. You can also pass a list of lists; if so, the nth element will be used for the nth column.
`stars`	Levels for p value stars. Names of `stars` are symbols to use. Set to `NULL` to not show stars.
`bold_signif`	Where p values are below this number, cells will be displayed in bold. Use `NULL` to turn off this behaviour.
`borders`	Thickness of inner horizontal borders. Set to 0 for no borders.
`outer_borders`	Thickness of outer (top and bottom) horizontal borders. Set to 0 for no borders.
`note`	Footnote for bottom cell, which spans all columns. `{stars}` will be replaced by a note about significance stars. Set to `NULL` for no footnote.
`statistics`	A vector of summary statistics to display. Set to `NULL` to show all available statistics. To change display names, name the `statistics` vector: `c("Displayed title" = "statistic_name",...)`
`coefs`	A vector of coefficients to display. Overrules `omit_coefs`. To change display names, name the `coef` vector: `c("Displayed title" = "coefficient_name",...)`
`omit_coefs`	Omit these coefficients.

Details

Models must have a generics::tidy() method defined, which should return "term", "estimate", "std.error", "statistic" and "p.value". The "broom" package provides methods for many model objects. If the tidy method does not have a conf.int option, huxreg will calculate confidence intervals itself, using a normal approximation.

If ... has names or contains a single named list, the names will be used for column headings. Otherwise column headings will be automatically created.

If the coef and/or statistics vectors have names, these will be used for row headings. If different values of coef have the same name, the corresponding rows will be merged in the output.

statistics should be column names from generics::glance(). You can also use "nobs" for the number of observations. If statistics is NULL then all columns from glance will be used. To use no columns, set statistics = character(0).

error_format is a string to be interpreted by glue::glue(). Terms in parentheses will be replaced by computed values. You can use any columns returned by tidy: typical columns include statistic, p.value, std.error, as well as conf.low and conf.high if you have set ci_level. For example, to show confidence intervals, you could write error_format = "{conf.low} to {conf.high}".

Value

A huxtable object.

Fixing p values manually

If you wish to use e.g. robust standard errors, you can pass results from e.g. lmtest::coeftest() into huxreg, since these objects have tidy methods. Alternatively, to manually insert your own statistics, see tidy_override().

Examples

```
if (! requireNamespace("broom")) {
  stop("Please install 'broom' to run this example.")
}

lm1 <- lm(mpg ~ cyl, mtcars)
lm2 <- lm(mpg ~ cyl + hp, mtcars)
glm1 <- glm(I(mpg > 20) ~ cyl, mtcars,
          family = binomial)

huxreg(lm1, lm2, glm1)

if (requireNamespace("sandwich") &&
      requireNamespace("lmtest")) {

  lm_robust <- lmtest::coeftest(lm1,
        vcov = sandwich::vcovHC)
  # coeftest() has no "glance" method:
  huxreg(lm_robust,
        statistics = character(0))
```

```
}
```

`huxtable` *Create a huxtable*

Description

`huxtable`, or `hux`, creates a huxtable object.

Usage

```
huxtable(
  ...,
  add_colnames = getOption("huxtable.add_colnames", TRUE),
  add_rownames = FALSE,
  autoformat = getOption("huxtable.autoformat", TRUE)
)

hux(
  ...,
  add_colnames = getOption("huxtable.add_colnames", TRUE),
  add_rownames = FALSE,
  autoformat = getOption("huxtable.autoformat", TRUE)
)

tribble_hux(
  ...,
  add_colnames = getOption("huxtable.add_colnames", TRUE),
  autoformat = getOption("huxtable.autoformat", TRUE)
)
```

Arguments

`...`	For `huxtable`, named list of values as in `data.frame()`. For `tribble_hux`, data values as in `tibble::tribble()`.
`add_colnames`	If `TRUE`, add a first row of column names to the huxtable.
`add_rownames`	If `TRUE` or a character string, add a first column of row names to the huxtable. The string gives the name for the new column (or `"rownames"` for `TRUE`).
`autoformat`	If `TRUE`, automatically format columns by type. See below.

Details

If you use `add_colnames` or `add_rownames`, be aware that these will shift your rows and columns along by one: your old row/column 1 will now be row/column 2, etc.

`add_colnames` defaults to `TRUE`. You can set the default globally by setting `options("huxtable.add_colnames")` to `TRUE` or `FALSE`.

tribble_hux is a simple wrapper around tibble::tribble() which lets you create data in a readable format. It requires the "tibble" package to be installed.

Value

An object of class huxtable.

Automatic formatting

If autoformat is TRUE, then columns will have number_format() and align() properties set automatically, as follows:

- Integer columns will have number_format set to 0.
- Other numeric columns will have number_format set to "%.3g".
- All other columns will have number_format set to NA (no formatting).
- Integer, Date and date-time (i.e. POSIXct and POSIXlt) columns will be right-aligned.
- Other numeric columns will be aligned on options("OutDec"), usually ".".
- Other columns will be left aligned.

You can change these defaults by editing options("huxtable.autoformat_number_format") and options("huxtable.autoformat_align"). See huxtable-package for more details.

Automatic alignment also applies to column headers if add_colnames is TRUE; headers of columns aligned on a decimal point will be right-aligned. Automatic number formatting does not apply to column headers.

See Also

huxtable-options

Examples

```
ht <- huxtable(
        column1 = 1:5,
        column2 = letters[1:5]
      )
ht
tribble_hux(
  ~ Name,             ~ Salary,
    "John Smith",       50000,
    "Jane Doe",         50000,
    "David Hugh-Jones", 50000,
    add_colnames = TRUE
)
```

huxtable-FAQ *Frequently Asked Questions, including how to get help*

Description

A FAQ of common issues.

Details

- LaTeX output isn't working.

  Have you installed the LaTeX packages you need? LaTeX packages are different from R packages. Run `check_latex_dependencies()` to find out if you are missing any. Then install them using your system's LaTeX management application. Or you can try `install_latex_dependencies()`.

- Numbers in my cells look weird!

  You can change numeric formatting using `number_format()`. Base R options like `scipen` usually have no effect.

- I ran `caption(ht) <-"Something"` and got an error message:

  ```
  Error in UseMethod("caption<-") :
  no applicable method for 'caption<-' applied to an object of class "c('huxtable',  'data.frame')"
  ```

  You may have loaded another package with a `caption` method, e.g. "xtable". Try loading huxtable after xtable.

- How can I change the font size, font etc. of captions?

  There are no direct commands for this. You have to use raw HTML/TeX/other commands within the caption itself. For example to have a bold caption in HTML, you might do something like:

  ```
  set_caption(jams, "<b>Jam Prices</b>")
  ```

- How do I refer to tables in bookdown?

  As of version 4.3.0, this is handled automatically for you. Just set the label using `label()`, then in markdown text do e.g.:

  ```
  \\@ref(tab:my-table-label).
  ```

- I have another problem.

  If you have a bug - i.e. a problem with the software - or have a feature request, please report it to `https://github.com/hughjonesd/huxtable/issues`. Otherwise, ask a question on StackOverflow or `https://community.rstudio.com`. That way, other people will benefit from the answers you get.

- Can I email you directly?

  I'd rather you asked on a public website. If you then email me a link, I may be able to help.

huxtable-news *Changes to the huxtable package*

Description

This help page simply gives the contents of NEWS.md.

Details

Note that huxtable attempts to follow semantic versioning (https://semver.org). Therefore, major version increments reflect backwards-incompatible API changes, not necessarily big changes.

huxtable (development version)

Huxtable 5.0.0 brings numerous changes. For a more user-friendly introduction, see https://hughjonesd.github.io/whats-new-in-huxtable-5.0.0.html.

Breaking changes:

- There are changes to LaTeX output.
  - LaTeX \tabcolsep is now set to 0 within huxtable tables, while left and right padding should now take effect even when `wrap` is `FALSE`.
  - The default LaTeX table environment is now "tabular" unless `width` is set. If `width` is set, it is "tabularx".
  - `wrap` only matters if `width` is set. Otherwise, cell wrapping is off.
  - the \centerbox macro from the LaTeX "adjustbox" package is used to centre tables. This should improve centring when tables are too wide. You may need to update the LaTeX "adjustbox" package to a recent version. `check_latex_dependencies()` can inform you about this.
- As previously signalled, `add_colnames` has now become `TRUE` by default in `huxtable()` and `as_huxtable()`. Set `options(huxtable.add_colnames = FALSE)` to go back to the old behaviour.
- Newlines in cell contents are now respected (in LaTeX, so long as `wrap = TRUE` and `width` has been set).
- Huxtable borders have been reworked, fixing some longstanding bugs and adding new features.
  - Borders are now automatically collapsed. For example:

    ```
    jams %>%
        set_right_border(everywhere, 1, 1) %>%
        set_left_border(everywhere, 2, 0.4)
    ```

    will set the border in between the columns of `jams` to `0.4`, overwriting the previous value. This is more in line with what you would expect. For example, the following code now does what you probably want:

    ```
    jams %>%
        set_rowspan(2, 1, 3) %>%
        set_bottom_border(4, everywhere, 1)
    ```

```
##                 Type              Price
##                 Strawberry         1.90
##                                    2.10
##                                    1.80
##               --------------------------
```

instead of the old behaviour:

```
jams %>%
    set_rowspan(2, 1, 3) %>%
    set_bottom_border(4, everywhere, 1)
##                 Type           Price
##                 Strawberry      1.90
##                                 2.10
##                                 1.80
##                              -----------
```

  - `set_left_border()`, `set_all_borders()` and friends all use a default value of 0.4. So to set a default border, write e.g.

    ```
    as_hux(head(iris)) %>%
          set_bottom_border(1, everywhere)
    ```

  - A new `brdr()` class encapsulates border thickness, style and colour. You can set all properties at once by writing, e.g.:

    ```
    as_hux(jams) %>%
          set_bottom_border(1, everywhere, brdr(1, "dotted", "darkgreen"))
    ```

    `left_border(ht)` and friends return a `brdr` object. To access the border thickness, write `brdr_thickness(left_border(ht))`.

- Various deprecated items have been removed:
  - The 3-argument form of set_*. Instead, use map_*.
  - The `byrow` argument to set_*. Instead, use map_* and `by_cols()`.
  - `error_style` and `pad_decimal` arguments in `huxreg`. Use `error_format` and `align(hx) <-"."`.
  - The `where()`, `is_a_number()` and `pad_decimal()` functions. Use map_* functions, `!is.na(as.numeric(x))`, and `align(ht) <-"."`.
- Default padding has been increased to 6 points.
- By default, `width()` is now unset.
- By default, `wrap()` is now `TRUE`.
- `every()` has been renamed to `stripe()`, to avoid a clash with `purrr::every()`. `everywhere`, `evens` and `odds` are still the same.
- The little-used ability to set `copy_cell_props` to a character vector in `rbind.huxtable` and `cbind.huxtable` has been removed. You can still set it to `FALSE`.
- `add_rows()` and `add_columns()` now always call `rbind.huxtable()` or `cbind.huxtable()` and return a huxtable.
- Huxtable no longer supports dplyr versions less than 0.7.0 (released mid-2017).
- `set_cell_properties()` has been renamed `style_cells()`. It is retained as a soft-deprecated alias.
- Various themes have been tweaked:
  - `theme_basic()` now has bold headers and no header column by default.

  - `theme_plain()` defaults to `position = "centre"`.
  - `theme_striped()` uses grey stripes, a white border, and subtler headers.
  - `theme_article()` has thinner borders.

Other changes:

- You can now use markdown within table cells.
  - Use `set_markdown(ht,rows,cols)` to turn this on.
  - Or use the convenience function `set_markdown_contents()` to set cell contents that will be interpreted as markdown.
  - Markdown works for HTML and LaTeX. There's basic support for on-screen display.
- Huxtable now has the concept of header row and columns.
  - By default, data frame column names will be headers.
  - To set other rows to be headers, use `set_header_rows(ht,row_numbers,TRUE)`. For columns, use `header_cols()` or `set_header_cols()`.
  - New functions `style_headers()`, `style_header_cols()`, and `style_header_rows()` to set multiple properties on headers.
  - In themes, `header_row/col = TRUE` set the first row/col to a header, and style all header rows/cols.
- `set_bold()` and `set_italic()` now use a default value of `TRUE`. So you can write e.g.

  ```
  as_hux(head(iris)) %>%
        set_bold(1, everywhere)
  ```

- Console output in R now shows table position and caption position.
- By default, huxtable now sets labels from the current knitr chunk label, if there is one. This is consistent with `kable()`. In bookdown, you can then do e.g.

  ```
  Some iris species are shown in \@ref(tab:mytable):


  ```r
  as_hux(iris)
  ```

  ```
  ## Warning in knit_print.huxtable(x, ...): Unrecognized output format "gfm". Using `to_screen` to
  ## Set options("huxtable.knitr_output_format") manually to "latex", "html", "rtf", "docx", "pptx"
  ```
  ```

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
4.9	3	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5	3.6	1.4	0.2	setosa
5.4	3.9	1.7	0.4	setosa
4.6	3.4	1.4	0.3	setosa
5	3.4	1.5	0.2	setosa
4.4	2.9	1.4	0.2	setosa

4.9	3.1	1.5	0.1	setosa
5.4	3.7	1.5	0.2	setosa
4.8	3.4	1.6	0.2	setosa
4.8	3	1.4	0.1	setosa
4.3	3	1.1	0.1	setosa
5.8	4	1.2	0.2	setosa
5.7	4.4	1.5	0.4	setosa
5.4	3.9	1.3	0.4	setosa
5.1	3.5	1.4	0.3	setosa
5.7	3.8	1.7	0.3	setosa
5.1	3.8	1.5	0.3	setosa
5.4	3.4	1.7	0.2	setosa
5.1	3.7	1.5	0.4	setosa
4.6	3.6	1	0.2	setosa
5.1	3.3	1.7	0.5	setosa
4.8	3.4	1.9	0.2	setosa
5	3	1.6	0.2	setosa
5	3.4	1.6	0.4	setosa
5.2	3.5	1.5	0.2	setosa
5.2	3.4	1.4	0.2	setosa
4.7	3.2	1.6	0.2	setosa
4.8	3.1	1.6	0.2	setosa
5.4	3.4	1.5	0.4	setosa
5.2	4.1	1.5	0.1	setosa
5.5	4.2	1.4	0.2	setosa
4.9	3.1	1.5	0.2	setosa
5	3.2	1.2	0.2	setosa
5.5	3.5	1.3	0.2	setosa
4.9	3.6	1.4	0.1	setosa
4.4	3	1.3	0.2	setosa
5.1	3.4	1.5	0.2	setosa
5	3.5	1.3	0.3	setosa
4.5	2.3	1.3	0.3	setosa
4.4	3.2	1.3	0.2	setosa
5	3.5	1.6	0.6	setosa
5.1	3.8	1.9	0.4	setosa
4.8	3	1.4	0.3	setosa
5.1	3.8	1.6	0.2	setosa
4.6	3.2	1.4	0.2	setosa
5.3	3.7	1.5	0.2	setosa
5	3.3	1.4	0.2	setosa
7	3.2	4.7	1.4	versicolor
6.4	3.2	4.5	1.5	versicolor
6.9	3.1	4.9	1.5	versicolor
5.5	2.3	4	1.3	versicolor
6.5	2.8	4.6	1.5	versicolor
5.7	2.8	4.5	1.3	versicolor
6.3	3.3	4.7	1.6	versicolor

4.9	2.4	3.3	1	versicolor
6.6	2.9	4.6	1.3	versicolor
5.2	2.7	3.9	1.4	versicolor
5	2	3.5	1	versicolor
5.9	3	4.2	1.5	versicolor
6	2.2	4	1	versicolor
6.1	2.9	4.7	1.4	versicolor
5.6	2.9	3.6	1.3	versicolor
6.7	3.1	4.4	1.4	versicolor
5.6	3	4.5	1.5	versicolor
5.8	2.7	4.1	1	versicolor
6.2	2.2	4.5	1.5	versicolor
5.6	2.5	3.9	1.1	versicolor
5.9	3.2	4.8	1.8	versicolor
6.1	2.8	4	1.3	versicolor
6.3	2.5	4.9	1.5	versicolor
6.1	2.8	4.7	1.2	versicolor
6.4	2.9	4.3	1.3	versicolor
6.6	3	4.4	1.4	versicolor
6.8	2.8	4.8	1.4	versicolor
6.7	3	5	1.7	versicolor
6	2.9	4.5	1.5	versicolor
5.7	2.6	3.5	1	versicolor
5.5	2.4	3.8	1.1	versicolor
5.5	2.4	3.7	1	versicolor
5.8	2.7	3.9	1.2	versicolor
6	2.7	5.1	1.6	versicolor
5.4	3	4.5	1.5	versicolor
6	3.4	4.5	1.6	versicolor
6.7	3.1	4.7	1.5	versicolor
6.3	2.3	4.4	1.3	versicolor
5.6	3	4.1	1.3	versicolor
5.5	2.5	4	1.3	versicolor
5.5	2.6	4.4	1.2	versicolor
6.1	3	4.6	1.4	versicolor
5.8	2.6	4	1.2	versicolor
5	2.3	3.3	1	versicolor
5.6	2.7	4.2	1.3	versicolor
5.7	3	4.2	1.2	versicolor
5.7	2.9	4.2	1.3	versicolor
6.2	2.9	4.3	1.3	versicolor
5.1	2.5	3	1.1	versicolor
5.7	2.8	4.1	1.3	versicolor
6.3	3.3	6	2.5	virginica
5.8	2.7	5.1	1.9	virginica
7.1	3	5.9	2.1	virginica
6.3	2.9	5.6	1.8	virginica
6.5	3	5.8	2.2	virginica

7.6	3	6.6	2.1	virginica
4.9	2.5	4.5	1.7	virginica
7.3	2.9	6.3	1.8	virginica
6.7	2.5	5.8	1.8	virginica
7.2	3.6	6.1	2.5	virginica
6.5	3.2	5.1	2	virginica
6.4	2.7	5.3	1.9	virginica
6.8	3	5.5	2.1	virginica
5.7	2.5	5	2	virginica
5.8	2.8	5.1	2.4	virginica
6.4	3.2	5.3	2.3	virginica
6.5	3	5.5	1.8	virginica
7.7	3.8	6.7	2.2	virginica
7.7	2.6	6.9	2.3	virginica
6	2.2	5	1.5	virginica
6.9	3.2	5.7	2.3	virginica
5.6	2.8	4.9	2	virginica
7.7	2.8	6.7	2	virginica
6.3	2.7	4.9	1.8	virginica
6.7	3.3	5.7	2.1	virginica
7.2	3.2	6	1.8	virginica
6.2	2.8	4.8	1.8	virginica
6.1	3	4.9	1.8	virginica
6.4	2.8	5.6	2.1	virginica
7.2	3	5.8	1.6	virginica
7.4	2.8	6.1	1.9	virginica
7.9	3.8	6.4	2	virginica
6.4	2.8	5.6	2.2	virginica
6.3	2.8	5.1	1.5	virginica
6.1	2.6	5.6	1.4	virginica
7.7	3	6.1	2.3	virginica
6.3	3.4	5.6	2.4	virginica
6.4	3.1	5.5	1.8	virginica
6	3	4.8	1.8	virginica
6.9	3.1	5.4	2.1	virginica
6.7	3.1	5.6	2.4	virginica
6.9	3.1	5.1	2.3	virginica
5.8	2.7	5.1	1.9	virginica
6.8	3.2	5.9	2.3	virginica
6.7	3.3	5.7	2.5	virginica
6.7	3	5.2	2.3	virginica
6.3	2.5	5	1.9	virginica
6.5	3	5.2	2	virginica
6.2	3.4	5.4	2.3	virginica
5.9	3	5.1	1.8	virginica

Column names: Sepal.Length, Sepal.Width, Petal.Length, Petal.Width, Species

Set options(huxtable.autolabel = FALSE) to turn off this behaviour.

- The one-argument form of `[` now works for huxtables just as it does for data frames. For example, `ht[2:3]` selects columns 2 and 3.
- New functions `fmt_percent()` and `fmt_pretty()` for passing into `number_format()`:
  ```
  jams$Sugar <-c ("Sugar content", 0.4, 0.35, 0.45)
  set_number_format(jams, -1, "Sugar", fmt_percent(1))
  ```
- `split_across()` and `split_down()` split a huxtable into a list of sub-tables. Headers can be automatically included.
- `restack_across()` and `restack_down()` split a huxtable, then join it back up. This is useful for making a table fit on a page.
- `merge_across()` and `merge_down()` merge an area of cells horizontally across rows, or vertically down columns.
- New functions set_lr_borders()/_border_colors()/_border_styles()/_padding() set left and right borders and padding simultaneously. New functions `set_tb_borders()` etc. set top and bottom properties simultaneously. There are `map_` equivalents of all of these.
- `set_outer_padding()` sets padding around a range of cells, similarly to `set_outer_borders()`.
- A new table-level property, `caption_width()`, allows you to set the width of the caption. The default, `NA`, sets the width equal to the table width.
- There are two new themes: `theme_compact()` and `theme_bright()`.
- For `huxreg()`, a new function `tidy_replace()` allows you to replace the output of `tidy(x)` entirely.
- huxtable now only sets `options(huxtable.knit_print_df = TRUE)` if it is attached, not if it is loaded.
- huxtable supports `dplyr::relocate()`, new in dplyr 1.0.0.
- Improvements to `as_flextable()`.
- Improvements to `quick_pptx()` (thanks @davidgohel).
- Bugfixes for `options(huxtable.use_fontspec = TRUE)`.
- Bugfix: `add_rownames = "string"` now works as promised.
- Bugfix: non-ASCII characters are now supported in RTF.

Other news:

- New versions of the gtsummary package will have an `as_huxtable()` method.
- Package texreg on CRAN includes a `huxtablereg()` function for creating a table of regression outputs.

huxtable 4.7.1

- The expss package now supports export to huxtables.
- `by_quantiles()`, `by_equal_groups()` and `by_colorspace()` have gained a `colwise` argument, which calculates quantiles or colors separately for each column.
- Add caption support for `as_flextable()` (thanks @sjewo).

huxtable 4.7.0

- Better error messages.
- New `merge_repeated_rows()` function: merge repeated rows into a single cell.

- New `fill` and `colspan`/`rowspan` arguments for `insert_row()`/`insert_column()`:
  - `insert_row(ht,"blah","","","","",...)` can be written `insert_row(ht,"blah",fill = "")`.
  - `colspan`/`rowspan` set `colspan`/`rowspan` of the first cell in the inserted row/column.

huxtable 4.6.1

- Bugfix: right borders in wrong place when cells were merged.
- Bugfix: chinese characters were displaying wrongly in `to_screen()`.

huxtable 4.6.0

- Set `options('huxtable.latex_use_fontspec')` to `TRUE` to use portable font names in TeX documents, with the LaTeX "fontspec" package.
- Bugfix: attributes were being copied wrongly in subset assignment of huxtables.
- Bugfix: text colors in `hux_logo()`.
- Bugfix: rbind of huxtable and matrix wasn't setting `row_height` correctly.

huxtable 4.5.0

- Add `quick_latex()` function.
- The `texreg` package now includes a `huxtablereg` function, analogous to `huxreg`, which outputs a huxtable from a list of regressions. This will be available from the next version of `texreg`.

huxtable 4.4.0

- Huxtables can now be printed directly in Word documents and Powerpoint presentations, thanks to the `flextable` package and recent versions of Pandoc. (Powerpoint printing requires Pandoc >= 2.4.0.)
- New "wrapleft" and "wrapright" options to `position()` allow text wrapping around tables.
- New `set_outer_border_colors()` and `set_outer_border_styles()` functions, like `set_outer_borders()`.
- Huxtable no longer requires the `broom` package, instead using the `generics` package. If you use `huxreg()`, you will still need e.g. `broom` or `broom.mixed` to provide `tidy()` and `glance()` methods for specific models.
- Bugfix: `tidy.tidy_override()` and `glance.tidy_override()` should work even if underlying object has no `tidy()` or `glance()` method.
- Bugfix: huxtables had option clash when `echo = TRUE` in Rmd pdf_document format.
- Bugfix: `caption()` and `height()` weren't playing nicely.
- Bugfix: `mutate(...,copy_cell_props = FALSE)` was adding a column named `copy_cell_props`.
- Bugfix: `check_latex_dependencies` and `install_latex_dependencies` gave misleading errors.
- Enhancement: when `stars` is `NULL` in `huxreg`, don't print a note by default.
- Enhancement: use `tinytex` when available, allowing autoinstallation of latex packages.

huxtable 4.3.0

- More work on TeX. Tables *should* now compile when raw_attributes is not set.
- New `map_xxx` functions to set properties variably by cell values.
- Functions for mapping properties variably: `by_rows`, `by_values`, `by_ranges`, `by_quantiles` etc.
- Correct bookdown labels are now automatically created.
- New grey, blue, green and orange themes.
- New "themes" vignette.
- New `tidy_override` function to override p values etc. in `huxreg`.
- New `set_contents` function to change huxtable contents within dplyr pipes.
- Enhancement: left- and right-aligned captions are now set above the table in LaTeX, using the "threeparttable" package. You will need to install this using e.g. `install_latex_dependencies()` or `tlmgr` if it is not already on your system.
- Enhancement: in `huxtable()` and friends, `add_rownames = "Colname"` now sets the name for the new column.
- Improvements to the vignettes and help files.
- Bugfix: to_md could hang with bold/italic cells.

Deprecated:

- The 3 argument form of `set_xxx` functions is deprecated, as is the `where` function. Use `map_xxx` instead.
- Argument `byrow` is soft-deprecated. Use `by_cols()` instead.

huxtable 4.2.1

- Bugfix: `wrap=TRUE` caused squeezed text in RTF.

Important:

- TeX code was getting escaped by pandoc. To avoid this, if possible, huxtable now adds fenced code blocks round latex tables (see https://pandoc.org/MANUAL.html#extension-raw_attribute). You must add
  md_extensions: +raw_attribute
  to your YAML header for this to work, and you will need a recent (> 2.0.0) version of Pandoc.

huxtable 4.2.0

- More speedups: LaTeX 2-3x faster, as_Workbook 2-3x faster.
- Simplify LaTeX output using our own LaTeX commands.
- RTF support: new `print_rtf`, `to_rtf` and `quick_rtf` functions.
- New `border_style` properties to set "solid", "double", "dotted" or "dashed" borders. (At present, LaTeX only allows "solid" or "double".)
- New `merge_cells` function, an alternative interface to `colspan` and `rowspan`.
- New `quick_pptx` function to print data frames and huxtables into Powerpoint.

- New `install_latex_dependencies` and `check_latex_dependencies` utility functions.
- `add_rows` and `add_columns` now accept data frames as arguments.
- New `theme_mondrian` theme :-D
- Enhancement: `print_md` now handles **bold** and *italic* cells.
- Enhancement: `quick_pdf` has new `width` and `height` options to change paper size.
- Use CSS writing-mode where possible for text rotation. Note that this may break on non-LTR languages. If this affects you, please file an issue.
- Bugfix: LaTeX didn't compile when height and caption were both set.
- Bugfix: `print_screen` and `print_md` would hang with a wide huxtable.
- Tweaks to documentation.

huxtable 4.1.0

- dplyr, knitr, rmarkdown and some other packages have moved to "Suggests:", lowering the dependency load considerably. All the functionality is still present. huxtable gives an informative warning if a needed package is not installed.
- Code rewrites for better performance and maintainability: HTML is up to 10x faster, LaTeX is up to 4x faster.
- Documentation improvements.
- New `tribble_hux` function wrapping `tibble::tribble()` for readable data input.
- New `add_rows` and `add_columns` functions to insert one or more rows into the middle of a huxtable.
- New option "huxtable.knitr_output_format" to override the default output format in knitr documents.
- Numeric row heights and column widths are rescaled to 1 when huxtables are cbinded/rbinded.
- LaTeX: at points where borders cross, priority is given to the horizontal border color.
- Bugfix: property accessors had the wrong environment. Thanks to Iñaki Úcar.
- Bugfix: row heights and column widths weren't being copied with cbind/rbind.
- Bugfixes for 0-row or 0-column huxtables:
  - Output works, usually with a warning.
  - cbind and rbind work.
- Bugfix: HTML cols were printed with 'width: NA'.
- Bugfix: width, col_width etc. can be reset to a number after setting them to a string.
  - The (undocumented) ability to mix numeric and non-numeric values for padding and/border widths has been removed. If you want a number, set a number and not a string.
- Bugfix: HTML tables with position "right" weren't right-aligned.
- Nicer error messages when rbinding objects with different numbers of rows.
- Vignette improvements.
- `is_a_number` is deprecated.
- ... and a cool new randomized `hux_logo()` ;-)

huxtable 4.0.1

- Improved formatting in Excel output.
- New `format` method which returns the result of `to_html`, `to_latex` etc. as appropriate.
- Bugfix: `to_html` printing e.g. "left-border: NA;" in cell CSS.
- Bugfix: set_all_* not working when huxtable is not attached.
- Bugfix: `as_Workbook` failing with non-numeric `width`.
- Bugfix: `hux_logo` was using multiple fonts, fails with Excel output.
- Bugfix: `as_flextable` borders not working in cells with colspan > 1.
- Documentation bugfixes.
- Compatibility with broom 5.0.0 - thanks @alexpghayes

huxtable 4.0.0

- New `theme_plain` theme.
- The default value for `add_colnames` is going to become `TRUE`. At present it remains `FALSE`. Set `options("huxtable.add_colnames")` to `TRUE` or `FALSE` to set the default and avoid warnings in future.
- quick_* functions now automatically open documents if used interactively. Use `open = FALSE` to avoid.
- Tweak top and bottom margins for HTML tables.
- `pad_decimal` is deprecated in favour of `align(ht) <- "."`.
- `huxreg` continues with a warning if `statistics` are unavailable for some models.

Breaking changes:

- huxtable now provides `knit_print.data.frame` methods. This means that bare data frames will be pretty-printed via huxtable if the package is loaded.
  - Set `options("huxtable.knit_print_df")` to `FALSE` if you don't want this.
  - By default data frames are printed using the `theme_plain` theme. Set options("huxtable.knit_print_df_theme") to a different one-argument function if you want to use a different theme.
- The new `autoformat` argument lets `huxtable()` and `as_huxtable()` automatically choose alignment and number format based on column type. Set `options("huxtable.autoformat")` to `FALSE` to turn off this feature by default.
- The default value of `number_format` has changed from "%5.3g" to "%.3g", which no longer space-pads numbers.
- `as_flextable` now does not print column names in the header. This matches the standard huxtable behaviour whereby headers are "just another row/column". To get the old behaviour, use `colnames_to_header = TRUE`.

Bugfixes:

- Bugfix: Date and datetime columns were converted to numbers by `add_colnames`.
- LaTeX bugfix: background colors were printing an extra space.
- `huxreg` was never using built-in confidence intervals.
- Screen bugfixes:
  - set max_width to screen width (thanks @jacob-long)
  - misaligned decimal points
- Various bugfixes for `number_format`, `huxreg`, `as_hux.table`, `as_flextable`.

huxtable 3.0.0

- Output to Excel workbooks using the `openxlsx` package.
- New `quick_xlsx` function.
- dplyr select helpers now work inside set_* column specifications: e.g. set_bold(ht, 1:3, matches("ab"), TRUE)
- Column names can now be used for the `after` argument to `insert_column`.
- quick_* functions: when the `file` argument is not explicitly specified, confirm overwrites manually, or fail if called non-interactively.
- Add pointless quote marks in Description and Title... I don't make the rules.
- Don't apply number_format to negative exponents (e.g. 1.12e-3).
- New `tidy_args` argument to huxreg allows per-model customization of the call to `tidy`.

Breaking changes:

- `quick_xxx` functions without an explicit `file` argument throw an error if called non-interactively, and prompt before overwriting files if called interactively.

huxtable 2.0.2

- Don't apply `number_format` to exponents in scientific notation.
- Turn off some tests on CRAN, as they fail there but not elsewhere.

huxtable 2.0.1

- Fix `quick_pdf` error when moving output across filesystems.

huxtable 2.0.0

- New `quick_html`, `quick_pdf` and `quick_docx` functions to print table-like objects to a new document.
- `to_screen` only shows colnames if there are any non-zero-length column names.

Breaking changes:

- `number_format` now applies to any number-like substrings in cells. This means you can include e.g. significance stars in a cell and still use `number_format` to format the content.
- If `number_format` is NA, numbers are unchanged.
- Default value of `number_format` has changed from "%5.2f" to "%5.3g", which plays nicer with integers but may surprise you by using scientific format for large numbers.

huxtable 1.2.0

- New `outer_borders` argument for `huxreg`. This changes default behaviour slightly.
- New `border` argument for `add_footnote` to choose width of footnote's top border.
- Added guard assertions to many exported functions.
- Bugfix: captions and colnames are wrapped in to_screen to respect max_width.

huxtable 1.1.0

- No more ugly autocreated column names.
- Allow huxtable to have invalid or empty column names in general.
- LaTeX should now be *much* faster on large tables.
- `set_outer_borders` now accepts the same row/column arguments as other `set_` functions.
- Better handling in LaTeX of horizontal borders which don't cross the entire table. (But not varying positive border widths. . . .)
- Bugfix: flextable didn't like huxreg's syntactically invalid column names.
- Accept, but silently change, English spelling of 'centre' in `align`, `position` and `caption_pos`.

huxtable 1.0.0

- LaTeX implements different thicknesses for vertical and horizontal borders (but only one horizontal thickness per row).
- LaTeX border colors now collapse nicely: set colors override unset ones.
- React gracefully to lack of p values in `huxreg`.
- New `set_outer_borders` function to set borders round a rectangle of cells.
- `to_screen` and `to_md` now respect `wrap` and `col_widths` properties.
- Screen and markdown wrap respect word boundaries.
- `to_screen` and `to_md` gain a `min_width` argument; `to_md` gains a logical `header` argument; `to_screen` gains a `compact` argument replacing `blank = NULL`.
- On screen colour and bold support, if the `crayon` package is installed. New `huxtable.color_screen` option.
- Move from `ReporteRs` to `officer` and `flextable`. No more `RJava` horror.
- New `error_format` argument to `huxreg` for flexible control over uncertainty estimates.
- Infrastructure improvements: slightly less ugly code in screen.R and LaTeX.R.

Breaking changes:

- Removed options `collapse`, `borders`, `blank` and `colname_color` from `to_screen`/`print_screen`.
- `as_FlexTable` is deprecated and calls `as_flextable` with a warning. `header_rows` and `footer_rows` arguments are ignored. If you need this feature, tell me.
- HTML border sizes are now set in points, not pixels.
- In `huxreg`:
  - `ci_level` is `NULL` by default. Set it to a number to calculate confidence intervals.
  - `error_style` is deprecated with a warning in favour of `error_format`.
  - Use `{stars}` not %stars% to display significance levels in the `note` argument.
  - `borders` becomes a number specifying border width. Set to 0 for no borders.

huxtable 0.3.1

- New convenience functions `insert_row` and `insert_column`.
- `latex_float` property allows you to change positioning in LaTeX.
- (Semantic versioning fail: this should have been 0.4.0.)

huxtable 0.3.0

- New borders argument for huxreg, gives borders in sensible places.
- Allow more flexible caption positioning with `caption_pos`.
- New `set_default_properties` function to set default properties for new huxtables.
- Fix compatibility with dplyr 0.6.0.

huxtable 0.2.2

- Fix a bug that could lead to wrong significance stars in `huxreg`.

huxtable 0.2.1

- Compatibility with dplyr 0.6.0.
- Use ~ for decimal padding in LaTeX.

huxtable 0.2.0

- New `huxreg` function to convert a list of models to a huxtable.
- New set_* interface allowing column ranges, expressions a la `subset`, and filling in values by row.
- Replacement methods $<-, [<- and [[<- now work better.
- New function `set_cell_properties` to set multiple properties on cells.
- `evens`, `odds`, `everywhere`, `every(n,from)`, `final(n)`, `where(cond)`: convenience functions to select rows, columns and cells.
- Export to Word/Powerpoint via `ReporteRs`.
- Huxtable now supports dplyr verbs like `filter` and `select`.
- Exported function `guess_knitr_output_format`.
- Ability to set border colors.
- Prevent overlapping row/colspans.
- Expanded introduction and new vignette for `huxreg`.
- Numerous bugs have been fixed and replaced with new, more advanced bugs.

Breaking changes:

- `theme_minimal` has been renamed `theme_basic` to avoid a name clash with `ggplot2`.

huxtable 0.1.0

- Added a `NEWS.md` file to track changes to the package.
- First CRAN release.

huxtable-options *Package options*

Description

Huxtable has several options.

Details

- `options('huxtable.add_colnames')` sets the default value for `add_colnames` in `huxtable()` and `as_huxtable()`. As of version 5.0.0, this defaults to `TRUE`.
- `options('huxtable.print')` sets the print method for huxtable objects. See `print.huxtable()`.
- `options('huxtable.knitr_output_format')` overrides the default output format when huxtable objects are printed by knitr. Set to "html", "latex", "md" or "screen". If `NULL` (the default), huxtable guesses the format using `guess_knitr_output_format()`.
- `options('huxtable.autolabel')`. If `TRUE`, (the default) automatically sets `label()` from the knitr chunk label, if there is one.
- `options('huxtable.color_screen')`. If `TRUE` and package `crayon` is available, huxtables will be printed in color on screen.
- `options('huxtable.bookdown')`. Set to `TRUE` within a bookdown document to automatically print bookdown-style labels. If unset, huxtable will try to guess if we are in a bookdown document.
- `options('huxtable.knit_print_df')`. If `TRUE`, data frames in knitr will be pretty-printed using huxtable. This option defaults to `TRUE` only if huxtable is attached to the search path using `library()`; not if huxtable is merely loaded (e.g. imported by another package).
- `options('huxtable.knit_print_df_theme')`. A function applied to data frames before printing in knitr. The function should take one argument (a data frame) and return a huxtable. Defaults to `theme_plain()`.
- `options('huxtable.autoformat')` sets the default value for `autoformat` in `huxtable()` and `as_huxtable()`. It defaults to `TRUE`.
- `options('huxtable.latex_use_fontspec')`. If `TRUE`, use the "fontspec" package, which allows you to use the same font names in TeX and HTML. This requires the the xetex or xelatex engine, which can be set using an .rmd header option. Note that `quick_pdf()` may use pdflatex. The default is `FALSE`.
- `options('huxtable.autoformat_number_format')` and `options('huxtable.autoformat_align')` are lists. The list names are base R classes. `huxtable()` with `autoformat = TRUE` will set `number_format()` and `align()` for data columns according to the corresponding list values. For example, to center-align `Date` objects you could set `"huxtable.autoformat_align"` to something like `list(...,Date = "center",...)`.

hux_logo *Huxtable logo*

Description

Returns a randomized huxtable logo, inspired by Mondrian.

Usage

```
hux_logo(latex = FALSE, html = FALSE)
```

Arguments

latex	Style for LaTeX.
html	Style for HTML.

Value

The huxtable logo.

Examples

```
print_screen(hux_logo())
```

insert_column *Insert a row or column*

Description

These convenience functions wrap `cbind` or `rbind` for huxtables, to insert a single row or column.

Usage

```
insert_column(
  ht,
  ...,
  after = 0,
  fill = NULL,
  rowspan = 1,
  copy_cell_props = TRUE
)

insert_row(
  ht,
  ...,
```

```
  after = 0,
  fill = NULL,
  colspan = 1,
  copy_cell_props = TRUE
)
```

Arguments

`ht`	A huxtable.
`...`	Cell contents.
`after`	Insert the row/column after this position. 0 (the default) inserts as the first row/column.
`fill`	String. If `...` contains fewer elements than there are columns/rows to fill, the remaining cells will be filled with this.
`rowspan, colspan`	Scalar integer. Sets the rowspan or colspan of the *first* cell only. this. The default `NULL` throws an error if there are too few elements.
`copy_cell_props`	Copy cell properties from the previous row or column (if after > 0). See `cbind.huxtable()`.

Details

In `insert_column` only, you can use a column name for `after`.

Even if `colspan` or `rowspan` are greater than 1, you must still provide values for the hidden cells. Use `fill = ""` for this.

Value

The modified huxtable

See Also

`add_rows()` and `add_columns()`, which insert multiple rows/columns at once.

Examples

```
insert_row(jams,
        c("Gooseberry", 2.15),
        after = 1
      )

insert_column(jams,
        c("Sugar", "50%", "60%", "40%"),
        after = "Price"
      )

insert_column(jams,
        "Sugar",
        after = "Price",
```

```
  fill = "50%"
)

# don't forget to use `fill`:
insert_row(jams,
  "Jams and prices",
  fill = "",
  colspan = 2
)
```

`jams` *Prices of 3 jams*

Description

A huxtable of jams.

Usage

```
jams
```

Format

A huxtable with 4 rows and 2 columns ("Type" and "Price").

`knit_print.data.frame` *Print data frames in knitr using huxtable*

Description

Print data frames in knitr using huxtable

Usage

```
## S3 method for class 'data.frame'
knit_print(x, options, ...)
```

Arguments

`x`	A huxtable.
`options`	Not used.
`...`	Not used.

Details

huxtable defines a knit_print method for data.frames. This converts the data frame to a huxtable, with add_colnames = TRUE, themes it using theme_plain() and prints it. It also tries to set a few intelligent defaults, e.g. wrapping long columns and setting an appropriate width. To turn this behaviour off, set options(huxtable.knit_print_df = FALSE). To change the theme, set options("huxtable.knit_print_df_theme") to a one-argument function which should return the huxtable.

See Also

huxtable-options

Other knit_print: knit_print.huxtable()

Examples

```
## Not run:
# in your knitr document
mytheme <- function (ht) {
  ht <- set_all_borders(ht, 0.4)
  ht <- set_all_border_colors(ht,
        "darkgreen")
  ht <- set_background_color(ht,
        evens, odds, "salmon")
  ht
}

options(huxtable.knit_print_df_theme
      = mytheme)
# groovy!
data.frame(
        a = 1:5,
        b = 1:5
      )

## End(Not run)
```

---

knit_print.huxtable *Print a huxtable within knitr*

Description

Print a huxtable within knitr

Usage

```
## S3 method for class 'huxtable'
knit_print(x, options, ...)
```

Arguments

x	A huxtable.
options	Not used.
...	Not used.

Details

knitr calls knitr::knit_print() on objects when they are printed in a knitr (or RMarkdown) document. The method for huxtable objects guesses the appropriate output format and prints itself out appropriately. You can override the output format by setting options("huxtable.knitr_output_format").

See Also

huxtable-options

Other knit_print: knit_print.data.frame()

---

label *Set a table label for external referencing*

Description

The label is used as the table's label in LaTeX, and as the "id" property of the table element in HTML.

Usage

```
label(ht)
label(ht) <- value
set_label(ht, value)
```

Arguments

ht	A huxtable.
value	A string. Set to NA to reset to the default, which is "NA".

Details

LaTeX table labels typically start with "tab:".

Within knitr, huxtable labels will default to the same as the knitr chunk label. To turn off this behaviour, set options(huxtable.autolabel = FALSE).

If you use bookdown, and set a label on your table, the table caption() will automatically be prefixed with (#label). You can then refer to the table using @ref(label). label needs to start with "tab:"; if it doesn't, the "tab:" prefix will be added automatically. To turn off this behaviour, set options(huxtable.bookdown = FALSE).

Value

`label()` returns the `label` property. `set_label()` returns the modified huxtable.

See Also

huxtable-options

Examples

```
label(jams) <-  "tab:mytable"
label(jams)
```

---

latex_float *Set the position of the table float in LaTeX*

Description

Possible values include:

- "h": here
- "h!" definitely here
- "t" top of page
- "ht" here or at top of page
- "b" bottom of page
- "p" page of floats

Usage

```
latex_float(ht)
latex_float(ht) <- value
set_latex_float(ht, value)
```

Arguments

`ht`	A huxtable.
`value`	A string. Set to `NA` to reset to the default, which is `"ht"`.

Details

See LaTeX documentation for more details.

Value

`latex_float()` returns the `latex_float` property. `set_latex_float()` returns the modified huxtable.

Examples

```
latex_float(jams) <-  "b"
latex_float(jams)
```

`mapping-functions` *How to set cell properties variably by cell contents*

Description

This help page explains how to set properties differently for cells, depending on their contents.

For example, in a table of p-values, you could bold cells where p < 0.05:

```
map_bold(pval_hux, by_ranges(0.05, c(TRUE, FALSE)))
```

Or you can use red text for a particular value:

```
hxtbl %>% map_text_color(by_values("Warning" = "red"))
```

There is a `map_...` function for each huxtable cell property. The syntax is:

```
map_property(ht, row, col, fn)
```

where `property` is the property name.

`row` and `col` specify ranges of rows and columns. See rowspecs for details. To set properties for the whole table, omit `row` and `col`:

```
map_property(ht, fn)
```

The `fn` argument is a *mapping function* which maps cell contents to property values.

- To set property values in "stripes" by rows or by columns, use `by_rows()` and `by_cols()`.
- To set property values for cells with specific contents, use `by_values()`.
- To set property values for cells within a numeric range, use `by_ranges()`.
- To set property values for cells by quantiles, use `by_quantiles()` or `by_equal_groups()`.
- To set property values for cells that match a string or regular expression, use `by_regex()`.
- To map numeric values to a colorspace, use `by_colorspace()`.
- For a more general solution, use `by_function()` or `by_cases()`.

Caveat

Most functions convert the huxtable to a matrix using `as.matrix()`. This can have unexpected results if you mix character and numeric data. See the example.

Technical details

`fn` takes four arguments: the entire original huxtable `ht`, a numeric vector of `rows`, a numeric vector of `cols`, and the `current` property values for `ht[rows,cols]`, as a matrix. It should return the new property values for `ht[rows,cols]`, as a matrix.

Examples

```
ht <- hux(Condition = c("OK", "Warning", "Error"))
ht <- map_text_color(ht, by_values(
        OK      = "green",
        Warning = "orange",
        Error   = "red"
      ))
ht

# Leaving NA values alone:
map_text_color(ht, by_values(
      "OK" = "blue", NA, ignore_na = TRUE))

# Resetting values:
map_text_color(ht, by_values(
      "OK" = "blue", NA, ignore_na = FALSE))

ht <- as_hux(matrix(rnorm(15), 5, 3))
map_background_color(ht, by_ranges(
        c(-1, 1),
        c("blue", "yellow", "red")
      ))
map_background_color(ht,
      by_equal_groups(2, c("red", "green")))

ht <- hux(
        Coef = c(3.5, 2.4, 1.3),
        Pval = c(0.04, 0.01, 0.07),
        add_colnames = TRUE
      )
map_bold(ht, everywhere, "Pval",
      by_ranges(0.05, c(TRUE, FALSE)))

# Problems with as.matrix:

ht <- hux(c(-1, 1, 2), letters[1:3])
as.matrix(ht)          # look at the spaces...
as.matrix(ht) > 0      # uh oh
map_text_color(ht,
      by_cases(. < 0 ~ "red", TRUE ~ "blue"))

# To avoid this, only look at the truly numeric columns:
map_text_color(ht, row = 1:3, col = 1,
      by_cases(. < 0 ~ "red", TRUE ~ "blue"))
```

markdown *Format cell content as markdown*

Description

Cells where the markdown property is TRUE will be rendered as markdown.

Usage

```
markdown(ht)
markdown(ht) <- value
set_markdown(ht, row, col, value = TRUE)
map_markdown(ht, row, col, fn)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
fn	A mapping function. See mapping-functions for details.
value	A logical vector or matrix. Set to NA to reset to the default, which is FALSE.

Details

Markdown is currently implemented for HTML and LaTeX only. There is basic support for on-screen display. The only extension used is "strikethrough": write ~text~ to strike through text.

Value

markdown() returns the markdown property. set_markdown() returns the modified huxtable.

See Also

set_markdown_contents(), a shortcut function.

Examples

```
jams[3, 2] <- "~2.10~ **Sale!** 1.50"
set_markdown(jams, 3, 2)
```

merge_across *Merge cells across rows or down columns*

Description

merge_across creates multicolumn cells within each row. merge_down creates multirow cells within each column.

Usage

```
merge_across(ht, row, col)

merge_down(ht, row, col)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.

Value

The ht object.

See Also

Other cell merging: merge_cells(), merge_repeated_rows()

Examples

```
ht <- as_hux(matrix(1:12, 4, 3, byrow = TRUE))
ht <- set_all_borders(ht, 1)
merge_across(ht, 2:4, 2:3)
merge_down(ht, 2:4, 2:3)
```

`merge_cells` *Merge a range of cells*

Description

Merge a range of cells

Usage

```
merge_cells(ht, row, col)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.

Details

`merge_cells(ht,c(min_row,max_row),c(min_col,max_col))` is equivalent to

```
colspan(ht)[min_row, min_col] <- max_col - min_col + 1
rowspan(ht)[min_row, min_col] <- max_row - min_row + 1
```

Value

The `ht` object.

See Also

Other cell merging: `merge_across()`, `merge_repeated_rows()`

Examples

```
ht <- hux(a = 1:3, b = 1:3)
ht <- set_all_borders(ht, 1)
merge_cells(ht, 2:3, 1:2)
```

`merge_repeated_rows` *Merge repeated rows into multirow cells*

Description

Merge repeated rows into multirow cells

Usage

```
merge_repeated_rows(ht, row, col)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.

Details

Repeated rows in each column are merged into cells with `rowspan > 1`.

If `row` contains gaps, results may be unexpected (and a warning is given).

Value

The `ht` object.

See Also

Other cell merging: `merge_across()`, `merge_cells()`

Examples

```
ht <- as_hux(jams[c(1, 2, 2, 3, 3, 4), ])
ht <- add_columns(ht, c("Sugar", "30%", "40%", "30%", "40%", "30%"),
      after = 1)
ht
merge_repeated_rows(ht)
merge_repeated_rows(ht, everywhere, "Type")
```

`mutate.huxtable` *Dplyr verbs for huxtable*

Description

Huxtable can be used with dplyr verbs `dplyr::select()`, `dplyr::rename()`, `dplyr::relocate()`, `dplyr::slice()`, `dplyr::arrange()`, `dplyr::mutate()` and `dplyr::transmute()`. These will return huxtables. Other verbs like `dplyr::summarise()` will simply return data frames as normal; `dplyr::pull()` will return a vector. `mutate` has an extra option, detailed below.

Usage

```
## S3 method for class 'huxtable'
mutate(.data, ..., copy_cell_props = TRUE)
```

Arguments

`.data`	A huxtable.
`...`	Arguments passed to `dplyr::mutate()`.
`copy_cell_props`	Logical: copy cell and column properties from existing columns.

Details

If `mutate` creates new columns, and the argument `copy_cell_props` is missing or `TRUE`, then cell and column properties will be copied from existing columns to their left, if there are any. Otherwise, they will be the standard defaults. Row and table properties, and properties of cells in existing columns, remain unchanged.

Examples

```
ht <- hux(a = 1:5, b = 1:5, c = 1:5, d = 1:5, add_colnames = FALSE)
bold(ht)[c(1, 3), ] <- TRUE
bold(ht)[, 1] <- TRUE
ht2 <- dplyr::select(ht, b:c)
ht2
bold(ht2)
ht3 <- dplyr::mutate(ht, x = a + b)
ht3
bold(ht3)
ht4 <- dplyr::mutate(ht, x = a + b,
      copy_cell_props = FALSE)
bold(ht4)
```

na_string *Change how NA values are printed*

Description

NA values in the huxtable are printed as the value of `na_string`.

Usage

```
na_string(ht)
na_string(ht) <- value
set_na_string(ht, row, col, value )
map_na_string(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`fn`	A mapping function. See mapping-functions for details.
`value`	A character vector or matrix. Set to `NA` to reset to the default, which is `""`.

Value

`na_string()` returns the `na_string` property. `set_na_string()` returns the modified huxtable.

See Also

Other formatting functions: `background_color()`, `bold()`, `font_size()`, `font()`, `number_format()`, `text_color()`

Examples

```
jams[3, 2] <- NA
jams
set_na_string(jams, "---")
```

number_format *Set how numbers are formatted in cells*

Description

If number_format is:

- numeric, numbers will be rounded to that many decimal places;
- character, it will be used as an argument to sprintf();
- a function, the function will be applied to the numbers;
- NA, then numbers will not be formatted (except by conversion with as.character).

Usage

```
number_format(ht)
number_format(ht) <- value
set_number_format(ht, row, col, value )
map_number_format(ht, row, col, fn)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
fn	A mapping function. See mapping-functions for details.
value	A character or integer vector, Note that setting to NA does not reset to the default.

Details

Number formatting is applied to any parts of cells that look like numbers. The exception is exponents in scientific notation; huxtable attempts to detect and ignore these.

The default value is "\ significant digits, and which may use scientific notation for large numbers.

Note that if your cells are of type numeric, a number format of NA doesn't guarantee you get back what you typed in, since R's default conversion may apply scientific notation and rounding.

To set number_format to a function, enclose the function in list. The function should take one argument and return a string. fmt_pretty() and fmt_percent() are useful shortcuts for common formatting functions.

Value

number_format() returns the number_format property. set_number_format() returns the modified huxtable.

See Also

Other formatting functions: background_color(), bold(), font_size(), font(), na_string(), text_color()

Examples

```
ht <- huxtable(
        number_format = c(
          "Default",
          "NA",
          "2",
          "\"%5.2f\"",
          "Pretty",
          "Sign"
        ),
        a = rep(1000, 6),
        b = rep(1000.005, 6),
        c = rep(0.0001, 6),
        d = rep(-1, 6),
        e = rep("3.2 (s.e. 1.4)", 6)
      )

number_format(ht)[3, -1] <- NA
number_format(ht)[4, -1] <- 2
number_format(ht)[5, -1] <- "%5.2f"

number_format(ht)[6, -1] <- fmt_pretty()

number_format(ht)[7, -1] <- list(
        function(x) if (x > 0) "+" else "-"
      )

right_border(ht) <- 1
bottom_border(ht)[1, ] <- 1

ht

ht_bands <- huxtable("10000 Maniacs", autoformat = FALSE)
# probably not what you want:
ht_bands
# fixed:
set_number_format(ht_bands, NA)
```

---

padding *Set padding*

Description

These functions set the space around the edges of cells, within the borders.

Usage

```
left_padding(ht)
left_padding(ht) <- value
set_left_padding(ht, row, col, value )
map_left_padding(ht, row, col, fn)

right_padding(ht)
right_padding(ht) <- value
set_right_padding(ht, row, col, value )
map_right_padding(ht, row, col, fn)

top_padding(ht)
top_padding(ht) <- value
set_top_padding(ht, row, col, value )
map_top_padding(ht, row, col, fn)

bottom_padding(ht)
bottom_padding(ht) <- value
set_bottom_padding(ht, row, col, value )
map_bottom_padding(ht, row, col, fn)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
fn	A mapping function. See mapping-functions for details.
value	Numeric: padding width/height in points.

See Also

set-multiple, set-outer.

Examples

```
left_padding(jams) <- 2
left_padding(jams)

jams <- set_left_padding(jams, 2)
left_padding(jams)
```

position *Set the table's position with respect to surrounding content.*

Description

Table position may be "left", "right" or "center". If you want text to wrap around the table, use "wrapleft" or "wrapright".

Usage

```
position(ht)
position(ht) <- value
set_position(ht, value)
```

Arguments

ht	A huxtable.
value	String. "left", "center", "right", "wrapleft" or "wrapright". Set to NA to reset to the default, which is "center".

Details

"wrapleft" and "wrapright" position the table to the left or right, and allow text to wrap around the table.

Value

position() returns the position property. set_position() returns the modified huxtable.

Examples

```
position(jams) <-  "right"
position(jams)

set_position(jams, "left")
set_position(jams, "right")
set_position(jams, "center")
```

`print.huxtable` *Default print method for huxtables*

Description

By default huxtables are printed using `print_screen()`. In certain cases, for example in Sweave documents, it may be useful to change this. You can do so by setting `options("huxtable.print")`.

Usage

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

## S3 method for class 'huxtable'
format(x, ..., output = c("latex", "html", "md", "screen", "rtf"))
```

Arguments

`x`	A huxtable.
`...`	Options passed to other methods.
`output`	Output format. One of `"html"`, `"latex"`, `"md"`, `"screen"` or `"rtf"`.

Value

`print` prints the huxtable and returns `NULL` invisibly.

`format` returns a string representation from `to_latex()`, `to_html()` etc.

See Also

To change how huxtables are printed within `knitr`, see `options("huxtable.knitr_output_format")` in huxtable-options

Examples

```
## Not run:
  # to print LaTeX output:
  options(huxtable.print = print_latex)

## End(Not run)

format(jams, output = "screen")
format(jams, output = "md")
```

print_html *Create HTML representing a huxtable*

Description

These functions print or return an HTML table.

Usage

```
print_html(ht, ...)

to_html(ht, ...)

print_notebook(ht, ...)

## S3 method for class 'huxtable'
to_html(ht, ...)
```

Arguments

ht	A huxtable.
...	Arguments to pass to methods. Not currently used.

Value

to_html returns an HTML string. print_html prints the string and returns NULL.

print_notebook prints HTML output suitable for use in an RStudio interactive notebook.

See Also

Other printing functions: print_latex(), print_md(), print_rtf(), print_screen()

Examples

```
ht <- hux(a = 1:3, b = letters[1:3])
to_html(ht)
```

print_latex *Create LaTeX representing a huxtable*

Description

Create LaTeX representing a huxtable

Usage

```
print_latex(ht, ...)

to_latex(ht, ...)

## S3 method for class 'huxtable'
to_latex(ht, tabular_only = FALSE, ...)
```

Arguments

ht	A huxtable.
...	Arguments to pass to methods.
tabular_only	Return only the LaTeX tabular, not the surrounding float.

Details

If we appear to be in a rmarkdown document with the Pandoc markdown +raw_attribute extension available, to_latex will return LaTeX surrounded by a "raw attribute code block" (see https://pandoc.org/MANUAL.html#extension-raw_attribute). This helps protect against pandoc accidentally escaping the TeX code.

Value

to_latex returns a string. print_latex prints the string and returns NULL.

See Also

Other printing functions: print_html(), print_md(), print_rtf(), print_screen()

Examples

```
ht <- huxtable(
        a = 1:3,
        b = letters[1:3]
      )
print_latex(ht)
```

print_md *Create Markdown representing a huxtable*

Description

Create Markdown representing a huxtable

Usage

```
print_md(ht, ...)

to_md(ht, ...)

## S3 method for class 'huxtable'
to_md(ht, header = TRUE, min_width = getOption("width")/4, max_width = 80, ...)
```

Arguments

ht	A huxtable.
...	Arguments passed to methods.
header	Logical. Print the first row as a header?
min_width	Minimum width in on-screen characters of the result.
max_width	Maximum width in on-screen characters of the result. Overrides min_width.

Details

Only align and caption properties are used. The markdown format is multiline_tables, see the rmarkdown documentation.

Value

to_md() returns a string. print_md() prints the string and returns NULL.

See Also

Other printing functions: print_html(), print_latex(), print_rtf(), print_screen()

Examples

```
print_md(jams)
```

print_rtf *Create RTF representing a huxtable*

Description

These functions print or return an RTF character string.

Usage

```
print_rtf(ht, fc_tables = rtf_fc_tables(ht), ...)

to_rtf(ht, ...)

## S3 method for class 'huxtable'
to_rtf(ht, fc_tables = rtf_fc_tables(ht), ...)
```

Arguments

ht	A huxtable.
fc_tables	See rtf_fc_tables().
...	Arguments to pass to methods.

Details

RTF files use a single per-document table for colors, and one for fonts. If you are printing multiple huxtables in a document, you need to make sure that the font and color table is set up correctly and that the RTF tables refer back to them. See rtf_fc_tables().

1. Prepare all the huxtables;
2. Call rtf_fc_tables(), passing in all the huxtables;
3. Print the rtfFCTables object in the RTF document header;
4. Pass in the rtfFCTables object to each call to print_rtf.

Value

to_rtf returns a string representing an RTF table. The fc_tables attribute of the returned string will contain the fc_tables object that was passed in (or autocreated). print_rtf prints the string and returns NULL.

Limitations

- rmarkdown"s rtf_document can"t yet print out customized color tables, so custom fonts and colors won"t work in this context.
- col_width() and width() can only be numeric or "pt".
- wrap() has no effect: cell contents always wrap.
- rotation() can only be 90 or 270, i.e. text going up or down.

See Also

Other printing functions: print_html(), print_latex(), print_md(), print_screen()

Examples

```
print_rtf(jams)
```

---

print_screen *Print a huxtable on screen*

Description

Print a huxtable on screen

Usage

```
print_screen(ht, ...)

to_screen(ht, ...)

## S3 method for class 'huxtable'
to_screen(
  ht,
  min_width = ceiling(getOption("width")/6),
  max_width = getOption("width", Inf),
  compact = TRUE,
  colnames = TRUE,
  color = getOption("huxtable.color_screen", default = TRUE),
  ...
)
```

Arguments

ht	A huxtable.
...	Passed on to to_screen.
min_width	Minimum width in on-screen characters of the result.
max_width	Maximum width in on-screen characters of the result. Overrides min_width.
compact	Logical. To save space, don't print lines for empty horizontal borders.
colnames	Logical. Whether or not to print colum names.
color	Logical. Whether to print the huxtable in color (requires the crayon package).

Details

Screen display shows the following features:

- Table and caption positioning
- Merged cells
- Cell alignment
- Borders
- Cell background and border color (if the "crayon" package is installed)
- Text color, bold and italic (if the "crayon" package is installed)

Cell padding, widths and heights are not shown, nor are border styles.

Value

`to_screen` returns a string. `print_screen` prints the string and returns `NULL`.

See Also

Other printing functions: `print_html()`, `print_latex()`, `print_md()`, `print_rtf()`

Examples

```
bottom_border(jams)[1, 1:2] <- 1
bold(jams)[1, 1:2] <- TRUE
jams <- map_text_color(jams,
      by_regex("berry" = "red"))

print_screen(jams)
```

---

quick-output *Quickly print objects to a PDF, TeX, HTML, Microsoft Office or RTF document.*

Description

These functions use huxtable to print objects to an output document. They are useful as one-liners for data reporting.

Usage

```
quick_latex(
  ...,
  file = confirm("huxtable-output.tex"),
  borders = 0.4,
  open = interactive()
)
```

```
quick_pdf(
  ...,
  file = confirm("huxtable-output.pdf"),
  borders = 0.4,
  open = interactive(),
  width = NULL,
  height = NULL
)

quick_html(
  ...,
  file = confirm("huxtable-output.html"),
  borders = 0.4,
  open = interactive()
)

quick_docx(
  ...,
  file = confirm("huxtable-output.docx"),
  borders = 0.4,
  open = interactive()
)

quick_pptx(
  ...,
  file = confirm("huxtable-output.pptx"),
  borders = 0.4,
  open = interactive()
)

quick_xlsx(
  ...,
  file = confirm("huxtable-output.xlsx"),
  borders = 0.4,
  open = interactive()
)

quick_rtf(
  ...,
  file = confirm("huxtable-output.rtf"),
  borders = 0.4,
  open = interactive()
)
```

Arguments

`...`	One or more huxtables or R objects with an `as_huxtable` method.
`file`	File path for the output.

borders	Border width for members of ... that are not huxtables.
open	Logical. Automatically open the resulting file?
width	String passed to the LaTeX geometry package"s paperwidth option. Use NULL for the default width.
height	String passed to geometry"s paperheight option. Use NULL for the default height.

Details

Objects in ... will be converted to huxtables, with borders added.

If 'file' is not specified, the command will fail in non-interactive sessions. In interactive sessions, the default file path is "huxtable-output.xxx" in the working directory; if this already exists, you will be asked to confirm manually before proceeding.

Value

Invisible NULL.

Examples

```
## Not run:
  m <- matrix(1:4, 2, 2)

  quick_pdf(m, jams)
  quick_latex(m, jams)
  quick_html(m, jams)
  quick_docx(m, jams)
  quick_xlsx(m, jams)
  quick_pptx(m, jams)
  quick_rtf(m, jams)

## End(Not run)
```

---

report_latex_dependencies

Tools for LaTeX dependencies

Description

report_latex_dependencies prints out and/or returns a list of LaTeX dependencies for adding to a LaTeX preamble.

check_latex_dependencies checks whether the required LaTeX packages are installed.

install_latex_dependencies is a utility function to install and/or update the LaTeX packages that huxtable requires. It calls tinytex::tlmgr_install() if possible, or tlmgr install directly.

Usage

```
report_latex_dependencies(quiet = FALSE, as_string = FALSE)

check_latex_dependencies(quiet = FALSE)

install_latex_dependencies()
```

Arguments

quiet	Logical. For report_latex_dependencies, suppress printing of dependencies. For check_latex_dependencies, suppress messages.
as_string	Logical: return dependencies as a string.

Value

If as_string is TRUE, report_latex_dependencies returns a string of "\\\\usepackage\\{...\\}" statements; otherwise it returns a list of rmarkdown::latex_dependency objects, invisibly.

check_latex_dependencies() returns TRUE or FALSE.

install_latex_dependencies returns TRUE if tlmgr returns 0.

Examples

```
report_latex_dependencies()

## Not run:
  check_latex_dependencies()

## End(Not run)

## Not run:
  install_latex_dependencies()

## End(Not run)
```

---

restack-across-down *Restack huxtables across/down the page.*

Description

- restack_across() splits a huxtable horizontally, then joins the parts up side by side.
- restack_down() splits a huxtable vertically, then joins the parts up top to bottom.

Usage

```
restack_across(
  ht,
  rows,
  headers = TRUE,
  on_remainder = c("warn", "stop", "fill")
)

restack_down(
  ht,
  cols,
  headers = TRUE,
  on_remainder = c("warn", "stop", "fill")
)
```

Arguments

`ht`	A huxtable
`rows, cols`	How many rows/columns the new result should have.
`headers`	Logical. Take account of header rows/columns?
`on_remainder`	String. "warn", "stop" or "fill". See below.

Details

If `headers` is `TRUE`, header rows/columns will be repeated across/down the restacked huxtable as necessary.

`on_remainder` determines what happens if the huxtable could not be evenly divided for restacking:

- `"stop"`: stop with an error.
- `"fill"`: fill the remainder with empty cells.
- `"warn"` (the default): issue a warning, then fill the remainder with empty cells.

Value

A new huxtable.

See Also

split-across-down

Examples

```
ht <- as_hux(matrix(LETTERS[1:4], 2, 2))
ht <- set_all_borders(ht)
ht

restack_down(ht, 1)
```

```
restack_across(ht, 1)

# headers:
restack_across(jams, 2)
restack_across(jams, 2,
      headers = FALSE)

# on_remainder:
restack_across(jams, 3,
      on_remainder = "fill")
```

`rotation` *Rotate text within cells*

Description

Numbers represent degrees to rotate text anti-clockwise:

Usage

```
rotation(ht)
rotation(ht) <- value
set_rotation(ht, row, col, value )
map_rotation(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`fn`	A mapping function. See mapping-functions for details.
`value`	A numeric vector or matrix. Set to `NA` to reset to the default, which is `0`.

Details

- 0 is the default;
- 90 is going upwards, for left-to-right languages;
- 270 is going downwards.

You will probably need to set `col_width()` and `row_height()` explicitly to achieve a nice result, in both HTML and LaTeX.

Value

`rotation()` returns the `rotation` property. `set_rotation()` returns the modified huxtable.

Examples

```
rotation(jams) <-  90
rotation(jams)

jams2 <- set_rotation(jams,
      270)
rotation(jams2)

jams3 <- set_rotation(jams,
      2:3, 1, 270)
rotation(jams3)

jams4 <- map_rotation(jams,
      by_rows(
        270,
        90)
      )
rotation(jams4)
```

---

rowspecs *Different ways to select rows and columns*

Description

This help page describes how to use the `row` and `col` arguments in set_* functions.

The basics

The set_* functions for cell properties all have arguments like this: `set_property(ht,row,col,value)`.

You can treat `row` and `col` arguments like arguments for data frame subsetting. For example, you can use `row = 1:3` to get the first three rows, `col = "salary"` to specify the column named "salary", or `row = ht$salary >= 50000` to specify rows where a condition is true.

There are also a few extra tricks you can use:

- Write `set_property(ht,x)`, omitting `row` and `col`, to set the property to `x` for all cells.
- Use `everywhere` to refer to all rows or all columns.
- Use `final(n)` to refer to the last n rows or columns.
- Use `evens` to get only even rows/columns and `odds` for only odd ones.
- Use `stripe(n,from = m)` to get every nth row/column starting at row/column m.
- Use `dplyr` functions like `starts_with`, `contains` and `matches` to specify columns (but not rows). See tidyselect::language for a full list.

The gory details

How the row and col arguments are parsed depends on the number of arguments passed to the set_* function.

- If there are two arguments then the second argument is taken as the value and is set for all rows and columns.
- If there are four arguments:
  - If `row` or `col` is numeric, character or logical, it is evaluated just as in standard subsetting. `col` will be evaluated in a special context provided by `tidyselect::with_vars()` to allow the use of dplyr functions.
  - If `row` or `col` is a function,it is called with two arguments: the huxtable, and the dimension number being evaluated, i.e. 1 for rows, 2 for columns. It must return a vector of column indices. `evens()`, `odds()`, `stripe()` and `final()` return functions for this purpose.

Examples

```
set_bold(jams, 2:4, 1:2, TRUE)
set_background_color(jams, evens, everywhere,
      "grey95")
set_bold(jams, everywhere,
      tidyselect::matches("yp"), TRUE)

set_text_color(jams, 2:4, 1:2,
      c("red", "violetred", "purple"))
```

`row_height` *Set the height of table rows*

Description

Numeric heights are scaled to 1 and treated as proportions of the table height in HTML, or of the text height (\\textheight) in LaTeX. Character row heights must be valid CSS or LaTeX dimensions.

Usage

```
row_height(ht)
row_height(ht) <- value
set_row_height(ht, row, value)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`value`	Numeric or character vector.. Set to `NA` to reset to the default, which is `NA`.

Value

`row_height()` returns the `row_height` property. `set_row_height()` returns the modified huxtable.

See Also

Other table measurements: `col_width()`, `height()`, `width()`

Examples

```
row_height(jams) <-  c(.4, .2, .2, .2)
row_height(jams)
```

---

rtf_fc_tables *Create RTF font and color tables*

Description

Create RTF font and color tables

Usage

```
rtf_fc_tables(..., extra_fonts = "Times", extra_colors = character(0))
```

Arguments

`...`	One or more objects of class `huxtable`.
`extra_fonts`	Extra fonts to include. These will be first in the fonts table.
`extra_colors`	Extra colors to include, as R color names.

Details

RTF documents have a single table of fonts, and a table of colors, in the RTF header. To create font and color tables for multiple huxtables, use this command. You can `print` the returned object in the RTF header. Pass it to `print_rtf()` or `to_rtf()` to ensure that huxtables print out the correct colour references.

Value

An object of class `rtfFCTables`. This is a list containing two items: `"fonts"` is a character vector of unique font names; `"colors"` is a character vector of unique color names.

Examples

```
# Printing multiple huxtables:

ht <- huxtable("Blue with red border")
ht <- set_all_borders(ht, 1)
ht <- set_all_border_colors(ht, "red")
background_color(ht) <- "blue"

ht2 <- huxtable("Dark green text")
text_color(ht2) <- "darkgreen"

fc_tbls <- rtf_fc_tables(ht, ht2)

# In the document header:
print(fc_tbls)

# In the document body:
print_rtf(ht, fc_tables = fc_tbls)
print_rtf(ht2, fc_tables = fc_tbls)
```

---

sanitize *Escape text for various formats*

Description

This escapes a string for LaTeX, HTML or RTF.

Usage

```
sanitize(str, type = c("latex", "html", "rtf"))
```

Arguments

str	A character object.
type	"latex", "html" or "rtf".

Details

HTML and LaTeX code was copied over from `xtable::sanitize()`.

Value

The sanitized character object.

Examples

```
txt <- "Make $$$ with us"
sanitize(txt, type = "latex")
```

set-multiple *Set left, right, top and bottom properties*

Description

These functions set left, right, top and/or bottom properties simultaneously for the specified cells.

Usage

```
set_all_borders(ht, row, col, value = 0.4)

map_all_borders(ht, row, col, fn)

set_all_border_colors(ht, row, col, value)

map_all_border_colors(ht, row, col, fn)

set_all_border_styles(ht, row, col, value)

map_all_border_styles(ht, row, col, fn)

set_all_padding(ht, row, col, value)

map_all_padding(ht, row, col, fn)

set_tb_padding(ht, row, col, value)

map_tb_padding(ht, row, col, fn)

set_lr_padding(ht, row, col, value)

map_lr_padding(ht, row, col, fn)

set_tb_borders(ht, row, col, value)

map_tb_borders(ht, row, col, fn)

set_lr_borders(ht, row, col, value)

map_lr_borders(ht, row, col, fn)

set_tb_border_colors(ht, row, col, value)

map_tb_border_colors(ht, row, col, fn)

set_lr_border_colors(ht, row, col, value)
```

```
map_lr_border_colors(ht, row, col, fn)

set_tb_border_styles(ht, row, col, value)

map_tb_border_styles(ht, row, col, fn)

set_lr_border_styles(ht, row, col, value)

map_lr_border_styles(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`value`	Value(s) to set. Set to `NA` to reset to the default.
`fn`	A mapping function. See mapping-functions for details.

Details

- set_all_* functions set top, bottom, left and right properties.
- set_tb_* functions set top and bottom properties.
- set_lr_* functions set left and right properties.

Value

The modified huxtable.

See Also

borders, border-colors, border-styles, padding.

Examples

```
ht <- as_hux(jams)
ht <- set_all_borders(ht)
ht
ht <- set_all_border_colors(ht, "red")
ht
ht <- set_all_border_styles(ht, "double")
ht <- set_all_padding(ht, 1:3, 1:2, "20px")
ht <- set_tb_padding(ht, 10)
ht <- set_tb_borders(ht)
set_tb_border_colors(ht, "red")
set_tb_border_styles(ht, "double")
```

set-outer *Set borders and padding around a rectangle of cells*

Description

Set borders and padding around a rectangle of cells

Usage

```
set_outer_borders(ht, row, col, value = 0.4)

set_outer_border_colors(ht, row, col, value)

set_outer_border_styles(ht, row, col, value)

set_outer_padding(ht, row, col, value)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
value	Border width, color, style or a `brdr()` object. See borders. For padding, padding width in points.

Details

`set_outer_borders` sets borders round the top, bottom, left and right of a group of cells. Behaviour is undefined unless `row` and `col` specify contiguous sequences. `set_outer_border_colors` and `set_outer_border_styles` set border colors and styles. `set_outer_padding` sets padding, i.e. top padding on the top row of cells, etc.

Examples

```
ht2 <- huxtable(a = 1:3, b = 1:3)
set_outer_borders(ht2)
set_outer_borders(ht2, 2:3, 1:2)
```

set_contents *Set cell contents*

Description

`set_contents()` is a convenience function to change the cell contents of a huxtable within a dplyr chain. `set_contents(ht,x,y,foo)` just calls `ht[x,y] <-foo` and returns `ht`.

Usage

```
contents(ht)
contents(ht) <- value
set_contents(ht, row, col, value )
map_contents(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`fn`	A mapping function. See mapping-functions for details.
`value`	Cell contents.

Examples

```
set_contents(jams, 2, 1, "Blackcurrant")
map_contents(jams, by_regex(".*berry" = "Snodberry"))
```

set_default_properties *Default huxtable properties*

Description

Defaults are used for new huxtables, and also when a property is set to `NA`.

Usage

```
set_default_properties(...)

get_default_properties(names = NULL)
```

Arguments

...	Properties specified by name, or a single named list.
names	Vector of property names. If NULL, all properties are returned.

Details

Note that autoformat = TRUE in huxtable() overrides some defaults.

To set default border styles, use the pseudo-properties border/border_style/border_color. You cannot set defaults separately for different sides.

Value

For set_default_properties, a list of the previous property values, invisibly.

For get_default_properties, a list of the current defaults.

See Also

Options for autoformat in huxtable-options.

Examples

```
old <- set_default_properties(
        text_color = "red",
        border     = 0.4
      )
hux(a = 1:2, b = 1:2)
set_default_properties(old)
get_default_properties("bold")
```

---

set_markdown_contents *Set cell contents to markdown*

Description

This convenience function calls set_contents() and set_markdown().

Usage

```
set_markdown_contents(ht, row, col, value)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
value	Cell contents, as a markdown string.

Value

The modified huxtable.

See Also

markdown().

Examples

```
set_markdown_contents(jams, 1, 1,
      "**Type** of jam")
```

---

spans *Extend cells over multiple rows and/or columns*

Description

A cell with rowspan of 2 covers the cell directly below it. A cell with colspan of 2 covers the cell directly to its right. A cell with rowspan of 2 and colspan of 2 covers a 2 x 2 square, hiding three other cells.

Usage

```
rowspan(ht)
rowspan(ht) <- value
set_rowspan(ht, row, col, value )
map_rowspan(ht, row, col, fn)

colspan(ht)
colspan(ht) <- value
set_colspan(ht, row, col, value )
map_colspan(ht, row, col, fn)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
fn	A mapping function. See mapping-functions for details.
value	An integer vector or matrix.

See Also

merge_cells(), merge_across() and merge_down() for a higher-level interface.

Examples

```
letter_hux <- as_hux(matrix(LETTERS[1:9], 3, 3))
letter_hux <- set_all_borders(letter_hux)
letter_hux
set_rowspan(letter_hux, 1, 1, 2)
set_colspan(letter_hux, 1, 1, 2)
```

---

split-across-down *Split a huxtable into multiple huxtables.*

Description

These functions split a huxtable horizontally or vertically, and return the new sub-tables in a list.

Usage

```
split_across(ht, after, height, headers = TRUE)

split_down(ht, after, width, headers = TRUE)
```

Arguments

`ht`	A huxtable.
`after`	Rows/columns after which to split. See rowspecs for details. Note that tidyselect semantics are allowed in `split_down()` but not `split_across()`.
`height, width`	Maximum height/width for the result.
`headers`	Logical. Take account of header rows/columns?

Details

Only one of `after` and `width` or `height` must be given. If `width` or `height` is given, the huxtable will be split by `col_width()` or `row_height()`, which must be numeric with no `NA` values.

If `headers` is `TRUE`, all previous headers will be added to each new table.

Value

A list of huxtables.

See Also

restack-across-down

Examples

```
ht <- as_hux(matrix(LETTERS[1:16], 4, 4))
ht <- set_all_borders(ht)
split_across(ht, after = 2)
split_down(ht, after = c(1, 3))

col_width(ht) <- c(0.15, 0.1, 0.25, 0.3)
split_down(ht, width = 0.3)

# split by column name:
split_down(jams, "Type")

# headers are repeated:
split_across(jams, 3)
```

---

stripe *Return every n row or column numbers*

Description

This is a convenience function to use in row or column specifications. In this context, `stripe(n,from)` will return from, from + n, ..., up to the number of rows or columns of the huxtable. `evens` and `odds` return even and odd numbers, i.e. they are equivalent to `stripe(2,2)` and `stripe(2,1)` respectively. `everywhere` returns all rows or columns, equivalently to `stripe(1)`.

Usage

```
stripe(n = 1, from = n)

everywhere(ht, dimension)

evens(ht, dimension)

odds(ht, dimension)
```

Arguments

`n`	A number (at least 1)
`from`	A number (at least 1)
`ht`	An object with a `dim` attribute like a matrix or data frame.
`dimension`	Number of the dimension to use.

Details

Technically, `stripe` returns a 2-argument function which can be called like `f(ht,dimension)`. See rowspecs for details.

Until huxtable 5.0.0, `stripe` was called `every`. It was renamed to avoid a clash with `purrr::every`.

Examples

```
ht <- huxtable(a = 1:10, b = 1:10)
set_background_color(ht,
      evens, everywhere,
      "grey95")
set_background_color(ht,
      stripe(3), everywhere,
      "grey95")
```

`style-functions` *Set multiple properties on headers*

Description

These functions set arbitrary cell properties on cells in header rows and/or columns.

Usage

```
style_headers(ht, ...)

style_header_rows(ht, ...)

style_header_cols(ht, ...)

style_cells(ht, row, col, ...)

set_cell_properties(ht, row, col, ...)
```

Arguments

`ht`	A huxtable.
`...`	Named list of cell properties.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.

Details

- `style_headers` sets properties on all header cells.
- `style_header_rows` sets properties on header rows.
- `style_header_cols` sets properties on header columns.
- `style_cells` sets properties on all selected cells.

`set_cell_properties` is a deprecated alias for `style_cells`. Don't use it.

Examples

```
style_headers(jams, text_color = "red")
jams <- set_header_cols(jams, 1, TRUE)
style_header_cols(jams,
  text_color = c(NA, "red",
    "darkred", "purple")
  )

style_cells(jams, everywhere, 2, bold = TRUE)
```

---

t.huxtable *Transpose a huxtable*

Description

Transpose a huxtable

Usage

```
## S3 method for class 'huxtable'
t(x)
```

Arguments

x	A huxtable.

Details

Row and column spans of x will be swapped, as will column widths and row heights, table width and height, and cell borders (bottom becomes right, etc.). Other properties - in particular, alignment, vertical alignment and rotation - will be preserved.

Value

The transposed object.

Examples

```
ht <- huxtable(
        a = 1:3,
        b = letters[1:3],
        autoformat = FALSE
      )
bottom_border(ht)[3,] <- 1
ht
t(ht)
```

tabular_environment *Set the table's tabular environment in LaTeX*

Description

By default this is either "tabular" or "tabularx".

Usage

```
tabular_environment(ht)
tabular_environment(ht) <- value
set_tabular_environment(ht, value)
```

Arguments

ht	A huxtable.
value	A string. Set to NA to reset to the default, which is "NA".

Details

No features are guaranteed to work if you set this to a non-default value. Use at your own risk!

Value

tabular_environment() returns the tabular_environment property. set_tabular_environment() returns the modified huxtable.

Examples

```
tabular_environment(jams) <-  "longtable"
tabular_environment(jams)
```

text_color *Set the color of text in cells*

Description

Colors can be in any format understood by R:

- A color name like "darkred"
- A HTML string like "#FF0000"
- The result of a function like rgb(1,0,0) or grey(0.5)

Usage

```
text_color(ht)
text_color(ht) <- value
set_text_color(ht, row, col, value )
map_text_color(ht, row, col, fn)
```

Arguments

ht	A huxtable.
row	A row specifier. See rowspecs for details.
col	An optional column specifier.
fn	A mapping function. See mapping-functions for details.
value	A character vector or matrix. Set to NA to reset to the default, which is "NA".

Value

`text_color()` returns the `text_color` property. `set_text_color()` returns the modified huxtable.

See Also

Other formatting functions: `background_color()`, `bold()`, `font_size()`, `font()`, `na_string()`, `number_format()`

Examples

```
text_color(jams) <-  "blue"
text_color(jams)

set_text_color(jams, "red")
set_text_color(jams,
      2:3, 1, "red")
map_text_color(jams,
      by_rows("red", "blue"))
```

---

themes *Theme a huxtable*

Description

These functions quickly set default styles for a huxtable.

Usage

```
theme_plain(ht, header_rows = TRUE, position = "center")

theme_bright(
  ht,
  header_rows = TRUE,
  header_cols = FALSE,
  colors = c("#7eabf2", "#e376e3", "#fcbb03", "#7aba59", "#fc0356")
)

theme_basic(ht, header_rows = TRUE, header_cols = FALSE)

theme_compact(ht, header_rows = TRUE, header_cols = FALSE)

theme_striped(
  ht,
  stripe = "grey90",
  stripe2 = "grey95",
  header_rows = TRUE,
  header_cols = TRUE
)

theme_grey(ht, header_rows = TRUE, header_cols = TRUE)

theme_blue(ht, header_rows = TRUE, header_cols = TRUE)

theme_orange(ht, header_rows = TRUE, header_cols = TRUE)

theme_green(ht, header_rows = TRUE, header_cols = TRUE)

theme_article(ht, header_rows = TRUE, header_cols = TRUE)

theme_mondrian(ht, prop_colored = 0.1, font = NULL)
```

Arguments

ht	A huxtable object.
header_rows	Logical: style header rows?
position	"left", "center" or "right"
header_cols	Logical: style header columns?
colors	Colors for header rows. Can also be a palette function.
stripe	Background colour for odd rows
stripe2	Background colour for even rows
prop_colored	Roughly what proportion of cells should have a primary-color background?
font	Font to use. For LaTeX, try "cmss".

Details

- `theme_plain` is a simple theme with a bold header, a grey striped background, and an outer border.
- `theme_basic` sets header rows/columns to bold, and adds a border beneath them.
- `theme_compact` is like `theme_basic` but with minimal padding.
- `theme_striped` uses different backgrounds for alternate rows, and for headers.
- `theme_article` is similar to the style of many scientific journals. It sets horizontal lines above and below the table.
- `theme_bright` uses thick white borders and a colourful header. It works nicely with sans-serif fonts.
- `theme_grey`, `theme_blue`, `theme_orange` and `theme_green` use white borders and subtle horizontal stripes.
- `theme_mondrian` mimics the style of a Mondrian painting, with thick black borders and randomized colors.

Value

The huxtable object, appropriately styled.

Examples

```
theme_plain(jams)
theme_basic(jams)
theme_compact(jams)
theme_striped(jams)
theme_article(jams)
theme_bright(jams)
theme_grey(jams)
theme_blue(jams)
theme_orange(jams)
theme_green(jams)
theme_mondrian(jams)
## Not run:
  quick_pdf(
          theme_plain(jams),
          theme_basic(jams),
          theme_compact(jams)
          theme_striped(jams),
          theme_article(jams),
          theme_bright(jams),
          theme_grey(jams),
          theme_blue(jams),
          theme_orange(jams),
          theme_green(jams),
          theme_mondrian(jams)
        )

## End(Not run)
```

tidy_override *Change a model's* tidy *output*

Description

Use tidy_override and tidy_replace to provide your own p values, confidence intervals etc. for a model.

Usage

```
tidy_override(x, ..., glance = list(), extend = FALSE)

tidy_replace(x, tidied, glance = list())

## S3 method for class 'tidy_override'
tidy(x, ...)

## S3 method for class 'tidy_override'
glance(x, ...)

## S3 method for class 'tidy_override'
nobs(object, ...)
```

Arguments

x	A model with methods defined for generics::tidy() and/or generics::glance().
...	In tidy_override, columns of statistics to replace tidy output. In tidy and glance methods, arguments passed on to the underlying model.
glance	A list of summary statistics for glance.
extend	Logical: allow adding new columns to tidy(x)?
tidied	Data frame to replace the result of tidy(x).
object	A tidy_override object.

Details

tidy_override allows you to replace some columns of tidy(x) with your own data.

tidy_replace allows you to replace the result of tidy(x) entirely.

Value

An object that can be passed in to huxreg.

Examples

```
if (! requireNamespace("broom", quietly = TRUE)) {
  stop("Please install 'broom' to run this example.")
}

lm1 <- lm(mpg ~ cyl, mtcars)
fixed_lm1 <- tidy_override(lm1,
      p.value = c(.04, .12),
      glance = list(r.squared = 0.99))
huxreg(lm1, fixed_lm1)

if (requireNamespace("nnet", quietly = TRUE)) {
  mnl <- nnet::multinom(gear ~ mpg, mtcars)
  tidied <- broom::tidy(mnl)
  mnl4 <- tidy_replace(mnl, tidied[tidied$y.level == 4, ])
  mnl5 <- tidy_replace(mnl, tidied[tidied$y.level == 5, ])
  huxreg(mnl4, mnl5, statistics = "nobs")
}
```

`valign` *Set the vertical alignment of cell content*

Description

Allowed values are "top", "middle", "bottom" or `NA`.

Usage

```
valign(ht)
valign(ht) <- value
set_valign(ht, row, col, value )
map_valign(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`fn`	A mapping function. See mapping-functions for details.
`value`	A character vector or matrix. Set to `NA` to reset to the default, which is `"top"`.

Details

Vertical alignment may not work for short text in LaTeX. Defining row heights with `row_height()` may help.

Value

`valign()` returns the `valign` property. `set_valign()` returns the modified huxtable.

Examples

```
valign(jams) <-  "top"
valign(jams)

jams2 <- set_valign(jams,
      "bottom")
valign(jams2)

jams3 <- set_valign(jams,
      2:3, 1, "bottom")
valign(jams3)

jams4 <- map_valign(jams,
      by_rows(
        "bottom",
        "top")
      )
valign(jams4)
```

---

width *Set the table width*

Description

`width()` sets the width of the entire table, while `col_width()` sets the width of individual columns. A numeric width is treated as a proportion of f the surrounding block width (HTML) or text width (LaTeX). A character width must be a valid CSS or LaTeX dimension.

Usage

```
width(ht)
width(ht) <- value
set_width(ht, value)
```

Arguments

`ht`	A huxtable.
`value`	A number or string. Set to `NA` to reset to the default, which is `NA`.

Value

`width()` returns the `width` property. `set_width()` returns the modified huxtable.

See Also

Other table measurements: `col_width()`, `height()`, `row_height()`

Examples

```
width(jams) <-  0.8
width(jams)
```

`wrap` *Wrap cell content over multiple lines*

Description

Text wrapping only really makes sense when the table `width()` has been set.

Usage

```
wrap(ht)
wrap(ht) <- value
set_wrap(ht, row, col, value )
map_wrap(ht, row, col, fn)
```

Arguments

`ht`	A huxtable.
`row`	A row specifier. See rowspecs for details.
`col`	An optional column specifier.
`fn`	A mapping function. See mapping-functions for details.
`value`	A logical vector or matrix. Set to `NA` to reset to the default, which is `TRUE`.

Value

`wrap()` returns the `wrap` property. `set_wrap()` returns the modified huxtable.

Examples

```
long_text <- paste(
        rep("Some long text.", 10),
        collapse = " "
    )
ht <- huxtable(Long = long_text)
width(ht) <- 0.2
wrap(ht) <- TRUE
```

```
## Not run:
  quick_html(ht)

## End(Not run)
```

`[.huxtable` *Subset a huxtable*

Description

Subset a huxtable

Usage

```
## S3 method for class 'huxtable'
x[i, j, drop = FALSE]

## S3 replacement method for class 'huxtable'
x[i, j] <- value

## S3 replacement method for class 'huxtable'
x$name <- value

## S3 replacement method for class 'huxtable'
x[[i, j]] <- value
```

Arguments

`x`	A huxtable.
`i`	Rows to select.
`j, name`	Columns to select.
`drop`	Only included for compatibility with [.data.frame. Do not use.
`value`	A matrix, data frame, huxtable or similar object.

Value

`[` returns a huxtable. `$` and `[[` return data from the underlying data frame.

Replacing existing rows and columns

For the replacement function [<-, if `value` is a huxtable, then its properties will be copied into `x`. Replacement functions $<- and [[<- replace existing data without affecting any properties.

Adding new rows and columns

If new columns or rows are created, then properties will be copied from the last column or row of `x`, or from `value` if `value` is a huxtable.

These methods are stricter than their data frame equivalents in some places. You can't add new rows or column at a numeric location without specifying all intervening rows/columns. New values must have the appropriate dimensions (vectors will be interpreted appropriately).

Examples

```
jams[1:3, ]
class(jams[1:3, ])
jams[, 1]
jams$Type
prices <- huxtable(c("Price", 1.70, 2.00, 2.20))
number_format(prices) <- 2
bold(prices) <- TRUE
jams[, 2] <- prices
jams

data(jams)
jams$price <- c("Price", 1.70, 2.00, 2.20)
jams
```

`[<-.brdr` *Replace a subset of a brdr object*

Description

Replace a subset of a brdr object

Usage

```
## S3 replacement method for class 'brdr'
x[...] <- value
```

Arguments

`x`	A `brdr` object.
`...`	Indices.
`value`	A `brdr()` object, number or matrix.

Details

You probably don't need to call this directly. If you want to access border thicknesses, do e.g.

```
l_borders <- brdr_thickness(left_border(ht))
```

which will give you a matrix of numbers.

Value

A `brdr()` object.

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