

# Package ‘mark’

October 16, 2022

**Type** Package

**Title** Miscellaneous, Analytic R Kernels

**Version** 0.5.3

**Date** 2022-09-29

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**Description** Miscellaneous functions and wrappers for development in other packages created, maintained by Jordan Mark Barbone.

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**URL** <https://github.com/jmbarbone/mark>,  
<https://jmbarbone.github.io/mark/>

**BugReports** <https://github.com/jmbarbone/mark/issues>

**Encoding** UTF-8

**Depends** R (>= 3.6)

**Imports** magrittr (>= 2.0.1), stats (>= 3.6), tools (>= 3.6), utils (>= 3.6)

**Suggests** bench (>= 1.1.1), bib2df (>= 1.1.1), crayon (>= 1.3.4), covr (>= 3.5.1), desc (>= 1.3.0), dplyr (>= 1.0.6), graphics (>= 3.6), haven, knitr (>= 1.30), rcmdcheck (>= 1.3.3), stringi (>= 1.5.3), spelling (>= 2.2), testthat (>= 3.0.0), tibble (>= 3.0.4), waldo (>= 0.2.5), withr (>= 2.3.0)

**RoxygenNote** 7.2.1

**Config/testthat/edition** 3

**Config/testthat/parallel** true

**Language** en-US

**NeedsCompilation** no

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**Repository** CRAN

**Date/Publication** 2022-10-16 13:20:02 UTC

**R topics documented:**

add_file_timestamp . . . . .	4
are_identical . . . . .	5
array_extract . . . . .	6
as_ordered . . . . .	6
base_alpha . . . . .	7
base_n . . . . .	8
between_more . . . . .	9
char2fact . . . . .	10
checkOptions . . . . .	10
chr_split . . . . .	11
clipboard . . . . .	12
complete_cases . . . . .	13
counts . . . . .	14
date_from_partial . . . . .	15
depth . . . . .	16
detail . . . . .	17
diff_time . . . . .	18
drop_levels . . . . .	19
ept . . . . .	20
eval_named_chunk . . . . .	21
expand_by . . . . .	22
fact . . . . .	22
fact2char . . . . .	24
fact_na . . . . .	25
fact_reverse . . . . .	25
fct_expand_seq . . . . .	26
file_info . . . . .	27
file_name . . . . .	27
file_utils . . . . .	28
fizzbuzz . . . . .	29
flip . . . . .	30
get_dir_max_number . . . . .	31
get_dir_recent_date . . . . .	31
get_recent_dir . . . . .	32
get_recent_file . . . . .	32
get_version . . . . .	33
handlers . . . . .	33
import . . . . .	35
insert . . . . .	36
is_dir . . . . .	36
labels . . . . .	37
limit . . . . .	38
lines_of_r_code . . . . .	39
list2df . . . . .	40
list_environments . . . . .	41
logic_ext . . . . .	41

ls_ext . . . . .	43
make_sf . . . . .	44
mark . . . . .	44
match_arg . . . . .	45
match_ext . . . . .	46
match_param . . . . .	47
median2 . . . . .	48
muffle . . . . .	49
multi_grepl . . . . .	49
na_assignments . . . . .	50
na_cols . . . . .	51
normalize . . . . .	52
norm_path . . . . .	53
note . . . . .	54
not_available . . . . .	55
omit_na . . . . .	56
percentile_rank . . . . .	57
print.mark_bib_df . . . . .	58
print.pseudo_id . . . . .	58
print_c . . . . .	59
process_bib_dataframe . . . . .	60
pseudo_id . . . . .	60
quick_df . . . . .	61
quiet_stop . . . . .	62
range2 . . . . .	62
read_bib . . . . .	63
recode_by . . . . .	64
reindex . . . . .	65
remove_na . . . . .	66
remove_null . . . . .	67
require_namespace . . . . .	68
round_by . . . . .	68
row_bind . . . . .	69
rscript . . . . .	70
save_source . . . . .	70
set_names0 . . . . .	71
simpleTimeReport . . . . .	71
sort_by . . . . .	72
sort_names . . . . .	73
source_files . . . . .	73
source_to_env . . . . .	74
sourcing . . . . .	74
struct . . . . .	75
str_extract_date . . . . .	76
str_slice . . . . .	77
switch-ext . . . . .	78
tableNA . . . . .	80
that . . . . .	81

todos . . . . .	82
to_boolean . . . . .	83
to_row_names . . . . .	83
t_df . . . . .	84
unlist0 . . . . .	85
use_author . . . . .	86
utils-paste . . . . .	86
vap . . . . .	87
vector2df . . . . .	88
within_call . . . . .	89
with_par . . . . .	89
%colons% . . . . .	90

**Index** **91**

---

add_file_timestamp	<i>Add file timestamp</i>
--------------------	---------------------------

---

### Description

Adds a timestamp to a file

### Usage

```
add_file_timestamp(
  x,
  ts = Sys.time(),
  format = "%Y-%m-%d %H%M%S",
  sep = " "
)
```

### Arguments

x	A vector of files
ts	A single timestamp or vector of timestamps (default: Sys.time())
format	A format to be applied to the times; set to NULL to skip formatting
sep	A character vector of length 1 to separate the timestamp from the file name

### Value

The full name paths with the appended time stamp

**Examples**

```
file1 <- tempfile(fileext = ".txt")
file2 <- tempfile()

add_file_timestamp(file1)
add_file_timestamp(file2)

file.remove(file1, file2)
```

---

are_identical	<i>Identical extensions</i>
---------------	-----------------------------

---

**Description**

Extensions for the use of `base::identical()`

**Usage**

```
are_identical(..., params = NULL)
```

**Arguments**

...	Vectors of values to compare, element-wise of equal length
params	Additional params (as a named list of arguments for <a href="#">base::identical</a> )

**Value**

A logical vector of TRUE/FALSE of equal length of each ... vector

**Examples**

```
x <- y <- z <- 1:5
y[2] <- 3L
z[5] <- NA_integer_

identical(x, y)      # compare entire vector
are_identical(x, y) # element-wise
are_identical(x, y, z) # 3 or more vectors
```

---

array_extract	<i>Array extract</i>
---------------	----------------------

---

**Description**

Extract dimensions from an array

**Usage**

```
array_extract(.arr, ..., default = "1")
```

**Arguments**

.arr	An array
...	A named list by array dimension number and the value
default	The default dimension index

**Value**

A value from the array arr

**Examples**

```
x <- array(rep(NA, 27), dim = c(3, 3, 3))
x[1, 2, 3] <- TRUE
x[1, 2, 3]
x
array_extract(x, `2` = 2, `3` = 3)
```

---

as_ordered	<i>Ordered</i>
------------	----------------

---

**Description**

As ordered

**Usage**

```
as_ordered(x)

## Default S3 method:
as_ordered(x)
```

**Arguments**

x	A vector of values
---	--------------------

**Details**

Simple implementation of ordered. If `x` is ordered it is simply returned. If `x` is a factor the ordered class is added. Otherwise, `x` is made into a factor with `fact()` and then the ordered class is added. Unlike just `fact`, `ordered` will replace the NA levels with `NA_integer_` to work appropriately with other functions.

**Value**

An ordered vector

**See Also**

[fact\(\)](#)

Other factors: [char2fact\(\)](#), [drop\\_levels\(\)](#), [fact2char\(\)](#), [fact\\_na\(\)](#), [fact\(\)](#)

**Examples**

```
x <- c("a", NA, "b")
x <- fact(x)
str(x) # NA is 3L

y <- x
class(y) <- c("ordered", class(y))
max(y)
max(y, na.rm = TRUE) # returns NA -- bad

# as_ordered() removes the NA level
x <- as_ordered(x)
str(x)
max(x, na.rm = TRUE) # returns b -- correct
```

---

base\_alpha

*Alpha base*

---

**Description**

Base 26 conversion with letters

**Usage**

```
base_alpha(x, base = 26)
```

**Arguments**

`x` A string of letters. Non characters are removed.

`base` A numeric

**Value**

A vector of integers

**Examples**

```
base_alpha("AB")
base_alpha("XFD")
base_alpha(c("JMB", "Jordan Mark", "XKCD"))
sum(base_alpha(c("x", "k", "c", "d")))
```

---

base\_n

*Base N conversion*

---

**Description**

Convert between base numbers

**Usage**

```
base_n(x, from = 10, to = 10)
```

**Arguments**

x	A vector of integers
from, to	An integer base to convert to and from; from must be an integer from 1 to 10 and to can currently only be 10.

**Value**

The A vector of integers converted from base from to base to

**Examples**

```
base_n(c(24, 22, 16), from = 7)
```

---

between_more	<i>Between more</i>
--------------	---------------------

---

## Description

Additional functionality and expansion of `dplyr::between`

## Usage

```
between_more(x, left, right, type = c("gele", "gel", "gle", "gl"))
```

## Arguments

<code>x</code>	A numeric vector of values
<code>left, right</code>	Boundary values
<code>type</code>	Abbreviation for the evaluation of left on right (see details)

## Details

Type can be one of the below:

**g** is greater than (`>`)

**ge** greater than or equal to (`>=`)

**l** less than (`<`)

**ls** less than or equal to (`<=`)

## Value

A logical vector

## See Also

`dplyr::case_when()`

## Examples

```
between_more(10, 2, 10, "gl")
between_more(10, 2, 10, "gle")
between_more(1:5, c(3, 3, 2, 2, 1), 5)
```

char2fact

*Character to factor*

---

**Description**

Converts characters to factors

**Usage**

```
char2fact(x, n = 5)

## Default S3 method:
char2fact(x, n = 5)

## S3 method for class 'character'
char2fact(x, n = 5)

## S3 method for class 'factor'
char2fact(x, n = 5)

## S3 method for class 'data.frame'
char2fact(x, n = 5)
```

**Arguments**

x	A vector of characters
n	The limit to the number of unique values for the factor

**See Also**

```
#' @seealso fact2char\(\)
Other factors: as\_ordered\(\), drop\_levels\(\), fact2char\(\), fact\_na\(\), fact\(\)
```

---

checkOptions*Check options*

---

**Description**

For each name in x checks the current option value and reports if there is a difference in a message. This does not change the options

**Usage**

```
checkOptions(x)
```

**Arguments**

x                    A named list of new options

**Details**

Checks and reports on options

**Value**

Invisible, a list of the current options from options()

**Examples**

```
op <- options()

x <- list(width = -20, warning.length = 2, probably_not_a_real_option = 2)
checkOptions(x)
# pointless, but shows that no messages are given
identical(options(), checkOptions(options()))

options(op)
```

---

chr_split	<i>Character split</i>
-----------	------------------------

---

**Description**

Split apart a string by each character

**Usage**

```
chr_split(x)
```

**Arguments**

x                    A vector of strings to split

**Value**

A character vector of length nchar(x)

**Examples**

```
chr_split("split this")
```

---

 clipboard

 Write to and read from the clipboard
 

---

## Description

Wrappers for working with the clipboard

## Usage

```
write_clipboard(x, ...)
```

```
read_clipboard(method = c("default", "data.frame", "tibble"), ...)
```

## Arguments

x	An object
...	Additional arguments sent to methods
method	Method switch for loading the clipboard

## Details

As these functions rely on `utils::readClipboard()` and `utils::writeClipboard` they are only available for Windows 10. For copying and pasting floats, there may be some rounding that can occur.

## Value

`write_clipboard()` None, called for side effects `read_clipboard()` Either a vector, data.frame, or tibble depending on the method chosen. Unlike `utils::readClipboard()`, an empty clipboard value returns NA rather than ""

## Examples

```
# Will only run on windows
if (Sys.info()[["sysname"]] == "Windows") {
  foo <- function(x) {
    write_clipboard(x)
    y <- read_clipboard()
    res <- all.equal(x, y)
    if (isTRUE(res)) return("All equal")
    print(x)
    print(y)
  }
  foo(1:4)
  foo(seq(-1, 1, .02))
  foo(Sys.Date() + 1:4)

  # May have some rounding issues
```

```
x <- "0.316362437326461129"
write_clipboard(x)
res <- as.character(read_clipboard())
all.equal(x, res)
x; res
}
```

---

complete_cases	<i>Complete cases</i>
----------------	-----------------------

---

### Description

Return completed cases of a data.frame

### Usage

```
complete_cases(data, cols = NULL, invert = FALSE)
```

### Arguments

data	A data.frame
cols	Colnames or numbers to remove NA values from; NULL (default) will use all columns
invert	Logical, if TRUE will return incomplete cases

### Value

A data.frame

### Examples

```
x <- data.frame(
  a = 1:5,
  b = c(1, NA, 3, 4, 5),
  c = c(1, NA, NA, 4, 5)
)

complete_cases(x)
complete_cases(x, invert = TRUE) # returns the incomplete rows
complete_cases(x, "a")
complete_cases(x, "b")
complete_cases(x, "c")
```

counts

*Count observations by unique values***Description**

Variables will be return by the order in which they appear. Even factors are shown by their order of appearance in the vector.

There are 2 methods for counting vectors. The default method uses `base::tabulate()` (the workhorse for `base::table()` with a call to `pseudo_id()` to transform all inputs into integers. The logical method counts TRUE, FALSE and NA values, which is much quicker.

**Usage**

```
counts(x, ...)

## S3 method for class 'data.frame'
counts(x, cols, sort = FALSE, ..., .name = "freq")

props(x, ...)

## Default S3 method:
props(x, sort = FALSE, na.rm = FALSE, ...)

## S3 method for class 'data.frame'
props(x, cols, sort = FALSE, na.rm = FALSE, ..., .name = "prop")
```

**Arguments**

<code>x</code>	A vector or <code>data.frame</code>
<code>...</code>	Arguments passed to other methods
<code>cols</code>	A vector of column names or indexes
<code>sort</code>	Logical, if TRUE will sort values (not counts) before returning. For factors this will sort by factor levels. This has no effect for logical vectors, which already return in the order of FALSE, TRUE, NA.
<code>.name</code>	The name of the new column
<code>na.rm</code>	If TRUE will remove NA values from proportions

**Details**

Get counts or proportions of unique observations in a vector or columns in a `data.frame`

**Value**

A named vector of integers or doubles (for counts, and props, respectively) or `data.frame` with columns for each column chosen and the `.name` chosen for the summary

**Examples**

```
x <- sample(1:5, 10, TRUE)
counts(x)
props(x)

x <- quick_df(list(
  a = c("a", "c", "a", "c", "d", "b"),
  b = c("a", "a", "a", "c", "c", "b"),
  c = c("a", "a", "a", "c", "b", "b")
))

counts(x, "a")
counts(x, c("a", "b", "c"))
props(x, 2)
props(x, 1:3)

props(c(1, 1, 3, NA, 4))
props(c(1, 1, 3, NA, 4), na.rm = TRUE)
```

---

date\_from\_partial      *Partial dates*

---

**Description**

Derive a date vector from a partial date string

**Usage**

```
date_from_partial(
  x,
  format = "ymd",
  method = c("min", "max"),
  year_replacement = NA_integer_
)
```

**Arguments**

x	A vector of dates written as characters
format	Format order of the date (accepts only combinations of 'y', 'm', and 'd')
method	Method for reporting partial dates as either the earliest possible date ("min") or the latest possible date ("max"); dates with missing days will be adjusted accordingly to the month and, if needed, the leap year
year_replacement	(Default: NA_integer_) If set, will use this as a replacement for dates that contain missing years

**Details**

Takes a character as an argument and attempts to create a date object when part of the date string is missing.

**Value**

A vector of Dates

**Examples**

```
x <- c("2020-12-17", NA_character_, "", "2020-12-UN", "2020-12-UN",
      "2019-Unknown-00", "UNK-UNK-UNK", "1991-02-UN", "   ",
      "2020January20")
data.frame(
  x = x,
  min = date_from_partial(x),
  max = date_from_partial(x, method = "max"),
  year = date_from_partial(x, year_replacement = 1900)
)
```

---

depth

*Depth*

---

**Description**

Functions to extract the 'depth' of an object

**Usage**

```
depth(x, ...)
```

```
## Default S3 method:
```

```
depth(x, ...)
```

```
## S3 method for class 'list'
```

```
depth(x, ...)
```

**Arguments**

x                    An object

...                  Possible additional arguments passed to methods (not in use)

**Details**

This function does not count an empty lists (`list()`) as a level or NULL objects.

**Value**

A single integer

**Examples**

```
a <- c(1, 2, 3)
depth(a) # Vectors are 1L

b <- list(a = 1, b = list(list(1)))
depth(b)
```

---

detail

*Details an object*

---

**Description**

Provides details about an object

**Usage**

```
detail(x, ...)

## Default S3 method:
detail(x, factor_n = 5L, ...)

## S3 method for class 'data.frame'
detail(x, factor_n = 5L, ...)
```

**Arguments**

x	An object
...	Additional arguments passed to methods
factor_n	An integer threshold for making factors; will convert any character vectors with factor_n or less unique values into a fact; setting as NA will ignore this

**Examples**

```
x <- sample(letters[1:4], 10, TRUE)
detail(x)

df <- quick_df(list(
  x = x,
  y = round(runif(10), 2),
  z = Sys.Date() + runif(10) * 100
))

detail(df)
```

---

`diff_time`*Diff time wrappers*

---

## Description

Wrappers for computing diff times

## Usage

```
diff_time(  
  x,  
  y,  
  method = c("secs", "mins", "hours", "days", "weeks", "months", "years", "dyears",  
            "wyears", "myears"),  
  tzx = NULL,  
  tzy = tzx  
)
```

```
diff_time_days(x, y, ...)
```

```
diff_time_weeks(x, y, ...)
```

```
diff_time_hours(x, y, ...)
```

```
diff_time_mins(x, y, ...)
```

```
diff_time_secs(x, y, ...)
```

```
diff_time_months(x, y, ...)
```

```
diff_time_years(x, y, ...)
```

```
diff_time_dyears(x, y, ...)
```

```
diff_time_wyears(x, y, ...)
```

```
diff_time_myears(x, y, ...)
```

## Arguments

<code>x, y</code>	Vectors of times
<code>method</code>	A method to report the difference in units of time (see <b>Units</b> section)
<code>txz, tzy</code>	time zones (see <b>Time zones</b> section)
<code>...</code>	Additional arguments passed to <code>diff_time()</code>

**Details**

A few significant differences exist with these functions \* The class of the object returned is no longer `difftime` (but does print) with the `difftime` method. This makes the exporting process easier as the data will not have to be converted back to numeric \* `difftime()` computes the difference of `time1 - time2`, but the inverse feels a bit more nature: time difference from `x` to `y` \* Additional units can be used (detailed below) \* Differences can be sensitive to time zones if time zones are passed to the `tz` parameter as a character vector

**Value**

A `diff_time` vector, object

**Units**

Units can be used beyond those available in `base::difftime()`. Some of these use assumptions in how units of time should be standardized and can be changed in the corresponding options. Any of these can be calculated with `base::difftime()` through using `units = "days"` but the `difftime` class will print out with these specifications into the console for less potential confusion.

**months** Months by number of days `mark.days_in_month` (defaults: 30)

**years** Years by number of days `mark.days_in_year` (defaults: 365)

**dyears** Years by number of days `mark.days_in_year` (defaults: 365) (same as years)

**myears** Years by number of days in a month `mark.days_in_month` (defaults: 30)

**wyears** Years by number of weeks in a year `mark.weeks_in_year` (defaults: 52)

**Time zones**

Time zones can be passed as either a numeric vector of GMT/UTC offsets (the number of seconds from GMT) or as a character vector. If the letter, these need to conform with values from `base::OlsonNames()`.

A default timezone can be set with `options(mark.default_tz = .)`. The value can either be a numeric

---

drop\_levels

*Drop levels*

---

**Description**

Drop unused levels of a factor

**Usage**

```
drop_levels(x, ...)  
  
## S3 method for class 'data.frame'  
drop_levels(x, ...)  
  
## S3 method for class 'fact'  
drop_levels(x, ...)  
  
## S3 method for class 'factor'  
drop_levels(x, ...)
```

**Arguments**

x	A factor or data.frame
...	Additional arguments passed to methods (not used)

**See Also**

[base::droplevels](#)

Other factors: [as\\_ordered\(\)](#), [char2fact\(\)](#), [fact2char\(\)](#), [fact\\_na\(\)](#), [fact\(\)](#)

---

ept

*Parse and evaluate text*

---

**Description**

A wrapper for `eval(parse(text = .))`

**Usage**

```
ept(x, envir = parent.frame())
```

**Arguments**

x	A character string to parse
envir	The environment in which to evaluate the code

**Value**

The evaluation of x after parsing

---

eval_named_chunk	<i>Evaluate a Named Chunk</i>
------------------	-------------------------------

---

**Description**

Evaluate a named chunk from an Rmd file.

**Usage**

```
eval_named_chunk(rmd_file, label_name)
```

**Arguments**

rmd_file	Absolute path to rmd file
label_name	Name of label

**Value**

The value from the evaluated code chunk

**Examples**

```
temp_rmd <- tempfile(fileext = ".rmd")

text <- '
```{r not this label}
print("that is wrong")
```

```{r hello label}
text <- "hello, world"
print(text)
print(TRUE)
```

```{r another label}
warning("wrong label")
```
'

## Not run:
writeLines(text, con = temp_rmd)

eval_named_chunk(temp_rmd, "hello label")
# [1] "hello, world"
# [1] TRUE

file.remove(temp_rmd)

## End(Not run)
```

---

|           |                         |
|-----------|-------------------------|
| expand_by | <i>Expands a vector</i> |
|-----------|-------------------------|

---

**Description**

Expands vector x by y

**Usage**

```
expand_by(x, y, expand = c("x", "y", "intersect", "both"), sort = FALSE)
```

**Arguments**

|        |  |
|--------|--|
| x, y   | Vectors  |
| expand | Character switch to expand or keep only the values that intersect, all values in x or y, or retain all values found. |
| sort   | Logical, if TRUE will sort by names in output  |

**Value**

A vector with expanded

**Examples**

```
x <- letters[c(3:2, 5, 9)]
y <- letters[c(1:4, 8)]
expand_by(x, y, "x")
expand_by(x, y, "y")
expand_by(x, y, "intersect")
expand_by(x, y, "both")
```

---

|      |               |
|------|---------------|
| fact | <i>Factor</i> |
|------|---------------|

---

**Description**

Quickly create a factor

**Usage**

```
fact(x)

## Default S3 method:
fact(x)

## S3 method for class 'character'
fact(x)

## S3 method for class 'numeric'
fact(x)

## S3 method for class 'integer'
fact(x)

## S3 method for class 'Date'
fact(x)

## S3 method for class 'POSIXt'
fact(x)

## S3 method for class 'logical'
fact(x)

## S3 method for class 'factor'
fact(x)

## S3 method for class 'fact'
fact(x)

## S3 method for class 'pseudo_id'
fact(x)

## S3 method for class 'haven_labelled'
fact(x)
```

**Arguments**

x                    A vector of values

**Details**

`fact()` can be about 5 times quicker than `factor()` or `as.factor()` as it doesn't bother sorting the levels for non-numeric data or have other checks or features. It simply converts a vector to a factor with all unique values as levels with NAs included.

`fact.factor()` will perform several checks on a factor to include NA levels and to check if the levels should be reordered to conform with the other methods. The `fact.fact()` method simple returns `x`.

**Value**

A vector of equal length of `x` with class `fact` and `factor`. If `x` was ordered, that class is added in between.

**level orders**

The order of the levels may be adjusted to these rules depending on the class of `x`:

`character` The order of appearance

`numeric/integer/Date/POSIXt` By the numeric order

`logical` As `TRUE`, `FALSE`, then `NA` if present

`factor` Numeric if levels can be safely converted, otherwise as they are

**See Also**

[as\\_ordered\(\)](#)

Other factors: [as\\_ordered\(\)](#), [char2fact\(\)](#), [drop\\_levels\(\)](#), [fact2char\(\)](#), [fact\\_na\(\)](#)

---

fact2char

*Factor to character*

---

**Description**

Convert factor columns to characters in a `data.frame`

**Usage**

```
fact2char(data, threshold = 10)
```

**Arguments**

`data` A `data.frame`

`threshold` A threshold for the number of levels to be met/exceeded for transforming into a character

**Value**

The `data.frame` `data` with factors converted by the rule above

**See Also**

[char2fact\(\)](#)

Other factors: [as\\_ordered\(\)](#), [char2fact\(\)](#), [drop\\_levels\(\)](#), [fact\\_na\(\)](#), [fact\(\)](#)

---

|         |                     |
|---------|---------------------|
| fact_na | fact <i>with</i> NA |
|---------|---------------------|

---

**Description**

Included NA values into `fact()`

**Usage**

```
fact_na(x, remove = FALSE)
```

**Arguments**

|        |  |
|--------|--|
| x      | A fact or object coerced to fact                                     |
| remove | If TRUE removes NA value from the fact levels and uniques attributes |

**Details**

This re-formats the x value so that NAs are found immediately within the object rather than accessed through its attributes.

**Value**

A fact vector

**See Also**

Other factors: [as\\_ordered\(\)](#), [char2fact\(\)](#), [drop\\_levels\(\)](#), [fact2char\(\)](#), [fact\(\)](#)

---

|              |                            |
|--------------|----------------------------|
| fact_reverse | <i>Fact reverse levels</i> |
|--------------|----------------------------|

---

**Description**

Reverse the levels of a fact

**Usage**

```
fact_reverse(x)
```

**Arguments**

|   |  |
|---|--|
| x | A fact object (or passed to <a href="#">fact()</a> ) |
|---|--|

---

|                |                                  |
|----------------|----------------------------------|
| fct_expand_seq | <i>Factor Expand by Sequence</i> |
|----------------|----------------------------------|

---

### Description

Expands an ordered factor from one level to another

### Usage

```
fct_expand_seq(  
  x,  
  min_lvl = min(x, na.rm = TRUE),  
  max_lvl = max(x, na.rm = TRUE),  
  by = 1L  
)
```

### Arguments

|         |                                     |
|---------|-------------------------------------|
| x       | An ordered factor                   |
| min_lvl | The start of the level sequence     |
| max_lvl | The end of the level sequence       |
| by      | Integer, number of steps in between |

### Details

Defaults for `min_lvl` and `max_lvl` are the minimum and maximum levels in the ordered vector `x`.

### Value

An ordered vector

### Examples

```
x <- ordered(letters[c(5:15, 2)], levels = letters)  
fct_expand_seq(x)  
fct_expand_seq(x, "g", "s", 3L) # from "g" to "s" by 3  
fct_expand_seq(x, "g", "t", 3L) # same as above  
fct_expand_seq(x, min(levels(x))) # from the first inherit level to the last observed
```

---

|           |                               |
|-----------|-------------------------------|
| file_info | <i>File information utils</i> |
|-----------|-------------------------------|

---

**Description**

Other utility functions for dealing with files

**Usage**

newest\_file(x)

newest\_dir(x)

oldest\_file(x)

oldest\_dir(x)

largest\_file(x)

smallest\_file(x)

**Arguments**

x                    A vector of file paths

**Value**

A full file path

---

|           |                  |
|-----------|------------------|
| file_name | <i>File name</i> |
|-----------|------------------|

---

**Description**

Basename of file without extension

**Usage**

file\_name(x, compression = FALSE)

**Arguments**

x                    character vector giving file paths.

compression        logical: should compression extension '.gz', '.bz2' or '.xz' be removed first?

**Value**

The file name of the path without the extension

---

`file_utils`*Open a file using windows file associations*

---

**Description**

Opens the given files(s)

**Usage**

```
open_file(x)
```

```
file_open(x)
```

```
shell_exec(x)
```

```
list_files(  
  x = ".",  
  pattern = NULL,  
  ignore_case = FALSE,  
  all = FALSE,  
  negate = FALSE,  
  basename = FALSE  
)
```

```
list_dirs(  
  x = ".",  
  pattern = NULL,  
  ignore_case = FALSE,  
  all = FALSE,  
  basename = FALSE,  
  negate = FALSE  
)
```

**Arguments**

|                          |  |
|--------------------------|--|
| <code>x</code>           | A character vector of paths  |
| <code>pattern</code>     | an optional <a href="#">regular expression</a> . Only file names which match the regular expression will be returned.  |
| <code>ignore_case</code> | logical. Should pattern-matching be case-insensitive?  |
| <code>all</code>         | a logical value. If FALSE, only the names of visible files are returned (following Unix-style visibility, that is files whose name does not start with a dot). If TRUE, all file names will be returned. |
| <code>negate</code>      | Logical, if TRUE will inversely select files that do not match the provided pattern  |
| <code>basename</code>    | If TRUE only searches pattern on the basename, otherwise on the entire path  |

**Details**

`open_file` is an alternative to `shell.exec()` that can take multiple files. `list_files` and `list_dirs` are mostly wrappers for `base::list.files()` and `base::list.dirs()` with preferred defaults and pattern searching on the full file path.

`file_open` is simply an alias.

**Value**

- `open_file()`, `shell_exec()`: A logical vector where TRUE successfully opened, FALSE did not and NA did not try to open (file not found)
- `list_files()`, `list_dirs()`: A vector of full paths

---

 fizzbuzz

*Fizz Buzz*


---

**Description**

For when someone asked you to do something you've done before, you can argue that the quickest way to do it is to just take the work someone else did and utilize that. No reason to reinvent the wheel.

**Usage**

```
fizzbuzz(n, show_numbers = TRUE)
```

```
fizzbuzz_lazy(n)
```

```
.fizzbuzz_vector
```

**Arguments**

`n`                    The number of numbers

`show_numbers`      If TRUE shows no

**Format**

An object of class character of length 1000000.

**Details**

Multiples of 3 are shown as "Fizz"; multiples of 5 as "Buzz"; multiple of both (i.e., 15) are "FizzBuzz". `fizzbuzz_lazy()` subsets the `.fizzbuzz_vector` object, which is a solution with default parameters up to 1e6

**Value**

A character vector of 1, 2, Fizz, 3, Buzz, etc

**Examples**

```
fizzbuzz(15)
fizzbuzz(30, show_numbers = FALSE)
cat(fizzbuzz(30), sep = "\n")

# show them how fast your solution is:
if (package_available("bench")) {
  bench::mark(fizzbuzz(1e5), fizzbuzz_lazy(1e5))
}
```

---

 flip

*Flip*


---

**Description**

Flip an object.

**Usage**

```
flip(x, ...)
```

## Default S3 method:

```
flip(x, ...)
```

## S3 method for class 'matrix'

```
flip(x, by_row = TRUE, keep_rownames = NULL, ...)
```

## S3 method for class 'data.frame'

```
flip(x, by_row = TRUE, keep_rownames = NULL, ...)
```

**Arguments**

|               |  |
|---------------|--|
| x             | An object                                      |
| ...           | Additional arguments passed to methods         |
| by_row        | TRUE, flips by row, otherwise by column        |
| keep_rownames | Logical, if TRUE will not reset rownames; NULL |

**Value**

A vector of values, equal length of x that is reversed or a data frame with flipped rows/columns

**Examples**

```
flip(letters[1:3])
flip(seq.int(9, -9, by = -3))
flip(head(iris))
flip(head(iris), keep_rownames = TRUE)
flip(head(iris), by_row = FALSE)
```

---

get\_dir\_max\_number      *Get recent directory by number name*

---

**Description**

Finds the directory where the number is the greatest. This can be useful for when folders are created as run IDs.

**Usage**

```
get_dir_max_number(x)
```

**Arguments**

x                      The directory to look in

**Value**

A full path to a directory

---

get\_dir\_recent\_date      *Get recent directory by date*

---

**Description**

Looks at the directories and assumes the date

**Usage**

```
get_dir_recent_date(x = ".", dt_pattern = NULL, dt_format = NULL, all = FALSE)
```

**Arguments**

x                      A directory

dt\_pattern            A pattern to be passed to filter for the directory

dt\_format            One or more formats to try

all                    Logical, if TRUE will recursively search for directories

**Value**

A full path to a directory

---

|                |                             |
|----------------|-----------------------------|
| get_recent_dir | <i>Get recent directory</i> |
|----------------|-----------------------------|

---

**Description**

Finds the recent subdirectory in a directory.

**Usage**

```
get_recent_dir(x = ".", ...)
```

**Arguments**

|     |  |
|-----|--|
| x   | The root directory   |
| ... | Additional arguments passed to <a href="#">list_dirs()</a> |

**Value**

The full path of the most recent directory

---

|                 |                        |
|-----------------|------------------------|
| get_recent_file | <i>Get recent file</i> |
|-----------------|------------------------|

---

**Description**

A function where you can detect the most recent file from a directory.

**Usage**

```
get_recent_file(x, exclude_temp = TRUE, ...)
```

**Arguments**

|              |   |
|--------------|---|
| x            | The directory in which to search the file                   |
| exclude_temp | Logical, if TRUE tries to remove temp Windows files         |
| ...          | Additional arguments passed to <a href="#">list_files()</a> |

**Value**

The full name of the most recent file from the stated directory

---

|             |                             |
|-------------|-----------------------------|
| get_version | <i>Get and bump version</i> |
|-------------|-----------------------------|

---

### Description

Will read the DESCRIPTION file and to get and adjust the version

bump\_date\_version() will not check if the version is actually a date. When the current version is the same as today's date(equal by character strings) it will append a . 1.

### Usage

```
get_version()

bump_version(version = NULL)

bump_date_version(version = NULL)

update_version(version = NULL, date = FALSE)
```

### Arguments

|         |   |
|---------|---|
| version | A new version to be added; default of NULL will automatically update. |
| date    | If TRUE will use a date as a version.                                 |

### Details

Get and bump package version for dates

### Value

- get\_version(): A package\_version
- bump\_version(), bump\_date\_version(), update\_version(): None, called for its side-effects

---

|          |                 |
|----------|-----------------|
| handlers | <i>Handlers</i> |
|----------|-----------------|

---

### Description

Catch and report handlers

**Usage**

```

has_warning(x, FUN, ...)

has_error(x, FUN, ...)

has_message(x, FUN, ...)

get_warning(x, FUN, ..., .null = TRUE)

get_message(x, FUN, ..., .null = TRUE)

get_error(x, FUN, ..., .null = TRUE)

```

**Arguments**

|       |  |
|-------|--|
| x     | A vector   |
| FUN   | A function   |
| ...   | Additional params passed to FUN                      |
| .null | Logical, if FALSE will drop NULL results (for get_*) |

**Details**

These functions can be used to catch whether an evaluation will return an error or warning without raising.

**Value**

The has\_\*() functions will return TRUE/FALSE for if the handler is found in the execution of the code. The get\_\*() functions provide the text of the message

**References**

Function for *catching* has been adapted from <https://stackoverflow.com/a/4952908/12126576>

**Examples**

```

has_warning(c(1, "no"), as.integer)
#   1   no
# FALSE TRUE

get_warning(c(1, "no"), as.integer)

# drop NULLs
get_warning(c(1, "no"), as.integer, .null = FALSE)

foo <- function(x) {
  stopifnot(x > 0)
  x
}

```

```
has_error(c(1, 0, 2), foo)
#   1   0   2
# FALSE TRUE FALSE

get_error(c(1, 0, 2), foo)

# drop NULLs
get_error(c(1, 0, 2), foo, .null = FALSE)
```

---

|        |               |
|--------|---------------|
| import | <i>Import</i> |
|--------|---------------|

---

## Description

Import a single function from a package

## Usage

```
import(pkg, fun, overwrite = FALSE)
```

## Arguments

|           |  |
|-----------|--|
| pkg       | String, name of the package  |
| fun       | String, fun name of the function   |
| overwrite | Logical, if TRUE and fun is also found in the current environment, will overwrite assignment |

## Value

None, called for side effects

## Examples

```
# assigns `add` -- test with caution
import("magrittr", "add")
```

---

|        |               |
|--------|---------------|
| insert | <i>Insert</i> |
|--------|---------------|

---

**Description**

Insert values at a position

**Usage**

```
insert(x, positions, values)
```

**Arguments**

|           |  |
|-----------|--|
| x         | A vector of values                         |
| positions | Integer of positions of x to insert values |
| values    | A vector of values to insert into x        |

**Value**

A vector with the intended values inserted

**Examples**

```
insert(letters[1:5], c(2, 4), c("X", "Y"))
```

---

|        |                          |
|--------|--------------------------|
| is_dir | <i>Is File/Directory</i> |
|--------|--------------------------|

---

**Description**

Is the path a file/directory?

**Usage**

```
is_dir(x)  
  
is_file(x)
```

**Arguments**

|   |                        |
|---|------------------------|
| x | A vector of file paths |
|---|------------------------|

**Details**

These are essentially taken from `utils::file_test()` for `op = '-d'` and `op = -f` but separated.

**Value**

A logical vector

---

|        |                         |
|--------|-------------------------|
| labels | <i>Dataframe labels</i> |
|--------|-------------------------|

---

**Description**

Assign labels to a vector or data.frame.

**Usage**

```
assign_labels(x, ...)

## Default S3 method:
assign_labels(x, label, ...)

## S3 method for class 'data.frame'
assign_labels(x, ..., .missing = c("error", "warn", "skip"), .ls = list(...))

get_labels(x)

## Default S3 method:
get_labels(x)

## S3 method for class 'data.frame'
get_labels(x)

view_labels(x, title)

remove_labels(x, ...)

## Default S3 method:
remove_labels(x, ...)

## S3 method for class 'data.frame'
remove_labels(x, cols, ...)
```

**Arguments**

|       |   |
|-------|---|
| x     | A vector of data.frame  |
| ...   | One or more unquoted expressed separated by commas. If assigning to a data.frame, ... can be replaced with a data.frame where the first column is the targeted colname and the second is the desired label. |
| label | A single length string of a label to be assigned  |

|                       |   |
|-----------------------|---|
| <code>.missing</code> | A control setting for dealing missing columns in a list; can be set to error to <code>stop()</code> the call, warn to provide a warning, or skip to silently skip those labels. |
| <code>.ls</code>      | A named list of columns and labels to be set if <code>...</code> is empty   |
| <code>title</code>    | Title for the viewer window – if not supplemented will show as <code>paste0(as.character(substitute(x)) - Labels)</code>  |
| <code>cols</code>     | A character vector of column names; if missing will remove the label attribute across all columns   |

### Details

When labels are assigned to a `data.frame` they can make viewing the object (with `View()` inside Rstudio). The `view_labels()` has a call to `View()` inside and will retrieve the labels and show them in the viewer as a `data.frame`.

### Value

A labelled vector or `data.frame`

### Examples

```
labs <- assign_labels(
  iris,
  Sepal.Length = "cms",
  Sepal.Width = "cms",
  Petal.Length = "cms",
  Petal.Width = "cms",
  Species = "Iris ..."
)

labs$dummy <- ""
get_labels(labs) # shows label as <NA> for dummy column

labs0 <- remove_labels(labs, c("Sepal.Length", "Sepal.Width"))
get_labels(labs0) # No labels for Sepal.Length and Sepal.Width
```

---

limit

*Limit*

---

### Description

Limit a numeric vector by lower and upper bounds

### Usage

```
limit(x, lower = min(x), upper = max(x))
```

**Arguments**

|       |  |
|-------|--|
| x     | A numeric vector                         |
| lower | A lower limit (as $x < \text{lower}$ )   |
| upper | An upper limit (as $x > \text{higher}$ ) |

**Value**

The vector x with lower and upper as the minimum, maximum values

---

|                 |                        |
|-----------------|------------------------|
| lines_of_r_code | <i>Lines of R code</i> |
|-----------------|------------------------|

---

**Description**

Find the total number of lines of R code

**Usage**

```
lines_of_r_code(x = ".", skip_empty = TRUE)
```

**Arguments**

|            |   |
|------------|---|
| x          | Directory to search for files   |
| skip_empty | Logical, if TRUE will not count lines that are empty or only contain a bracket or quotation mark. |

**Details**

Tries to read each file in the directory that ends in .R or .r and sums together. Files that fail to read are not counted.

**Value**

An integer for the number of lines in all applicable files

**Examples**

```
lines_of_r_code(system.file())  
lines_of_r_code(system.file(), skip_empty = FALSE)
```

---

`list2df`*List to data.frame*

---

**Description**

Converts a list object into a data.frame

**Usage**

```
list2df(x, name = "name", value = "value", show_NA, warn = TRUE)
```

**Arguments**

|                          |  |
|--------------------------|--|
| <code>x</code>           | A (preferably) named list with any number of values  |
| <code>name, value</code> | Names of the new key and value columns, respectively |
| <code>show_NA</code>     | Ignored; if set will trigger a warning               |
| <code>warn</code>        | Logical; if TRUE will show a warning when            |

**Details**

Unlike `base::list2DF()`, `list2df()` tries to format the data.frame by using the names of the list as values rather than variables. This creates a longer form list that may be more tidy.

**Value**

a data.frame object with columns "name" and "value" for the names of the list and the values in each

**Examples**

```
x <- list(a = 1, b = 2:4, c = letters[10:20], "unnamed", "unnamed2")
list2df(x, "col1", "col2", warn = FALSE)

if (getRversion() >= as.package_version('4.0')) {
# contrast with `base::list2DF()` and `base::as.data.frame()`
  x <- list(a = 1:3, b = 2:4, c = letters[10:12])
  list2df(x, warn = FALSE)
  list2DF(x)
  as.data.frame(x)
}
```

---

|                   |  |
|-------------------|--|
| list_environments | <i>List all environments and objects</i> |
|-------------------|--|

---

### Description

Functions to list out all environments and objects

### Usage

```
environments()
```

```
ls_all(all.names = FALSE)
```

```
objects_all(all.names = FALSE)
```

### Arguments

`all.names` a logical value. If TRUE, all object names are returned. If FALSE, names which begin with a `'.'` are omitted.

### Details

`environments()` is basically a printing wrapper for `base::search()`

`ls_all()` and `objects_all()` can be used retrieved all objects from all environments in the `search()` path, which may print out a large result into the console.

### Value

- `environments()`: Invisibly, a character vector of environment names
- `ls_all()`, `objects_all()`: A named list for each of the environments in the `search()` path with all the objects found in that environment

---

|           |                           |
|-----------|---------------------------|
| logic_ext | <i>Logic - Extension'</i> |
|-----------|---------------------------|

---

### Description

All functions take logical or logical-like (i.e., 1, 0, or NA as integer or doubles) and return logical values.

Extensions to the base logical operations to account for NA values.

`base::isTRUE()` and `base::isFALSE()` will only return single length TRUE or FALSE as it checks for valid lengths in the evaluation. When needing to check over a vector for the presence of TRUE or FALSE and not being held back by NA values, `is_true` and `is_false` will always provide a TRUE FALSE when the vector is logical or return NA is the vector `x` is not logical.

`%or%` is just a wrapper for `base::xor()`

**Usage**

```
is_true(x)

## Default S3 method:
is_true(x)

## S3 method for class 'logical'
is_true(x)

is_false(x)

## Default S3 method:
is_false(x)

## S3 method for class 'logical'
is_false(x)

x %xor% y

OR(..., na.rm = FALSE)

AND(..., na.rm = FALSE)

either(x, y)

is_boolean(x)

none(..., na.rm = FALSE)
```

**Arguments**

|       |  |
|-------|--|
| x, y  | A vector of logical values. If NULL will generate a warning. If not a logical value, will return NA equal to the vector length |
| ...   | Vectors or a list of logical values  |
| na.rm | Logical, if TRUE will ignore NA  |

**Details**

Logical operations, extended

**Value**

- `is_true()`, `is_false()`, `either()`, `%or%`, `AND()`, `OR()`: A logical vector, equal length of x (or y or of all ... lengths)
- `is_boolean()`: TRUE or FALSE
- `none()`: TRUE, FALSE, or NA

**Examples**

```

x <- c(TRUE, FALSE, NA)
y <- c(FALSE, FALSE, TRUE)
z <- c(TRUE, NA, TRUE)
isTRUE(x)
is_true(x)
isFALSE(x)
is_false(x)
x %xor% TRUE
TRUE %xor% TRUE
TRUE %xor% FALSE
NA %xor% FALSE
OR(x, y, z)
OR(x, y, z, na.rm = TRUE)
AND(x, y, z)
AND(x, y, z, na.rm = TRUE)
either(x, FALSE)
either(TRUE, FALSE)
either(FALSE, NA)
either(TRUE, NA)
none(x)
none(x & y, na.rm = TRUE)
is_boolean(x)
is_boolean(c(1L, NA_integer_, 0L))
is_boolean(c(1.01, 0, -1))

```

ls\_ext

*List Objects - extensions***Description**

List Objects - extensions

**Usage**

```
ls_dataframe(pattern, all.names = FALSE, envir = parent.frame())
```

```
ls_function(pattern, all.names = FALSE, envir = parent.frame())
```

```
ls_object(pattern, all.names = FALSE, envir = parent.frame())
```

**Arguments**

|           |   |
|-----------|---|
| pattern   | an optional <a href="#">regular expression</a> . Only names matching pattern are returned. <a href="#">glob2rx</a> can be used to convert wildcard patterns to regular expressions. |
| all.names | a logical value. If TRUE, all object names are returned. If FALSE, names which begin with a ‘.’ are omitted.  |
| envir     | an alternative argument to name for specifying the environment. Mostly there for back compatibility.  |

**Value**

A character vector of names

---

|         |                                  |
|---------|----------------------------------|
| make_sf | <i>Make system file function</i> |
|---------|----------------------------------|

---

**Description**

Simple wrapper for package specific function for internal packages

**Usage**

```
make_sf(package)
```

**Arguments**

|         |                         |
|---------|-------------------------|
| package | The name of the package |
|---------|-------------------------|

---

|      |             |
|------|-------------|
| mark | <i>mark</i> |
|------|-------------|

---

**Description**

Miscellaneous, Analytic R Code

**Author(s)**

**Maintainer:** Jordan Mark Barbone <jmbarbone@gmail.com> (0000-0001-9788-3628) [copyright holder]

**See Also**

Useful links:

- <https://github.com/jmbarbone/mark>
- <https://jmbarbone.github.io/mark/>
- Report bugs at <https://github.com/jmbarbone/mark/issues>

---

|           |                        |
|-----------|------------------------|
| match_arg | <i>Match arguments</i> |
|-----------|------------------------|

---

## Description

This function is essentially a clear version of `base::match.arg()` which produces a cleaner warning message and does not restrict the `table` param to character vectors only.

## Usage

```
match_arg(x, table)
```

## Arguments

|       |                    |
|-------|--------------------|
| x     | An argument        |
| table | A table of choices |

## Details

Match arguments

## Value

A single value from x matched on table

## See Also

[match\\_param\(\)](#)

## Examples

```
x <- c("apple", "banana", "orange")
match_arg("b", x)

# Produces error
try(match_arg("pear", x))

foo <- function(x, op = c(1, 2, 3)) {
  op <- match_arg(op)
  x / op
}

foo(10, 3)

# Error
try(foo(1, 0))
```

---

|           |                                    |
|-----------|------------------------------------|
| match_ext | <i>Value matching - Extensions</i> |
|-----------|------------------------------------|

---

## Description

Non matching alternatives and supplementary functions.

## Usage

```
x %out% table
x %wo% table
x %wi% table
no_match(x, table)
any_match(x, table)
```

## Arguments

|       |   |
|-------|---|
| x     | vector or NULL: the values to be matched. <a href="#">Long vectors</a> are supported.             |
| table | vector or NULL: the values to be matched against. <a href="#">Long vectors</a> are not supported. |

## Details

Contrast with `base::match()`, `base::intersect()`, and `%in%`. The functions of `%wi%` and `%wo%` can be used in lieu of `intersect()` and `setdiff()`. The primary difference is that the base functions return only unique values, which may not be a desired behavior.

## Value

- `%out%`: A logical vector of equal length of `x`, `table`
- `%wo%`, `%wi%`: A vector of values of `x`
- `any_match()`, `no_match()`: TRUE or FALSE

## Examples

```
1:10 %in% c(1,3,5,9)
1:10 %out% c(1,3,5,9)
letters[1:5] %wo% letters[3:7]
letters[1:5] %wi% letters[3:7]

# base functions only return unique values
c(1:6,7:2) %wo% c(3,7,12) # -> keeps duplicates
setdiff(c(1:6,7:2), c(3,7,12)) # -> unique values
```

```
c(1:6,7:2) %wi% c(3,7,12) # -> keeps duplicates  
intersect(c(1:6,7:2), c(3,7,12)) # -> unique values
```

---

match\_param

*Match params*

---

### Description

Much like `base::match.arg()` with a few key differences:

- Will not perform partial matching
- Will not return error messages with ugly quotation marks

### Usage

```
match_param(param, choices, null = TRUE)
```

### Arguments

|         |  |
|---------|--|
| param   | The parameter                            |
| choices | The available choices                    |
| null    | If TRUE allows NULL to be passed a param |

### Details

Param matching for an argument

### Value

A single value from param matched on choices

### See Also

[match\\_arg\(\)](#)

---

`median2`*Median (Q 50)*

---

**Description**

Median as the 50th quantile with an option to select quantile algorithm

**Usage**

```
median2(x, type = 7, na.rm = FALSE)
```

```
q50(x, type = 7, na.rm = FALSE)
```

**Arguments**

|                    |   |
|--------------------|---|
| <code>x</code>     | numeric vector whose sample quantiles are wanted, or an object of a class for which a method has been defined (see also ‘details’). <code>NA</code> and <code>NaN</code> values are not allowed in numeric vectors unless <code>na.rm</code> is <code>TRUE</code> . |
| <code>type</code>  | an integer between 1 and 9 selecting one of the nine quantile algorithms detailed below to be used.   |
| <code>na.rm</code> | logical; if true, any <code>NA</code> and <code>NaN</code> ’s are removed from <code>x</code> before the quantiles are computed.  |

**Details**

`q50` is an alias for `median2`

**Value**

See `stats::quantile()`

**See Also**

[stats::quantile\(\)](#)

**Examples**

```
set.seed(42)
x <- rnorm(100)
median(x)           # 0.08979677
median2(x, type = 7) # 0.08979677 - default type is 7
median2(x, type = 3) # 0.08976065
```

---

|        |               |
|--------|---------------|
| muffle | <i>Muffle</i> |
|--------|---------------|

---

**Description**

Suppress messages and warnings

**Usage**

```
muffle(expr, ...)
```

```
wuffle(expr, ...)
```

**Arguments**

expr            An expression to be evaluated

...            Additional arguments passed to [base::suppressMessages\(\)](#) or [base::suppressWarnings\(\)](#)

**Details**

`muffle()` and `wuffle()` are aliases for [base::suppressMessages\(\)](#) and [base::suppressWarnings\(\)](#), respectively, except the names are shorter and therefore quicker to write.

**Value**

The result of `expr`

---

|             |                           |
|-------------|---------------------------|
| multi_grepl | <i>Multiple searching</i> |
|-------------|---------------------------|

---

**Description**

Multiple search pattern searches

**Usage**

```
multi_grepl(x, patterns, ..., simplify = TRUE)
```

```
multi_grep(x, patterns, ..., simplify = TRUE)
```

**Arguments**

|          |   |
|----------|---|
| x        | Passed to <code>base::grepl()</code>  |
| patterns | A list or vector of patterns to search across x; if named value returned will be the name of the pattern – otherwise the position. Pattern match reported will be the first in the list that is found |
| ...      | Additional arguments passed to <code>base::grepl()</code>   |
| simplify | if FALSE will return a list of all matches, otherwise the first match found   |

**Value**

The name or position of the pattern that is matched

**Examples**

```
x <- c("apple", "banana", "lemon")
multi_grepl(x, c("a" = "[ab]", "b" = "lem"))
multi_grepl(x, c("a" = "[ab]", "b" = "q"))           # lemon not matches on either
multi_grepl(x, c("a" = "[ab]", "b" = "e"))         # apple matches "a" before "b"
multi_grepl(x, c("a" = "[ab]", "b" = "e"), simplify = FALSE) # shows all matches
multi_grepl(x, c("[ab]", "e"))                     # returned as positions
multi_grepl(x, c("[ab]", "e"), simplify = FALSE)
```

---

na\_assignments

*NA at positions*


---

**Description**

Converts select elements of a vector into NAs

This is how the end results are

- NA\_at and NA\_if require a suitable index value (`x[y] <- NA`)
  - NA\_at expects y (or the result of function y) to be integers
  - NA\_if expects y (or the result of function y) to be logical
- NA\_in and NA\_out expect some values to match on
  - NA\_in checks `x[x %in% y] <- NA`
  - NA\_out checks `x[x %out% y] <- NA` (see [match\\_ext](#))

**Usage**

```
NA_at(x, y, ...)
```

```
NA_if(x, y, ...)
```

```
NA_in(x, y, ...)
```

```
NA_out(x, y, ...)
```

**Arguments**

|     |   |
|-----|---|
| x   | A vector of values  |
| y   | Either a suitable value (see <code>Details</code> ) or a function which accepts x as its first parameter and can return suitable values |
| ... | Additional values passed to y (if y is a function)  |

**Details**

Convert specific values to NA

**Value**

x with assigned NA values

**See Also**

Inspired by `dplyr::na_if()`

**Examples**

```
let <- ordered(letters[1:5])
NA_at(let, c(1, 3, 5)) # [1] <NA> b <NA> d <NA>
NA_if(let, let <= "b") # [1] <NA> <NA> c d e
NA_in(let, c("a", "c")) # [1] <NA> b <NA> d e
NA_out(let, c("a", "c")) # [1] a <NA> c <NA> <NA>
```

---

na\_cols

*Selecting NA columns*


---

**Description**

Select or remove columns that are entirely NA

**Usage**

```
select_na_cols(x)

remove_na_cols(x)

is_na_cols(x, names = TRUE)
```

**Arguments**

|       |  |
|-------|--|
| x     | A data.frame   |
| names | Logical, if TRUE (default) will return column names as names of vector |

**Value**

- `select_na_cols()` the data.frame with only columns that are all NA
- `remove_na_cols()` the data.frame without columns of only NA
- `is_na_cols()` a logical vector: TRUE all rows of column are NA, otherwise FALSE

---

 normalize

*Normalize values*


---

**Description**

Normalizes values based on possible range and new bounds

**Usage**

```
normalize(x, ...)

## Default S3 method:
normalize(x, range = base::range(x, na.rm = TRUE), bounds = 0:1, ...)

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

**Arguments**

|                     |  |
|---------------------|--|
| <code>x</code>      | An object that is (coercible to) double; data.frames are transformed   |
| <code>...</code>    | Additional arguments passed to methods   |
| <code>range</code>  | The range of possible values of <code>x</code> . See details for more info. Defaults to the range of non-NA values |
| <code>bounds</code> | The new boundaries for the normalized values of <code>x</code> . Defaults to 0 and 1.                              |

**Details**

Parameters `range` and `bounds` are modified with `base::range()`. The largest and smallest values are then used to determine the minimum/maximum values and lower/upper bounds. This allows for a vector of more than two values to be passed.

The current implementation of `normalize.data.frame()` allows for list of parameters passed for each column. However, it is probably best suited for default values.

**Value**

`x` with transformed values where range values are transformed to bounds.

**Examples**

```
x <- c(0.23, 0.32, 0.12, 0.61, 0.26, 0.24, 0.23, 0.32, 0.29, 0.27)
data.frame(
  x = normalize(x),
  v = normalize(x, range = 0:2),
  b = normalize(x, bounds = 0:10),
  vb = normalize(x, range = 0:2, bounds = 0:10)
)

# maintains matrix
mat <- structure(c(0.24, 0.92, 0.05, 0.37, 0.19, 0.69, 0.43, 0.22, 0.85,
0.73, 0.89, 0.68, 0.57, 0.89, 0.61, 0.98, 0.75, 0.37, 0.24, 0.24,
0.34, 0.8, 0.25, 0.46, 0.03, 0.71, 0.79, 0.56, 0.83, 0.97), dim = c(10L, 3L))

mat
normalize(mat, bounds = -1:1)
normalize(as.data.frame(mat), bounds = -1:1)
```

norm\_path

*Normalize paths***Description**

Normalize and check a vector of paths

**Usage**

```
norm_path(x = ".", check = FALSE, remove = check)
file_path(..., check = FALSE, remove = check)
user_file(..., check = FALSE, remove = check)
```

**Arguments**

|        |   |
|--------|---|
| x      | A character vector of paths   |
| check  | Logical, if TRUE will check if the path exists and output a warning if it does not. |
| remove | Logical, if TRUE will remove paths that are not found                               |
| ...    | Character vectors for creating a path   |

**Value**

A vector of full file paths

---

|      |                                   |
|------|-----------------------------------|
| note | <i>Append a note to an object</i> |
|------|-----------------------------------|

---

### Description

An alternative to the `base::comment()`.

### Usage

```
note(x) <- value  
set_note(x, value)  
note(x)
```

### Arguments

|       |   |
|-------|---|
| x     | An object   |
| value | The note to attach; if NULL will remove the note and the class noted from the object. |

### Details

When the note is assigned to an object a new class will be added, `note`, so that a print function can call an S3 method. The print for this can be adjusted for its width by using the option `mark.note.width` which defaults to the option `width` when not set.

The type of object assigned to the note is not restricted, so user beware of odd prints or additional features added to the notes fun.

When assigning a note (with `note<-`, and its alias `set_note()`) the noted class is added to the object. This allows the `print.noted` class to be dispatched and for the note to be printed every time the object is called/printed and the next print method used. However, it will not be called when `not interactive()`

### Value

- `note<-`, `set_note()` will return x (with the "note" attribute assigned)
- `note()` will retrieve the "note" attribute

### Examples

```
x <- c("x", "k", "c", "d")  
comment(x) <- "This is just a comment"  
comment(x)  
  
# Comment is intentionally hidden  
x  
note(x) <- "Just some random letters"
```

```
note(x)

# Note is now present every time
x

# Assigning `NULL` will remove note (and class)
note(x) <- NULL
note(x) # NULL
x      # No more note
```

---

|               |                           |
|---------------|---------------------------|
| not_available | <i>Make not available</i> |
|---------------|---------------------------|

---

### Description

Create NA vectors

### Usage

```
not_available(type = "logical", length = 0L)
```

```
set_not_available(type, value)
```

```
NA_Date_
```

```
NA_POSIXct_
```

```
NA_POSIXlt_
```

### Arguments

|        |                                      |
|--------|--------------------------------------|
| type   | Type of NA (see details)             |
| length | Length of the vector                 |
| value  | A value to return in not_available() |

### Format

An object of class Date of length 1.

An object of class POSIXct (inherits from POSIXt) of length 1.

An object of class POSIXlt (inherits from POSIXt) of length 1.

### Details

If length is a text it will search for an appropriate match.

**Value**

A vector of NA values

**Examples**

```
x <- not_available("Date", 3)
x
class(x)
```

---

omit\_na

*Omit NA values*

---

**Description**

Omit NA values

**Usage**

```
omit_na(x)
```

**Arguments**

x                    A vector of values

**Value**

x which NA values removes and two attributes of integers: na which is the position of NA values, and valid for the position of non-NA values; empty positions reported as integer(0)

**Examples**

```
# Like stats::na.omit but always provides
x <- letters[1:5]
omit_na(x)
x[c(3, 5)] <- NA
omit_na(x)
```

---

|                 |                        |
|-----------------|------------------------|
| percentile_rank | <i>Percentile rank</i> |
|-----------------|------------------------|

---

**Description**

The bounds of the percentile rank are  $> 0$  and  $< 1$  (see Boundaries)

A percentile rank here is the proportion of scores that are less than the current score.

$$PR = (c_L + 0.5f_i)/N$$

Where

$c_L$  is the frequency of scores less than the score of interest

$f_i$  is the frequency of the score of interest

**Usage**

```
percentile_rank(x, weights = times, times)
```

**Arguments**

`x` A vector of values to rank

`weights, times` A vector of the number of times to repeat `x`

**Details**

Computes a percentile rank for each score in a set.

**Value**

The percentile rank of `x` between 0 and 1 (see Boundaries)

**Boundaries**

While the percentile rank of a score in a set must be exclusively within the boundaries of 0 and 1, this function may produce a percentile rank that is exactly 0 or 1. This may occur when the number of values are so large that the value within the boundaries is too small to be differentiated.

Additionally, when using the `weights` parameter, if the lowest or highest number has a value of 0, the number will then have a theoretical 0 or 1, as these values are not actually within the set.

**Examples**

```
percentile_rank(0:9)
x <- c(1, 2, 1, 7, 5, NA_integer_, 7, 10)
percentile_rank(x)

if (package_available("dplyr")) {
  dplyr::percent_rank(x)
}

# with times
percentile_rank(7:1, c(1, 0, 2, 2, 3, 1, 1))
```

---

```
print.mark_bib_df      Print bib data frame
```

---

**Description**

Print bib dataframe, or as list

**Usage**

```
## S3 method for class 'mark_bib_df'
print(x, list = FALSE, ...)
```

**Arguments**

|                   |  |
|-------------------|--|
| <code>x</code>    | The <code>mark_bib_df</code> object                                  |
| <code>list</code> | If TRUE will print as a list rather than the <code>data.frame</code> |
| <code>...</code>  | Additional arguments passed to methods                               |

**Value**

`x`, invisibly, called for its side effects

---

```
print.pseudo_id      Print pseudo_id
```

---

**Description**

Print `pseudo_id`

**Usage**

```
## S3 method for class 'pseudo_id'
print(x, ..., all = FALSE)
```

**Arguments**

|     |  |
|-----|--|
| x   | An object of class <code>pseudo_id</code>  |
| ... | Not implemented  |
| all | if TRUE will print all uniques. This is not recommend for many uniques as it will crowd the console output |

**Value**

x, invisibly. Called for its side effects.

**See Also**

`pseudo_id()`

---

|         |                   |
|---------|-------------------|
| print_c | <i>Print as c</i> |
|---------|-------------------|

---

**Description**

Prints a vector to paste into an R script

**Usage**

```
print_c(x = read_clipboard(), sorted = TRUE, null = TRUE)
```

**Arguments**

|        |  |
|--------|--|
| x      | A vector (defaults to reading the clipboard)                         |
| sorted | If TRUE (default) applies <code>sort()</code> to x                   |
| null   | If TRUE (default) adds NULL at the end of the <code>c()</code> print |

**Details**

This sorts (if set) and provides unique values for each element in x and prints then as a call to c. This can be useful for copying data that you want to save as a vector in an R script. The result is both called in `cat()` as well as copied to the clipboard.

**Value**

Invisibly, as a character vector, the object printed to the console

**Examples**

```
print_c(1:10)
print_c(letters[1:3])
print_c(month.abb)
```

---

`process_bib_dataframe` *Process bib values*

---

### Description

Generates a data frame of values from bibs

### Usage

```
process_bib_dataframe(categories, values, fields, keys)
```

### Arguments

|                         |                      |
|-------------------------|----------------------|
| <code>categories</code> | A list of categories |
| <code>values</code>     | A list of values     |
| <code>fields</code>     | a Vector of fields   |
| <code>keys</code>       | a Vector of keys     |

### Value

A wide `data.frame` with explicit NAs

---

`pseudo_id` *Create an ID for a vector*

---

### Description

Transforms a vector into an integer of IDs.

### Usage

```
pseudo_id(x, ...)
```

```
## S3 method for class 'pseudo_id'
```

```
pseudo_id(x, ...)
```

```
## Default S3 method:
```

```
pseudo_id(x, na_last = TRUE, ...)
```

```
## S3 method for class 'factor'
```

```
pseudo_id(x, ...)
```

**Arguments**

|         |   |
|---------|---|
| x       | A vector of values                            |
| ...     | Additional arguments passed to methods        |
| na_last | Logical if FALSE will not place NA at the end |

**Value**

A pseudo\_id object where the integer value of the vector correspond to the position of the unique values in the attribute "uniques".

**Examples**

```
set.seed(42)
(x <- sample(letters, 10, TRUE))
(pid <- pseudo_id(x))
attr(pid, "uniques")[pid]
```

---

quick\_df

*Quick DF*


---

**Description**

This is a speedier implementation of `as.data.frame()` but does not provide the same sort of checks. It should be used with caution.

**Usage**

```
quick_df(x)

quick_df1(...)
```

**Arguments**

|     |   |
|-----|---|
| x   | A list or NULL (see return)                             |
| ... | Columns as tag = value (passed to <code>list()</code> ) |

**Value**

A data.frame; if x is NULL a data.frame with 0 rows and 0 columns is returned (similar to calling `data.frame()` but faster)

**Examples**

```
# unnamed will use make.names()
x <- list(1:10, letters[1:10])
quick_df(x)

# named is preferred
names(x) <- c("numbers", "letters")
quick_df(x)

# empty data.frame
quick_df(NULL)
```

---

|            |                   |
|------------|-------------------|
| quiet_stop | <i>Quiet stop</i> |
|------------|-------------------|

---

**Description**

Quietly calls stop

**Usage**

```
quiet_stop()
```

**Value**

None, called for side effects

---

|        |                |
|--------|----------------|
| range2 | <i>Range 2</i> |
|--------|----------------|

---

**Description**

Employs `min()` and `max()`. However, `base::range()`, there is no argument for removing Inf values.

**Usage**

```
range2(x, na.rm = FALSE)
```

**Arguments**

|       |   |
|-------|---|
| x     | A numeric (or character) vector (see Note in <code>base::min</code> ) |
| na.rm | Logical, if TRUE removes missing values                               |

**Value**

A numeric vector of length 2 of the minimum and maximum values, respectively

**Examples**

```
x <- rep(1:1e5, 100)
system.time(rep(range(x), 100))
system.time(rep(range2(x), 100))
x[sample(x, 1e5)] <- NA

system.time(rep(range(x, na.rm = TRUE), 100))
system.time(rep(range2(x, na.rm = TRUE), 100))
```

---

|          |                      |
|----------|----------------------|
| read_bib | <i>Read Bib file</i> |
|----------|----------------------|

---

**Description**

Read a bib file into a data.frame

**Usage**

```
read_bib(file, skip = 0L, max_lines = NULL, encoding = "UTF-8")
```

**Arguments**

|           |  |
|-----------|--|
| file      | File or connection                             |
| skip      | The lines to skip                              |
| max_lines | The maximum number of lines to read            |
| encoding  | Assumed encoding of file (passed to readLines) |

**Details**

Inspired and partially credited to `bib2df::bib2df()` although this has no dependencies outside of base functions and much quicker. This speed seems to come from removing `stringr` functions and simplifying a few `*apply` functions. This will also include as many categories as possible from the entry.

**Value**

A data.frame with each row as a bib entry and each column as a field

**See Also**

[bib2df::bib2df\(\)](#)

**Examples**

```

file <- "https://raw.githubusercontent.com/jmbarbone/bib-references/master/references.bib"
bibdf <- read_bib(file, max_lines = 51L)

if (package_available("tibble")) {
  tibble::as_tibble(bibdf)
} else {
  head(bibdf)
}

if (package_available("bib2df") & package_available("bench")) {
  file <- system.file("extdata", "bib2df_testfile_3.bib", package = "bib2df")

  # Doesn't include the 'tidying' up
  foo <- function(file) {
    bib <- ("bib2df" %colons% "bib2df_read")(file)
    ("bib2df" %colons% "bib2df_gather")(bib)
  }

  bench::mark(
    read_bib = read_bib(file),
    bib2df = bib2df::bib2df(file),
    foo = foo(file),
    check = FALSE
  )[1:9]
}

```

---

`recode_by`*Recode by*

---

**Description**

A simple implementation of recoding

**Usage**

```
recode_by(x, by, vals = NULL, mode = "any")
```

```
recode_only(x, by, vals = NULL)
```

**Arguments**

|                   |   |
|-------------------|---|
| <code>x</code>    | A vector to recode  |
| <code>by</code>   | A names vector ( <code>new = old</code> ); any non-matching values are set to the appropriate NA  |
| <code>vals</code> | An optional vector of values to use in lieu of a names in the vector; this takes priority over <code>names(by)</code> . This can be the same length as <code>by</code> or a single value. |
| <code>mode</code> | passed to <code>as.vector()</code>  |

**Details**

This can be comparable to `dplyr::recode()` expect that the values are arranged as `new = old` rather than `old = new` and allows for a separate vector to be passed for `new`.

`recode_only()` will only recode the values matches in `by/val`. The mode is automatically set according to `mode(x)`. This functions more like `base::replace()` but with extra features

**Value**

A vector of values from `x`

**See Also**

[dplyr::recode\(\)](#)

**Examples**

```

recode_by(1:3, c(a = 1, b = 2))
recode_by(letters[1:3], c(`1` = "a", `2` = "b")) # will not guess mode
recode_by(letters[1:3], c(`1` = "a", `2` = "b"), mode = "integer") # make as integer
recode_by(letters[1:3], c("a", "b"), vals = 1:2) # or pass to vals

recode_only(letters[1:3], c("zzz" = "a"))
recode_only(letters[1:3], c(`1` = "a")) # returns as "1"
recode_only(1:3, c("a" = 1)) # coerced to NA

# Pass list for multiples
recode_only(letters[1:10], list(abc = c("a", "b", "c"), ef = c("e", "f")))

```

---

reindex

*Reindex a data.frame*


---

**Description**

Reindexes a `data.frame` with a reference

**Usage**

```

reindex(
  x,
  index = NULL,
  new_index,
  expand = c("intersect", "both"),
  sort = FALSE
)

```

**Arguments**

|           |   |
|-----------|---|
| x         | A data.frame  |
| index     | The column name or number of an index to use; if NULL will assume the first column; a value of row.names will use row.names(x)  |
| new_index | A column vector of the new index value  |
| expand    | Character switch to expand or keep only the values that intersect (none), all values in x or index, or retain all values found. |
| sort      | Logical, if TRUE will sort the rows in output   |

**Value**

A data.frame with rows of index

**Examples**

```
iris1 <- head(iris, 5)
iris1$index <- 1:5
reindex(iris1, "index", seq(2, 8, 2))
reindex(iris1, "index", seq(2, 8, 2), expand = "both")

# Using letters will show changes in rownames
iris1$index <- letters[1:5]
reindex(iris1, "index", letters[seq(2, 8, 2)])
reindex(iris1, "index", seq(2, 8, 2))
reindex(iris1, "index", seq(2, 8, 2), expand = "both")
```

---

remove\_na

*Remove NA*

---

**Description**

Remove NAs from a vector

**Usage**

```
remove_na(x)

## Default S3 method:
remove_na(x)

## S3 method for class 'list'
remove_na(x)

## S3 method for class 'factor'
remove_na(x)

## S3 method for class 'fact'
remove_na(x)
```

**Arguments**

x                    A vector of values

**Details**

remove\_na.factor will remove NA values as identified by the levels() or by the integer value of the level. factors are recreated with all NA values and, if present, the NA level removed.

**Value**

x without values where is.na(x) is TRUE For factors, a new factor (ordered if is.ordered(x))

**Examples**

```
remove_na(c(4, 1, 2, NA, 4, NA, 3, 2))

# removes based on levels
remove_na(factor(c("b", NA, "a", "c")))

# removes based on values
x <- as_ordered(c("b", "d", "a", "c"))
x[2:3] <- NA
str(remove_na(x))
```

---

|             |                    |
|-------------|--------------------|
| remove_null | <i>Remove NULL</i> |
|-------------|--------------------|

---

**Description**

Remove NULL results from a list

**Usage**

```
remove_null(x)
```

**Arguments**

x                    A list

**Value**

The list x without NULL

**Examples**

```
x <- list(a = letters[1:5], b = NULL, c = complex(3))
x
remove_null(x)
```

---

|                   |                          |
|-------------------|--------------------------|
| require_namespace | <i>Require namespace</i> |
|-------------------|--------------------------|

---

**Description**

A wrapped requireNamespace

**Usage**

```
require_namespace(namespace, ...)  
package_available(namespace)
```

**Arguments**

namespace, ... One or more packages to to require.

**Value**

- require\_namespace(): None, called for side effects
- package\_available(): Visibly, TRUE or FALSE

**Examples**

```
foo <- function() {  
  require_namespace("bad_package")  
  1  
}  
  
try(require_namespace("bad_package"))  
try(foo())
```

---

|          |   |
|----------|---|
| round_by | <i>Rounding by a specific interval.</i> |
|----------|---|

---

**Description**

Rounds a number or vector of numbers by another

**Usage**

```
round_by(x, by = 1, method = c("round", "ceiling", "floor"), include0 = TRUE)
```

**Arguments**

|          |   |
|----------|---|
| x        | A number or vector to round.  |
| by       | The number by which to round  |
| method   | An option to explicitly specify automatic rounding, ceiling, or floor |
| include0 | If FALSE replaces 0 with by   |

**Value**

A vector of doubles of the same length of x

**Examples**

```
x <- seq(1, 13, by = 4/3)

cbind(
  x,
  by_1 = round_by(x, 1),
  by_2 = round_by(x, 2),
  by_3 = round_by(x, 3)
)
```

---

row\_bind

*Row bind*

---

**Description**

Bind a list of data.frames

**Usage**

```
row_bind(...)
```

**Arguments**

... A list of data.frames to be attached to each other by row

**Value**

A data.frame combining all the rows from data.frames in ... and all the columns, as they appear. An empty data.frame with 0 columns and 0 rows is returned if ... has no length

**See Also**

[dplyr::bind\\_rows\(\)](#) [base::rbind\(\)](#)

---

|         |                |
|---------|----------------|
| rscript | <i>Rscript</i> |
|---------|----------------|

---

**Description**

Implements Rscript with system2

**Usage**

```
rscript(x, ops = NULL, args = NULL, ...)
```

**Arguments**

|      |   |
|------|---|
| x    | An R file to run                                      |
| ops  | A character vector of options ("--" is added to each) |
| args | A character vector of other arguments to pass         |
| ...  | Additional arguments passed to system2                |

**Value**

A character vector of the result from calling Rscript via system2()

**See Also**

[source\\_to\\_env](#)

---

|             |                    |
|-------------|--------------------|
| save_source | <i>Save source</i> |
|-------------|--------------------|

---

**Description**

Source a file and save as file

**Usage**

```
save_source(env = parent.frame(), file = mark_temp("Rds"), name = NULL)
```

**Arguments**

|      |  |
|------|--|
| env  | The parent environment                                 |
| file | The file to save the environment to                    |
| name | An optional name for the environment (mostly cosmetic) |

**Value**

A source\_env/environment object, created from env

---

|            |                  |
|------------|------------------|
| set_names0 | <i>Set names</i> |
|------------|------------------|

---

**Description**

Sets or removes names

**Usage**

```
set_names0(x, nm = x)
```

```
remove_names(x)
```

```
names_switch(x)
```

```
x %names% nm
```

**Arguments**

x                   A vector of values

nm                   A vector of names

**Value**

- set\_names0(): x with nm values assigned to names (if x is NULL, NULL is returned)
- remove\_names(): x without names
- names\_switch(): character vector of equal length x where names and values are switched

---

|                  |                     |
|------------------|---------------------|
| simpleTimeReport | <i>Time reports</i> |
|------------------|---------------------|

---

**Description**

**[Experimental]** This function can be used to evaluate an expression line-by-line to capture outputs, errors, messages, and evaluation time.

**Usage**

```
simpleTimeReport(title = NULL, expr, envir = parent.frame())
```

**Arguments**

title                The title to be printed

expr                 The expression to run

envir                The environment from which to evaluate the expr

**Details**

Evaluate code and report on the time difference

**Value**

A reported\_results/list object containing results, outputs, messages, warnings, and errors

**Examples**

```
simpleTimeReport("example", {  
  print("1")  
  Sys.sleep(1)  
  warning("this is a warning")  
  for (i in 1:5) {  
    Sys.sleep(0.5)  
  }  
  sample(1e6, 1e6, TRUE)  
})
```

---

sort\_by

*Sort by*

---

**Description**

Sort an object by another object

**Usage**

```
sort_by(x, by, ...)
```

**Arguments**

|     |  |
|-----|--|
| x   | A vector                                     |
| by  | Another vector                               |
| ... | Additional arguments passed to base::order() |

**Value**

The values of x, resorted

**Examples**

```
l3 <- letters[1:3]  
sort_by(l3, c(3, 2, 1))  
# make a factor object with the reversed order  
f <- factor(l3, levels = rev(l3))  
sort_by(f, l3)  
sort_by(1:3, rev(l3))
```

---

|            |                      |
|------------|----------------------|
| sort_names | <i>Sort by names</i> |
|------------|----------------------|

---

**Description**

Sort a vector by it's name

**Usage**

```
sort_names(x, numeric = FALSE)
```

**Arguments**

|         |                                       |
|---------|---------------------------------------|
| x       | A named vector of values              |
| numeric | If TRUE will try to coerce to numeric |

**Value**

x sorted by its names()

---

|              |                                   |
|--------------|-----------------------------------|
| source_files | <i>Source file from directory</i> |
|--------------|-----------------------------------|

---

**Description**

Walk through files in a directory and output them. Files are sources in order of names

**Usage**

```
source_r_dir(dir, echo = FALSE, quiet = FALSE, ...)
```

```
source_r_file(path, echo = FALSE, quiet = FALSE, ...)
```

**Arguments**

|       |  |
|-------|--|
| dir   | The location of your R scripts   |
| echo  | logical; if TRUE, each expression is printed after parsing, before evaluation. |
| quiet | Logical. Whether to print out a message for each file.                         |
| ...   | Additional arguments passed to <a href="#">base::source()</a>                  |
| path  | The location of the R file.  |

**Value**

None, called for side effects

---

|               |                              |
|---------------|------------------------------|
| source_to_env | <i>Source to environment</i> |
|---------------|------------------------------|

---

**Description**

Source an R script to an environment

**Usage**

```
source_to_env(x, ops = NULL)
```

**Arguments**

|     |   |
|-----|---|
| x   | An R script                                     |
| ops | Options to be passed to <a href="#">rscript</a> |

**Value**

Invisibly, and environment variable of the objects/results created from x

---

|          |                            |
|----------|----------------------------|
| sourcing | <i>Sourcing extensions</i> |
|----------|----------------------------|

---

**Description**

Functions for extending sourcing features

**Usage**

```
ksource(file, ..., quiet = TRUE, cd = FALSE, env = parent.frame())
```

```
try_source(file, cd = FALSE, ...)
```

```
try_ksource(file, ...)
```

**Arguments**

|       |  |
|-------|--|
| file  | An R or Rmd file.  |
| ...   | Additional arguments passed to <a href="#">base::source()</a>  |
| quiet | Logical; Determines whether to apply silence to <a href="#">knitr::purl()</a>                                    |
| cd    | Logical; if TRUE, the R working directory is temporarily changed to the directory containing file for evaluating |
| env   | An environment determining where the parsed expressions are evaluated  |

**Details**

`try_source()` will output an error message rather than completely preventing the execution. This can be useful for when a script calls on multiple, independent files to be sourced and a single failure shouldn't prevent the entire run to fail as well.

**Value**

- `ksource()`: Invisibly, the result of calling `source()` on the .R file conversion of file
- `try_source()`, `try_ksource()`: attempts of `source()` and `ksource()` but converts errors to warnings

---

 struct

*Simple structures*


---

**Description**

Create simple structures

**Usage**

```
struct(x, class, ..., .keep_attr = FALSE)
```

**Arguments**

|                         |   |
|-------------------------|---|
| <code>x</code>          | An object; if NULL, coerced to <code>list()</code>  |
| <code>class</code>      | A vector of classes; can also be NULL   |
| <code>...</code>        | Named attributes to set to <code>x</code> ; overwrites any attributes in <code>x</code> even if defined in <code>.keep_attr</code>  |
| <code>.keep_attr</code> | Control for keeping attributes from <code>x</code> : TRUE will retain all attributes from <code>x</code> ; a character vector will pick out specifically defined attributes to retain; otherwise only attributes defined in <code>...</code> will be used |

**Details**

Unlike `base::structure()` this does not provide additional checks for special names, performs no `base::storage.mode()` conversions for factors (`x` therefor has to be an integer), attributes from `x` are not retained, and `class` is specified outside of other attributes and assigned after `base::attributes()` is called.

Essentially, this is just a wrapper for calling `base::attributes()` then `base::class()`.

Note that `base::structure()` provides a warning when the first argument is NULL. `struct()` does not. The coercion from NULL to `list()` is done, and documented, in `base::attributes()`.

**Value**

An object with class defined as `class` and attributes `...`

**Examples**

```

x <- list(a = 1, b = 2)
# structure() retains the $names attribute of x but struct() does not
structure(x, class = "data.frame", row.names = 1L)
struct(x, "data.frame", row.names = 1L)
struct(x, "data.frame", row.names = 1L, names = names(x))

# structure() corrects entries for "factor" class
# but struct() demands the data to be an integer
structure(1, class = "factor", levels = "a")
try(struct(1, "factor", levels = "a"))
struct(1L, "factor", levels = "a")

# When first argument is NULL -- attributes() coerces
try(structure(NULL)) # NULL, no call to attributes()
struct(NULL, NULL) # list(), without warning
x <- NULL
attributes(x) <- NULL
x # NULL
attributes(x) <- list() # struct() always grabs ... into a list
x # list()

# Due to the use of class() to assign class, you may experience some
# other differences between structure() and struct()
x <- structure(1, class = "integer")
y <- struct(1, "integer")
str(x)
str(y)

all.equal(x, y)

# Be careful about carrying over attributes
x <- quick_df(list(a = 1:2, b = 3:4))
# returns empty data.frame
struct(x, "data.frame", new = 1)

# safely changing names without breaking rownames
struct(x, "data.frame", names = c("c", "d")) # breaks
struct(x, "data.frame", names = c("c", "d"), .keep_attr = TRUE)
struct(x, "data.frame", names = c("c", "d"), .keep_attr = "row.names")

# safely adds comments
struct(x, "data.frame", comment = "hi", .keep_attr = TRUE)
struct(x, "data.frame", comment = "hi", .keep_attr = c("names", "row.names"))

# assignment in ... overwrites attributes
struct(x, "data.frame", names = c("var1", "var2"), .keep_attr = TRUE)

```

**Description**

Extract date from string

**Usage**

```
str_extract_date(x, format = "%Y-%m-%d")
str_extract_datetime(x, format = "%Y-%m-%d %H%M%S")
```

**Arguments**

|        |                       |
|--------|-----------------------|
| x      | A character vector    |
| format | A date format to find |

**Value**

A Date (if found) or NA

**Examples**

```
str_extract_date("This is a file name 2020-02-21.csv")
str_extract_date(c("This is a file name 2020-02-21.csv",
                  "Date of 2012-06-15 here"))
str_extract_date(c("This is a file name 2020-02-21.csv", "No date"))
str_extract_date("Last saved 17 December 2019", format = "%d %B %Y")

str_extract_datetime(c("2020-02-21 235033", "2012-12-12 121212"))
str_extract_datetime("This is a file name 2020-02-21 235033.csv")
```

---

str\_slice

*String Slice*


---

**Description**

Slice/split a string into multiple lines by the desired length of the line.

**Usage**

```
str_slice(x, n = 80L)
str_slice_by_word(x, n = 80L)
```

**Arguments**

|   |                                       |
|---|---------------------------------------|
| x | A character vector                    |
| n | Integer, the length of the line split |

**Value**

A character vector

**Examples**

```
if (requireNamespace("stringi")) {
  x <- stringi::stri_rand_lipsum(1)
  str_slice(x)
  str_slice_by_word(x, n = 50L)
}
```

---

 switch-ext

*Switch with a list of parameters*


---

**Description**

switch\_params() is a vectorized version of switch switch\_case() uses a formula syntax to return the value to the right of the tilde (~) when x is TRUE switch\_in\_case() is a special case of switch\_case() for match()-ing x in the values on the left to return the value on the right.

**Usage**

```
switch_params(x, ...)
```

```
switch_in_case(x, ..., .default = NULL, .envir = parent.frame())
```

```
switch_case(..., .default = NULL, .envir = parent.frame())
```

**Arguments**

|          |  |
|----------|--|
| x        | A vector of values   |
| ...      | Case evaluations (named for switch_params)   |
| .default | The default value if no matches are found in ... (default: NULL produces an NA value derived from ...) |
| .envir   | The environment in which to evaluate the LHS of ... (default: parent.frame())                          |

**Details**

Switch with a list of params

**Value**

A named vector of values of same length x; or for switch\_case, an unnamed vector of values matching the rhs of ...

Inspired from:

- <https://stackoverflow.com/a/32835930/12126576>
- <https://github.com/tidyverse/dplyr/issues/5811>

**Examples**

```

# by single
switch_params(c("j", "m", "b"), j = 10, b = 2, m = 13)

# match with TRUE
switch_case(
  1:10 == 9      ~ NA_integer_,
  1:10 %% 3 == 0 ~ 1:10,
  1:10 %% 4 == 0 ~ 11:20,
  1:10 %% 5 == 0 ~ 21:30,
  1:10 %% 2 == 0 ~ 31:40,
  .default = -1L
)

# match within a vector
switch_in_case(
  c(1, 2, 12, 4, 20, 21),
  1:10 ~ 1,
  11:20 ~ 2
)

switch_in_case(
  c("a", "b", "d", "e", "g", "j"),
  letters[1:3] ~ "a",
  letters[5:6] ~ "e"
)

use_these <- c(1, 3, 2, 5)
switch_in_case(
  1:10,
  use_these ~ TRUE,
  .default = FALSE
)

ne <- new.env()
ne$use_these2 <- use_these
# error
try(switch_in_case(
  1:10,
  use_these2 ~ TRUE
))
switch_in_case(
  1:10,
  use_these2 ~ TRUE,
  .envir = ne
)

switch_in_case(
  seq.int(1, 60, 6),
  1:10      ~ "a",
  11:20     ~ "b",

```

```

    c(22, 24, 26) ~ "c",
    30:Inf       ~ "d"
  )

# Use functions
switch_in_case(
  1:6,
  c(1, 3, 5) ~ exp,
  c(2, 4) ~ log
)

```

---

tableNA

*Table NA values*


---

### Description

Tables out whether data are NAs are not

### Usage

```
tableNA(..., .list = FALSE)
```

### Arguments

`...` one or more objects which can be interpreted as factors (including numbers or character strings), or a `list` (such as a data frame) whose components can be so interpreted. (For `as.table`, arguments passed to specific methods; for `as.data.frame`, unused.)

`.list` Logical, if TRUE and `...` is a list, will c

### Details

All data are checked with `is.na()` and the resulting TRUE or FALSE is are tabulated.

### Value

`table()` returns a *contingency table*, an object of class "table", an array of integer values. Note that unlike S the result is always an `array`, a 1D array if one factor is given.

`as.table` and `is.table` coerce to and test for contingency table, respectively.

The `as.data.frame` method for objects inheriting from class "table" can be used to convert the array-based representation of a contingency table to a data frame containing the classifying factors and the corresponding entries (the latter as component named by `responseName`). This is the inverse of `xtabs`.

### References

Becker, R. A., Chambers, J. M. and Wilks, A. R. (1988) *The New S Language*. Wadsworth & Brooks/Cole.

**See Also**

[tabulate](#) is the underlying function and allows finer control.

Use [ftable](#) for printing (and more) of multidimensional tables. [margin.table](#), [prop.table](#), [addmargins](#).

[addNA](#) for constructing factors with [NA](#) as a level.

[xtabs](#) for cross tabulation of data frames with a formula interface.

**Examples**

```
x <- list(
  a = c(1, 2, NA, 3),
  b = c("A", NA, "B", "C"),
  c = as.Date(c("2020-01-02", NA, NA, "2020-03-02"))
)
tableNA(x) # entire list
tableNA(x, .list = TRUE) # counts for each
tableNA(x[1], x[2])
tableNA(x[1], x[2], x[3]) # equivalent ot tableNA(x, .list = TRUE)
```

---

 that

*That*


---

**Description**

Grammatical correctness

**Usage**

```
that(x, arr.ind = FALSE, useNames = TRUE)
```

**Arguments**

|                       |  |
|-----------------------|--|
| <code>x</code>        | a <a href="#">logical</a> vector or array. <a href="#">NAs</a> are allowed and omitted (treated as if <code>FALSE</code> ).                    |
| <code>arr.ind</code>  | logical; should <b>array indices</b> be returned when <code>x</code> is an array? Anything other than a single true value is treated as false. |
| <code>useNames</code> | logical indicating if the value of <code>arrayInd()</code> should have (non-null) dimnames at all.   |

**Details**

See `fortunes::fortune(175)`.

**Value**

see [base::which\(\)](#)

**See Also**

[base::which\(\)](#)

---

todos

*Get TODOs*

---

**Description**

Search for #` ` TODO tags

**Usage**

```

todos(
  pattern = NULL,
  path = ".",
  force = getOption("mark.todos.force", FALSE),
  ...
)

fixmes(
  pattern = NULL,
  path = ".",
  force = getOption("mark.todos.force", FALSE),
  ...
)

```

**Arguments**

|         |  |
|---------|--|
| pattern | A character string containing a regular expression to filter for comments after tags; default NULL does not filter   |
| path    | The file directory to search for the tags  |
| force   | If TRUE will force searching for files in directories that do not contain an .Rproj file. This can be controlled with the option <code>mark.todos.force</code> |
| ...     | Additional parameters passed to <code>grep</code> (Except for <code>pattern</code> , <code>x</code> , and <code>value</code> )                                 |

**Details**

Calls `git grep -in "[#] TODO"` to find any lines of a .R or .Rmd file with a comment.

**Value**

NULL if none are found, otherwise a `data.frame` with the line number, file name, and TODO comment.

---

|            |                   |
|------------|-------------------|
| to_boolean | <i>To Boolean</i> |
|------------|-------------------|

---

**Description**

Convert a vector to boolean/logical

**Usage**

```
to_boolean(x, ...)  
  
## S3 method for class 'logical'  
to_boolean(x, ...)  
  
## S3 method for class 'numeric'  
to_boolean(x, true = 1L, false = 0L, ...)  
  
## S3 method for class 'character'  
to_boolean(x, true = NULL, false = NULL, ...)  
  
## S3 method for class 'factor'  
to_boolean(x, true = NULL, false = NULL, ...)
```

**Arguments**

|       |  |
|-------|--|
| x     | A vector of values                     |
| ...   | Additional arguments passed to methods |
| true  | A vector of values to convert to TRUE  |
| false | A vector of values to convert to FALSE |

**Value**

A logical vector of equal length as x

---

|              |                     |
|--------------|---------------------|
| to_row_names | <i>To row names</i> |
|--------------|---------------------|

---

**Description**

Converts a column to row names

**Usage**

```
to_row_names(data, row_names = 1L)
```

**Arguments**

data            A data.frame  
 row\_names      The numeric position of the column.

**Value**

A data.frame

**Examples**

```
x <- data.frame(
  a = 1:4,
  b = letters[1:4]
)

to_row_names(x)
to_row_names(x, "b")
```

---

|      |                             |
|------|-----------------------------|
| t_df | <i>Data frame transpose</i> |
|------|-----------------------------|

---

**Description**

This transposes a data.frame with `t()` but transforms back into a data.frame with column and row names cleaned up. Because the data types may be mixed and reduced to characters, this may only be useful for a visual viewing of the data.frame.

**Usage**

```
t_df(x, id = NULL)
```

**Arguments**

x                A data.frame  
 id               No longer used

**Details**

Transposes a data.frame as a data.frame

**Value**

A transposed data.frame with columns ("colname", "row\_1", ..., for each row in x.

**Examples**

```
x <- data.frame(col_a = Sys.Date() + 1:5, col_b = letters[1:5], col_c = 1:5)
t_df(x)
```

---

`unlist0`*Unlist and squash*

---

## Description

Unlist without unique names; combine names for unique values

## Usage

```
unlist0(x)
```

```
squash_vec(x, sep = ".")
```

## Arguments

|                  |                                  |
|------------------|----------------------------------|
| <code>x</code>   | A vector of values               |
| <code>sep</code> | A separation for combining names |

## Details

`unlist0()` is much like `unlist()` expect that name are not made to be unique. `squash_vec()` works differently

## Value

- `unlist0()`: a vector with the possibility of non-unique names
- `squash_vec()`: A vector of unique values and names

## Examples

```
x <- list(a = 1:3, b = 2, c = 2:4)
y <- c(a = 1, b = 1, c = 1, d = 2, e = 3, f = 3)

# unlist0() doesn't force unique names
unlist(x) # names: a1 a2 a3 b c1 c2 c3
unlist0(x) # names: a a a b c c c
unlist0(y) # no change

# squash_vec() is like the inverse of unlist0() because it works on values
squash_vec(x)
squash_vec(y)
```

---

|            |                                  |
|------------|----------------------------------|
| use_author | <i>Add author to DESCRIPTION</i> |
|------------|----------------------------------|

---

**Description**

Adds author to description

**Usage**

```
use_author(author_info = find_author())
```

**Arguments**

author\_info     Author information as a named list

**Details**

Only valid for a single author.

**Value**

None, called for side effects

---

|             |                      |
|-------------|----------------------|
| utils-paste | <i>Paste combine</i> |
|-------------|----------------------|

---

**Description**

Paste and combine

**Usage**

```
paste_c(x, y, collate = TRUE, sep = "")
```

```
paste_combine(..., collate = TRUE, sep = "")
```

```
collapse0(..., sep = "")
```

**Arguments**

x, y, ...       Vectors to paste and/or combine

collate        Logical; TRUE prints out combinations in order of the first vector elements then the next; otherwise reversed (see examples)

sep            A character string to separate terms

**Value**

A character vector

**Examples**

```
x <- letters[1:5]
y <- 1:3
z <- month.abb[c(1, 12)]
paste_combine(x, y)
paste_combine(x, y, z)
paste_combine(x, y, z, sep = ".")
paste_combine(x, y, sep = "_")
paste_combine(x, y, collate = FALSE)
collapse0(list(1:3, letters[1:3]), 5:7, letters[5:7])
collapse0(1:3, letters[5:7], sep = "_")
```

---

 vap

*Vaps!*


---

**Description**

Wrappers for vapply

**Usage**

```
vap_int(.x, .f, ..., .nm = FALSE)
vap_dbl(.x, .f, ..., .nm = FALSE)
vap_chr(.x, .f, ..., .nm = FALSE)
vap_lgl(.x, .f, ..., .nm = FALSE)
vap_cplx(.x, .f, ..., .nm = FALSE)
vap_date(.x, .f, ..., .nm = FALSE)
```

**Arguments**

|                  |  |
|------------------|--|
| <code>.x</code>  | A vector of values   |
| <code>.f</code>  | A function to apply to each element in vector <code>.x</code>  |
| <code>...</code> | Additional arguments passed to <code>.f</code>   |
| <code>.nm</code> | Logical, if TRUE returns names of <code>.x</code> (Note: If <code>.x</code> does not have any names, they will be set to the values) |

**Details**

These are simply wrappers for `base::vapply()` to shorten lines.

Each function is designed to use specific vector types:

**vap\_int** integer

**vap\_dbl** double

**vap\_chr** character

**vap\_lgl** logical

**vap\_cplx** complex

**vap\_date** Date

**Value**

A vector of type matching the intended value in the function name.

**See Also**

[base::vapply\(\)](#)

---

vector2df

*Vector to data.frame*

---

**Description**

Transforms a vector (named) to a data.frame

**Usage**

```
vector2df(x, name = "name", value = "value", show_NA)
```

**Arguments**

|             |  |
|-------------|--|
| x           | A vector of values.                              |
| name, value | Character strings for the name and value columns |
| show_NA     | Ignored; will trigger a warning if set           |

**Value**

A data.frame with name (optional) and value columns

---

|             |                        |
|-------------|------------------------|
| within_call | <i>Function within</i> |
|-------------|------------------------|

---

**Description**

Returns the function call you are within

**Usage**

```
within_call()
```

```
within_fun()
```

```
outer_call(n = 0)
```

```
outer_fun(n = 0)
```

**Arguments**

n                    The number of calls to move out from

**Value**

The string of the call/function

---

|          |                           |
|----------|---------------------------|
| with_par | <i>Temporary plotting</i> |
|----------|---------------------------|

---

**Description**

Reset par() after running

**Usage**

```
with_par(..., ops = NULL)
```

**Arguments**

...                    Code to be evaluated

ops                    A named list to be passed to `graphics::par()`

**Value**

Invisibly, the result of ...

**Examples**

```
with_par(  
  plot(lm(Sepal.Length ~ Sepal.Width, data = iris)),  
  plot(lm(Petal.Length ~ Petal.Width, data = iris)),  
  ops = list(mfrow = c(2, 4))  
)
```

---

%colons%

*Colons*

---

**Description**

Get an object from a package

**Usage**

```
package %colons% name
```

**Arguments**

|         |                     |
|---------|---------------------|
| package | Name of the package |
| name    | Name to retrieve    |

**Details**

This is a work around to calling `:::`.

**Value**

The variable name from package `package`

**WARNING**

To reiterate from other documentation: it is not advised to use `:::` in your code as it will retrieve non-exported objects that may be more likely to change in their functionality than exported objects.

# Index

- \* **datasets**
  - fizzbuzz, 29
  - not\_available, 55
- \* **factors**
  - as\_ordered, 6
  - char2fact, 10
  - drop\_levels, 19
  - fact, 22
  - fact2char, 24
  - fact\_na, 25
- .fizzbuzz\_vector (fizzbuzz), 29
- %names% (set\_names), 71
- %out% (match\_ext), 46
- %wi% (match\_ext), 46
- %wo% (match\_ext), 46
- %xor% (logic\_ext), 41
- %colons%, 90
  
- add\_file\_timestamp, 4
- addmargins, 81
- addNA, 81
- AND (logic\_ext), 41
- any\_match (match\_ext), 46
- are\_identical, 5
- array, 80
- array\_extract, 6
- as\_ordered, 6, 10, 20, 24, 25
- as\_ordered(), 24
- assign\_labels (labels), 37
  
- base::attributes(), 75
- base::class(), 75
- base::comment(), 54
- base::droplevels, 20
- base::grepl(), 50
- base::identical, 5
- base::intersect(), 46
- base::isFALSE(), 41
- base::isTRUE(), 41
- base::list.dirs(), 29
- base::list.files(), 29
- base::match(), 46
- base::match.arg(), 45, 47
- base::min, 62
- base::range(), 52, 62
- base::rbind(), 69
- base::replace(), 65
- base::source(), 73, 74
- base::storage.mode(), 75
- base::structure(), 75
- base::suppressMessages(), 49
- base::suppressWarnings(), 49
- base::vapply(), 88
- base::which(), 81, 82
- base::xor(), 41
- base\_alpha, 7
- base\_n, 8
- between\_more, 9
- bib2df::bib2df(), 63
- bump\_date\_version (get\_version), 33
- bump\_version (get\_version), 33
  
- char2fact, 7, 10, 20, 24, 25
- char2fact(), 24
- checkOptions, 10
- chr\_split, 11
- clipboard, 12
- collapse0 (utils-paste), 86
- complete\_cases, 13
- counts, 14
  
- date\_from\_partial, 15
- depth, 16
- detail, 17
- diff\_time, 18
- diff\_time\_days (diff\_time), 18
- diff\_time\_dyears (diff\_time), 18
- diff\_time\_hours (diff\_time), 18
- diff\_time\_mins (diff\_time), 18
- diff\_time\_months (diff\_time), 18

diff\_time\_myyears (diff\_time), 18  
 diff\_time\_secs (diff\_time), 18  
 diff\_time\_weeks (diff\_time), 18  
 diff\_time\_wyears (diff\_time), 18  
 diff\_time\_years (diff\_time), 18  
 dplyr::bind\_rows(), 69  
 dplyr::na\_if(), 51  
 dplyr::recode(), 65  
 drop\_levels, 7, 10, 19, 24, 25  
  
 either (logic\_ext), 41  
 environments (list\_environments), 41  
 ept, 20  
 eval\_named\_chunk, 21  
 expand\_by, 22  
  
 fact, 7, 10, 20, 22, 24, 25  
 fact(), 7, 25  
 fact2char, 7, 10, 20, 24, 24, 25  
 fact2char(), 10  
 fact\_na, 7, 10, 20, 24, 25  
 fact\_reverse, 25  
 fct\_expand\_seq, 26  
 file\_info, 27  
 file\_name, 27  
 file\_open (file\_utils), 28  
 file\_path (norm\_path), 53  
 file\_utils, 28  
 fixmes (todos), 82  
 fizzbuzz, 29  
 fizzbuzz\_lazy (fizzbuzz), 29  
 flip, 30  
 ftable, 81  
  
 get\_dir\_max\_number, 31  
 get\_dir\_recent\_date, 31  
 get\_error (handlers), 33  
 get\_labels (labels), 37  
 get\_message (handlers), 33  
 get\_recent\_dir, 32  
 get\_recent\_file, 32  
 get\_version, 33  
 get\_warning (handlers), 33  
 glob2rx, 43  
 graphics::par(), 89  
  
 handlers, 33  
 has\_error (handlers), 33  
 has\_message (handlers), 33  
  
 has\_warning (handlers), 33  
  
 import, 35  
 insert, 36  
 is\_boolean (logic\_ext), 41  
 is\_dir, 36  
 is\_false (logic\_ext), 41  
 is\_file (is\_dir), 36  
 is\_na\_cols (na\_cols), 51  
 is\_true (logic\_ext), 41  
  
 knitr::purl(), 74  
 ksource (sourcing), 74  
  
 labels, 37  
 largest\_file (file\_info), 27  
 limit, 38  
 lines\_of\_r\_code, 39  
 list, 80  
 list2df, 40  
 list\_dirs (file\_utils), 28  
 list\_dirs(), 32  
 list\_environments, 41  
 list\_files (file\_utils), 28  
 list\_files(), 32  
 logic\_ext, 41  
 logical, 81  
 Long vectors, 46  
 ls\_all (list\_environments), 41  
 ls\_dataframe (ls\_ext), 43  
 ls\_ext, 43  
 ls\_function (ls\_ext), 43  
 ls\_object (ls\_ext), 43  
  
 make\_sf, 44  
 margin.table, 81  
 mark, 44  
 mark-package (mark), 44  
 match\_arg, 45  
 match\_arg(), 47  
 match\_ext, 46, 50  
 match\_param, 47  
 match\_param(), 45  
 median2, 48  
 muffle, 49  
 multi\_grep (multi\_grepl), 49  
 multi\_grepl, 49  
  
 NA, 48, 81

- na\_assignments, 50
- NA\_at (na\_assignments), 50
- na\_cols, 51
- NA\_Date\_ (not\_available), 55
- NA\_if (na\_assignments), 50
- NA\_in (na\_assignments), 50
- NA\_out (na\_assignments), 50
- NA\_POSIXct\_ (not\_available), 55
- NA\_POSIXlt\_ (not\_available), 55
- names\_switch (set\_names0), 71
- newest\_dir (file\_info), 27
- newest\_file (file\_info), 27
- no\_match (match\_ext), 46
- none (logic\_ext), 41
- norm\_path, 53
- normalize, 52
- not\_available, 55
- note, 54
- note<- (note), 54
  
- objects\_all (list\_environments), 41
- oldest\_dir (file\_info), 27
- oldest\_file (file\_info), 27
- omit\_na, 56
- open\_file (file\_utils), 28
- OR (logic\_ext), 41
- outer\_call (within\_call), 89
- outer\_fun (within\_call), 89
  
- package\_available (require\_namespace), 68
- paste\_c (utils-paste), 86
- paste\_combine (utils-paste), 86
- percentile\_rank, 57
- print.mark\_bib\_df, 58
- print.pseudo\_id, 58
- print\_c, 59
- process\_bib\_dataframe, 60
- prop.table, 81
- props (counts), 14
- pseudo\_id, 59, 60
- pseudo\_id(), 59
  
- q50 (median2), 48
- quick\_df, 61
- quick\_df1 (quick\_df), 61
- quiet\_stop, 62
  
- range2, 62
  
- read\_bib, 63
- read\_clipboard (clipboard), 12
- recode\_by, 64
- recode\_only (recode\_by), 64
- regular expression, 28, 43
- reindex, 65
- remove\_labels (labels), 37
- remove\_na, 66
- remove\_na\_cols (na\_cols), 51
- remove\_names (set\_names0), 71
- remove\_null, 67
- require\_namespace, 68
- round\_by, 68
- row\_bind, 69
- rscript, 70, 74
  
- save\_source, 70
- select\_na\_cols (na\_cols), 51
- set\_names0, 71
- set\_not\_available (not\_available), 55
- set\_note (note), 54
- shell\_exec (file\_utils), 28
- simpleTimeReport, 71
- smallest\_file (file\_info), 27
- sort\_by, 72
- sort\_names, 73
- source\_files, 73
- source\_r\_dir (source\_files), 73
- source\_r\_file (source\_files), 73
- source\_to\_env, 70, 74
- sourcing, 74
- squash\_vec (unlist0), 85
- squash\_vec(), 85
- stats::quantile(), 48
- str\_extract\_date, 76
- str\_extract\_datetime (str\_extract\_date), 76
- str\_slice, 77
- str\_slice\_by\_word (str\_slice), 77
- struct, 75
- switch-ext, 78
- switch\_case (switch-ext), 78
- switch\_in\_case (switch-ext), 78
- switch\_params (switch-ext), 78
  
- t\_df, 84
- tableNA, 80
- tabulate, 81
- that, 81

to\_boolean, 83  
to\_row\_names, 83  
todos, 82  
try\_ksource (sourcing), 74  
try\_source (sourcing), 74

unlist(), 85  
unlist0, 85  
unlist0(), 85  
update\_version (get\_version), 33  
use\_author, 86  
user\_file (norm\_path), 53  
utils-paste, 86  
utils::file\_test(), 36  
utils::readClipboard(), 12

vap, 87  
vap\_chr (vap), 87  
vap\_cplx (vap), 87  
vap\_date (vap), 87  
vap\_dbl (vap), 87  
vap\_int (vap), 87  
vap\_lgl (vap), 87  
vector2df, 88  
view\_labels (labels), 37

with\_par, 89  
within\_call, 89  
within\_fun (within\_call), 89  
write\_clipboard (clipboard), 12  
wuffle (muffle), 49

xtabs, 80, 81