

# Package ‘summarytools’

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**Type** Package

**Title** Tools to Quickly and Neatly Summarize Data

**Version** 0.9.5

**Description** Data frame summaries, cross-tabulations, weight-enabled frequency tables and common descriptive (univariate) statistics in concise tables available in a variety of formats (plain ASCII, Markdown and HTML). A good point-of-entry for exploring data, both for experienced and new R users.

**Imports** base64enc, checkmate, dplyr, grDevices, htmltools, lubridate, magick, matrixStats, methods, pander, pryr, rapportools, stats, tcltk, tibble, tidyr, utils

**Suggests** forcats, kableExtra, knitr, magrittr, rmarkdown, rstudioapi

**Depends** R (>= 2.10)

**VignetteBuilder** knitr

**LazyData** true

**License** GPL-2

**URL** <https://github.com/dcomtois/summarytools>

**BugReports** <https://github.com/dcomtois/summarytools/issues>

**Encoding** UTF-8

**RoxygenNote** 7.0.2

**NeedsCompilation** no

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**Repository** CRAN

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summarytools-package *Tools to Quickly and Neatly Summarize Data*

---

### Description

**summarytools** provides users with functions to neatly and quickly summarize numerical and categorical data. Data frame summaries, frequency tables and cross-tabulations, as well as common descriptive (univariate) statistics can be produced in a straightforward manner. Users with little to no prior R programming experience but who are familiar with popular commercial statistical software such as SAS, SPSS and Stata should feel right at home.

### Details

These are the four core functions:

**dfSummary** Extensive yet legible data frame summaries.

**freq** Frequency tables supporting weights and displaying proportions of valid and of total data, including cumulative proportions.

**descr** All common univariate descriptive stats for single vectors or for all numerical vectors in a data frame.

**ctable** Cross-tabulations for two categorical vectors or factors. Choose between *Total*, *Columns* or *Rows* proportions.

**Output formats** are:

**plain ascii** Ideal when looking at results in the console.

**rmarkdown** Ideal when writing short papers or presentations.

**html** This format is well integrated in RStudio (but will work with any browser). Use the `view()` function to see results appear directly in RStudio's Viewer or in your default Web Browser.

### Author(s)

**Maintainer:** Dominic Comtois <dominic.comtois@gmail.com>

### See Also

Useful links:

- <https://github.com/dcomtois/summarytools>
- Report bugs at <https://github.com/dcomtois/summarytools/issues>

---

cleartmp

*Delete Temporary Html Files*

---

### Description

Delete temporary files created when using generic print method with `method='browser'` or `method='viewer'`, or when calling `view()` function.

### Usage

```
cleartmp(all = TRUE, silent = FALSE, verbose = FALSE)
```

### Arguments

<code>all</code>	Logical. When TRUE (default), all temporary summarytools files are deleted. When FALSE, only the latest file is.
<code>silent</code>	Logical. Hide confirmation messages (FALSE by default).
<code>verbose</code>	Logical. Display a message for every file that is deleted. FALSE by default.

### Details

All temporary files are deleted automatically when R session is ended. This function is thus an overkill in most circumstances.

### Author(s)

Dominic Comtois, <dominic.comtois@gmail.com>>

---

ctable

*Cross-Tabulation*


---

### Description

Cross-tabulation for a pair of categorical variables (or factors) with either row, column, or total proportions, as well as marginal sums.

### Usage

```
ctable(
  x,
  y,
  prop = st_options("ctable.prop"),
  useNA = "ifany",
  totals = st_options("ctable.totals"),
  style = st_options("style"),
  round.digits = 1,
  justify = "right",
  plain.ascii = st_options("plain.ascii"),
  headings = st_options("headings"),
  display.labels = st_options("display.labels"),
  split.tables = Inf,
  dnn = c(substitute(x), substitute(y)),
  chisq = FALSE,
  weights = NA,
  rescale.weights = FALSE,
  ...
)
```

### Arguments

x	First categorical variable - values will appear as row names.
y	Second categorical variable - values will appear in as column names.
prop	Proportions to display; “r” for <i>rows</i> (default), “c” for <i>columns</i> , “t” for <i>total</i> , or “n” for <i>none</i> . This option can be set globally; see <a href="#">st_options</a> .
useNA	Argument passed on to <a href="#">table</a> ; One of “ifany” (default), “no”, or “always”.
totals	Logical. Should row and column totals be displayed? Defaults to TRUE. To change this default value globally, see <a href="#">st_options</a> .
style	Style to be used by <a href="#">pander</a> when rendering output table; One of “simple” (default), “grid”, or “rmarkdown”. This option can be set globally; see <a href="#">st_options</a> .
round.digits	Number of significant digits to display. Defaults to 1. To change this default value globally, see <a href="#">st_options</a> .
justify	String indicating alignment of columns; one of “l” (left) “c” (center), or “r” (right). Defaults to “r”.



```

with(tobacco, ctable(gender, smoker, totals = FALSE, headings = FALSE, prop = "n"))

# Grouped cross-tabulations
with(tobacco, stby(list(x = smoker, y = diseased), gender, ctable))

## Not run:
ct <- ctable(tobacco$gender, tobacco$smoker)

# Show html results in browser
print(ct, method = "browser")

# Save results to html file
print(ct, file = "ct_gender_smoker.html")

# Save results to text file
print(ct, file = "ct_gender_smoker.txt")

## End(Not run)

```

---

define\_keywords

*Modify Keywords Used In Outputs*


---

## Description

As an alternative to [use\\_custom\\_lang](#), this allows temporarily modifying the keywords used in the outputs.

## Usage

```
define_keywords(...)
```

## Arguments

... one or more pairs of keywords and their new values see *Details*.

## Details

On systems with GUI capabilities, a window will pop-up, allowing the modification of the *custom* column. The changes will be active as long as the package is loaded. A dialog will show up prompting the user to save the modified set of keywords in a custom csv language file.

Here is the full list of modifiable keywords. Check out the *language\_template.csv* file in the package's *includes* directory.

**title.freq** main heading for freq()

**title.freq.weighted** main heading for freq() (weighted)

**title.ctable** main heading for ctable()

**title.ctable.weighted** main heading ctable() (weighted)

**title.table.row** indicates what proportions are displayed  
**title.table.col** indicates what proportions are displayed  
**title.table.tot** indicates what proportions are displayed  
**title.descr** main heading for descr()  
**title.descr.weighted** main heading for descr() (weighted)  
**title.dfSummary** main heading for dfSummary()  
**n** heading item used in descr()  
**dimensions** heading item used in dfSummary()  
**duplicates** heading item used in dfSummary()  
**data.frame** heading item (all functions)  
**label** heading item (all functions) & column name in dfSummary()  
**variable** heading item (all functions) & column name in dfSummary()  
**group** heading item (all functions when used with stby())  
**by** heading item for descr() when used with stby()  
**weights** heading item - descr() & freq()  
**type** heading item for freq()  
**logical** heading item - type in freq()  
**character** heading item - type in freq()  
**numeric** heading item - type in freq()  
**factor** heading item - type in freq()  
**factor.ordered** heading item - type in freq()  
**date** heading item - type in freq()  
**datetime** heading item - type in freq()  
**freq** column name in freq()  
**pct** column name in freq() when report.nas=FALSE  
**pct.valid.f** column name in freq()  
**pct.valid.cum** column name in freq()  
**pct.total** column name in freq()  
**pct.total.cum** column name in freq()  
**pct.cum** column name in freq()  
**valid** column name in freq() and dfSummary() & column content in dfSummary()  
**invalid** column content in dfSummary() (emails)  
**total** column grouping in freq(), html version  
**mean** row name in descr()  
**sd.long** row name in descr()  
**sd** cell content (dfSummary)  
**min** row name in descr()

**q1** row name in descr() - 1st quartile  
**med** row name in descr()  
**q3** row name in descr() - 3rd quartile  
**max** row name in descr()  
**mad** row name in descr() - Median Absolute Deviation  
**iqr** row name in descr() - Inter-Quartile Range  
**cv** row name in descr() - Coefficient of Variation  
**skewness** row name in descr()  
**se.skewness** row name in descr() - Std. Error for Skewness  
**kurtosis** row name in descr()  
**n.valid** row name in descr() - Count of non-missing values  
**pct.valid** row name in descr() - pct. of non-missing values  
**no** column name in dfSummary() - position of column in the data frame  
**stats.values** column name in dfSummary()  
**freqs.pct.valid** column name in dfSummary()  
**graph** column name in dfSummary()  
**missing** column name in dfSummary()  
**distinct.value** cell content in dfSummary() - singular form  
**distinct.values** cell content in dfSummary() - plural form  
**all.nas** cell content in dfSummary() - column has only NAs  
**all.empty.str** cell content in dfSummary() - column has only empty strings  
**all.empty.str.nas** cell content in dfSummary() - col. has only NAs and empty strings  
**no.levels.defined** cell content in dfSummary() - factor has no levels defined  
**int.sequence** cell content in dfSummary()  
**rounded** cell content in dfSummary() - note appearing in Stats/Values  
**others** cell content in dfSummary() - nbr of values not displayed  
**codes** cell content in dfSummary() - When UPC codes are detected  
**mode** cell content in dfSummary() - mode = most frequent value  
**med.short** cell content in dfSummary() - median (shortened term)  
**start** cell content in dfSummary() - earliest date for date-type cols  
**end** cell content in dfSummary() - latest date for data-type cols  
**emails** cell content in dfSummary()  
**generated.by** footnote content  
**version** footnote content  
**date.fmt** footnote - date format (see [strptime](#))

### Examples

```

## Not run:
define_keywords(n = "Nb. Obs.")

## End(Not run)

```

## Description

Calculates mean, sd, min, Q1\*, median, Q3\*, max, MAD, IQR\*, CV, skewness\*, SE.skewness\*, and kurtosis\* on numerical vectors. (\*) Not available when using sampling weights.

## Usage

```
descr(
  x,
  var = NULL,
  stats = st_options("descr.stats"),
  na.rm = TRUE,
  round.digits = st_options("round.digits"),
  transpose = st_options("descr.transpose"),
  style = st_options("style"),
  plain.ascii = st_options("plain.ascii"),
  justify = "r",
  headings = st_options("headings"),
  display.labels = st_options("display.labels"),
  split.tables = 100,
  weights = NA,
  rescale.weights = FALSE,
  ...
)
```

## Arguments

x	A numerical vector or a data frame.
var	Unquoted expression referring to a specific column in x. Provides support for piped function calls (e.g. <code>df %&gt;% descr(some_var)</code> ).
stats	Which stats to produce. Either “all” (default), “fivenum”, “common” (see Details), or a selection of: “mean”, “sd”, “min”, “q1”, “med”, “q3”, “max”, “mad”, “iqr”, “cv”, “skewness”, “se.skewness”, “kurtosis”, “n.valid”, and “pct.valid”. This can be set globally via <a href="#">st_options</a> (“descr.stats”).
na.rm	Argument to be passed to statistical functions. Defaults to TRUE. Can be set globally; see <a href="#">st_options</a> .
round.digits	Number of significant digits to display. Defaults to 2, and can be set globally (see <a href="#">st_options</a> ).
transpose	Logical. Makes variables appears as columns, and stats as rows. Defaults to FALSE. To change this default value, see <a href="#">st_options</a> (option “descr.transpose”).
style	Style to be used by <a href="#">pander</a> when rendering output table; One of “simple” (default), “grid”, or “rmarkdown” This option can be set globally; see <a href="#">st_options</a> .

<code>plain.ascii</code>	Logical. <code>pander</code> argument; when TRUE, no markup characters will be used (useful when printing to console). Defaults to TRUE unless <code>style = 'rmarkdown'</code> , in which case it will be set to FALSE automatically. To change the default value globally, see <code>st_options</code> .
<code>justify</code>	Alignment of numbers in cells; “l” for left, “c” for center, or “r” for right (default). Has no effect on <i>html</i> tables.
<code>headings</code>	Logical. Set to FALSE to omit heading section. Can be set globally via <code>st_options</code> . TRUE by default.
<code>display.labels</code>	Logical. Should variable / data frame labels be displayed in the title section? Default is TRUE. To change this default value globally, see <code>st_options</code> .
<code>split.tables</code>	Pander argument that specifies how many characters wide a table can be. 100 by default.
<code>weights</code>	Vector of weights having same length as x. NA (default) indicates that no weights are used.
<code>rescale.weights</code>	Logical. When set to TRUE, the total count will be the same as the unweighted x. FALSE by default.
<code>...</code>	Additional arguments passed to <code>pander</code> .

### Value

An object having classes `matrix` and `summarytools` containing the statistics, with extra attributes used by `print` method.

### Author(s)

Dominic Comtois, <dominic.comtois@gmail.com>

### Examples

```
data("exams")

# All stats for all numerical variables
descr(exams)

# Only common statistics
descr(exams, stats = "common")

# Arbitrary selection of statistics, transposed
descr(exams, stats = c("mean", "sd", "min", "max"), transpose = TRUE)

# Rmarkdown-ready
descr(exams, plain.ascii = FALSE, style = "rmarkdown")

# Grouped statistics
data("tobacco")
with(tobacco, stby(BMI, gender, descr))

# Grouped statistics, transposed
```

```

with(tobacco, stby(BMI, age.gr, descr, stats = "common", transpose = TRUE))

## Not run:
# Show in Viewer (or browser if not in RStudio)
view(descr(exams))

# Save to html file with title
print(descr(exams),
      file = "descr_exams.html",
      report.title = "BMI by Age Group",
      footnote = "<b>Schoolyear:</b> 2018-2019<br/><b>Semester:</b> Fall")

## End(Not run)

```

---

dfSummary

*Data frame Summary*


---

## Description

Summary of a data frame consisting of: variable names, labels if any, factor levels, frequencies and/or numerical summary statistics, and valid/missing observation counts.

## Usage

```

dfSummary(
  x,
  round.digits = st_options("round.digits"),
  varnumbers = st_options("dfSummary.varnumbers"),
  labels.col = st_options("dfSummary.labels.col"),
  valid.col = st_options("dfSummary.valid.col"),
  na.col = st_options("dfSummary.na.col"),
  graph.col = st_options("dfSummary.graph.col"),
  graph.magnif = st_options("dfSummary.graph.magnif"),
  style = st_options("dfSummary.style"),
  plain.ascii = st_options("plain.ascii"),
  justify = "l",
  col.widths = NA,
  headings = st_options("headings"),
  display.labels = st_options("display.labels"),
  max.distinct.values = 10,
  trim.strings = FALSE,
  max.string.width = 25,
  split.cells = 40,
  split.tables = Inf,
  tmp.img.dir = st_options("tmp.img.dir"),
  silent = st_options("dfSummary.silent"),

```

```
    ...
  )
```

### Arguments

<code>x</code>	A data frame.
<code>round.digits</code>	Number of significant digits to display. Defaults to 2 and can be set globally; see <a href="#">st_options</a> .
<code>varnumbers</code>	Logical. Should the first column contain variable number? Defaults to TRUE. Can be set globally; see <a href="#">st_options</a> , option “dfSummary.varnumbers”.
<code>labels.col</code>	Logical. If TRUE, variable labels (as defined with <b>rapportools</b> , <b>Hmisc</b> or <b>summarytools</b> ’ label functions) will be displayed. TRUE by default, but the <i>labels</i> column is only shown if at least one column has a defined label. This option can also be set globally; see <a href="#">st_options</a> , option “dfSummary.labels.col”.
<code>valid.col</code>	Logical. Include column indicating count and proportion of valid (non-missing) values. TRUE by default, but can be set globally; see <a href="#">st_options</a> , option “dfSummary.valid.col”.
<code>na.col</code>	Logical. Include column indicating count and proportion of missing (NA) values. TRUE by default, but can be set globally; see <a href="#">st_options</a> , option “dfSummary.na.col”.
<code>graph.col</code>	Logical. Display barplots / histograms column in <i>html</i> reports. TRUE by default, but can be set globally; see <a href="#">st_options</a> , option “dfSummary.graph.col”.
<code>graph.magnif</code>	Numeric. Magnification factor, useful if the graphs show up too large (then use a value < 1) or too small (use a value > 1). Must be positive. Default to 1. Can be set globally; see <a href="#">st_options</a> , option “dfSummary.graph.magnif”.
<code>style</code>	Style to be used by <a href="#">pander</a> when rendering output table. Defaults to “multiline”. The only other valid option is “grid”. Style “simple” is not supported for this particular function, and “rmarkdown” will fallback to “multiline”.
<code>plain.ascii</code>	Logical. <a href="#">pander</a> argument; when TRUE, no markup characters will be used (useful when printing to console). Defaults to TRUE. Set to FALSE when in context of markdown rendering. To change the default value globally, see <a href="#">st_options</a> .
<code>justify</code>	String indicating alignment of columns; one of “l” (left) “c” (center), or “r” (right). Defaults to “l”.
<code>col.widths</code>	Numeric or character. Vector of column widths. If numeric, values are assumed to be numbers of pixels. Otherwise, any CSS-supported units can be used. NA by default, meaning widths are calculated automatically.
<code>headings</code>	Logical. Set to FALSE to omit headings. To change this default value globally, see <a href="#">st_options</a> .
<code>display.labels</code>	Logical. Should data frame label be displayed in the title section? Default is TRUE. To change this default value globally, see <a href="#">st_options</a> .
<code>max.distinct.values</code>	The maximum number of values to display frequencies for. If variable has more distinct values than this number, the remaining frequencies will be reported as a whole, along with the number of additional distinct values. Defaults to 10.

<code>trim.strings</code>	Logical; for character variables, should leading and trailing white space be removed? Defaults to FALSE. See <i>details</i> section.
<code>max.string.width</code>	Limits the number of characters to display in the frequency tables. Defaults to 25.
<code>split.cells</code>	A numeric argument passed to <code>pander</code> . It is the number of characters allowed on a line before splitting the cell. Defaults to 40.
<code>split.tables</code>	<b>pander</b> argument which determines the maximum width of a table. Keeping the default value (Inf) is recommended.
<code>tmp.img.dir</code>	Character. Directory used to store temporary images when rendering <code>dfSummary()</code> with <code>'method = "pander"</code> , <code>'plain.ascii = TRUE'</code> and <code>'style = "grid"</code> . See <i>Details</i> .
<code>silent</code>	Logical. Hide console messages. FALSE by default. To change this value globally, see <code>st_options</code> .
<code>...</code>	Additional arguments passed to <code>pander</code> .

## Details

The default `plain.ascii = TRUE` option is there to make results appear cleaner in the console. When used in a context of *rmarkdown* rendering, set this option to FALSE.

When the `trim.strings` is set to TRUE, trimming is done *before* calculating frequencies, so those will be impacted accordingly.

Specifying `tmp.img.dir` allows producing results consistent with pandoc styling while also showing *png* graphs. Due to the fact that in Pandoc, column widths are determined by the length of cell contents **even if said content is merely a link to an image**, we cannot use the standard R temporary directory to store the images. We need a shorter path; on Mac OS and Linux, using `"/tmp"` is a sensible choice, since this directory is cleaned up automatically on a regular basis. On Windows however, there is no such convenient directory and the user will have to choose a directory and cleanup the temporary images manually after the document has been rendered. Providing a relative path such as `"img"` is recommended. The maximum length for this parameter is set to 5 characters. It can be set globally using `st_options`; for example: `st_options(tmp.img.dir = ".")`.

## Value

A data frame with additional class `summarytools` containing as many rows as there are columns in `x`, with attributes to inform `print` method. Columns in the output data frame are:

**No** Number indicating the order in which column appears in the data frame.

**Variable** Name of the variable, along with its class(es).

**Label** Label of the variable (if applicable).

**Stats / Values** For factors, a list of their values, limited by the `max.distinct.values` parameter. For character variables, the most common values (in descending frequency order), also limited by `max.distinct.values`. For numerical variables, common univariate statistics (mean, std. deviation, min, med, max, IQR and CV).

**Freqs (% of Valid)** For factors and character variables, the frequencies and proportions of the values listed in the previous column. For numerical vectors, number of distinct values, or frequency of distinct values if their number is not greater than `max.distinct.values`.

**Text Graph** An ascii histogram for numerical variables, and ascii barplot for factors and character variables.

**Valid** Number and proportion of valid values.

**Missing** Number and proportion of missing (NA and NAN) values.

### Author(s)

Dominic Comtois, <dominic.comtois@gmail.com>

### Examples

```
data("tobacco")
saved_x11_option <- st_options("use.x11")
st_options(use.x11 = FALSE)
dfSummary(tobacco)

# Exclude some columns
dfSummary(tobacco, varnumbers = FALSE, valid.col = FALSE)

# Limit number of categories to be displayed for factors / categorical data
dfSummary(tobacco, max.distinct.values = 5, style = "grid")

# Using stby()
stby(tobacco, tobacco$gender, dfSummary)

st_options(use.x11 = saved_x11_option)

## Not run:

# Show in Viewer or browser (view: no capital V!)
view(dfSummary(iris))

# Rmarkdown-ready
dfSummary(tobacco, style = "rmarkdown", plain.ascii = TRUE,
          varnumbers = FALSE, valid.col = FALSE, tmp.img.dir = "./img")

# Using group_by()
tobacco %>% group_by(gender) %>% dfSummary()

## End(Not run)
```

**Description**

Jeu de donnees simulees contenant les notes de 30 etudiants, avec les colonnes suivantes:

- etudiant Nom de l'etudiant.
- sexe Variable categorielle (facteur). Deux niveaux: "Fille", "Garcon".
- francais Note en francais (numerique).
- math Note en maths (numerique).
- geographie Note en geographie (numerique).
- histoire Note en histoire (numerique).
- economie Note en economie (numerique).
- anglais Note en anglais (numerique).

**Usage**

```
data(examens)
```

**Format**

Un data frame de 30 rangees et 8 colonnes

**Details**

Donnees simulees. Les notes de chaque etudiant sont centrees autour d'une moyenne personnelle et ecart-type randomises.

A copy of this dataset is **available in English** under the name "exams".

---

exams

*Report Cards - Simulated Data*

---

**Description**

A simulated dataset with grades for hypothetical 30 students, with the following variables:

- student Student's name.
- gender Factor with 2 levels: "Girl", "Boy".
- french French Grade (numerical).
- math Math Grade (numerical).
- geography Geography Grade (numerical).
- history History Grade (numerical).
- economics Economics Grade (numerical).
- english English Grade (numerical).

**Usage**

```
data(exams)
```

**Format**

A data frame with 30 rows and 8 variables

**Details**

All names and grades are simulated. Grades for each student are centered around a personal randomized average and standard deviation.

A copy of this dataset is also **available in French** under the name “examens”.

---

freq

*Frequency Tables for Factors and Other Discrete Data*

---

**Description**

Displays weighted or unweighted frequencies, including <NA> counts and proportions.

**Usage**

```
freq(  
  x,  
  var = NULL,  
  round.digits = st_options("round.digits"),  
  order = "default",  
  style = st_options("style"),  
  plain.ascii = st_options("plain.ascii"),  
  justify = "default",  
  cumul = st_options("freq.cumul"),  
  totals = st_options("freq.totals"),  
  report.nas = st_options("freq.report.nas"),  
  rows = numeric(),  
  missing = "",  
  display.type = TRUE,  
  display.labels = st_options("display.labels"),  
  headings = st_options("headings"),  
  weights = NA,  
  rescale.weights = FALSE,  
  ...  
)
```

**Arguments**

<code>x</code>	Factor or vector, or data frame when <code>y</code> is also provided, usually in a piped call.
<code>var</code>	Unquoted expression referring to a specific column in <code>x</code> . Provides support for piped function calls (e.g. <code>df %&gt;% freq(some_var)</code> ).
<code>round.digits</code>	Number of significant digits to display. Defaults to 2 and can be set globally; see <a href="#">st_options</a> .
<code>order</code>	Ordering of rows in frequency table; “names” (default for non-factors), “levels” (default for factors), or “freq” (from most frequent to less frequent). To invert the order, place a minus sign before or after the word. “-freq” will thus display the items starting from the lowest in frequency to the highest, and so forth.
<code>style</code>	Style to be used by <a href="#">pander</a> when rendering output table; One of “simple” (default), “grid”, or “rmarkdown” This option can be set globally; see <a href="#">st_options</a> .
<code>plain.ascii</code>	Logical. <a href="#">pander</a> argument; when TRUE, no markup characters will be used (useful when printing to console). Defaults to TRUE unless <code>style = 'rmarkdown'</code> , in which case it will be set to FALSE automatically. To change the default value globally, see <a href="#">st_options</a> .
<code>justify</code>	String indicating alignment of columns. By default (“default”), “right” is used for text tables and “center” is used for <i>html</i> tables. You can force it to one of “left”, “center”, or “right”.
<code>cumul</code>	Logical. Set to FALSE to hide cumulative proportions from results. TRUE by default. To change this value globally, see <a href="#">st_options</a> .
<code>totals</code>	Logical. Set to FALSE to hide totals from results. TRUE by default. To change this value globally, see <a href="#">st_options</a> .
<code>report.nas</code>	Logical. Set to FALSE to turn off reporting of missing values. To change this default value globally, see <a href="#">st_options</a> .
<code>rows</code>	Character or numeric vector allowing subsetting of the results. The order given here will be reflected in the resulting table. If a single string is used, it will be used as a regular expression to filter row names.
<code>missing</code>	Characters to display in NA cells. Defaults to “”.
<code>display.type</code>	Logical. Should variable type be displayed? Default is TRUE.
<code>display.labels</code>	Logical. Should variable / data frame labels be displayed? Default is TRUE. To change this default value globally, see <a href="#">st_options</a> .
<code>headings</code>	Logical. Set to FALSE to omit heading section. Can be set globally via <a href="#">st_options</a> .
<code>weights</code>	Vector of weights; must be of the same length as <code>x</code> .
<code>rescale.weights</code>	Logical parameter. When set to TRUE, the total count will be the same as the unweighted <code>x</code> . FALSE by default.
<code>...</code>	Additional arguments passed to <a href="#">pander</a> .

**Details**

The default `plain.ascii = TRUE` option is there to make results appear cleaner in the console. To avoid `rmarkdown` rendering problems, this option is automatically set to FALSE whenever `style = "rmarkdown"` (unless `plain.ascii = TRUE` is made explicit in the function call).

**Value**

A frequency table of class matrix and summarytools with added attributes used by *print* method.

**Author(s)**

Dominic Comtois, <dominic.comtois@gmail.com>

**See Also**

[table](#)

**Examples**

```
data(tobacco)
freq(tobacco$gender)
freq(tobacco$gender, totals = FALSE)

# Ignore NA's, don't show totals, omit headings
freq(tobacco$gender, report.nas = FALSE, totals = FALSE, headings = FALSE)

# In .Rmd documents, use the two following arguments, minimally
freq(tobacco$gender, style="rmarkdown", plain.ascii = FALSE)

# Grouped Frequencies
with(tobacco, stby(diseased, smoker, freq))
(fr_smoker_by_gender <- with(tobacco, stby(smoker, gender, freq)))

# Print html Source
print(fr_smoker_by_gender, method = "render", footnote = NA)

# Order by frequency (+ to -)
freq(tobacco$age.gr, order = "freq")

# Order by frequency (- to +)
freq(tobacco$age.gr, order = "-freq")

# Use the 'rows' argument to display only the 10 most common items
freq(tobacco$age.gr, order = "freq", rows = 1:10)

## Not run:
# Display rendered html results in RStudio's Viewer
# notice 'view()' is NOT written with capital V
# If working outside RStudio, Web browser is used instead
# A temporary file is stored in temp dir
view(fr_smoker_by_gender)

# Display rendered html results in default Web browser
# A temporary file is stored in temp dir here too
print(fr_smoker_by_gender, method = "browser")

# Write results to text file (.txt, .md, .Rmd) or html file (.html)
print(fr_smoker_by_gender, method = "render", file = "fr_smoker_by_gender.md)
```

```
print(fr_smoker_by_gender, method = "render", file = "fr_smoker_by_gender.html")  
## End(Not run)
```

---

label

*Get or Set Variable or Data Frame Labels*

---

### Description

Assigns a label to a vector or data frame, or returns value stored in the object's label attribute (or NA if none exists).

### Usage

```
label(x, all = FALSE, fallback = FALSE, simplify = FALSE)  
label(x) <- value
```

### Arguments

x	An R object to extract labels from.
all	Logical. When x is a data frame, setting this argument to TRUE will make the function return all variable labels. By default, its value is FALSE, so that if x is a data frame, it is the data frame's label that will be returned.
fallback	a logical value indicating if labels should fallback to object name(s). Defaults to FALSE.
simplify	When x is a data frame and all = TRUE, coerce results to a vector and remove NA's. Default is FALSE.
value	String to be used as label. To clear existing labels, use NA or NULL.

### Note

Loosely based on Gergely Daróczy's [label](#) function.

### Author(s)

Dominic Comtois, <dominic.comtois@gmail.com>.

---

print.list

*Print Method for Objects of Class "list"*


---

### Description

Displays a list comprised of summarytools objects created with lapply.

### Usage

```
## S3 method for class 'list'
print(x, method = "pander", file = "",
      append = FALSE, report.title = NA, table.classes = NA,
      bootstrap.css = st_options('bootstrap.css'),
      custom.css = st_options('custom.css'), silent = FALSE,
      footnote = st_options('footnote'), collapse = 0,
      escape.pipe = st_options('escape.pipe'), ...)
```

### Arguments

x	A summarytools object that was generated with <a href="#">freq</a> , <a href="#">descr</a> , <a href="#">ctable</a> or <a href="#">dfSummary</a> .
method	One of “pander”, “viewer”, “browser”, or “render”. For print(), default is “pander”; for view(), default is “viewer”. If “viewer” is used outside <i>RStudio</i> , “browser” will be used instead. Use “render” if function is called from an Rmd document.
file	File name to write output to. Defaults to “”.
append	Logical. When file argument is supplied, this indicates whether to append output to existing file. FALSE by default.
report.title	For <i>html</i> reports, this goes into the <title> tag. Defaults to NA, in which case <title> will be generic.
table.classes	Character. Additional classes to assign to output tables. All <i>Bootstrap css</i> classes can be used. It also allows user-defined classes (see custom.css parameter). See <i>details</i> section. NA by default.
bootstrap.css	Logical. Set to FALSE to omit <i>Bootstrap css</i> . TRUE by default. To change this default value globally, see <a href="#">st_options</a> .
custom.css	Path to a user-defined <i>.css</i> file. Classes defined in this file can be used in the table.classes parameter. NA by default. To change this default value globally, see <a href="#">st_options</a> .
silent	Hide console messages (such as ignored variables or NaN to NA transformations).
footnote	footnote in <i>html</i> output. When set to “default”, this is the package name and version, R version, and current date). Has no effect when method is “pander”. Set to “default”, provide your own text, or set to NA to omit. To change this default value globally, see <a href="#">st_options</a> .
collapse	Numeric. 0 by default. Set to 1 to make freq() sections collapsible (when clicking on the variable name). Future versions might provide alternate collapsing options.

escape.pipe	Logical. Set to TRUE when using style='grid' and file argument is supplied if the intent is to generate a text file that can be converted to other formats using <i>Pandoc</i> . To change this default value globally, see <a href="#">st_options</a> .
...	Additional arguments can be used to override parameters stored as attributes in the object being printed. See <i>Details</i> section.

---

print.stby

---

*Print Method for Objects of Class "stby"*


---

## Description

Displays a list comprised of summarytools objects created with stby.

## Usage

```
## S3 method for class 'stby'
print(x, method = "pander", file = "",
      append = FALSE, report.title = NA, table.classes = NA,
      bootstrap.css = st_options('bootstrap.css'),
      custom.css = st_options('custom.css'), silent = FALSE,
      footnote = st_options('footnote'),
      escape.pipe = st_options('escape.pipe'), ...)
```

## Arguments

x	A summarytools object that was generated with <a href="#">freq</a> , <a href="#">descr</a> , <a href="#">ctable</a> or <a href="#">dfSummary</a> .
method	One of "pander", "viewer", "browser", or "render". For print(), default is "pander"; for view(), default is "viewer". If "viewer" is used outside <i>RStudio</i> , "browser" will be used instead. Use "render" if function is called from an Rmd document.
file	File name to write output to. Defaults to "".
append	Logical. When file argument is supplied, this indicates whether to append output to existing file. FALSE by default.
report.title	For <i>html</i> reports, this goes into the <title> tag. Defaults to NA, in which case <title> will be generic.
table.classes	Character. Additional classes to assign to output tables. All <i>Bootstrap css</i> classes can be used. It also allows user-defined classes (see custom.css parameter). See <i>details</i> section. NA by default.
bootstrap.css	Logical. Set to FALSE to omit <i>Bootstrap css</i> . TRUE by default. To change this default value globally, see <a href="#">st_options</a> .
custom.css	Path to a user-defined .css file. Classes defined in this file can be used in the table.classes parameter. NA by default. To change this default value globally, see <a href="#">st_options</a> .
silent	Hide console messages (such as ignored variables or NaN to NA transformations).

footnote	footnote in <i>html</i> output. When set to “default”, this is the package name and version, R version, and current date). Has no effect when method is “pander”. Set to “default”, provide your own text, or set to NA to omit. To change this default value globally, see <a href="#">st_options</a> .
escape.pipe	Logical. Set to TRUE when using style='grid' and file argument is supplied if the intent is to generate a text file that can be converted to other formats using <i>Pandoc</i> . To change this default value globally, see <a href="#">st_options</a> .
...	Additional arguments can be used to override parameters stored as attributes in the object being printed. See <i>Details</i> section.

---

```
print.summarytools    print.summarytools
```

---

## Description

Display summarytools objects in the console, in Web Browser or in *RStudio*'s Viewer, or write content to file.

## Usage

```
## S3 method for class 'summarytools'
print(x, method = "pander", file = "",
      append = FALSE, report.title = NA, table.classes = NA,
      bootstrap.css = st_options('bootstrap.css'),
      custom.css = st_options('custom.css'), silent = FALSE,
      footnote = st_options('footnote'), max.tbl.height = Inf,
      collapse = 0, escape.pipe = st_options("escape.pipe"), ...)
```

## Arguments

x	A summarytools object that was generated with <a href="#">freq</a> , <a href="#">descr</a> , <a href="#">ctable</a> or <a href="#">dfSummary</a> .
method	One of “pander”, “viewer”, “browser”, or “render”. For <code>print()</code> , default is “pander”; for <code>view()</code> , default is “viewer”. If “viewer” is used outside <i>RStudio</i> , “browser” will be used instead. Use “render” if function is called from an Rmd document.
file	File name to write output to. Defaults to “”.
append	Logical. When file argument is supplied, this indicates whether to append output to existing file. FALSE by default.
report.title	For <i>html</i> reports, this goes into the <title> tag. Defaults to NA, in which case <title> will be generic.
table.classes	Character. Additional classes to assign to output tables. All <i>Bootstrap css</i> classes can be used. It also allows user-defined classes (see <code>custom.css</code> parameter). See <i>details</i> section. NA by default.
bootstrap.css	Logical. Set to FALSE to omit <i>Bootstrap css</i> . TRUE by default. To change this default value globally, see <a href="#">st_options</a> .

custom.css	Path to a user-defined .css file. Classes defined in this file can be used in the table.classes parameter. NA by default. To change this default value globally, see <a href="#">st_options</a> .
silent	Hide console messages (such as ignored variables or NaN to NA transformations).
footnote	footnote in <i>html</i> output. When set to “default”, this is the package name and version, R version, and current date). Has no effect when method is “pander”. Set to “default”, provide your own text, or set to NA to omit. To change this default value globally, see <a href="#">st_options</a> .
max.tbl.height	Maximum table height (in pixels) allowed in rendered dfSummary() tables. When this argument is used, results will show up in a <div> with the specified height and a scroll bar. Intended to be used in <i>Rmd</i> documents. Has no effect when method is “pander”. Inf by default.
collapse	Numeric. 0 by default. Set to 1 to make freq() sections collapsible (when clicking on the variable name). Future versions might provide alternate collapsing options.
escape.pipe	Logical. Set to TRUE when using style='grid' and file argument is supplied if the intent is to generate a text file that can be converted to other formats using <i>Pandoc</i> . To change this default value globally, see <a href="#">st_options</a> .
...	Additional arguments can be used to override parameters stored as attributes in the object being printed. See <i>Details</i> section.

## Details

Plain *ascii* and *rmarkdown* tables are generated via [pander](#). See *References* section for a list of all available *pander* options.

The following additional arguments can be used to override formatting attributes stored in the object to be printed. Refer to the function’s documentation for details on these arguments.

- style
- round.digits (except for [dfSummary](#) objects)
- plain.ascii
- justify
- headings
- display.labels
- varnumbers ([dfSummary](#) objects)
- labels.col ([dfSummary](#) objects)
- graph.col ([dfSummary](#) objects)
- valid.col ([dfSummary](#) objects)
- na.col ([dfSummary](#) objects)
- col.widths ([dfSummary](#) objects)
- split.tables
- report.nas ([freq](#) objects)
- display.type ([freq](#) objects)

- missing ([freq](#) objects)
- totals ([freq](#) and [ctable](#) objects)
- caption ([freq](#) and [ctable](#) objects)

The following additional arguments can be used to override heading elements to be printed:

- `Data.frame`
- `Data.frame.label`
- `Variable`
- `Variable.label`
- `Group`
- `date`
- `Weights` ([freq](#) & [descr](#) objects)
- `Data.type` ([freq](#) objects)
- `Row.variable` ([ctable](#) objects)
- `Col.variable` ([ctable](#) objects)

### Value

NULL when `method="pander"`; a file path (returned invisibly) when `method="viewer"` or `method="browser"`. In the latter case, the file path is also passed to `shell.exec` so the document is opened in default Web Browser.

### Author(s)

Dominic Comtois, <[dominic.comtois@gmail.com](mailto:dominic.comtois@gmail.com)>

### References

[RStudio Summarytools on GitHub](#) [List of pander options on GitHub](#) [Bootstrap Cascading Stylesheets](#)

### See Also

[pander](#)

### Examples

```
## Not run:
data(tobacco)
view(dfSummary(tobacco), footnote = NA)

## End(Not run)
data(exams)
print(freq(exams$gender), style = 'markdown')
print(descr(exams), headings = FALSE)
```

---

stby *Obtain Grouped Statistics With summarytools*

---

### Description

This is essentially the base [by](#) function, except for the class of the returned object.

### Usage

```
stby(data, INDICES, FUN, ..., simplify = TRUE)
```

### Arguments

data	an R object, normally a data frame, possibly a matrix.
INDICES	a grouping variable or a list of grouping variables, each of length <code>nrow(data)</code> .
FUN	a function to be applied to (usually data-frame) subsets of data.
...	Further arguments to FUN.
simplify	Logical. Essentially a placeholder to maintain full compatibility with base <code>by</code> . For more details, see <a href="#">tapply</a> .

### Value

An object having classes “list” and “summarytools”.

### See Also

[by](#), [tapply](#)

### Examples

```
data("tobacco")
with(tobacco, stby(BMI, gender, descr))
```

---

st\_css *Include **summarytools**' css Into Active Document*

---

### Description

Generates the *css* needed by **summarytools** in *Rmarkdown* documents.

### Usage

```
st_css(main = TRUE, global = FALSE, bootstrap = FALSE, style.tag = TRUE, ...)
```

**Arguments**

main	Logical. Include <i>summarytools.css</i> file. TRUE by default. Affects only <b>summarytools</b> objects.
global	Logical. Include the additional <i>summarytools-global.css</i> file, which affects all content in the document. Provides control over objects that were not <i>html-rendered</i> ; in particular, table widths and vertical alignment are modified to improve layout. FALSE by default.
bootstrap	Logical. Include <i>bootstrap.min.css</i> . FALSE by default.
style.tag	Logical. Includes the opening and closing <style> tags. TRUE by default.
...	Character. Path to additional <i>css</i> file(s) to include.

**Details**

Typically the function is called right after the initial setup chunk of an *Rmarkdown* document, in a chunk having options `echo=FALSE` and `results="asis"`.

**Author(s)**

Dominic Comtois, <dominic.comtois@gmail.com>

---

st\_options

*Query and set summarytools global options*

---

**Description**

To list all *summarytools* global options, call without arguments. To display the value of one or several options, enter the name(s) of the option(s) in a character vector as sole argument. To **reset** all options, use single unnamed argument 'reset' or  $\emptyset$ .

**Usage**

```
st_options(
  option = NULL,
  value = NULL,
  style = "simple",
  plain.ascii = TRUE,
  round.digits = 2,
  headings = TRUE,
  footnote = "default",
  display.labels = TRUE,
  bootstrap.css = TRUE,
  custom.css = NA,
  escape.pipe = FALSE,
  freq.cumul = TRUE,
  freq.totals = TRUE,
  freq.report.nas = TRUE,
```

```

freq.ignore.threshold = 25,
freq.silent = FALSE,
ctable.prop = "r",
ctable.totals = TRUE,
descr.stats = "all",
descr.transpose = FALSE,
descr.silent = FALSE,
dfSummary.style = "multiline",
dfSummary.varnumbers = TRUE,
dfSummary.labels.col = TRUE,
dfSummary.valid.col = TRUE,
dfSummary.na.col = TRUE,
dfSummary.graph.col = TRUE,
dfSummary.graph.magnif = 1,
dfSummary.silent = FALSE,
tmp.img.dir = NA,
subtitle.emphasis = TRUE,
lang = "en",
use.x11 = TRUE
)

```

## Arguments

option	option(s) name(s) to query (optional). Can be a single string or a vector of strings to query multiple values.
value	The value you wish to assign to the option specified in the first argument. This is for backward-compatibility, as all options can now be set via their own parameter. That is, instead of <code>st_options('plain.ascii', FALSE)</code> , use <code>st_options(plain.ascii = FALSE)</code> .
style	Character. One of “simple” (default), “rmarkdown”, or “grid”. Does not apply to <a href="#">dfSummary</a> .
plain.ascii	Logical. TRUE by default. Set to FALSE when using <code>summarytools</code> with a rendering tool such as <code>knitr</code> or when creating <code>rmarkdown</code> output files to be converted with <code>Pandoc</code> . Note however that its value will automatically be set to FALSE whenever <code>style</code> is set to “rmarkdown”.
round.digits	Numeric. Defaults to 2.
headings	Logical. Set to FALSE to remove all headings from outputs. Only the tables will be printed out, except when <code>by</code> or <code>lapply</code> are used. In that case, the variable or the group will still appear before the tables. FALSE by default.
footnote	Character. When the default value “default” is used, the package name & version, as well as the R version number are displayed below <code>html</code> outputs. Set to NA to omit the footnote, or provide a custom string. Applies only to <code>html</code> outputs.
display.labels	Logical. TRUE by default. Set to FALSE to omit data frame and variable labels in the headings section.
bootstrap.css	Logical. Specifies whether to Include <i>Bootstrap css</i> in <code>html</code> reports <code>head</code> section outputs. Defaults to TRUE. Set to FALSE when using the “render” method inside a <code>shiny</code> app to avoid interacting with the app’s layout.

<code>custom.css</code>	Character. Path to an additional, user-provided, CSS file. NA by default.
<code>escape.pipe</code>	Logical. Set to TRUE if Pandoc conversion is your goal and you have unsatisfying results with grid or multiline tables. FALSE by default.
<code>freq.cumul</code>	Logical. Corresponds to the <code>cumul</code> parameter of <code>freq</code> . TRUE by default.
<code>freq.totals</code>	Logical. Corresponds to the <code>totals</code> parameter of <code>freq</code> . TRUE by default.
<code>freq.report.nas</code>	Logical. Corresponds to the <code>display.nas</code> parameter of <code>freq</code> . TRUE by default.
<code>freq.ignore.threshold</code>	Numeric. Number of distinct values above which numerical variables are ignored when calling <code>freq</code> with a whole data frame as main argument. Defaults to 25.
<code>freq.silent</code>	Logical. Hide console messages. FALSE by default.
<code>ctable.prop</code>	Character. Corresponds to the <code>prop</code> parameter of <code>ctable</code> . Defaults to “r” (row).
<code>ctable.totals</code>	Logical. Corresponds to the <code>totals</code> parameter of <code>ctable</code> . TRUE by default.
<code>descr.stats</code>	Character. Corresponds to the <code>stats</code> parameter of <code>descr</code> . Defaults to “all”.
<code>descr.transpose</code>	Logical. Corresponds to the <code>transpose</code> parameter of <code>descr</code> . FALSE by default.
<code>descr.silent</code>	Logical. Hide console messages. FALSE by default.
<code>dfSummary.style</code>	Character. “multiline” by default. Set to “grid” for <i>Rmarkdown</i> documents.
<code>dfSummary.varnumbers</code>	Logical. In <code>dfSummary</code> , display variable numbers in the first column. Defaults to TRUE.
<code>dfSummary.labels.col</code>	Logical. In <code>dfSummary</code> , display variable labels Defaults to TRUE.
<code>dfSummary.valid.col</code>	Logical. In <code>dfSummary</code> , include column indicating count and proportion of valid (non-missing). TRUE by default.
<code>dfSummary.na.col</code>	Logical. In <code>dfSummary</code> , include column indicating count and proportion of missing (NA) values. TRUE by default.
<code>dfSummary.graph.col</code>	Logical. Display barplots / histograms column in <code>dfSummary html</code> reports. TRUE by default.
<code>dfSummary.graph.magnif</code>	Numeric. Magnification factor, useful if <code>dfSummary</code> graphs show up too large (then use a value between 0 and 1) or too small (use a value > 1). Must be positive. Default to 1.
<code>dfSummary.silent</code>	Logical. Hide console messages. FALSE by default.
<code>tmp.img.dir</code>	Character. Directory used to store temporary images. See <i>Details</i> section of <code>dfSummary</code> . NA by default.

subtitle.emphasis	Logical. Controls the formatting of the “subtitle” (the <i>data frame</i> or <i>variable</i> name, depending on context. When TRUE (default), “h4” is used, while with FALSE, “bold” / “strong” is used. Hence the default value gives it stronger emphasis.
lang	Character. A 2-letter code for the language to use in the produced outputs. Currently available languages are: ‘en’, ‘es’, ‘fr’, ‘pt’, ‘ru’, and ‘tr’.
use.x11	Logical. TRUE by default. In console-only environments, setting this to FALSE will prevent errors occurring when <code>dfSummary</code> tries to generate <i>html</i> “Base64-encoded” graphs.

## Details

To learn more about summarytools options, see the [project’s GitHub page](#).

## Examples

```
## Not run:
# show all summarytools global options
st_options()

# show a specific option
st_options("round.digits")

# show two (or more) options
st_options(c("plain.ascii", "style", "footnote"))

# set one option
st_options(plain.ascii = FALSE)

# set one options, legacy way
st_options("plain.ascii", FALSE)

# set several options
st_options(plain.ascii = FALSE,
           style       = "rmarkdown",
           footnote    = NA)

# reset all
st_options('reset')
# ... or
st_options(0)

## End(Not run)
```

## Description

Jeu de données simulées de 1000 sujets, avec les colonnes suivantes:

- sexe Variable catégorielle (facteur), 2 niveaux: “F” et “M”. Environ 500 chacun.
- age Numérique.
- age.gr Groupe d’âge - variable catégorielle, 4 niveaux.
- IMC Indice de masse corporelle (numérique).
- fumeur Variable catégorielle, 2 niveaux (“Oui” / “Non”).
- cigs.par.jour Nombre de cigarettes fumées par jour (numérique).
- malade Variable catégorielle, 2 niveaux (“Oui” / “Non”).
- maladie Champs texte.
- ponderation Poids échantillonnel (numérique).

## Usage

```
data(tabagisme)
```

## Format

Un data frame de 1000 rangées et 9 colonnes

## Details

Note sur la simulation des données: la probabilité pour un sujet de tomber dans la catégorie “malade” est basée sur une fonction arbitraire faisant intervenir l’âge, l’IMC et le nombre de cigarettes fumées par jour.

A copy of this dataset is **available in English** under the name “tobacco”.

---

tb

*Convert Summarytools Objects into Tibbles*

---

## Description

Make a tidy dataset out of `freq()` or `descr()` outputs

## Usage

```
tb(x, order = 1, na.rm = FALSE, drop.var.col = FALSE)
```

**Arguments**

<code>x</code>	a <code>freq()</code> or <code>descr()</code> output object.
<code>order</code>	Integer. Useful for grouped results produced with <code>stby</code> or <code>dplyr::group_by</code> . When set to 1 (default), the ordering is done using the grouping variables first. When set to 2, the ordering is first determined by the variable column for <code>descr</code> or the column displaying the variable values for <code>freq</code> . When set to 3, the same ordering as with 2 is used, but columns are rearranged to reflect this sort order.
<code>na.rm</code>	Logical. For <code>freq</code> objects, remove <NA> rows (or (Missing) rows if NA values were made explicit with <code>forcats::fct_explicit_na()</code> ). Has no effect on <code>descr</code> objects.
<code>drop.var.col</code>	Logical. For <code>descr</code> objects, drop the variable column. This is possible only when statistics are produced for a single variable; for multiple variables, this argument is ignored. FALSE by default.

**Value**

A `tibble` which is constructed following the *tidy* principles.

**Examples**

```
tb(freq(iris$Species))
tb(descr(iris))

data("tobacco")
tb(stby(tobacco, tobacco$gender, descr))
```

---

tobacco

*Tobacco Use and Health - Simulated Dataset*


---

**Description**

A simulated datasets of 1,000 subjects, with the following variables:

**Usage**

```
data(tobacco)
```

**Format**

A data frame with 1000 rows and 9 variables

**Details**

- gender Factor with 2 levels: “F” and “M”, having roughly 500 of each.
- age Numerical.
- age.gr Factor with 4 age categories.
- BMI Body Mass Index (numerical).
- smoker Factor (“Yes” / “No”).
- cigs.per.day Number of cigarettes smoked per day (numerical).
- diseased Factor (“Yes” / “No”).
- disease Character.
- samp.wgts Sampling weights (numerical).

A note on simulation: probability for an individual to fall into category “diseased” is based on an arbitrary function involving age, BMI and number of cigarettes per day.

A copy of this dataset is also **available in French** under the name “tabagisme”.

---

unlabel

*Clear Variable and Data Frame Label(s)*

---

**Description**

Returns the object with all labels removed. Both the “label” attribute and **Hmisc**’s “labelled” class are removed.

**Usage**

```
unlabel(x)
```

**Arguments**

x                    An R object to remove labels from.

**Author(s)**

Dominic Comtois, <dominic.comtois@gmail.com>.

**See Also**

[label](#)

---

use_custom_lang	<i>Import and use a custom language</i>
-----------------	---

---

### Description

If your language is not available or if you wish to customize the outputs' language to suit your preference, you can set up a translations file (see details) and import it with this function.

### Usage

```
use_custom_lang(file)
```

### Arguments

`file` Character. The path to the translations file.

### Details

To build the translations file, copy the *language\_template.csv* file located in the installed package's *includes* directory and fill out the 'custom' column using a text editor, leaving column titles unchanged. The file must also retain its *UTF-8* encoding.

---

view	<i>view</i>
------	-------------

---

### Description

Visualize results in RStudio's Viewer or in Web Browser

### Usage

```
view(x, method = "viewer", file = "", append = FALSE,  
     report.title = NA, table.classes = NA,  
     bootstrap.css = st_options("bootstrap.css"),  
     custom.css = st_options("custom.css"), silent = FALSE,  
     footnote = st_options("footnote"),  
     max.tbl.height = Inf,  
     collapse = 0,  
     escape.pipe = st_options("escape.pipe"), ...)
```

## Arguments

x	A summarytools object that was generated with <a href="#">freq</a> , <a href="#">descr</a> , <a href="#">ctable</a> or <a href="#">dfSummary</a> .
method	One of “pander”, “viewer”, “browser”, or “render”. For <code>print()</code> , default is “pander”; for <code>view()</code> , default is “viewer”. If “viewer” is used outside <i>RStudio</i> , “browser” will be used instead. Use “render” if function is called from an Rmd document.
file	File name to write output to. Defaults to “”.
append	Logical. When file argument is supplied, this indicates whether to append output to existing file. FALSE by default.
report.title	For <i>html</i> reports, this goes into the <title> tag. Defaults to NA, in which case <title> will be generic.
table.classes	Character. Additional classes to assign to output tables. All <i>Bootstrap css</i> classes can be used. It also allows user-defined classes (see <code>custom.css</code> parameter). See <i>details</i> section. NA by default.
bootstrap.css	Logical. Set to FALSE to omit <i>Bootstrap css</i> . TRUE by default. To change this default value globally, see <a href="#">st_options</a> .
custom.css	Path to a user-defined <code>.css</code> file. Classes defined in this file can be used in the <code>table.classes</code> parameter. NA by default. To change this default value globally, see <a href="#">st_options</a> .
silent	Hide console messages (such as ignored variables or NaN to NA transformations).
footnote	footnote in <i>html</i> output. When set to “default”, this is the package name and version, R version, and current date). Has no effect when method is “pander”. Set to “default”, provide your own text, or set to NA to omit. To change this default value globally, see <a href="#">st_options</a> .
max.tbl.height	Maximum table height (in pixels) allowed in rendered <code>dfSummary()</code> tables. When this argument is used, results will show up in a <div> with the specified height and a scroll bar. Intended to be used in <i>Rmd</i> documents. Has no effect when method is “pander”. Inf by default.
collapse	Numeric. 0 by default. Set to 1 to make <code>freq()</code> sections collapsible (when clicking on the variable name). Future versions might provide alternate collapsing options.
escape.pipe	Logical. Set to TRUE when using <code>style='grid'</code> and file argument is supplied if the intent is to generate a text file that can be converted to other formats using <i>Pandoc</i> . To change this default value globally, see <a href="#">st_options</a> .
...	Additional arguments can be used to override parameters stored as attributes in the object being printed. See <i>Details</i> section.

## Details

Creates *html* outputs and opens them in the Viewer, in a browser or renders the *html* code appropriate for *Rmarkdown* documents.

For objects of class “summarytools”, this function is simply a wrapper around `print.summarytools` with `method` set to “viewer”.

Objects of class “by” or “list” are dispatched to the present function, as it can manage multiple objects, whereas `print.summarytools` can only manage one object at a time.

---

`what.is`*Obtain Extended Properties of Objects*

---

## Description

Combination of most common “macro-level” functions that describe an object.

## Usage

```
what.is(x, show.all = FALSE, ignore.size.warn = FALSE)
```

## Arguments

<code>x</code>	Any object.
<code>show.all</code>	Logical. When TRUE, all logical results from the “is.” <i>identifier functions</i> will be displayed, with a warning message when the result applies only to the first element in the structure. FALSE by default.
<code>ignore.size.warn</code>	Set to TRUE to force execution of the function for large (> 20 K-bytes) objects. Defaults to FALSE.

## Details

An alternative to calling in turn `class`, `typeof`, `dim`, and so on. A call to this function will readily give all this information at once.

## Value

A list with following elements:

**properties** A data frame with the class(es), type, mode and storage mode of the object as well as the dim, length and object.size.

**attributes.lengths** A named character vector giving all attributes (*c.f.* “names”, “row.names”, “class”, “dim”, and so forth) along with their length.

**extensive.is** A character vector of all the *identifier functions*. (starting with “is.”) that yield TRUE when used with `x` as argument.

**function.type** When `x` is a function, results of `f$type` are added.

## Author(s)

Dominic Comtois, <dominic.comtois@gmail.com>

## See Also

`class`, `typeof`, `mode`, `storage.mode`, `dim`, `length`, `is.object`, `otype`, `object.size`, `f$type`

**Examples**

```
what.is(1)
what.is(NaN)
what.is(iris3)
what.is(print)
what.is(what.is)
```

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