Package ‘labelled’

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**copy_labels**

*Copy variable and value labels and SPSS style missing value*

**Description**

This function copies variable and value labels (including missing values) from one vector to another or from one data frame to another data frame. For data frame, labels are copied according to variable names, and only if variables are the same type in both data frames.

**Usage**

```r
copy_labels(from, to)
```

```r
copy_labels_from(to, from)
```

**Arguments**

- `from` A vector or a data.frame (or tibble) to copy labels from.
- `to` A vector or data.frame (or tibble) to copy labels to.

**Details**

Some base R functions like `subset` drop variable and value labels attached to a variable. `copy_labels` could be used to restore these attributes.

`copy_labels_from` is intended to be used with `dplyr` syntax, see examples.
Examples

library(dplyr)

df <- tibble(
  id = 1:3,
  happy = factor(c('yes', 'no', 'yes'),
    levels = c('yes', 'no'),
    labels = c(female = 1, male = 2))
)

set_variable_labels(
  id = "Individual ID",
  happy = "Are you happy?",
  gender = "Gender of respondent"
)

var_label(df)

fdf <- df %>% filter(id < 3)

var_label(fdf)  # some variable labels have been lost

fdf <- fdf %>% copy_labels_from(df)

var_label(fdf)

# Alternative syntax

fdf <- subset(df, id < 3)

fdf <- copy_labels(from = df, to = fdf)

---

labelled  

Create a labelled vector.

Description

A labelled vector is a common data structure in other statistical environments, allowing you to assign text labels to specific values.

Usage

labelled(x, labels, label = NULL)

is.labelled(x)

Arguments

x  A vector to label. Must be either numeric (integer or double) or character.

labels  A named vector or NULL. The vector should be the same type as x. Unlike factors, labels don’t need to be exhaustive: only a fraction of the values might be labelled.

label  A short, human-readable description of the vector.

Value

An object of class "haven_labelled" or "haven_labelled_spss".


See Also

`labelled(haven)`

`haven::is.labelled()` (*haven*)

Examples

```r
s1 <- labelled(c("M", "M", "F"), c(Male = "M", Female = "F"))
s1
str(s1)
s2 <- labelled(c(1, 1, 2), c(Male = 1, Female = 2),
               label="Assigned sex at birth")
s2
str(s2)

# Unfortunately it's not possible to make as.factor() work for labelled objects
# so instead use to_factor(). This works for all types of labelled vectors.
to_factor(s1)
to_factor(s1, levels = "prefixed")
to_factor(s2)

# Other statistical software supports multiple types of missing values
s3 <- labelled_spss(c(1, 1, 2, 2, 8, 9),
                    c(Male = 1, Female = 2, Refused = 8, "Not applicable" = 9),
                    na_values = c(8, 9))
s3
str(s3)
to_factor(s3)
to_factor(s3, user_na_to_na = TRUE)
is.labelled(s1)
```

---

**labelled_spss**  
*Create a labelled vector with SPSS style of missing values.*

**Description**

It is similar to the `labelled` class but it also models SPSS’s user-defined missings, which can be up to three distinct values, or for numeric vectors a range.

**Usage**

```r
labelled_spss(x, labels, na_values = NULL, na_range = NULL, label = NULL)
```

**Arguments**

- `x` A vector to label. Must be either numeric (integer or double) or character.
labels A named vector or NULL. The vector should be the same type as x. Unlike factors, labels don’t need to be exhaustive: only a fraction of the values might be labelled.

na_values A vector of values that should also be considered as missing.

na_range A numeric vector of length two giving the (inclusive) extents of the range. Use -Inf and Inf if you want the range to be open ended.

label A short, human-readable description of the vector.

See Also

labelled_spss (haven)

Examples

x1 <- labelled_spss(1:10, c(Good = 1, Bad = 8), na_values = c(9, 10))
x1
is.na(x1)
x2 <- labelled_spss(1:10, c(Good = 1, Bad = 8), na_range = c(9, Inf))
x2
is.na(x2)

Description

look_for emulates the lookfor Stata command in R. It supports searching into the variable names of regular R data frames as well as into variable labels descriptions. The command is meant to help users finding variables in large datasets.

Usage

look_for(data, ..., labels = TRUE, ignore.case = TRUE, details = FALSE)

lookfor(data, ..., labels = TRUE, ignore.case = TRUE, details = FALSE)

Arguments

data a data frame

... list of keywords, a character string (or several character strings), which can be formatted as a regular expression suitable for a grep pattern, or a vector of keywords; displays all variables if not specified

labels whether or not to search variable labels (descriptions); TRUE by default

ignore.case whether or not to make the keywords case sensitive; TRUE by default (case is ignored during matching)

details add details about each variable (see examples)
Details

The function looks into the variable names for matches to the keywords. If available, variable labels are included in the search scope. Variable labels of data.frame imported with foreign or memisc packages will also be taken into account (see to_labelled).

look_for and lookfor are equivalent.

Value

A data frame featuring the variable position, name and description (if it exists) in the original data frame.

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Source

Based on the behaviour of the lookfor command in Stata.

Examples

```r
look_for(iris)
# Look for a single keyword.
look_for(iris, "petal")
look_for(iris, "s")
# Look for with a regular expression
look_for(iris, "petal\|species")
look_for(iris, "s\$")
# Look for with several keywords
look_for(iris, "pet", "sp")
look_for(iris, "pet", "sp", "width")
# Labelled data
## Not run: require(questionr)
data(fertility)
look_for(women)
look_for(women, "date")
# Display details
look_for(women, details = TRUE)
## End(Not run)
```

---

**mean.haven_labelled**  
Arithmetic mean for numeric labelled vectors

Description

Arithmetic mean for numeric labelled vectors
### Usage

```r
## S3 method for class 'haven_labelled'
mean(x, trim = 0, na.rm = FALSE, ...)
```

#### Arguments

- `x`: a numeric labelled vector.
- `trim`: the fraction (0 to 0.5) of observations to be trimmed from each end of `x`. before the mean is computed. Values of trim outside that range are taken as the nearest endpoint.
- `na.rm`: a logical value indicating whether NA values should be stripped before the computation proceeds.
- `...`: additional arguments to be passed to or from methods.

#### See Also

- `mean`

---

### Description

Get / Set SPSS missing values

#### Usage

- `na_values(x)`
- `na_values(x) <- value`
- `na_range(x)`
- `na_range(x) <- value`
- `set_na_values(.data, ...)`
- `set_na_range(.data, ...)`
- `user_na_to_na(x)`
Arguments

- **x**: A vector.
- **value**: A vector of values that should also be considered as missing (for `na_values`) or a numeric vector of length two giving the (inclusive) extents of the range (for `na_values`, use `-Inf` and `Inf` if you want the range to be open ended).
- **.data**: a data frame
- **...**: name-value pairs of missing values (see examples)

Details

See `labelled_spss` for a presentation of SPSS’s user defined missing values. Note that `is.na` will return TRUE for user defined missing values. You can use `user_na_to_na` to convert user defined missing values to NA.

Value

`na_values` will return a vector of values that should also be considered as missing. `na_range` will return a numeric vector of length two giving the (inclusive) extents of the range.

`set_na_values` and `set_na_range` will return an updated copy of `.data`.

Note

`set_na_values` and `set_na_range` could be used with dplyr.

See Also

`labelled_spss`, `user_na_to_na`

Examples

```r
v <- labelled(c(1,2,2,3,9,1,3,2,NA), c(yes = 1, no = 3, "don’t know" = 9))
v
na_values(v) <- 9
na_values(v)
v
is.na(v)
user_na_to_na(v)
na_values(v) <- NULL
v
na_range(v) <- c(5, Inf)
na_range(v)
v
user_na_to_na(v)
if (require(dplyr)) {
  # setting value labels
  df <- data_frame(s1 = c("M", "M", "F", "F"), s2 = c(1, 1, 2, 9)) %>%
    set_value_labels(s2 = c(yes = 1, no = 2)) %>%
    set_na_values(s2 = 9)
  na_values(df)
```
# removing missing values
df <- df %>% set_na_values(s2 = NULL)
df$s2
}

nolabel_to_na  

Rencode values with no label to NA

Description
For labelled variables, values with no label will be recoded to NA.

Usage
nolabel_to_na(x)

Arguments

x  
Object to recode.

Examples
v <- labelled(c(1, 2, 9, 1, 9), c(yes = 1, no = 2))
nolabel_to_na(v)

recode.haven_labelled  

Rencode values

Description
Extend recode method from haven to works with labelled vectors.

Usage
## S3 method for class 'haven_labelled'
recode(.x, ..., .default = NULL, .missing = NULL)
Arguments

- \( .x \) A vector to modify
- \( \ldots \) Replacements. For character and factor \( .x \), these should be named and replacement is based only on their name. For numeric \( .x \), these can be named or not. If not named, the replacement is done based on position i.e. \( .x \) represents positions to look for in replacements. See examples.

When named, the argument names should be the current values to be replaced, and the argument values should be the new (replacement) values.

All replacements must be the same type, and must have either length one or the same length as \( .x \).

These dots support tidy dots features.

- \( \text{.default} \) If supplied, all values not otherwise matched will be given this value. If not supplied and if the replacements are the same type as the original values in \( .x \), unmatched values are not changed. If not supplied and if the replacements are not compatible, unmatched values are replaced with \( NA \).

- \( \text{.default} \) must be either length 1 or the same length as \( .x \).

- \( \text{.missing} \) If supplied, any missing values in \( .x \) will be replaced by this value. Must be either length 1 or the same length as \( .x \).

See Also

- recode (dplyr)

Examples

```r
x <- labelled(1:3, c(yes = 1, no = 2))
x
dplyr::recode(x, `3` = 2L)
```

Description

This function removes specified attributes. When applied to a data.frame, it will also remove recursively the specified attributes to each column of the data.frame.

Usage

```r
remove_attributes(x, attributes)
```

Arguments

- \( x \) an object
- \( \text{attributes} \) a character vector indicating attributes to remove
Examples

```r
## Not run:
library(haven)
path <- system.file("examples", "iris.sav", package = "haven")
d <- read_sav(path)
str(d)
d <- remove_attributes(d, "format.spss")
str(d)
## End(Not run)
```

---

remove_labels

Remove variable label, value labels and user defined missing values

Description

Use `remove_var_label` to remove variable label, `remove_val_labels` to remove value labels, `remove_user_na` to remove user defined missing values (na_values and na_range) and `remove_labels` to remove all.

Usage

```r
remove_labels(x, user_na_to_na = FALSE)
remove_var_label(x)
remove_val_labels(x)
remove_user_na(x, user_na_to_na = FALSE)
```

Arguments

- `x` A vector or a data frame.
- `user_na_to_na` Convert user defined missing values into NA?

Details

Be careful with `remove_user_na` and `remove_labels`, user defined missing values will not be automatically converted to NA, except if you specify `user_na_to_na = TRUE`. `user_na_to_na(x)` is an equivalent of `remove_user_na(x, user_na_to_na = TRUE).

Examples

```r
x1 <- labelled_spss(1:10, c(Good = 1, Bad = 8), na_values = c(9, 10))
var_label(x1) <- "A variable"
x1

x2 <- remove_labels(x1)
x2
```
sort_val_labels

Sort value labels

Description

Sort value labels according to values or to labels

Usage

sort_val_labels(x, according_to = c("values", "labels"), decreasing = FALSE)

## S3 method for class 'haven_labelled'
sort_val_labels(x, according_to = c("values", "labels"), decreasing = FALSE)

## S3 method for class 'data.frame'
sort_val_labels(x, according_to = c("values", "labels"), decreasing = FALSE)

Arguments

x A labelled vector.
according_to According to values or to labels?
decreasing In decreasing order?

Examples

v <- labelled(c(1, 2, 3), c(maybe = 2, yes = 1, no = 3))
v
sort_val_labels(v)
sort_val_labels(v, decreasing = TRUE)
sort_val_labels(v, 'l')
sort_val_labels(v, 'l', TRUE)
"Tagged" missing values work exactly like regular R missing values except that they store one additional byte of information a tag, which is usually a letter ("a" to "z"). When by loading a SAS and Stata file, the tagged missing values always use lower case values.

Usage

tagged_na(...)  
na_tag(x)  
is_tagged_na(x, tag = NULL)  
format_tagged_na(x, digits = getOption("digits"))  
print_tagged_na(x, digits = getOption("digits"))

Arguments

... Vectors containing single character. The letter will be used to "tag" the missing value.
x A numeric vector
tag If NULL, will only return true if the tag has this value.
digits Number of digits to use in string representation

Details

‘format_tagged_na()’ and ‘print_tagged_na()’ format tagged NA’s as NA(a), NA(b), etc.

Examples

x <- c(1:5, tagged_na("a"), tagged_na("z"), NA)  
# Tagged NA's work identically to regular NAs  
x  
is.na(x)  

# To see that they're special, you need to use na_tag(),  
# is_tagged_na(), or print_tagged_na():  
is_tagged_na(x)  
n_a_tag(x)  
print_tagged_na(x)
# You can test for specific tagged NAs with the second argument
# Because the support for tagged's NAs is somewhat tagged on to R,
# the left-most NA will tend to be preserved in arithmetic operations.
na_tag(tagged_na("a") + tagged_na("z"))

---

to_character

Convert input to a character vector

Description

By default, to_character is a wrapper for base::as.character(). For labelled vector, to_character allows to specify if value, labels or labels prefixed with values should be used for conversion.

Usage

to_character(x, ...)

## S3 method for class 'haven_labelled'
to_character(  
x,  
levels = c("labels", "values", "prefixed"),  
nolabel_to_na = FALSE,  
...  
)

Arguments

x Object to coerce to a character vector.
...
Other arguments passed down to method.
levels What should be used for the factor levels: the labels, the values or labels prefixed with values?
nolabel_to_na Should values with no label be converted to 'NA'?

Details

If some values doesn’t have a label, automatic labels will be created, except if nolabel_to_na is TRUE.

Examples

v <- labelled(c(1,2,2,2,3,9,1,3,2,NA), c(yes = 1, no = 3, "don't know" = 9))
to_character(v)
to_character(v, missing_to_na = FALSE, nolabel_to_na = TRUE)
to_character(v, "v")
to_character(v, "p")
Description

The base function `base::as.factor()` is not a generic, but this variant is. By default, `to_factor` is a wrapper for `base::as.factor()`. Please note that `to_factor` differs slightly from `as_factor` method provided by haven package.

Usage

to_factor(x, ...)

```r
## S3 method for class 'haven_labelled'
to_factor(
  x,
  levels = c("labels", "values", "prefixed"),
  ordered = FALSE,
  nolabel_to_na = FALSE,
  sort_levels = c("auto", "none", "labels", "values"),
  decreasing = FALSE,
  drop_unused_labels = FALSE,
  user_na_to_na = FALSE,
  strict = FALSE,
  unclass = FALSE,
  ...
)

## S3 method for class 'data.frame'
to_factor(
  x,
  levels = c("labels", "values", "prefixed"),
  ordered = FALSE,
  nolabel_to_na = FALSE,
  sort_levels = c("auto", "none", "labels", "values"),
  decreasing = FALSE,
  labelled_only = TRUE,
  drop_unused_labels = FALSE,
  strict = FALSE,
  unclass = FALSE,
  ...
)
```

Arguments

- `x` Object to coerce to a factor.
- `...` Other arguments passed down to method.
levels What should be used for the factor levels: the labels, the values or labels prefixed with values?

ordered TRUE for ordinal factors, FALSE (default) for nominal factors.
nolabel_to_na Should values with no label be converted to ‘NA’?
sort_levels How the factor levels should be sorted? (see Details)
decreasing Should levels be sorted in decreasing order?
drop_unused_labels Should unused value labels be dropped? (applied only if strict = FALSE)
user_na_to_na Convert user defined missing values into NA?
strict Convert to factor only if all values have a defined label?
unclass If not converted to a factor (when strict = TRUE), convert to a character or a numeric factor?
labelled_only for a data.frame, convert only labelled variables to factors?

Details

If some values doesn’t have a label, automatic labels will be created, except if nolabel_to_na is TRUE.

If sort_levels == ‘values’, the levels will be sorted according to the values of x. If sort_levels == ‘labels’, the levels will be sorted according to labels’ names. If sort_levels == ‘none’, the levels will be in the order the value labels are defined in x. If some labels are automatically created, they will be added at the end. If sort_levels == ‘auto’, sort_levels == ‘none’ will be used, except if some values doesn’t have a defined label. In such case, sort_levels == ‘values’ will be applied.

When applied to a data.frame, only labelled vectors are converted by default to a factor. Use labelled_only = FALSE to convert all variables to factors.

Examples

v <- labelled(c(1,2,2,2,3,9,1,3,2,NA), c(yes = 1, no = 3, “don’t know“ = 9))
to_factor(v)
to_factor(v, nolabel_to_na = TRUE)
to_factor(v, ‘p’)
to_factor(v, sort_levels = ‘v’)
to_factor(v, sort_levels = ‘n’)
to_factor(v, sort_levels = ‘l’)

to_factor(x, ordered = TRUE)

# Strict conversion
v <- labelled(c(1, 1, 2, 3), labels = c(No = 1, Yes = 2))
to_factor(v)
to_factor(v, strict = TRUE) # Not converted because 3 does not have a label
to_factor(v, strict = TRUE, unclass = TRUE)
to_labelled

Convert to labelled data

Description

Convert a factor or data imported with foreign or memisc to labelled data.

Usage

to_labelled(x, ...)

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

## S3 method for class 'list'
to_labelled(x, ...)

## S3 method for class 'data.set'
to_labelled(x, ...)

## S3 method for class 'importer'
to_labelled(x, ...)

foreign_to_labelled(x)

memisc_to_labelled(x)

## S3 method for class 'factor'
to_labelled(x, labels = NULL, ...)

Arguments

x Factor or dataset to convert to labelled data frame

... Not used

labels When converting a factor only: an optional named vector indicating how factor levels should be coded. If a factor level is not found in labels, it will be converted to NA.

Details

to_labelled is a general wrapper calling the appropriate sub-functions.

memisc_to_labelled converts a data.set object created with memisc package to a labelled data frame.

foreign_to_labelled converts data imported with read.spss or read.dta from foreign package to a labelled data frame, i.e. using labelled class. Factors will not be converted. Therefore, you
should use `use.value.labels = FALSE` when importing with `read.spss` or `convert.factors = FALSE` when importing with `read.dta`.

To convert correctly defined missing values imported with `read.spss`, you should have used `to.data.frame = FALSE` and `use.missings = FALSE`. If you used the option `to.data.frame = TRUE`, meta data describing missing values will not be attached to the import. If you used `use.missings = TRUE`, missing values would have been converted to `NA`.

So far, missing values defined in Stata are always imported as `NA` by `read.dta` and could not be retrieved by `foreign_to_labelled`.

### Value

A tbl data frame or a labelled vector.

### See Also

`labelled (foreign)`, `read.spss (foreign)`, `read.dta (foreign)`, `data.set (memisc)`, `importer (memisc)`, `to_factor`.

### Examples

```r
## Not run:
# from foreign
library(foreign)
sav <- system.file("files", "electric.sav", package = "foreign")
df <- to_labelled(read.spss(
  sav,
  to.data.frame = FALSE,
  use.value.labels = FALSE,
  use.missings = FALSE
))

# from memisc
library(memisc)
nes1948.por <- UnZip("anes/NES1948.ZIP", 'NES1948.POR', package='memisc')
nes1948 <- spss.portable.file(nes1948.por)
df <- to_labelled(nes1948)
ds <- as.data.set(nes1948)
df <- to_labelled(ds)

## End(Not run)

# Converting factors to labelled vectors
f <- factor(c("yes", "yes", "no", "no", "don't know", "no", "yes", "don't know"))
to_labelled(f)
to_labelled(f, c("yes" = 1, "no" = 2, "don't know" = 9))
to_labelled(f, c("yes" = 1, "no" = 2))
to_labelled(f, c("yes" = "Y", "no" = "N", "don't know" = "DK"))

s1 <- labelled(c("M", "M", "F"), c(Male = "M", Female = "F"))
labels <- val_labels(s1)
f1 <- to_factor(s1)
```
update_labelled

f1

to_labelled(f1)
identical(s1, to_labelled(f1))
to_labelled(f1, labels)
identical(s1, to_labelled(f1, labels))

update_labelled  Update labelled data to version 2.0.0

Description

Labelled data imported with haven version 1.1.2 or before or created with labelled version 1.1.0 or before was using "labelled" and "labelled_spss" classes.

Usage

update_labelled(x)

## S3 method for class 'labelled'
update_labelled(x)

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

Arguments

x  An object (vector or data.frame) to convert.

Details

Since version 2.0.0 of these two packages, "haven_labelled" and "haven_labelled_spss" are used instead.

update_labelled convert labelled vectors from the old to the new classes.

val_labels  Get / Set value labels

Description

Get / Set value labels
Usage

val_labels(x, prefixed = FALSE)

## Default S3 method:
val_labels(x, prefixed = FALSE)

## S3 method for class 'haven_labelled'
val_labels(x, prefixed = FALSE)

## S3 method for class 'data.frame'
val_labels(x, prefixed = FALSE)

val_labels(x) <- value

## S3 replacement method for class 'numeric'
val_labels(x) <- value

## S3 replacement method for class 'character'
val_labels(x) <- value

## S3 replacement method for class 'haven_labelled'
val_labels(x) <- value

## S3 replacement method for class 'haven_labelled_spss'
val_labels(x) <- value

## S3 replacement method for class 'data.frame'
val_labels(x) <- value

val_label(x, v, prefixed = FALSE)

## S3 method for class 'haven_labelled'
val_label(x, v, prefixed = FALSE)

## S3 method for class 'data.frame'
val_label(x, v, prefixed = FALSE)

val_label(x, v) <- value

## S3 replacement method for class 'haven_labelled'
val_label(x, v) <- value

## S3 replacement method for class 'numeric'
val_label(x, v) <- value

## S3 replacement method for class 'character'
val_label(x, v) <- value
val_labels

## S3 replacement method for class 'data.frame'
val_label(x, v) <- value

set_value_labels(.data, ...)
add_value_labels(.data, ...)
remove_value_labels(.data, ...)

Arguments

x
A vector.

prefixed
Should labels be prefixed with values?

value
A named vector for val_labels (see labelled) or a character string for val_labels. NULL to remove the labels. For data frames, it could also be a named list.

v
A single value.

.data
a data frame

... name-value pairs of value labels (see examples)

Value

t_val_labels will return a named vector. val_label will return a single character string.

set_value_labels, add_value_labels and remove_value_labels will return an updated copy of .data.

Note

set_value_labels, add_value_labels and remove_value_labels could be used with dplyr. While set_value_labels will replace the list of value labels, add_value_labels and remove_value_labels will update that list (see examples).

Examples

v <- labelled(c(1,2,2,2,3,9,1,3,2,NA), c(yes = 1, no = 3, "don't know" = 9))
val_labels(v)
val_labels(v, prefixed = TRUE)
val_label(v, 2)
val_label(v, 2) <- 'maybe'
val_label(v, 9) <- NULL
val_labels(v) <- NULL
if (require(dplyr)) {
  # setting value labels
  df <- data_frame(s1 = c("M", "M", "F"), s2 = c(1, 1, 2)) %>%
    set_value_labels(s1 = c(Male = "M", Female = "F"), s2 = c(Yes = 1, No = 2))
  val_labels(df)

  # updating value labels
  df <- df %>% add_value_labels(s2 = c(Unknown = 9))
  df$s2
}
# removing a value labels
```r
df <- df %>% remove_value_labels(s2 = 9)
df$s2
```

# removing all value labels
```r
df <- df %>% set_value_labels(s2 = NULL)
df$s2
```
Arguments

x an object
unlist for data frames, return a named vector instead of a list
value a character string or NULL to remove the label For data frames, it could also be a
named list or a character vector of same length as the number of columns in x.
.data a data frame
... name-value pairs of variable labels (see examples)
.labels variable labels to be applied to the data.frame, using the same syntax as value
in ‘var_label(df) <- value’.

Details

For data frames, if value is a named list, only elements whose name will match a column of the
data frame will be taken into account. If value is a character vector, labels should in the same order
as the columns of the data.frame.

Value

set_variable_labels will return an updated copy of .data.

Note

set_variable_labels could be used with dplyr.

Examples

var_label(iris$Sepal.Length)
var_label(iris$Sepal.Length) <- 'Length of the sepal'
## Not run:
View(iris)

## End(Not run)

# To remove a variable label
var_label(iris$Sepal.Length) <- NULL
# To change several variable labels at once
var_label(iris) <- c(
  "sepal length", "sepal width", "petal length",
  "petal width", "species"
)
var_label(iris)
var_label(iris) <- list(
  Petal.Width = "width of the petal",
  Petal.Length = "length of the petal"
)
var_label(iris)
var_label(iris, unlist = TRUE)
if (require(dplyr)) {
  # adding some variable labels
  df <- data_frame(s1 = c("M", "M", "F"), s2 = c(1, 1, 2)) %>%

set_variable_labels(s1 = "Sex", s2 = "Yes or No?")
var_label(df)

# removing a variable label
df <- df %>% set_variable_labels(s2 = NULL)
var_label(df$s2)

# defining variable labels derived from variable names
if (require(snakecase)) {
  iris <- iris %>%
    set_variable_labels(.labels = to_sentence_case(names(iris))
  var_label(iris)
}
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