

# Package ‘yamlet’

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**Type** Package

**Title** Versatile Curation of Table Metadata

**Version** 1.3.4

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**BugReports** <https://github.com/bergsmat/yamlet/issues>

**Description** A YAML-based mechanism for working with table metadata. Supports compact syntax for creating, modifying, viewing, exporting, importing, displaying, and plotting metadata coded as column attributes. The ‘yamlet’ dialect is valid ‘YAML’ with defaults and conventions chosen to improve readability. See ?yamlet, ?decorate, ?modify, ?io\_csv, and ?ggplot.decorated.

**License** GPL-3

**Encoding** UTF-8

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as.integer.classified *Coerce Classified to Integer*

---

### Description

Coerces classified to integer. Result is like `as.integer(as.numeric(x)) + offset` but has a `guide` attribute: a list of integers whose names are the original levels of `x`. If you need a simple integer, consider coercing first to numeric.

### Usage

```
## S3 method for class 'classified'
as.integer(
  x,
  offset = 0L,
  ...,
  persistence = getOption("yamlet_persistence", TRUE)
)
```

**Arguments**

x	classified, see <a href="#">classified</a>
offset	an integer value to add to intermediate result
...	passed to <a href="#">desolve</a>
persistence	whether to return 'dvec' (is.integer(): TRUE) or just integer.

**Value**

integer (possibly of class dvec)

**See Also**

Other classified: [\[.classified\(\)](#), [\[<-.classified\(\)](#), [\[\[.classified\(\)](#), [\[\[<-.classified\(\)](#), [c.classified\(\)](#), [classified\(\)](#), [classified.classified\(\)](#), [classified.data.frame\(\)](#), [classified.default\(\)](#), [classified.dvec\(\)](#), [classified.factor\(\)](#), [desolve.classified\(\)](#), [unclassified\(\)](#), [unclassified.classified\(\)](#), [unclassified.data.frame\(\)](#)

**Examples**

```
library(magrittr)

# create factor with codelist attribute
classified(c('knife', 'fork', 'spoon'))

# give back a simple numeric
classified(c('knife', 'fork', 'spoon')) %>% as.numeric

# intentionally preserve levels as 'guide' attribute
classified(c('knife', 'fork', 'spoon')) %>% as.integer

# implement offset
classified(c('knife', 'fork', 'spoon')) %>% as.integer(-1)

# globally defeat the 'persistence' paradigm
options(yamlet_persistence = FALSE)
c('knife', 'fork', 'spoon') %>%
  classified %>%
  as.integer %>%
  class # integer

# remove option to restore default persistence paradigm
options(yamlet_persistence = NULL)
c('knife', 'fork', 'spoon') %>%
  classified %>%
  as.integer %>%
  class # dvec

# locally defeat persistence paradigm
c('knife', 'fork', 'spoon') %>%
  classified %>%
```

```
as.integer(persistence = FALSE) %>%
class # integer
```

---

```
as_categorical.decorated
```

*Coerce decorated to Categorical*

---

## Description

Coerces (elements of) 'decorated' to categorical. See example(s). Briefly, a continuous variable with units (and a small set of existing values) is converted to a factor-ready variable.

## Usage

```
## S3 method for class 'decorated'
as_categorical(x, ...)
```

## Arguments

x	decorated
...	unquoted names of columns to be converted

## Value

decorated

## See Also

Other decorated: [\[.decorated\(\)](#), [\[<-.decorated\(\)](#), [\[\[.decorated\(\)](#), [\[\[<-.decorated\(\)](#), [as\\_categorical\(\)](#), [merge.decorated\(\)](#), [names<-.decorated\(\)](#)

## Examples

```
library(magrittr)
library(tablet)
library(kableExtra)
library(yamlet)
x <-
  data.frame(DOSE = c(12, 1.2, 2.4, 6, 12, 1.2)) %>%
  decorate('DOSE: [ Dose, mg ]')
x %>%
  as_categorical(DOSE) %>%
  resolve %>%
  tablet %>%
  as_kable %>%
  kable_classic
```

---

as\_dvec.units                    *Coerce Units to Decorated Vector*

---

### Description

Coerces units to dvec.

### Usage

```
## S3 method for class 'units'
as_dvec(x, ...)
```

### Arguments

x	units
...	passed arguments

### Examples

```
library(magrittr)
library(dplyr)
a <- data.frame(id = 1:4, wt = c(70, 80, 70, 80), sex = c(0,1,0,1))
a %<>% decorate('wt: [ body weight, kg ]')
a %<>% decorate('sex: [ sex, [ female: 0, male: 1]]')
a %<>% decorate('id: identifier')
a %<>% resolve
a %<>% mutate(wt = as_units(wt))
a %<>% mutate(wt = as_dvec(wt))
str(a$wt)
```

---

as\_units.dvec                    *Coerce Decorated Vector to Units*

---

### Description

Coerces dvec to units. If x has a units attribute, it is used to create class 'units'. It is an error if x has no units attribute.

### Usage

```
## S3 method for class 'dvec'
as_units(x, ..., preserve = getOption("yamlet_as_units_preserve", "label"))
```

**Arguments**

x	dvec
...	ignored
preserve	attributes to preserve; just label by default (class and units are handled implicitly)

**Examples**

```
library(magrittr)
a <- data.frame(id = 1:4, wt = c(70, 80, 70, 80), sex = c(0,1,0,1))
a %<>% decorate('wt: [ body weight, kg ]')
a %<>% decorate('sex: [ sex, [ female: 0, male: 1]]')
a %<>% decorate('id: identifier')
a %<>% resolve
a$wt %>% as_units
```

---

canonical.decorated    *Sort Decorations*

---

**Description**

Enforces canonical attribute order for class 'decorated'. Set of default\_keys will be augmented with all observed attribute names and will be expanded or reduced as necessary for each data item.

**Usage**

```
## S3 method for class 'decorated'
canonical(
  x,
  default_keys = getOption("yamlet_default_keys", list("label", "guide")),
  ...
)
```

**Arguments**

x	decorated
default_keys	attribute names in preferred order
...	ignored

**Value**

decorated

**See Also**

Other canonical: `canonical()`, `canonical.yamlet()`

Other interface: `classified.data.frame()`, `decorate.character()`, `decorate.data.frame()`, `desolve.decorated()`, `enscript.default()`, `ggplot.decorated()`, `io_csv.character()`, `io_csv.data.frame()`, `io_res.character()`, `io_res.decorated()`, `io_table.character()`, `io_table.data.frame()`, `io_yamlet.character()`, `io_yamlet.data.frame()`, `is_parseable.default()`, `mimic.default()`, `modify.default()`, `promote.list()`, `read.yamlet()`, `resolve.decorated()`, `selected.default()`, `write.yamlet()`

**Examples**

```
# make some decorated data
library(magrittr)
x <- data.frame(x = 1, y = 1, z = factor('a'))
x %<>% decorate('
x: [ guide: mm, desc: this, label: foo ]
"y": [ guide: bar, desc: other ]
')

# retrieve decorations: label not first!
decorations(x)

# sort label first by default
decorations(canonical(x))

# equivalent invocation
canonical(decorations(x))
```

---

`classified.default`      *Create Classified by Default*

---

**Description**

Creates a factor of subclass 'classified', for which there are attribute-preserving methods. In particular, classified has a `codelist` attribute indicating the origin of its levels: it is constructed from the `codelist` attribute of `x` if available, or from 'levels' and 'labels' by default. Unlike the case for `factor`, length of labels cannot be one (i.e., different from length of levels).

**Usage**

```
## Default S3 method:
classified(
  x = character(),
  levels,
  labels,
  exclude = NA,
  ordered = is.ordered(x),
```

```

    nmax = NA,
    token = character(0),
    ...
  )

```

### Arguments

x	see <a href="#">factor</a>
levels	see <a href="#">factor</a>
labels	see <a href="#">factor</a> , must have same length as levels
exclude	see <a href="#">factor</a>
ordered	see <a href="#">factor</a>
nmax	see <a href="#">factor</a>
token	informative label for messages
...	ignored

### Value

'classified' 'factor'

### See Also

Other classified: [\[.classified\(\)](#), [\[<-classified\(\)](#), [\[\[.classified\(\)](#), [\[\[<-classified\(\)](#), [as.integer.classified\(\)](#), [c.classified\(\)](#), [classified\(\)](#), [classified.classified\(\)](#), [classified.data.frame\(\)](#), [classified.dvec\(\)](#), [classified.factor\(\)](#), [desolve.classified\(\)](#), [unclassified\(\)](#), [unclassified.classified\(\)](#), [unclassified.data.frame\(\)](#)

### Examples

```

# classified creates a factor with a corresponding codelist attribute
classified(c('a','b','c'))

# codelist 'remembers' the origins of levels
classified(c('a','b','c'), labels = c('A','B','C'))

# classified is 'reversible'
library(magrittr)
c('a','b','c') %>%
  classified(labels = c('A','B','C')) %>%
  unclassified

```

---

classified.factor	<i>Create Classified from Factor</i>
-------------------	--------------------------------------

---

**Description**

Creates classified from factor. Uses `classified.default`, but supplies existing levels by default.

**Usage**

```
## S3 method for class 'factor'
classified(
  x = character(),
  levels,
  labels,
  exclude = NA,
  ordered = is.ordered(x),
  nmax = NA,
  token = character(0),
  ...
)
```

**Arguments**

x	see <a href="#">factor</a>
levels	passed to <code>classified.default</code> ; defaults to <code>levels(x)</code>
labels	passed to <code>classified.default</code> ; must be same length as levels(after removing values in exclude) and must not contain duplicates
exclude	see <a href="#">factor</a>
ordered	see <a href="#">factor</a>
nmax	see <a href="#">factor</a>
token	informative label for messages
...	ignored

**Value**

'classified' 'factor'

**See Also**

Other classified: `[.classified()`, `[<-.classified()`, `[ [.classified()`, `[ [<-.classified()`, `as.integer.classified()`, `c.classified()`, `classified()`, `classified.classified()`, `classified.data.frame()`, `classified.default()`, `classified.dvec()`, `desolve.classified()`, `unclassified()`, `unclassified.classified()`, `unclassified.data.frame()`

**Examples**

```
a <- factor(c('c', 'b', 'a'))
levels(classified(a))
attr(classified(a), 'codelist')
```

---

decorate.character      *Decorate Character*

---

**Description**

Treats `x` as a file path. By default, metadata is sought from a file with the same base but the 'yaml' extension.

**Usage**

```
## S3 method for class 'character'
decorate(
  x,
  meta = NULL,
  ...,
  read = getOption("yamlet_import", as.csv),
  ext = getOption("yamlet_extension", ".yaml")
)
```

**Arguments**

<code>x</code>	file path for table data
<code>meta</code>	file path for corresponding yamlet metadata, or a yamlet object
<code>...</code>	passed to <code>read</code> (if accepted) and to <a href="#">as_yamlet.character</a>
<code>read</code>	function or function name for reading <code>x</code>
<code>ext</code>	file extension for metadata file, if relevant

**Value**

class 'decorated' 'data.frame'

**See Also**

Other decorate: [as\\_decorated\(\)](#), [as\\_decorated.default\(\)](#), [decorate\(\)](#), [decorate.data.frame\(\)](#), [decorate.list\(\)](#), [decorate\\_groups\(\)](#), [decorate\\_groups.data.frame\(\)](#), [decorations\(\)](#), [decorations.data.frame\(\)](#), [decorations\\_groups\(\)](#), [decorations\\_groups.data.frame\(\)](#), [group\\_by\\_decorations\(\)](#), [group\\_by\\_decorations.data.frame\(\)](#), [redecorate\(\)](#), [undecorate\(\)](#), [undecorate.default\(\)](#)

Other interface: [canonical.decorated\(\)](#), [classified.data.frame\(\)](#), [decorate.data.frame\(\)](#), [desolve.decorated\(\)](#), [enscript.default\(\)](#), [ggplot.decorated\(\)](#), [io\\_csv.character\(\)](#), [io\\_csv.data.frame\(\)](#), [io\\_res.character\(\)](#), [io\\_res.decorated\(\)](#), [io\\_table.character\(\)](#), [io\\_table.data.frame\(\)](#), [io\\_yamlet.character\(\)](#), [io\\_yamlet.data.frame\(\)](#), [is\\_parseable.default\(\)](#), [mimic.default\(\)](#), [modify.default\(\)](#), [promote.list\(\)](#), [read\\_yamlet\(\)](#), [resolve.decorated\(\)](#), [selected.default\(\)](#), [write\\_yamlet\(\)](#)

**Examples**

```

# find data file
file <- system.file(package = 'yamlet', 'extdata', 'quinidine.csv')
file

# find metadata file
meta <- system.file(package = 'yamlet', 'extdata', 'quinidine.yaml')
meta

# decorate with explicit metadata reference
a <- decorate(file, meta)

# rely on default metadata path
b <- decorate(file)

# in this case: same
stopifnot(identical(a, b))

```

---

decorate.data.frame     *Decorate Data Frame*

---

**Description**

Decorates a data.frame. Expects metadata in yamlet format, and loads it onto columns as attributes.

**Usage**

```

## S3 method for class 'data.frame'
decorate(
  x,
  meta = NULL,
  ...,
  persistence = getOption("yamlet_persistence", TRUE)
)

```

**Arguments**

x	data.frame
meta	file path for corresponding yaml metadata, or a yamlet; an attempt will be made to guess the file path if x has a 'source' attribute
...	passed to <a href="#">decorate.list</a>
persistence	whether to coerce decorated columns to 'dvec' where suitable method exists

**Details**

As of v0.8.8, the data.frame method for decorate() coerces affected columns using [as\\_dvec](#) if persistence is true and a suitable method exists. 'vctrs' methods are implemented for class dvec to help attributes persist during tidyverse operations. Details are described in [c.dvec](#). Disable this functionality with options(yamlet\_persistence = FALSE).

**Value**

class 'decorated' 'data.frame'

**See Also**

decorate.list

Other interface: [canonical.decorated\(\)](#), [classified.data.frame\(\)](#), [decorate.character\(\)](#), [desolve.decorated\(\)](#), [enscript.default\(\)](#), [ggplot.decorated\(\)](#), [io\\_csv.character\(\)](#), [io\\_csv.data.frame\(\)](#), [io\\_res.character\(\)](#), [io\\_res.decorated\(\)](#), [io\\_table.character\(\)](#), [io\\_table.data.frame\(\)](#), [io\\_yamlet.character\(\)](#), [io\\_yamlet.data.frame\(\)](#), [is\\_parseable.default\(\)](#), [mimic.default\(\)](#), [modify.default\(\)](#), [promote.list\(\)](#), [read\\_yamlet\(\)](#), [resolve.decorated\(\)](#), [selected.default\(\)](#), [write\\_yamlet\(\)](#)

Other decorate: [as\\_decorated\(\)](#), [as\\_decorated.default\(\)](#), [decorate\(\)](#), [decorate.character\(\)](#), [decorate.list\(\)](#), [decorate\\_groups\(\)](#), [decorate\\_groups.data.frame\(\)](#), [decorations\(\)](#), [decorations.data.frame\(\)](#), [decorations\\_groups\(\)](#), [decorations\\_groups.data.frame\(\)](#), [group\\_by\\_decorations\(\)](#), [group\\_by\\_decorations.data.frame\(\)](#), [redecorate\(\)](#), [undecorate\(\)](#), [undecorate.default\(\)](#)

**Examples**

```
# find data path
library(csv)
file <- system.file(package = 'yamlet', 'extdata', 'quinidine.csv')
file
dat <- as.csv(file) # dat now has 'source' attribute

# use source attribute to find metadata
a <- decorate(as.csv(file))

# supply metadata path (or something close) explicitly
b <- decorate(dat, meta = file)

# these are equivalent
stopifnot(identical(a, b))
```

---

decorate\_groups.data.frame

*Capture Groups as Decorations for Data Frame*

---

**Description**

Captures groups as decorations for class 'data.frame'. Creates a sequentially-valued integer attribute with name 'groups' for each corresponding column (after clearing all such existing designations). It is an error if not all such columns are present. Defaults to `groups(x)`. If no columns are specified and `x` has no groups, `x` is returned with any existing column-level 'groups' attributes removed.

**Usage**

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

**Arguments**

```
x                data.frame
...              unquoted names of columns to assign as groups; defaults to groups(x)
```

**Value**

same class as x

**See Also**

Other decorate: [as\\_decorated\(\)](#), [as\\_decorated.default\(\)](#), [decorate\(\)](#), [decorate.character\(\)](#), [decorate.data.frame\(\)](#), [decorate.list\(\)](#), [decorate\\_groups\(\)](#), [decorations\(\)](#), [decorations.data.frame\(\)](#), [decorations\\_groups\(\)](#), [decorations\\_groups.data.frame\(\)](#), [group\\_by\\_decorations\(\)](#), [group\\_by\\_decorations.data.frame\(\)](#), [redecorate\(\)](#), [undecorate\(\)](#), [undecorate.default\(\)](#)

**Examples**

```
library(magrittr)
library(dplyr)
Theoph %>% decorate_groups(Subject, Time) %>% groups # nothing!
Theoph %>% decorate_groups(Subject, Time) %>% decorations # note well
Theoph %>% group_by(Subject, Time) %>% decorate_groups %>% decorations # same
```

---

decorations.data.frame

*Retrieve Decorations for Data Frame*

---

**Description**

Retrieve the decorations of a data.frame; i.e., the metadata used to decorate it. Returns a list with same names as the data.frame. By default, 'class' and 'level' attributes are excluded from the result, as you likely don't want to manipulate these independently.

**Usage**

```
## S3 method for class 'data.frame'
decorations(
  x,
  ...,
  exclude_attr = getOption("yamlet_exclude_attr", c("class", "levels"))
)
```

**Arguments**

x                    data.frame  
 ...                  optional unquoted column names to limit output (passed to [select](#))  
 exclude\_attr        attributes to remove from the result

**Value**

named list of class 'yamlet'

**See Also**

Other decorate: [as\\_decorated\(\)](#), [as\\_decorated.default\(\)](#), [decorate\(\)](#), [decorate.character\(\)](#), [decorate.data.frame\(\)](#), [decorate.list\(\)](#), [decorate\\_groups\(\)](#), [decorate\\_groups.data.frame\(\)](#), [decorations\(\)](#), [decorations\\_groups\(\)](#), [decorations\\_groups.data.frame\(\)](#), [group\\_by\\_decorations\(\)](#), [group\\_by\\_decorations.data.frame\(\)](#), [redecorate\(\)](#), [undecorate\(\)](#), [undecorate.default\(\)](#)

**Examples**

```
# prepare a decorated data.frame
file <- system.file(package = 'yamlet', 'extdata', 'quinidine.csv')
x <- decorate(file)

# retrieve the decorations
decorations(x, Subject, time, conc)
```

---

decorations\_groups.data.frame

*Recover Groups Decorations for Data Frame*

---

**Description**

Recovers groups decorations for class 'data.frame'. Seeks a sequentially-valued integer attribute with name 'groups' for each column, sorts these, and returns a character vector like `group_vars(x)`.

**Usage**

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

**Arguments**

x                    data.frame  
 ...                  ignored

**Value**

character: names of groups columns

**See Also**

Other decorate: [as\\_decorated\(\)](#), [as\\_decorated.default\(\)](#), [decorate\(\)](#), [decorate.character\(\)](#), [decorate.data.frame\(\)](#), [decorate.list\(\)](#), [decorate\\_groups\(\)](#), [decorate\\_groups.data.frame\(\)](#), [decorations\(\)](#), [decorations.data.frame\(\)](#), [decorations\\_groups\(\)](#), [group\\_by\\_decorations\(\)](#), [group\\_by\\_decorations.data.frame\(\)](#), [redecorate\(\)](#), [undecorate\(\)](#), [undecorate.default\(\)](#)

**Examples**

```
library(magrittr)
library(dplyr)
Theoph %<>% group_by(Subject, Time)
Theoph %>% group_vars
Theoph %>% decorations_groups # nothing!
Theoph %<>% decorate_groups
Theoph %>% decorations_groups # something!
Theoph %<>% ungroup
Theoph %>% group_vars # gone!
Theoph %<>% group_by(across(all_of(decorations_groups(.))))
Theoph %>% group_vars # recovered!
Theoph %<>% group_by_decorations
Theoph %>% group_vars # same
rm(Theoph)
```

---

desolve.classified      *Desolve Guide for Classified*

---

**Description**

Un-resolves explicit usage of default key 'guide' to implicit usage for class 'classified'. Calls [drop\\_title](#) (a non-action by default), [unclassified](#), followed by [implicit\\_guide](#).

**Usage**

```
## S3 method for class 'classified'
desolve(x, ...)
```

**Arguments**

x                      classified  
 ...                    passed to [drop\\_title](#), [unclassified](#), and [unclassified](#)

**Value**

dvec

**See Also**

Other resolve: [desolve\(\)](#), [desolve.data.frame\(\)](#), [desolve.decorated\(\)](#), [desolve.default\(\)](#), [desolve.dvec\(\)](#), [resolve\(\)](#), [resolve.classified\(\)](#), [resolve.data.frame\(\)](#), [resolve.decorated\(\)](#), [resolve.default\(\)](#), [resolve.dvec\(\)](#), [resolve.factor\(\)](#)

Other classified: [\[.classified\(\)](#), [\[<-.classified\(\)](#), [\[\[.classified\(\)](#), [\[\[<-.classified\(\)](#), [as.integer.classified\(\)](#), [c.classified\(\)](#), [classified\(\)](#), [classified.classified\(\)](#), [classified.data.frame\(\)](#), [classified.default\(\)](#), [classified.dvec\(\)](#), [classified.factor\(\)](#), [unclassified\(\)](#), [unclassified.classified\(\)](#), [unclassified.data.frame\(\)](#)

**Examples**

```
library(magrittr)
x <- as_dvec(
  4:6,
  guide = list(a = 4L, b = 5L, c = 6L)
)

# untouched
x %>% str

# resolved
x %>% resolve %>% str

# resolved and desolved
x %>% resolve %>% desolve %>% str
```

---

desolve.decorated

*Desolve Guide for Decorated*


---

**Description**

Un-resolves explicit usage of default key 'guide' to implicit usage for 'decorated' class. Simply calls [drop\\_title](#), [unclassified](#), and [implicit\\_guide](#).

**Usage**

```
## S3 method for class 'decorated'
desolve(x, ...)
```

**Arguments**

x decorated  
... passed to [drop\\_title](#), [unclassified](#), and [implicit\\_guide](#)

**Value**

decorated

**See Also**

Other resolve: [desolve\(\)](#), [desolve.classified\(\)](#), [desolve.data.frame\(\)](#), [desolve.default\(\)](#), [desolve.dvec\(\)](#), [resolve\(\)](#), [resolve.classified\(\)](#), [resolve.data.frame\(\)](#), [resolve.decorated\(\)](#), [resolve.default\(\)](#), [resolve.dvec\(\)](#), [resolve.factor\(\)](#)

Other interface: [canonical.decorated\(\)](#), [classified.data.frame\(\)](#), [decorate.character\(\)](#), [decorate.data.frame\(\)](#), [encript.default\(\)](#), [ggplot.decorated\(\)](#), [io\\_csv.character\(\)](#), [io\\_csv.data.frame\(\)](#), [io\\_res.character\(\)](#), [io\\_res.decorated\(\)](#), [io\\_table.character\(\)](#), [io\\_table.data.frame\(\)](#), [io\\_yamlet.character\(\)](#), [io\\_yamlet.data.frame\(\)](#), [is\\_parseable.default\(\)](#), [mimic.default\(\)](#), [modify.default\(\)](#), [promote.list\(\)](#), [read\\_yamlet\(\)](#), [resolve.decorated\(\)](#), [selected.default\(\)](#), [write\\_yamlet\(\)](#)

**Examples**

```
library(magrittr)
file <- system.file(package = 'yamlet', 'extdata', 'quinidine.csv')
x <- decorate(file)

# this is how Age, glyco, Race look when resolved
x %>% resolve %>% decorations(Age, glyco, Race)

# we can resolve two of them and then 'unresolve' all of them
x %>% resolve(glyco, Race) %>% desolve %>% decorations(Age, glyco, Race)
```

---

encript.default

*Render Scripted Attributes of Indicated Components by Default*


---

**Description**

Modifies specific attributes of each indicated element (all elements by default).

**Usage**

```
## Default S3 method:
encript(
  x,
  ...,
  open = getOption("yamlet_append_units_open", " ("),
  close = getOption("yamlet_append_units_close", ")"),
  format = getOption("yamlet_format", ifelse(knitr::is_latex_output(), "latex", "html"))
)
```

**Arguments**

x	object
...	indicated columns, or name-value pairs; passed to <a href="#">resolve</a> and <a href="#">selected</a>
open	character to precede units
close	character to follow units
format	one of 'latex' or 'html'

## Details

The goal here is to render labels and units (where present) in a way that supports subscripts and superscripts for both plots and tables in either html or latex contexts.

The current implementation writes an 'expression' attribute to support figure labels and a 'title' attribute to support tables. `ggplot_build.decorated_ggplot` will attempt to honor the expression attribute if it exists. `tablet.data.frame` will attempt to honor the title attribute if it exists (see Details there). An attempt is made to guess the output format (html or latex).

In addition to the 'title' and 'expression' attributes, `enscript()` writes a 'plotmath' attribute to store plotmath versions of factor levels, where present. By default, factor levels are converted to their latex or html equivalents. However, `ggplot_build.decorated_ggplot` will use the plotmath versions of factor labels for legends and facet labels. If a 'plotmath' attribute already exists, it is not overwritten, preventing the same variable from being accidentally transformed twice.

To flexibly support latex, html, and plotmath, this function expects column labels and units to be encoded in "spork" syntax. See `as_spork` for details and examples. Briefly, "\_" precedes a subscript, "^" precedes a superscript, and "." is used to force the termination of either a superscript or a subscript where necessary. For best results, units should be written using \*, /, and ^; e.g. "kg\*m^2/s^2" not "kg m2 s-2" (although both are valid: see `is_parseable`). A literal backslash followed by "n" represents a newline. Greek letters are represented by their names, except where names are enclosed in backticks.

`enscript()` always calls `resolve()` for the indicated columns, to make units present where appropriate.

## Value

'enscript', a superclass of x

## See Also

Other `enscript`: `enscript()`

Other interface: `canonical.decorated()`, `classified.data.frame()`, `decorate.character()`, `decorate.data.frame()`, `desolve.decorated()`, `ggplot.decorated()`, `io_csv.character()`, `io_csv.data.frame()`, `io_res.character()`, `io_res.decorated()`, `io_table.character()`, `io_table.data.frame()`, `io_yamlet.character()`, `io_yamlet.data.frame()`, `is_parseable.default()`, `mimic.default()`, `modify.default()`, `promote.list()`, `read_yamlet()`, `resolve.decorated()`, `selected.default()`, `write_yamlet()`

## Examples

```
library(magrittr)
library(ggplot2)
x <- data.frame(time = 1:10, work = (1:10)^1.5)
x %<>% decorate('
  time: [ Time_elapsed, h ]
  work: [ Work_total_observed, kg*m^2/s^2 ]
')

x %>% decorations
x %>% ggplot(aes(time, work)) + geom_point()
```

```
x %>% enscript %>% ggplot(aes(time, work)) + geom_point()
x %>% enscript(format = 'html') %$$ work %>% attr('title')
testthat::expect_equal(enscript(x), enscript(enscript(x)))
```

---

get\_labs

*Get Labels*


---

### Description

Gets labels for a ggplot object. Not exported, to avoid confusion. Development version of ggplot2 implements new get\_labs() interface. This function is an abstraction that supports new vs old approaches, solely for yamlet's interests. See <https://github.com/tidyverse/ggplot2/pull/6078>.

### Usage

```
get_labs(plot)
```

### Arguments

plot            the ggplot

---

ggplot.decorated

*Create a New ggplot for a Decorated Data Frame*


---

### Description

Creates a new ggplot object for a decorated data.frame. This is the ggplot() method for class 'decorated'. It creates a ggplot object using the default method, but reclassifies it as 'decorated\_ggplot' so that a custom build method is invoked; see [ggplot\\_build.decorated\\_ggplot](#).

### Usage

```
## S3 method for class 'decorated'
ggplot(data, ...)
```

### Arguments

data            decorated, see [decorate](#)  
...            passed to [ggplot](#)

### Details

For fine control, you can switch between 'data.frame' and 'decorated' using [as\\_decorated](#) (supplies null decorations) and [as.data.frame](#) (preserves decorations).

**Value**

return value like `ggplot` but inheriting 'decorated\_ggplot'

**See Also**

`decorate` `resolve` `ggready`

Other decorated\_ggplot: `data_context()`, `data_context.ggplot()`, `ggplot_build.decorated_ggplot()`, `mapframe()`, `mapframe.default()`, `mapframe.ggplot()`

Other interface: `canonical.decorated()`, `classified.data.frame()`, `decorate.character()`, `decorate.data.frame()`, `desolve.decorated()`, `enscript.default()`, `io_csv.character()`, `io_csv.data.frame()`, `io_res.character()`, `io_res.decorated()`, `io_table.character()`, `io_table.data.frame()`, `io_yamlet.character()`, `io_yamlet.data.frame()`, `is_parseable.default()`, `mimic.default()`, `modify.default()`, `promote.list()`, `read_yamlet()`, `resolve.decorated()`, `selected.default()`, `write_yamlet()`

**Examples**

```
file <- system.file(package = 'yamlet', 'extdata', 'quinidine.csv')
library(ggplot2)
library(dplyr)
library(magrittr)
# par(ask = FALSE)

x <- decorate(file)
x %<>% filter(!is.na(conc))

# Manipulate class to switch among ggplot methods.
class(x)
class(data.frame(x))
class(as_decorated(data.frame(x)))

# The bare data.frame gives boring labels and un-ordered groups.
# (After ggplot2 v. 3.5.1 label attributes are honored as axis labels.)
map <- aes(x = time, y = conc, color = Heart)
data.frame(x) %>% ggplot(map) + geom_point()

# Decorated data.frame uses supplied labels.
# Notice CHF levels are still not ordered. (Moderate first.)
x %>% ggplot(map) + geom_point()

# If we resolve Heart, CHF levels are ordered.
x %>% resolve(Heart) %>% ggplot(map) + geom_point()

# We can map aesthetics as decorations.
x %>%
  decorate('Heart: [ color: [gold, purple, green]]') %>%
  ggplot(map) + geom_point()

# Colors are matched to particular levels. Purple drops out here:
x %>%
  decorate('Heart: [ color: [gold, purple, green]]') %>%
```

```

    filter(Heart != 'Moderate') %>%
    ggplot(map) + geom_point()

# We can resolve other columns for a chance to enrich the output with units.
x %>%
  resolve %>%
  ggplot(map) + geom_point()

# Underscore and circumflex imply subscript and superscript:
x %>%
  redecorate("conc: [ conc_serum, mg*L-1 ]") %>%
  ggplot(map) + geom_point()

# If we invoke enscript(), the subscripts and superscripts are rendered:
x %>%
  redecorate("conc: [ conc_serum, mg*L-1 ]") %>%
  redecorate("Heart: [ CHF\\* ]") %>%
  enscript %>%
  ggplot(map) + geom_point()

# Here we try a dataset with conditional labels and units.

file <- system.file(package = 'yamlet', 'extdata', 'phenobarb.csv')
x <- file %>% decorate %>% resolve
# Note that value has two elements for label, etc.
x %>% decorations(value)

# The print method defaults to the first, with warning.
map <- aes(x = time, y = value, color = event)

x %>% ggplot(map) + geom_point()

# If we subset appropriately, the relevant value is substituted.
x %>% filter(event == 'conc') %>% ggplot(map) + geom_point()

x %>% filter(event == 'conc') %>%
ggplot(aes(x = time, y = value, color = ApgarInd)) + geom_point()

x %>% filter(event == 'dose') %>%
ggplot(aes(x = time, y = value, color = Wt)) +
geom_point() +
scale_y_log10() +
scale_color_gradientn(colours = rainbow(4))

# ggplot_build.decorated_ggplot will attempt to honor coordinated aesthetics.
x <- data.frame(x = c(1:6, 3:8), y = c(1:6, 1:6), z = letters[c(1:6, 1:6)])
x %<>% decorate('z: [color: ["red", "blue", "green", "gold", "black", "magenta"]]')
x %<>% decorate('z: [fill: ["red", "blue", "green", "gold", "black", "magenta"]]')
x %<>% decorate('z: [shape: [20, 21, 22, 23, 24, 25]]')
x %<>% decorate('z: [linetype: [6, 5, 4, 3, 2, 1]]')
x %<>% decorate('z: [alpha: [ .9, .8, .7, .6, .5, .4]]')
x %<>% decorate('z: [size: [1, 1.5, 2, 2.5, 3, 3.5]]')

```

```
x %>% ggplot(aes(
  x, y,
  color = z,
  fill = z,
  shape = z,
  linetype = z,
  alpha = z,
  size = z,
)) +
  geom_point() +
  geom_line(size = 1)
```

---

gg\_new

*Detect Revised Label Strategy*


---

### Description

Detects the existence of qqplot's updated label strategy after v. 3.5.1, e.g. ggplot2\_3.5.1.9000. For internal use to accommodate breaking changes.

### Usage

```
gg_new()
```

---

group\_by\_decorations.data.frame

*Groups by Decorations for Data Frame*


---

### Description

Invokes [group\\_by](#) using whatever groups are recovered by [decorations\\_groups](#).

### Usage

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

### Arguments

```
x          grouped_df
...        ignored
```

### Value

list of symbols

**See Also**

Other decorate: [as\\_decorated\(\)](#), [as\\_decorated.default\(\)](#), [decorate\(\)](#), [decorate.character\(\)](#), [decorate.data.frame\(\)](#), [decorate.list\(\)](#), [decorate\\_groups\(\)](#), [decorate\\_groups.data.frame\(\)](#), [decorations\(\)](#), [decorations.data.frame\(\)](#), [decorations\\_groups\(\)](#), [decorations\\_groups.data.frame\(\)](#), [group\\_by\\_decorations\(\)](#), [redecorate\(\)](#), [undecorate\(\)](#), [undecorate.default\(\)](#)

**Examples**

```
library(magrittr)
library(dplyr)
Theoph %>% group_vars # nothing!
Theoph %<>% decorate_groups(Subject, Time)
Theoph %<>% group_by_decorations
Theoph %>% group_vars # something
rm(Theoph)
```

---

 io\_csv

---

*Import and Export Documented Tables as CSV*


---

**Description**

Imports or exports documented tables as comma-separated variable. Generic, with methods that extend [as.csv](#).

**Usage**

```
io_csv(x, ...)
```

**Arguments**

x	object
...	passed arguments

**Value**

See methods.

**See Also**

Other io: [io\\_csv.character\(\)](#), [io\\_csv.data.frame\(\)](#), [io\\_res\(\)](#), [io\\_res.character\(\)](#), [io\\_res.decorated\(\)](#), [io\\_table\(\)](#), [io\\_table.character\(\)](#), [io\\_table.data.frame\(\)](#), [io\\_yamlet\(\)](#), [io\\_yamlet.character\(\)](#), [io\\_yamlet.data.frame\(\)](#), [io\\_yamlet.yamlet\(\)](#)

## Examples

```
# generate some decorated data
file <- system.file(package = 'yamlet', 'extdata', 'quinidine.csv')
x <- decorate(file)

# get a temporary filepath
out <- file.path(tempdir(), 'out.csv')

# save file using io_csv (returns filepath)
foo <- io_csv(x, out)
stopifnot(identical(out, foo))

# read using this filepath
y <- io_csv(foo)

# lossless round-trip (ignoring source attribute)
attr(x, 'source') <- NULL
attr(y, 'source') <- NULL
stopifnot(identical(x, y))
```

---

io\_table

*Import and Export Documented Tables*

---

## Description

Imports or exports documented tables. Generic, with methods that extend [read.table](#) and [write.table](#).

## Usage

```
io_table(x, ...)
```

## Arguments

x	object
...	passed arguments

## Value

See methods.

## See Also

Other io: [io\\_csv\(\)](#), [io\\_csv.character\(\)](#), [io\\_csv.data.frame\(\)](#), [io\\_res\(\)](#), [io\\_res.character\(\)](#), [io\\_res.decorated\(\)](#), [io\\_table.character\(\)](#), [io\\_table.data.frame\(\)](#), [io\\_yamlet\(\)](#), [io\\_yamlet.character\(\)](#), [io\\_yamlet.data.frame\(\)](#), [io\\_yamlet.yamlet\(\)](#)

**Examples**

```
# generate some decorated data
file <- system.file(package = 'yamlet', 'extdata','quinidine.csv')
x <- decorate(file)

# get a temporary filepath
out <- file.path(tempdir(), 'out.tab')

# save file using io_table (returns filepath)
foo <- io_table(x, out)
stopifnot(identical(out, foo))

# read using this filepath
y <- io_table(foo, as.is = TRUE)

# lossless round-trip
attr(x, 'source') <- NULL
rownames(x) <- NULL
rownames(y) <- NULL
stopifnot(identical(x, y))
```

---

is\_dvec

*Test if Class is dvec*

---

**Description**

Tests whether x inherits 'dvec'.

**Usage**

```
is_dvec(x)
```

**Arguments**

x                    object

**Value**

logical

**Examples**

```
is_dvec(1L)
is_dvec(as_dvec(1L))
```

---

mimic.default      *Try To Look Like Another Equal-length Variable*

---

### Description

Tries to mimic another vector or factor. If meaningful and possible, x acquires a guide attribute with labels from corresponding values in y. Any codelist attribute is removed. No guide is created for zero-length x. If x is a factor, unused levels are removed.

### Usage

```
## Default S3 method:
mimic(x, y = x, ...)
```

### Arguments

x	vector-like
y	vector-like, same length as x
...	passed to link{factor}

### Value

same class as x

### See Also

Other mimic: [mimic\(\)](#), [mimic.classified\(\)](#)

Other interface: [canonical.decorated\(\)](#), [classified.data.frame\(\)](#), [decorate.character\(\)](#), [decorate.data.frame\(\)](#), [desolve.decorated\(\)](#), [enscript.default\(\)](#), [ggplot.decorated\(\)](#), [io\\_csv.character\(\)](#), [io\\_csv.data.frame\(\)](#), [io\\_res.character\(\)](#), [io\\_res.decorated\(\)](#), [io\\_table.character\(\)](#), [io\\_table.data.frame\(\)](#), [io\\_yamlet.character\(\)](#), [io\\_yamlet.data.frame\(\)](#), [is\\_parseable.default\(\)](#), [modify.default\(\)](#), [promote.list\(\)](#), [read\\_yamlet\(\)](#), [resolve.decorated\(\)](#), [selected.default\(\)](#), [write\\_yamlet\(\)](#)

### Examples

```
library(magrittr)
library(dplyr)
let <- letters[1:5]
LET <- LETTERS[1:5]
int <- 0L:4L
num <- as.numeric(int)
fac <- factor(let)
css <- classified(let)

# any of these can mimic any other
str(mimic(LET, let))
str(mimic(num, let))
```

```

str(mimic(let, num))

# factors get a guide and classifieds get a named codelist
str(mimic(fac, int))
str(mimic(css, int))

# int can 'pick up' the factor levels as guide names
str(mimic(int, css))

# if two variables mean essentially the same thing,
# mimic lets you save space
x <- data.frame(id = 1:2, ID = c('A','B'))
x
x %<>% mutate(id = mimic(id, ID)) %>% select(-ID)
x
# ID still available, in principle:
x %>% as_decorated %>% resolve

```

---

modify.default

---

*Modify Attributes of Indicated Components by Default*


---

## Description

Modifies the attributes of each indicated element (all elements by default). Tries to assign the value of an expression to the supplied label, with existing attributes and the object itself (.) available as arguments. Gives a warning if the supplied label is considered reserved. Intends to support anything with one or more non-empty names.

## Usage

```

## Default S3 method:
modify(
  x,
  ...,
  .reserved = getOption("yamlet_modify_reserved", c("class", "levels", "labels",
    "names"))
)

```

## Arguments

x	object
...	indicated columns, or name-value pairs
.reserved	reserved labels that warn on assignment

## Details

The name of the component itself is available during assignments as attribute 'name' (any pre-existing attribute 'name' is temporarily masked). After all assignments are complete, the value of 'name' is enforced at the object level. Thus, modify expressions can modify component names.

As currently implemented, the expression is evaluated by `eval_tidy`, with attributes supplied as the data argument. Thus, names in the expression may be disambiguated, e.g. with `.data`. See examples.

## Value

same class as x

## See Also

Other modify: `modify()`, `named()`, `selected()`, `selected.default()`

Other interface: `canonical.decorated()`, `classified.data.frame()`, `decorate.character()`, `decorate.data.frame()`, `desolve.decorated()`, `enscript.default()`, `ggplot.decorated()`, `io_csv.character()`, `io_csv.data.frame()`, `io_res.character()`, `io_res.decorated()`, `io_table.character()`, `io_table.data.frame()`, `io_yamlet.character()`, `io_yamlet.data.frame()`, `is_parseable.default()`, `mimic.default()`, `promote.list()`, `read_yamlet()`, `resolve.decorated()`, `selected.default()`, `write_yamlet()`

## Examples

```
library(magrittr)
library(dplyr)
file <- system.file(package = 'yamlet', 'extdata', 'quinidine.csv')
x <- decorate(file)

# modify selected columns
x %<>% modify(title = paste(label, '(', guide, ')'), time)
x %>% select(time, conc) %>% decorations

# modify (almost) all columns
x %<>% modify(title = paste(label, '(', guide, ')'), -Subject)
x %>% select(time, conc) %>% decorations

# use column itself
x %<>% modify(`defined values` = sum(!is.na(.)))
x %>% select(time) %>% decorations

# rename column
x %<>% modify(time, name = label)
names(x)

# warn if assignment fails
## Not run:
\donttest{
x %<>% modify(title = foo, time)
}
```

```

## End(Not run)

# support lists
list(a = 1, b = 1:10, c = letters) %>%
  modify(length = length(.), b:c)

x %<>% select(Subject) %>% modify(label = NULL, `defined values` = NULL)

# distinguish data and environment
location <- 'environment'
x %>% modify(where = location) %>% decorations
x %>% modify(where = .env$location) %>% decorations
## Not run:
\donttest{
x%>% modify(where = .data$location) %>% decorations
}
## End(Not run)
x %>% modify(location = 'attributes', where = location) %>% decorations
x %>% modify(location = 'attributes', where = .data$location) %>% decorations

```

---

read\_yamlet

*Read Yamlet*


---

## Description

Reads yamlet from file. Similar to [io\\_yamlet.character](#) but also reads text fragments.

## Usage

```

read_yamlet(
  x,
  ...,
  default_keys = getOption("yamlet_default_keys", list("label", "guide"))
)

```

## Arguments

**x** file path for yamlet, or vector of yamlet in storage syntax

**...** passed to [as\\_yamlet](#)

**default\_keys** character: default keys for the first n anonymous members of each element

## Value

yamlet: a named list with default keys applied

**See Also**

[decorate.data.frame](#)

Other interface: [canonical.decorated\(\)](#), [classified.data.frame\(\)](#), [decorate.character\(\)](#), [decorate.data.frame\(\)](#), [desolve.decorated\(\)](#), [enscript.default\(\)](#), [ggplot.decorated\(\)](#), [io\\_csv.character\(\)](#), [io\\_csv.data.frame\(\)](#), [io\\_res.character\(\)](#), [io\\_res.decorated\(\)](#), [io\\_table.character\(\)](#), [io\\_table.data.frame\(\)](#), [io\\_yamlet.character\(\)](#), [io\\_yamlet.data.frame\(\)](#), [is\\_parseable.default\(\)](#), [mimic.default\(\)](#), [modify.default\(\)](#), [promote.list\(\)](#), [resolve.decorated\(\)](#), [selected.default\(\)](#), [write\\_yamlet\(\)](#)

**Examples**

```
library(csv)
file <- system.file(package = 'yamlet', 'extdata', 'quinidine.csv')
meta <- system.file(package = 'yamlet', 'extdata', 'quinidine.yaml')
x <- as.csv(file)
y <- read_yamlet(meta)
x <- decorate(x, meta = y)
stopifnot(identical(x, decorate(file)))
```

---

resolve.decorated      *Resolve Guide for Decorated*

---

**Description**

Resolves implicit usage of default key 'guide' to explicit usage for decorated class. Calls [explicit\\_guide](#), [classified](#), and [make\\_title](#).

**Usage**

```
## S3 method for class 'decorated'
resolve(x, ...)
```

**Arguments**

x                    decorated  
...                    passed to [explicit\\_guide](#), [classified](#), and [make\\_title](#)

**Value**

decorated

**See Also**

Other resolve: [desolve\(\)](#), [desolve.classified\(\)](#), [desolve.data.frame\(\)](#), [desolve.decorated\(\)](#), [desolve.default\(\)](#), [desolve.dvec\(\)](#), [resolve\(\)](#), [resolve.classified\(\)](#), [resolve.data.frame\(\)](#), [resolve.default\(\)](#), [resolve.dvec\(\)](#), [resolve.factor\(\)](#)

Other interface: [canonical.decorated\(\)](#), [classified.data.frame\(\)](#), [decorate.character\(\)](#), [decorate.data.frame\(\)](#), [desolve.decorated\(\)](#), [enscript.default\(\)](#), [ggplot.decorated\(\)](#), [io\\_csv.character\(\)](#), [io\\_csv.data.frame\(\)](#), [io\\_res.character\(\)](#), [io\\_res.decorated\(\)](#), [io\\_table.character\(\)](#), [io\\_table.data.frame\(\)](#), [io\\_yamlet.character\(\)](#), [io\\_yamlet.data.frame\(\)](#), [is\\_parseable.default\(\)](#), [mimic.default\(\)](#), [modify.default\(\)](#), [promote.list\(\)](#), [read\\_yamlet\(\)](#), [selected.default\(\)](#), [write\\_yamlet\(\)](#)

**Examples**

```
# generate some decorated data
library(magrittr)
file <- system.file(package = 'yamlet', 'extdata', 'quinidine.csv')
x <- decorate(file)
x %>% decorations(Age, glyco)

# resolve everything, and show selected decorations
x %>% resolve %>% decorations(Age, glyco)

# resolve selectively, and show selected decorations
x %>% resolve(glyco) %>% decorations(Age, glyco)
```

---

undecorate.default      *Undecorate by Default*

---

**Description**

Undecorates by default method. Calls [type.convert](#) for each element, with `as.is = TRUE` by default.

**Usage**

```
## Default S3 method:
undecorate(x, as.is = TRUE, ...)
```

**Arguments**

<code>x</code>	object
<code>as.is</code>	passed to <a href="#">type.convert</a>
<code>...</code>	passed arguments

**Value**

a list-like object, typically `data.frame`

**See Also**

Other decorate: [as\\_decorated\(\)](#), [as\\_decorated.default\(\)](#), [decorate\(\)](#), [decorate.character\(\)](#), [decorate.data.frame\(\)](#), [decorate.list\(\)](#), [decorate\\_groups\(\)](#), [decorate\\_groups.data.frame\(\)](#), [decorations\(\)](#), [decorations.data.frame\(\)](#), [decorations\\_groups\(\)](#), [decorations\\_groups.data.frame\(\)](#), [group\\_by\\_decorations\(\)](#), [group\\_by\\_decorations.data.frame\(\)](#), [redecorate\(\)](#), [undecorate\(\)](#)

**Examples**

```
file <- system.file(package = 'yamlet', 'extdata', 'xanomeline.csv.gz')
x <- io_csv(file)
head(decorations(x))
head(decorations(undecorate(x)))
```

---

write\_yamlet

*Write Yamlet*


---

**Description**

Writes yamlet to file. Similar to [io\\_yamlet.yamlet](#) but returns invisible storage format instead of invisible storage location.

**Usage**

```
write_yamlet(
  x,
  con = stdout(),
  eol = "\n",
  useBytes = FALSE,
  default_keys = getOption("yamlet_default_keys", list("label", "guide")),
  fileEncoding = getOption("encoding"),
  block = FALSE,
  ...
)
```

**Arguments**

x	something that can be coerced to class 'yamlet', like a yamlet object or a decorated data.frame
con	passed to <a href="#">writeLines</a>
eol	end-of-line; passed to <a href="#">writeLines</a> as sep
useBytes	passed to <a href="#">writeLines</a>
default_keys	character: default keys for the first n anonymous members of each element
fileEncoding	if con is character, passed to <a href="#">file</a> as encoding
block	whether to write block scalars
...	passed to <a href="#">as_yamlet</a> and to <a href="#">as.character.yamlet</a>

**Value**

invisible character representation of yamlet (storage syntax)

**See Also**

[decorate.list](#)

Other interface: [canonical.decorated\(\)](#), [classified.data.frame\(\)](#), [decorate.character\(\)](#), [decorate.data.frame\(\)](#), [desolve.decorated\(\)](#), [enscript.default\(\)](#), [ggplot.decorated\(\)](#), [io\\_csv.character\(\)](#), [io\\_csv.data.frame\(\)](#), [io\\_res.character\(\)](#), [io\\_res.decorated\(\)](#), [io\\_table.character\(\)](#), [io\\_table.data.frame\(\)](#), [io\\_yamlet.character\(\)](#), [io\\_yamlet.data.frame\(\)](#), [is\\_parseable.default\(\)](#), [mimic.default\(\)](#), [modify.default\(\)](#), [promote.list\(\)](#), [read\\_yamlet\(\)](#), [resolve.decorated\(\)](#), [selected.default\(\)](#)

**Examples**

```
library(csv)
file <- system.file(package = 'yamlet', 'extdata', 'quinidine.csv')
meta <- system.file(package = 'yamlet', 'extdata', 'quinidine.yaml')
x <- as.csv(file)
y <- read_yamlet(meta)
x <- decorate(x, meta = y)
identical(x, decorate(file))
tmp <- tempfile()
write_yamlet(x, tmp)
stopifnot(identical(read_yamlet(meta), read_yamlet(tmp)))
```

---

yamlet

*yamlet: Versatile Curation of Table Metadata*

---

**Description**

The **yamlet** package supports storage and retrieval of table metadata in yaml format. The most important function is [decorate.character](#): it lets you 'decorate' your data by attaching attributes retrieved from a file in yaml format. Typically your data will be of class 'data.frame', but it could be anything that is essentially a named list.

**Storage Format**

Storage format for 'yamlet' is a text file containing well-formed yaml. Technically, it is a map of sequences. Though well formed, it need not be complete: attributes or their names may be missing.

In the simplest case, the data specification consists of a list of column (item) names, followed by semicolons. Perhaps you only have one column:

```
mpg:
```

or maybe several:

```
mpg:
cyl:
disp:
```

If you know descriptive labels for your columns, provide them (skip a space after the colon).

```
mpg: fuel economy
cyl: number of cylinders
disp: displacement
```

If you know units, create a sequence with square brackets.

```
mpg: [ fuel economy, miles/gallon ]
cyl: number of cylinders
disp: [ displacement , in^3 ]
```

If you are going to give units, you probably should give a key first, since the first anonymous element is 'label' by default, and the second is 'guide'. (A guide can be units for numeric variables, factor levels/labels for categorical variables, or a format string for dates, times, and datetimes.) You could give just the units but you would have to be specific:

```
mpg: [units: miles/gallon]
```

You can over-ride default keys by providing them in your data:

```
mpg: [units: miles/gallon]
_keys: [label, units]
```

Notice that stored yamlet can be informationally defective while syntactically correct. If you don't know an item key at the time of data authoring, you can omit it:

```
race: [race, [white: 0, black: 1, asian: 3 ]]
```

Or perhaps you know the key but not the value:

```
race: [race, [white: 0, black: 1, asian: 2, ? other ]]
```

Notice that race is factor-like; the factor sequence is nested within the attribute sequence. Equivalently:

```
race: [label: race, guide: [white: 0, black: 1, asian: 2, ? other ]]
```

If you have a codelist of length one, you should still enclose it in brackets:

```
sex: [Sex, [ M ]]
```

To get started using yamlet, see `?as_yamlet.character` and examples there. See also `?decorate` which adds yamlet values to corresponding items in your data. See also `?print.decorated` which uses label attributes, if present, as axis labels.

Note: the quinidine and phenobarb datasets in the examples are borrowed from **nlme** (`?Quinidine`, `?Phenobarb`), with some reorganization.

### Author(s)

**Maintainer:** Tim Bergsma <bergsmat@gmail.com>

**See Also**

Useful links:

- Report bugs at <https://github.com/bergsmat/yamlet/issues>

---

yamlet\_options

*Display Global Yamlet Options*


---

**Description**

Displays global yamlet options: those options whose names begin with 'yamlet\_'.

- **yamlet\_append\_units\_open**: see [append\\_units.default](#). Controls how labels are constructed for variables with 'units' attributes. In brief, units are wrapped in parentheses, and appended to the label.
- **yamlet\_append\_units\_close**: see [append\\_units.default](#). Controls how labels are constructed for variables with 'units' attributes. In brief, units are wrapped in parentheses, and appended to the label.
- **yamlet\_append\_units\_style**: see [append\\_units.default](#). Determines parsing as 'plot-math' or 'latex', or 'plain' for no parsing.
- **yamlet\_append\_units\_target**: see [append\\_units.default](#). By default, append result is assigned to attribute 'label', but could be something else like 'title'.
- **yamlet\_default\_keys**: see [as\\_yamlet.character](#). The first two yaml attributes without specified names are assumed to be 'label' and 'guide'.
- **yamlet\_persistence**: see [decorate.list](#) and [as.integer.classified](#). By default, persistence of column attributes is implemented by creating 'dvec' objects (decorated vectors) using **vctrs** methodology.
- **yamlet\_cell\_value**: see [as.data.frame.yamlet](#). Controls how cells are calculated when converting yamlet (decorations) to a data.frame.
- **yamlet\_import**: see [decorate.character](#). Controls how primary data is read from file (default: `as.csv()`).
- **yamlet\_extension**: see [decorate.character](#). Controls what file extension is expected for yaml metadata (default: 'yaml')
- **yamlet\_overwrite**: see [decorate.list](#). Controls whether existing decorations are overwritten.
- **yamlet\_exclude\_attr**: see [decorations.data.frame](#) Controls what attributes are excluded from display.
- **yamlet\_with\_title**: see [make\\_title.dvec](#) and [drop\\_title.dvec](#). For objects with (implied) units attributes, titles are by default automatically created on `resolve()` and destroyed on `desolve()`. Interacts with `yamlet_append_units_*`.
- **yamlet\_infer\_guide**: see [explicit\\_guide.yamlet](#). Identifies the function that will be used to reclassify 'guide' as something more explicit.

- **yamlet\_explicit\_guide\_overwrite**: see [explicit\\_guide.data.frame](#) and [explicit\\_guide.dvec](#). In the latter case, controls whether existing attributes are overwritten.
- **yamlet\_explicit\_guide\_simplify**: [explicit\\_guide.data.frame](#) and [explicit\\_guide.dvec](#). Ordinarily, the 'guide' attribute is removed if something more useful can be inferred.
- **yamlet\_decorated\_ggplot\_search**: see [ggplot\\_build.decorated\\_ggplot](#). The build method for `decorated_ggplot` populates axis labels by searching first for attributes named 'expression', 'title', and 'label'. Customizable.
- **yamlet\_decorated\_ggplot\_discrete**: see [ggplot\\_build.decorated\\_ggplot](#). Discrete aesthetics to map from data decorations where available.
- **yamlet\_decorated\_ggplot\_drop**: see [ggplot\\_build.decorated\\_ggplot](#). Should unused factor levels be omitted from data-driven discrete scales?
- **yamlet\_ggreedy\_parse**: see [ggreedy.data.frame](#), [ggreedy.decorated](#). Whether to parse axis labels. TRUE by default, but may be problematic if unintended.
- **yamlet\_modify\_reserved**: see [modify.default](#). A list of reserved labels that warn on reassignment.
- **yamlet\_promote\_reserved**: see [promote.list](#). Attributes to leave untouched when promoting singularities.
- **yamlet\_promote**: see [filter.decorated](#). Whether to promote when filtering 'decorated'.
- **yamlet\_as\_units\_preserve**: [as\\_units.dvec](#). What attributes to preserve when converting dvec to units. Just 'label' by default. Assign `options(yamlet_as_units_preserve = character(0))` to remove all.
- **yamlet\_print\_simplify**: [print.yamlet](#). Whether to collapse interactively-displayed decorations into a single line for lists that have no (nested) names and have the same length when unlisted. True by default. Can be misleading for lists with fine detail, but in most cases fine detail will likely have names.
- **yamlet\_format**: [enscript.default](#). Choice of 'html' or 'latex', guessed if not supplied.
- **yamlet\_warn\_conflicted**: [c.classified](#). Whether to warn when codelists for combined classified factors have conflicting names (which will be dropped).
- **yamlet\_reconcile\_attributes**: [c.classified](#). Whether to reconcile attribute lists when combining classified. Set FALSE for old behavior (pre 1.3.1) of adopting attributes (other than levels and codelists).
- **yamlet\_expand\_codelist**: [explicit\\_guide.yamlet](#). If TRUE (default) an empty list as a guide attribute is short-hand for `sort(unique(x))`.
- **yamlet\_collapse\_codelist**: [implicit\\_guide.data.frame](#). An integer (default: Inf) giving the maximum number of (un-named) codelist elements to store explicitly. Else, if `sort(unique(x))` has exactly the same values as codelist, `implicit_guide` will substitute an empty list.

## Usage

```
yamlet_options()
```

## Value

list

**Examples**

```
yamlet_options()
```

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