Package 'hms'

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Title Pretty Time of Day

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Description Implements an S3 class for storing and formatting time-of-day values, based on the 'difftime' class.

Imports methods,
pkgconfig,
rlang,
vctrs (>= 0.2.0)

Suggests crayon,
lubridate,
pillar (>= 1.1.0),
testthat

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URL https://github.com/tidyverse/hms

BugReports https://github.com/tidyverse/hms/issues

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R topics documented:

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hms-package   *hms: Pretty Time of Day*

Description

Implements an S3 class for storing and formatting time-of-day values, based on the 'difftime' class.

Details

Stable

Author(s)

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Other contributors:

- The R Consortium [funder]
- RStudio [funder]

See Also

Useful links:

- https://github.com/tidyverse/hms
- Report bugs at https://github.com/tidyverse/hms/issues

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hms   *A simple class for storing time-of-day values*

Description

The values are stored as a difftime vector with a custom class, and always with "seconds" as unit for robust coercion to numeric. Supports construction from time values, coercion to and from various data types, and formatting. Can be used as a regular column in a data frame.

hms() is a high-level constructor that accepts second, minute, hour and day components as numeric vectors.

new_hms() is a low-level constructor that only checks that its input has the correct base type, numeric.

is_hms() checks if an object is of class hms.

as_hms() forwards to vec_cast().

Usage

```
hms(seconds = NULL, minutes = NULL, hours = NULL, days = NULL)

new_hms(x = numeric())

is_hms(x)

as_hms(x)

## S3 method for class 'hms'
as.POSIXct(x, ...)

## S3 method for class 'hms'
as.POSIXlt(x, ...)

## S3 method for class 'hms'
as.character(x, ...)

## S3 method for class 'hms'
as.data.frame(x, row.names = NULL, optional = FALSE, ...,
  nm = paste(deparse(substitute(x), width.cutoff = 500L), collapse =
  " "))

## S3 method for class 'hms'
format(x, ...)

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

Arguments

seconds, minutes, hours, days

    Time since midnight. No bounds checking is performed.

x	An object.
...	additional arguments to be passed to or from methods.
row.names	NULL or a character vector giving the row names for the data frame. Missing values are not allowed.
optional	logical. If TRUE, setting row names and converting column names (to syntactic names: see make.names) is optional. Note that all of R's **base** package as.data.frame() methods use optional only for column names treatment, basically with the meaning of data.frame(*,check.names = !optional). See also the make.names argument of the matrix method.
nm	Name of column in new data frame

Details

For hms, all arguments must have the same length or be NULL. Odd combinations (e.g., passing only seconds and hours but not minutes) are rejected.

For arguments of type [POSIXct](#) and [POSIXlt](#), as_hms() does not perform timezone conversion. Use [lubridate::with_tz()](#) and [lubridate::force_tz()](#) as necessary.

Examples

```
hms(56, 34, 12)
hms()

new_hms(as.numeric(1:3))
# Supports numeric only!
try(new_hms(1:3))

as_hms(1)
as_hms("12:34:56")
as_hms(Sys.time())
as.POSIXct(hms(1))
data.frame(a = hms(1))
d <- data.frame(hours = 1:3)
d$hours <- hms(hours = d$hours)
d
```

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parse_hms   *Parsing hms values*

Description

These functions convert character vectors to objects of the [hms](#) class. NA values are supported.

parse_hms() accepts values of the form "HH:MM:SS", with optional fractional seconds.

parse_hm() accepts values of the form "HH:MM".

Usage

```
parse_hms(x)

parse_hm(x)
```

Arguments

x   A character vector

Value

An object of class [hms](#).

Examples

```
parse_hms("12:34:56")
parse_hms("12:34:56.789")
parse_hm("12:34")
```

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round_hms   *Round or truncate to a multiple of seconds*

Description

Convenience functions to round or truncate to a multiple of seconds.

Usage

```
round_hms(x, secs)

trunc_hms(x, secs)
```

Arguments

x	A vector of class [hms](#)
secs	Multiple of seconds, a positive numeric. Values less than one are supported

Value

The input, rounded or truncated to the nearest multiple of secs

Examples

```
round_hms(as.hms("12:34:56"), 5)
round_hms(as.hms("12:34:56"), 60)
trunc_hms(as.hms("12:34:56"), 60)
```

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vec_cast.hms   *Casting*

Description

Double dispatch methods to support `vctrs::vec_cast()`.

Usage

```
## S3 method for class 'hms'
vec_cast(x, to, ...)
```

Arguments

x	Vectors to cast.
to	Type to cast to. If NULL, x will be returned as is.
...	For vec_cast_common(), vectors to cast. For vec_cast() and vec_restore(), these dots are only for future extensions and should be empty.

vec_ptype2.hms	*Coercion*

Description

Double dispatch methods to support `vctrs::vec_ptype2()`.

Usage

```
## S3 method for class 'hms'
vec_ptype2(x, y, ..., x_arg = "", y_arg = "")
```

Arguments

x	Vector types.
y	Vector types.
...	These dots are for future extensions and must be empty.
x_arg	Argument names for x and y. These are used in error messages to inform the user about the locations of incompatible types (see `stop_incompatible_type()`).
y_arg	Argument names for x and y. These are used in error messages to inform the user about the locations of incompatible types (see `stop_incompatible_type()`).

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