

Package ‘rccdates’

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Type Package

Title Date Functions for Swedish Cancer Data

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Description Identify, convert and handle dates as used within the Swedish cancer register and associated cancer quality registers in Sweden. Especially the cancer register sometimes use nonstandard date variables where day and/or month can be “00” or were the date format is a mixture of “%Y-%m-%d”, “%Y%m%d” and “%y%V” (two digit year and week number according to ISO 8601, which is not completely supported by R). These dates must be approximated to valid dates before being used in for example survival analysis. The package also includes some convenient functions for calculating “lead times” (relying on ‘difftime’) and introduce a “year” class with relevant S3-methods to handle yearly cohort.

License GPL-2

Depends R (>= 2.10)

Imports rccmisc

Suggests testthat, knitr, rmarkdown

BugReports <https://bitbucket.com/cancercentrum/rccdates/issues>

SysDataCompression xz

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VignetteBuilder knitr

NeedsCompilation no

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as.Dates	<i>Converting all potential dates in a data.frame</i>
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Description

This function takes a data.frame, checks all its variables for potential dates and transform potential date variables to dates.

Usage

```
as.Dates(x, ...)

## S3 method for class 'data.frame'
as.Dates(x, progress_bar = TRUE, ...)

## Default S3 method:
as.Dates(x, rtr = TRUE, yyww = rtr, yyyyww = rtr,
         yyyy0000 = rtr, yyyyymm00 = rtr, ask = FALSE, name = "x", ...)
```

Arguments

x	a data.frame, numeric vector or character vector, possibly with potential date variable(s)
...	arguments passed to exceed_threshold
progress_bar	Should a progress bar be printed to show the progress of the call? TRUE by default.
rtr	Should dates in formats found in RTR be recognised as dates. This controls yyww, yyyyww, yyyy0000, yyyyymm00 but each of them can also be set individually. TRUE by default.
yyww, yyyyww	Should entries of the old yyww/yyyyww-formats be recognised as dates? Same as rtr by default.
yyyy0000, yyyyymm00	Should entries with unknown month and/or day (set to zero) be accepted as dates? If yes, dates in the form "yyyy0000" will be set to "yyyy0701" and "yyyyymm00" to "yyyyymm15". Same as rtr by default.
ask, name	arguments passed to exceed_threshold

Details

The function only recognise dates in the standard format used in INCA and Rockan, hence ' week number sometimes used for older data). We hope that this older format can be omitted in the future since it adds some unclarity if the vector is really a date or not). Dates in other formats (for example as parts of social security numbers, as part of a comment, or as a time stamp) will not be treated as dates.

Value

the given input with potential date variable(s) converted to date(s) and other variable(s) intact

Slow call

Note that the function call can be very slow for big data sets (each individual cell is checked). You probably only run this function once per dataset and could hopefully live with this drawback :-)

See Also

[as.Date](#)

Examples

```
# Let's say we have a data.frame with one date column and one column that is almost
# (but not exactly) a date:
test_data <- data.frame(
  not_date = c("19121212", "1912-12-12", "2014-01-01", "121212"),
  date     = c(19121212, "1912-12-12", "2014-01-01", "6405"))
as.Dates(test_data) # Only recognizes the "date" column as date

# Inform that the "not_date" column might also be a date candidate if fixed:
as.Dates(test_data, threshold = .5)

# Force the not_date column to date
as.Dates(test_data, threshold = .5, force = TRUE)
```

as.year

Year vectors

Description

Creates or coerces objects of type year.

Usage

```
as.year(x)

## S3 method for class 'Date'
as.year(x)

## Default S3 method:
as.year(x)

is.year(x)

## S3 method for class 'year'
a - b

width.year(x)
```

Arguments

x	object to be coerced or tested
a, b	years to be added or subtracted

Details

The year class also inherits methods from the character class but not from numeric. (It does not make any sense to, for example, multiply two years with each other). There are however methods for subtraction and it is also possible to add a integer to a year etcetera.

Value

Vector of class year and "AsIs" (see function [I](#)).

Examples

```
as.year("2012")
as.year(Sys.Date())
rccmisc::width(c(2012, 2014))
```

as.yyww

Coerce yyww-variable to a valid date.

Description

Coerce yyww-variable to a valid date.

Usage

```
as.yyww(x, format_check = TRUE)
```

```
as.yyyyww(x, format_check = TRUE)
```

Arguments

x a vector that can be coerced to a date of the form yV (yyww) or YV (yyyyww)

format_check Should the format of x be checked to be in correct format before we try to change it? TRUE by default. Set to FALSE if the format is already checked outside the function to avoid multiple checks (that could be time consuming for big data sets).

Value

a date vector

asDate	<i>as.Date with format = "%Y-%m-%d"</i>
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Description

This is just a wrapper for the standard INCA date format

Usage

```
asDate(...)
```

Arguments

... arguments passed to [as.Date](#)

Examples

```
asDate(c("", "", "2014-10-10"))
```

lt *Lead time from one date to another*

Description

Lead time from one date to another

Usage

```
lt(from, to, neg = NA, as = "numeric")
```

```
leadtime(from, to, neg = NA, as = "numeric")
```

Arguments

from, to	start and stop dates (in formats that can be coerced by as.Dates).
neg	default value for negative lead times. NULL means that negative lead times are kept as is. NA by default (changes negative values to NA). Any numerical value is accepted
as	name of the class to be assigned to x. Default is numeric but could also be set to for example difftime or integer .

Value

A vector of class as (numeric by default).

Examples

```
lt(from = Sys.Date(), to = Sys.Date() + 10)
```

rccdates *Date functions for RCC (INCA and Rockan format)*

Description

See [as.Dates](#).

Author(s)

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