Package 'ethiodate'

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Type Package

Title Working with Ethiopian Dates

Version 0.1.0

Description A robust and efficient solution for working with Ethiopian dates. It can seamlessly convert to and from Gregorian dates.
It ensures lightning-fast computations by integrating high-performance 'C++' code through 'Rcpp' package.

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Encoding UTF-8

RoxygenNote 7.3.2

LinkingTo Rcpp

Imports Rcpp, stringr, vctrs

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

Config/testthat/edition 3

URL https://guturago.github.io/ethiodate/

VignetteBuilder knitr

Depends R (>= 4.1.0)

NeedsCompilation yes

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Contents

`eth_date` *Create an Ethiopian Date Object*

Description

Convert an object to an Ethiopian date.

Usage

```
eth_date(x, ...)

## S3 method for class 'numeric'
eth_date(x, origin = NULL, ...)

## S3 method for class 'character'
eth_date(x, format = "%Y-%m-%d", lang = c("lat", "amh", "en"), ...)

## S3 method for class 'Date'
eth_date(x, ...)

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

## S3 method for class 'POSIXt'
eth_date(x, ...)
```

Arguments

`x`	a numeric, character, Date, POSIXct or POSIXt vector.
`...`	further arguments to be passed to specific methods (see above).
`origin`	a Date or ethdate object, or something that can be coerced by `eth_date(origin, ...)`. Default: the Unix epoch of "1970-01-01" GC ("1962-04-23" EC).
`format`	format argument for character method to parse the date.
`lang`	a language in which month names are written, if included in x. Use "amh" for month names written in Amharic alphabets, "lat" for Amharic month names written in Latin alphabets, and "en" for English month names.

Details

`eth_date()` internally stores number of days since the Unix epoch of "1970-01-01" GC ("1962-04-23" EC). Days before "1962-04-23" EC are represented as negative integers. This makes it easy to convert from and to base `Date` objects.

The conversion of numeric vectors assumes that the vector represents a number of days since the origin ("1962-04-23" EC if origin is NULL). For the date objects, it extract underlying numeric values and convert it to `ethiodate` object. To convert from POSIXct or POSIXt, it coerces these objects to base Date object and, then, apply conversion.

To parse character vector, a valid format must be supplied. The default is "%Y-%m-%d". please see the details section of `strptime`.

Value

a vector of 'ethdate' objects corresponding to x.

Author(s)

Gutama Girja Urago

See Also

`eth_make_date()` `eth_parse_date()`

Examples

```
eth_date(Sys.Date())
eth_date(Sys.time())

x <- 7
eth_date(x)
eth_date(x, origin = Sys.Date())
eth_date(x, origin = "2017-01-01")
eth_date(x, origin = "01-01-2017", format = "%d-%m-%Y")

s <- c("01/01/2013", "06/13/2011")
eth_date(s, format = "%d/%m/%Y")
```

`eth_make_date` *Make Ethiopian Date*

Description

Make Ethiopian date from year, month and day components.

Usage

```
eth_make_date(year, month, day)
```

Arguments

year	an integer vector of Ethiopian year.
month	an integer vector of Ethiopian month.
day	an integer vector of Ethiopian day.

Details

This function makes an Ethiopian date object from three integer vectors of an equal length. It validates the date and returns NA for invalid dates. It accounts for leap years.

Value

a vector of 'ethdate' objects.

Author(s)

Gutama Girja Urago

See Also

eth_date() eth_parse_date()

Examples

```
eth_make_date(2017, 01, 15)
```

---

eth_parse_date *Parse Ethiopian Date*

Description

Parse Ethiopian date from character vector that has a non-digit separator.

Usage

```
eth_parse_date(x, format = "%Y-%m-%d", lang = c("lat", "amh", "en"))
```

Arguments

x	a character vector.
format	a format in in which x is composed. See strptime.
lang	a language in which month names are written, if included in x. Use "amh" for month names written in Amharic alphabets, "lat" for Amharic month names written in Latin alphabets, and "en" for English month names.

Details

x must include non-digit separator.

Value

a vector of 'ethdate' objects.

Author(s)

Gutama Girja Urago

See Also

`eth_date()` `eth_make_date()`

Examples

```
eth_parse_date("2017-01-01")
s <- c("01/01/2013", "06/13/2011")
eth_parse_date(s, format = "%d/%m/%Y")
```

---

eth_show *See Month or Day Names*

Description

Small functions that displays texts.

Usage

```
eth_show(x = c("%B", "%b", "%A", "%a"), lang = c("lat", "amh", "en"))

eth_today(...)

eth_now(...)
```

Arguments

x	what you want to see.
lang	language of the text.
...	arguments that passes to `format()`

Value

a character vector.

Author(s)

Gutama Girja Urago

Examples

```
eth_show()
eth_show("%A", "amh")
eth_today()
eth_now()
```

`eth_year` *Ethiopian Date Components*

Description

Small functions that helps to extract parts of Ethiopian date objects.

Usage

```
eth_year(x)

eth_month(x)

eth_monthname(x, lang = c("lat", "amh", "en"), abbreviate = FALSE)

eth_day(x)

eth_weekday(x, lang = c("lat", "amh", "en"), abbreviate = FALSE)
```

Arguments

`x`	a vector of an Ethiopian date object
`lang`	a language. 'amh' for Amharic, 'lat' for Amharic written in Latin alphabets and 'en' for English
`abbreviate`	Do you want to get an abbreviated month or weekday names?

Value

a vector

Author(s)

Gutama Girja Urago

Examples

```
today <- eth_date(Sys.Date())
eth_year(today)
eth_month(today)
eth_monthname(today)
eth_day(today)
eth_weekday(today)
```

`is_eth_date` *Utils*

Description

Small helper functions.

Usage

```
is_eth_date(x)

is_eth_leap(x)

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

## S3 method for class 'ethdate'
as.double(x, ...)

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

Arguments

`x`	an ethdate or numeric vector.
`...`	further arguments to be passed to specific methods.

Value

`is_eth_leap()` returns a boolean vector, `as.Date()` returns Date object, `as.numeric()` returns number of date since 1970-01-01 GC (1962-04-23 EC), and `as.character()` returns formatted character date.

Examples

```
is_eth_leap(2011)
```

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