Package ‘encode’

October 13, 2022

Type    Package
Title   Represent Ordered Lists and Pairs as Strings
Version 0.3.6
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Description Interconverts between ordered lists and compact string notation.
Useful for capturing code lists, and pair-wise codes and decodes, for text storage.
Analogous to factor levels and labels. Generics encode() and decode() perform interconversion, while codes() and decodes() extract components of an encoding.
The function encoded() checks whether something is interpretable as an encoding.
If a vector has an encoded 'guide' attribute, as_factor() uses it to coerce to factor.

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LazyData TRUE

Imports
Suggests magrittr

RoxygenNote 6.0.1

NeedsCompilation no
Repository CRAN

Date/Publication 2019-04-25 12:10:09 UTC

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Coerces to factor, blending levels with encoding, if present as a 'guide' attribute. Vectors without encodings (or with empty encodings) acquire levels equal to unique(x) (notice that storage order controls presentation order). Vectors with non-empty encodings are decoded after harmonizing the encoding and the actual data. Factors with encodings defer to order and display value of the encoding as much as possible. Missing levels are supplied. Unused levels are removed. Other attributes beside 'class' and 'levels' are preserved.

Usage

as_factor(x)

Arguments

x  vector or factor

Value

factor

See Also

Other decode: decode.data.frame, decode.default, decode

Examples

library(magrittr)
f <!-- c(1, 2, NA, 4, 5) --> as_factor(f)
as_factor(factor(f))
as_factor(as.factor(f))
as_factor(structure(f, guide = '....'))
as_factor(structure(f, guide = '/5/'))
as_factor(structure(f, guide = '/5/bar/'))
as_factor(structure(f, guide = '/5/bar/6/baz/'))
as_factor(structure(factor(f), guide = '/5/bar/'))
as_factor(structure(factor(f), guide = '/5/bar/')) %>% sort
as_factor(structure(factor(f), guide = '....'))


as_factor(structure(factor(foo), guide = '/1/bar/'//5/bar//''))

---

codes  

Extract Codes from an Object

Description

Extracts Codes from an object. Default method is supplied.

Usage

codes(x, ...)

Arguments

x  object
...

Passed arguments

See Also

codes.default

Other codes: codes.default

---

codes.default  

Extract Codes by Default from an Object

Description

Extracts codes from an object using the default method.

Usage

## Default S3 method:
codes(x, simplify = TRUE, ...)

Arguments

x  object
simplify  whether to convert length one list to vector
...

Passed arguments

Value

list, or vector if simplify = TRUE
**decode.data.frame**

See Also

Other codes: *codes*

---

**decode**  
*Decode an Object*

**Description**

Decodes an object. Default method supplied.

**Usage**

```r
decode(x, ...)
```

**Arguments**

- `x`  
  object
- `...`  
  passed arguments

**See Also**

- `decode.default`
- Other decode: *as_factor, decode.data.frame, decode.default*

---

**decode.data.frame**  
*Decode Data Frame.*

**Description**

Decodes a data.frame. Calls `as_factor()` for each column with an encoded guide attribute.

**Usage**

```r
## S3 method for class 'data.frame'
de decode(x, ...)
```

**Arguments**

- `x`  
  inherits data.frame
- `...`  
  ignored

**Value**

same class as `x`

**See Also**

- Other decode: *as_factor, decode.default, decode*
**decode.default**  
*Decode an Object by Default*

**Description**
Decodes an object using the default method. Typically `x` is a character vector containing codes that can be extracted from `encoding`. Corresponding decodes are returned as a factor with levels of unique decodes. If `encoding` is NULL, it is replaced with an encoding such that levels and labels are both `unique(x)`. Duplicate codes are ignored. Duplicate decodes are collapsed (combined to a single level).

**Usage**
```r
## Default S3 method:
decode(x, encoding = NULL, ...)
```

**Arguments**
- `x`: object
- `encoding`: length one character that is itself encoded
- `...`: passed arguments

**Value**
factor

**See Also**
Other decode: `as_factor`, `decode.data.frame`, `decode`

---

**decodes**  
*Extract Decodes from an Object*

**Description**
Extracts decodes from an object. Default method is supplied.

**Usage**
```r
decodes(x, ...)
```

**Arguments**
- `x`: object
- `...`: passed arguments
See Also

decodes.default
Other decodes: decodes.default

decodes.default  Extract Decodes by Default from an Object

Description

Extracts decodes from an object using the default method.

Usage

## Default S3 method:
decodes(x, simplify = TRUE, ...)

Arguments

x  object
simplify  whether to convert length one list to vector
...  passed arguments

Value

list, or vector if simplify = TRUE

See Also

Other decodes: decodes

decode  Encode Factor-like Levels and Labels as a Simple String

Description

For compact storage, encode combines a set of levels and labels (codes and decodes) into a simple string. The default method converts its argument to character. The list method operates element-wise, expecting an equal number of label elements, each of which have the same length as the corresponding element of x.

Usage

code(x, ...)

Arguments

  x  object
  ... passed arguments

Details

An empty 'encoding' consists of four identical characters, e.g. ////. A non-empty encoding must be at least 5 characters long, beginning and ending with two instances of sep e.g. //1//. Levels are likewise separated from each other by double separators, e.g. //1//2//.

If a label (decode) is available for a level, it follows the corresponding level: the two are separated by a single instance of sep, e.g. //1//a//2//b/.

Encodings may be combined as elements of a character vector, i.e. and encoded vector. Choice of separator may vary among elements, but must be consistent within elements.

Labels (decodes) may be zero-length, but not levels (codes), e.g. //1/// is valid but ///a/// is not. A zero-length decode is extracted as an empty string.

Duplicate levels (codes) result in a warning for encode(), and are otherwise silently ignored. Duplicate labels (decodes) result in case-collapsing.

See Also

encode.character encode.default encode.list codes decodes decode encoded

Other encode: encode.character, encode.default, encode.list

Examples

```r
da <- encode(
  x = list(  
    c('M','F'),  
    c(1:4)  
  ),
  labels = list(  
    c('male','female'),  
    c('caucasian','asian','african',NA)  
  )
)
b <- encode(c(1:2),c('pediatric','adult'))
a  
b  
c <- c('a',NA,'##b##')
encoded(a)
encoded(b)
encoded(c)
encoded( ' //4// ')
codes(a)
codes(b)
codes(b,simplify=FALSE)
```
encode.character

Encode Character.

Description

Encodes character. If sep is NULL, it is replaced with the first of these that is not otherwise present in the result: /|:\~!@#$

Usage

## S3 method for class 'character'
encode(x, labels = NULL, sep = NULL, ...)

Arguments

x 
object

labels 
same length as x if supplied

sep 
a single character not present in x or labels

... 
passed arguments

Value

character

See Also

Other encode: encode.default, encode.list, encode
**encode.default**

*Encode Default.*

**Description**

Encodes using default method: coerces to character and encodes the result.

**Usage**

```r
## Default S3 method:
encode(x, labels = NULL, ...)
```

**Arguments**

- `x` object
- `labels` same length as x if supplied
- `...` passed arguments

**Value**

character

**See Also**

Other encode: `encode.character, encode.list, encode`

**encode.list**

*Encode a List*

**Description**

Encodes a list.

**Usage**

```r
## S3 method for class 'list'
encode(x, labels = NULL, ...)
```

**Arguments**

- `x` object
- `labels` same length as x if supplied
- `...` passed arguments
encoded.default

Value

list

See Also

Other encode: encode.character, encode.default, encode

encoded

Description

Checks if object is encoded.

Usage

encoded(x, ...)

Arguments

x object
...

passed arguments

See Also

encoded.default

Other encoded: encoded.default

encoded.default

Description

Checks if object is encoded, using default methodology. Always returns logical, telling whether the corresponding element represents an encoding of levels and labels. Objects with zero length give FALSE.

Usage

## Default S3 method:
encoded(x, ...)

Arguments

x object
...

passed arguments
encoded.default

Value
  logical

See Also
  Other encoded: encoded
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