Package ‘ox’

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Title    Shorthand if-Else
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Description Short hand if-else function to easily switch the values depending on a logical condition.
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**ox**  

*Short hand if-else*

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**Description**

Short hand if-else functions for simple values switching.

**Usage**

```r
ox(.f, ..., .then = list(...)[[1]], .else = rev(list(...))[[1]])
```

```r
xo(.f, ..., .then = list(...)[[1]], .else = rev(list(...))[[1]])
```

**Arguments**

- **.f** (function) to be applied on .... Must return single logical value.
- **...** arguments passed to the .f.
- **.then** A positive-replacement. NOTE, that if .then is not specified directly by named argument then the first argument from ... will be taken.
- **.else** A negative-replacement. NOTE, that if .else is not specified directly by named argument then the last argument from ... will be considered as a replacement.

**Details**

ox evaluates function .f which returns a single logical value and depending on the result ox returns:
- on TRUE returns .then.
- on FALSE returns .else.

It’s important to note is that .then and .else have a default values set as the first and the last element of the .... This means that they don’t have to be specified if both are arguments of .f.

If any of them are not arguments of .f then this argument should be specified directly as .then or .else, otherwise it will be passed to the function.

As, far as .then and .else won’t be specified order of arguments in ... matters for ox but it’s up to you if they are passed in the correct order to the .f. Then one, might consider name the argument so .f will be executed as expected. Consider following example

```r
greater_than_by <- function(x, y, by) x > (y + by)
ox(greater_than_by, x = 5, by = 3, y = 3)
```
In above, one needs to move y to the end so that it will be considered as .else.
To invert the switch one can use xo which is equivalent of ox(Negate(.f), ..., .then, .else).

Value

object identical to .then or .else depending on the condition result.

Examples

```r
# if (is.null(NULL)) NULL else 1
ox(NULL, .f = is.null, .else = 1)

# if (is("text", "character")) "text" else "not a character"
ox("text", .f = is, "character", .else = "not a character")

# if (1 > 2) 1 else 2
ox(`>`^, 1, 2)
# if (!is.null(NULL)) NULL else 1
xo(NULL, .f = is.null, .else = 1)

# if (!is("text", "character")) "text" else "not a character"
ox("text", .f = is, "character", .else = "not a character")

# if (!1 > 2) 1 else 2
xo(`>`^, 1, 2)
```

vectorized-ox  Vectorized ox

Description

Switch the values of the vector by another on specific indices.

Usage

```r
OX(.f, ..., .then = list(...)[[1]], .else = rev(list(...))[[1]])
XO(.f, ..., .then = list(...)[[1]], .else = rev(list(...))[[1]])
```

Arguments

* .f (function) evaluated as .f(...). Must return a vector of indices (logical or integer), which defines which values will be replaced by .else.
* ... arguments passed to the .f.
* .then (list, atomic, NULL) A positive-replacement. NOTE, that if .then is not specified directly by named argument then the first argument from ... will be taken.
.else (list, atomic, NULL)
A negative-replacement. Should be of length equal to length of .then, or single value or NULL. NOTE, that if .else is not specified directly by named argument then the last argument from ... will be considered as a replacement.

Details

# 'OX evaluates function .f which returns a vector of indices which are then decide which values of .then are replaced by else.

.then[!idx] <- .else[!idx]

Consequence of above is that idx = .f(...) should be a logical vector or integer vector which would be valid indices for .then and .else. This means that .then and .else should be of the same length, but there are two exceptions:

- when .else is a single value, than this value will replace .then at returned indices .then[!idx] <- .else
- when .else is NULL

To invert the switch one can use XO which is equivalent of OX(Negate(.f), ..., .then, .else).

Value

atomic or list. Returned object is a .then object with elements replaced by .else depending on a result of the logical condition.

Examples

# switch values of the vector when condition is true
OX(is.na, c(1, NA, 3), .else = c(2, 2, 2))

# use OX to invert negate the condition
XO(is.na, c(1, NA, 3), .else = c(2, 2, 2))
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