Package: wallis (via r-universe)

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Description Room squares in R.

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Contents

`all_ordered_pairs` *All ordered pairs*

Description

All ordered pairs

Usage

```
all_ordered_pairs(n)
```

Arguments

`n`	Size of underlying set

Value

A list of all ordered pairs.

`all_pairs` *All unordered pairs*

Description

All unordered pairs

Usage

```
all_pairs(n)
```

Arguments

`n`	Size of underlying set.

Value

A list of all unordered pairs.

avail *Is pair p available in R at cell e?*

Description

Is pair p available in R at cell e?

Usage

```
avail(R, p, e)
```

Arguments

R	A partial Room square.
p	A pair.
e	An empty cell of R.

Value

True if and only if the pair p can be placed in cell e in R.

distinct_pairs *Pairs used in R*

Description

Pairs used in R

Usage

```
distinct_pairs(R)
```

Arguments

R	A Room square.

Value

A list of the distinct pairs that appear in R.

empty_cells *Empty cells of a partial Room square*

Description

Empty cells of a partial Room square

Usage

```
empty_cells(R)
```

Arguments

R	A partial Room square.

Value

A list of empty cells of R.

empty_room *Create a partial Room square with no filled cells*

Description

Create a partial Room square with no filled cells

Usage

```
empty_room(n = 5)
```

Arguments

n	Size of partial Room square to create.

Value

A partial Room square of size n with no filled cells.

grid_lines *Horizontal and vertical grid lines*

Description

Horizontal and vertical grid lines

Usage

```
grid_lines(n_rows, n_cols)
```

Arguments

n_rows	Number of rows.
n_cols	Number of columns.

Value

A tibble with columns x, y, xend and yend.

horiz_lines *Horizontal grid lines*

Description

Horizontal grid lines

Usage

```
horiz_lines(n_rows, n_cols)
```

Arguments

n_rows	Number of rows.
n_cols	Number of columns.

Value

A tibble with columns x, y, xend and yend.

is_col_latin *Is A Room square column latin?*

Description

Is A Room square column latin?

Usage

```
is_col_latin(R)
```

Arguments

R	A Room square

Value

True if and only if R is column latin.

is_col_latin_i *Does a column satisfy the latin constraint?*

Description

Does a column satisfy the latin constraint?

Usage

```
is_col_latin_i(R, i)
```

Arguments

R	A Room square
i	A column index

Value

True if and only if column i of R satisfies the latin constraint.

is_maximal_proom *Is R a maximal partial Room square?*

Description

Is R a maximal partial Room square?

Usage

```
is_maximal_proom(R, n)
```

Arguments

R	A partial Room square.
n	Order of R.

Value

True if and only if R is a maximal partial Room square, False otherwise.

is_partial_room *Is R a partial Room square?*

Description

Is R a partial Room square?

Usage

```
is_partial_room(R)
```

Arguments

R	A partial Room square.

Value

True if and only if R is a partial Room square, False otherwise.

is_room *Is R a Room square?*

Description

Is R a Room square?

Usage

```
is_room(R)
```

Arguments

R	A Room square.

Value

True if and only if R is a Room square, False otherwise.

is_row_latin *Is a Room square row latin?*

Description

Is a Room square row latin?

Usage

```
is_row_latin(R)
```

Arguments

R	A Room square

Value

True if and only if R is row latin.

is_row_latin_i *Does a row satisfy the latin constraint?*

Description

Does a row satisfy the latin constraint?

Usage

```
is_row_latin_i(R, i)
```

Arguments

R	A Room square
i	A row index

Value

True if and only if row i of R satisfies the latin constraint.

n_filled_cells *Number of filled cells in a partial Room square*

Description

Number of filled cells in a partial Room square

Usage

```
n_filled_cells(R)
```

Arguments

R	A partial Room square

Value

The number of filled cells in R.

remove_both *Remove both elements of a pair from a list*

Description

Remove both elements of a pair from a list

Usage

```
remove_both(X, p)
```

Arguments

X	A list
p	A pair

Value

The list X with both elements of p removed (if they exist).

Room *Create a Room square*

Description

Create a Room square

Create a Room square

Format

An R6Class generator object

Methods

Public methods:

- Room$new()
- Room$set()
- Room$is_available()
- Room$clone()

Method new():

Usage:

```
Room$new(size = NA)
```

Arguments:

`size` the order of the Room square to be created

Method `set()`**:**

Usage:

```
Room$set(e, p)
```

Method `is_available()`**:**

Usage:

```
Room$is_available(e, p)
```

Method `clone()`**:** The objects of this class are cloneable with this method.

Usage:

```
Room$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

`see` *Symbols visible from cell e*

Description

Symbols visible from cell e

Usage

```
see(R, e)
```

Arguments

`R`	A Room square.
`e`	A cell in R.

Value

A list of symbols visible in R from cell e.

see2 *Symbols visible from cell (row, col) in R*

Description

Symbols visible from cell (row, col) in R

Usage

```
see2(R, row, col)
```

Arguments

R	A Room square.
row	A row index.
col	A column index.

Value

A list of symbols visible in R from cell (col, rol).

unused_pairs *Pairs not used in a partial Room square*

Description

Pairs not used in a partial Room square

Usage

```
unused_pairs(R, n)
```

Arguments

R	A partial Room square.
n	Order of R.

Value

A list of pairs not used in R.

vertical_lines *Vertical grid lines*

Description

Vertical grid lines

Usage

```
vertical_lines(n_rows, n_cols)
```

Arguments

n_rows	Number of rows.
n_cols	Number of columns.

Value

A tibble with columns x, y, xend and yend.

volume *Volume of a partial Room square*

Description

Volume of a partial Room square

Usage

```
volume(R)
```

Arguments

R	A partial Room square.

Value

The volume of R.

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