Package ‘mycor’

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Title  Automatic Correlation and Regression Test in a ‘data.frame’
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Description  Perform correlation and linear regression test
             among the numeric fields in a data.frame automatically
             and make plots using pairs or lattice::parallelplot.
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### mycor

**Perform correlation and linear regression for a data.frame automatically**

#### Description

Perform correlation and linear regression for a data.frame automatically

#### Usage

```r
mycor(x, ..., digits)
```

#### Arguments

- `x` A data.frame.
- `...` further arguments to be passed to `cor.test`.
- `digits` integer indicating the number of decimal places (round) or significant digits (signif) to be used.
- `formula` a formula of the form `- u + v`, where each of `u` and `v` are numeric variables giving the data values for one sample. The samples must be of the same length.
- `data` A data.frame
- `mycor` Object to mycor

#### Value

`mycor` returns as object of class "mycor"

The function summary is used to print a summary of the result. The function plot is used to plot the results using `pairs` and `parallelplot`.

An object of class "mycor:" is a list containing at least following components:

- `df` a data.frame
- `select` logical vectors returns if columns of `df` is numeric
- `out` a list of class "htest" from `cor.test` between the last paired samples in a data.frame.
- `r` a matrix consist of r values from `cor.test` between all pairs of numeric data from a data.frame
- `p` a matrix consist of p values from `cor.test` between all pairs of numeric data from a data.frame
- `slope` a matrix consist of slope values from `lm` between all pairs of numeric data from a data.frame
- `intercept` a matrix consist of intercept values from `lm` between all pairs of numeric data from a data.frame
Methods (by class)

- default: for class data.frame
- formula: for class "formula"

Examples

```r
out = mycor(iris)
plot(out)
plot(out, groups=Species)
plot(out, type=2, groups=species)
plot(out, type=4, groups=species)
out1 = mycor(~mpg+disp+wt+hp, data=mtcars, alternative="greater", methods="kendall",
            conf.level=0.95)
plot(out1, type=3)
plot(out1, type=4, groups=cyl)
```

Description

Correlation and Fitting linear model function for function "mycor"

Usage

```r
mylm(y, x, ..., digits = 3)
```

Arguments

- `y`: numeric vectors of data values
- `x`: numeric vectors of data values
- `...`: further arguments to be passed to or from methods.
- `digits`: integer indicating the number of decimal places (round) or significant digits (significant) to be used.

Value

`mylm` returns a list of following components:

- `out`: a list of class "htest" from `cor.test` between the last paired samples in a data.frame.
- `result`: a numeric vector of length 4, consist of r and p values from `cor.test`, slope and intercept values from `lm` between numeric vector y and x.
panel.cor  
*Make correlation plot for plot of class "mycor"*

**Description**

Make correlation plot for plot of class "mycor"

**Usage**

```
panel.cor(x, y, digits = 2, prefix = "", cex.cor)
```

**Arguments**

- `x`: a numeric vector
- `y`: a numeric vector
- `digits`: integer indicating the number of decimal places (round) or significant digits (significant) to be used.
- `prefix`: a character vector
- `cex.cor`: a numeric variable

panel.hist  
*Make plot with histogram for plot of class "mycor"*

**Description**

Make plot with histogram for plot of class "mycor"

**Usage**

```
panel.hist(x, ...)
```

**Arguments**

- `x`: a numeric vector
- `...`: further arguments to be passed to or from methods.
plot.mycor

Plot for an object of class "mycor"

Description
Plot for an object of class "mycor"

Usage
### S3 method for class 'mycor'
plot(x, ..., groups = -1, type = 1)

Arguments
- **x**
  - an object of class "mycor"
- **...**
  - further arguments to be passed to `pairs` or `parallelplot` (in case of "type" argument is 4).
- **groups**
  - a variable to be evaluated in a data.frame `x$df`, expected to act as a grouping variable within each panel, typically used to distinguish different groups by varying graphical parameters like color and line type.
- **type**
  - specify the type of plot

Examples
```r
out = mycor(iris)
plot(out)
plot(out, groups = Species)
plot(out, type = 2, groups = species)
out1 = mycor(mtcars[1:5], alternative = "greater", methods = "kendall",
conf.level = 0.95)
plot(out1, type = 3)
plot(out1, type = 4, groups = cyl)
```

print.mycor

Print function for class "mycor"

Description
Print function for class "mycor"

Usage
### S3 method for class 'mycor'
print(x, ...)

Examples
```r
```
Arguments

- `x` an object of class "mycor", a result of a call to `mycor`.
- `...` further arguments to be passed to or from methods.

Examples

```r
out = mycor(iris)
print(out)
```

### summary.mycor

#### Summarizing function for class "mycor"

**Description**

Summarizing function for class "mycor"

**Usage**

```r
## S3 method for class 'mycor'
summary(object, ...)
```

**Arguments**

- `object` an object of class "mycor", a result of a call to `mycor`.
- `...` further arguments to be passed to or from methods.

**Examples**

```r
out = mycor(iris)
summary(out)
```
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