

Package ‘instatCalculations’

January 20, 2025

Title Calculation system used in R-Instat

Version 0.1.2

Description Functions used in the calculation system used in R-Instat

License LGPL (>= 3)

Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.2

Imports dplyr,
magrittr,
R6,
rlang

Contents

calculation	1
instat_calculation	3
Index	6

calculation	<i>Calculation Class</i>
-------------	--------------------------

Description

Represents a calculation with associated parameters, filters, and sub-calculations.

Methods

`add_sub_calculation(sub_calculation, name)` Add a sub-calculation.
`data_clone(...)` Clone the data.

Public fields

function_name Character. The name of the function.
parameters List. The parameters for the calculation.
calculated_from Character vector. Sources from which the calculation is derived.
is_recalculable Logical. Indicates if the calculation is recalculable.
sub_calculations List. A list of sub-calculations.
type Character. The type of calculation.
filter_conditions List. The conditions used to filter data.
filters List. The filters applied to the data.
name Character. The name of the calculation instance.

Methods

Public methods:

- `calculation$new()`
- `calculation$add_sub_calculation()`
- `calculation$data_clone()`
- `calculation$clone()`

Method `new()`: Initialize the calculation class.

Usage:

```
calculation$new(
  function_name = "",
  parameters = list(),
  calculated_from = c(),
  is_recalculable = TRUE,
  sub_calculations = list(),
  type = "",
  filter_conditions = list(),
  filters = list(),
  name = ""
)
```

Arguments:

function_name Character. The name of the function. Default is an empty string.
parameters List. The parameters for the calculation. Default is an empty list.
calculated_from Character vector. Sources from which the calculation is derived. Default is an empty vector.
is_recalculable Logical. Indicates if the calculation is recalculable. Default is TRUE.
sub_calculations List. A list of sub-calculations. Default is an empty list.
type Character. The type of calculation. Default is an empty string.
filter_conditions List. The conditions used to filter data. Default is an empty list.
filters List. The filters applied to the data. Default is an empty list.
name Character. The name of the calculation instance. Default is an empty string.

Method `add_sub_calculation()`: Add a sub-calculation.

Usage:

```
calculation$add_sub_calculation(sub_calculation, name)
```

Arguments:

sub_calculation An object representing the sub-calculation to add.
name Character. The name of the sub-calculation.

Method data_clone(): Clone the data.

Usage:

```
calculation$data_clone(...)
```

Arguments:

... Additional methods to add to the function.

Returns: A new instance of the calculation class with the same data.

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

Usage:

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

Arguments:

deep Whether to make a deep clone.

instat_calculation	<i>instat_calculation Class</i>
--------------------	---------------------------------

Description

instat_calculation Class

instat_calculation Class

Details

A class to store calculations.

Methods

get_dependencies(depends = c()) Get Dependencies.

data_clone(...) Clone the data.

Public fields

function_exp A string passed directly to one of dplyr functions.

type The type of calculation.

name The name of the calculation instance.

result_name The name for the output produced by the calculation.

result_data_frame The data frame that the output should go to.

manipulations A list of calculations to be performed before sub_calculations and the main calculation.

sub_calculations A list of calculations to be performed after manipulations.

calculated_from A list of columns the calculation depends on.

save An integer indicating whether the calculation and result should be saved.

before A boolean indicating if the calculation should be performed before others.

adjacent_column The name of the adjacent column.

param_list Additional parameters to read into the calculation, e.g., .drop = TRUE for by calculation.

Methods

Public methods:

- `instat_calculation$new()`
- `instat_calculation$data_clone()`
- `instat_calculation$get_dependencies()`
- `instat_calculation$clone()`

Method `new()`: Initialise the `instat_calculation` class

Usage:

```
instat_calculation$new(
  function_exp = "",
  type = "",
  name = "",
  result_name = "",
  result_data_frame = "",
  manipulations = list(),
  sub_calculations = list(),
  calculated_from = list(),
  save = 0,
  before = FALSE,
  adjacent_column = "",
  param_list = list()
)
```

Arguments:

`function_exp` A string passed directly to one of dplyr functions.

`type` The type of calculation.

`name` The name of the calculation instance.

`result_name` The name for the output produced by the calculation.

`result_data_frame` The data frame that the output should go to.

`manipulations` A list of calculations to be performed before `sub_calculations` and the main calculation.

`sub_calculations` A list of calculations to be performed after manipulations.

`calculated_from` A list of columns the calculation depends on.

`save` An integer indicating whether the calculation and result should be saved.

`before` A boolean indicating if the calculation should be performed before others.

`adjacent_column` The name of the adjacent column.

`param_list` Additional parameters to read into the calculation, e.g., `.drop = TRUE` for by calculation.

Method `data_clone()`: Clone the data

Usage:

```
instat_calculation$data_clone(...)
```

Arguments:

`...` Additional methods to add to the function.

Returns: A new instance of the `instat_calculation` class with the same data.

Method `get_dependencies()`: Get dependencies

Usage:

```
instat_calculation$get_dependencies(depends = c())
```

Arguments:

depends A vector of dependencies.

Returns: A vector of dependencies.

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

Usage:

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

Arguments:

deep Whether to make a deep clone.

Index

calculation, [1](#)

instat_calculation, [3](#)