

Package ‘GlobalOptions’

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Type Package

Title Generate Functions to Get or Set Global Options

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Depends R (>= 3.3.0), methods

Imports utils

Suggests testthat (>= 1.0.0), knitr, markdown, GetoptLong, rmarkdown

VignetteBuilder knitr

Description It provides more configurations on the option values such as validation and filtering on the values, making options invisible or private.

URL <https://github.com/jokergoo/GlobalOptions>

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```
.v
```

Get other option values

Description

Get other option values

Usage

```
.v(opt_name, name_is_character = NA)

## S3 method for class 'InternalOptionValue'
x$nm
```

Arguments

opt_name	The option name.
name_is_character	Please ignore, only used internally.
x	should always be written as <code>‘.v‘</code> .
nm	The option name.

Details

When setting one option, the value can be dependent on other option names. The current value of other option can be accessed by `‘.v(nm)‘` or `‘.v$nm‘`.

Examples

```
opt = set_opt(a = 1, b = function() .v$a*2)
opt$b
opt(a = 2); opt$b
opt(a = 4); opt$b
reset_opt(opt); opt$b
```

```
print.GlobalOptionsFun
```

Print options

Description

Print options

Usage

```
## S3 method for class 'GlobalOptionsFun'
print(x, ...)
```

Arguments

x The option object returned by [`set_opt()`] or [`setGlobalOptions()`].
 ... Other arguments.

Examples

```
opt = set_opt(a = 1, b = "b")
opt
```

reset_opt	<i>Helper functions</i>
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Description

Helper functions

Usage

```
reset_opt(opt)

add_opt(opt, ...)
```

Arguments

opt The option object returned by [`set_opt()`] or [`setGlobalOptions()`].
 ... New options.

Details

`reset_opt()` is identical to `opt(RESET = TRUE)`.
`add_opt()` is identical to `opt(..., ADD = TRUE)`.

Examples

```
opt = set_opt(a = 1, b = 2)
opt$a = 100; opt$b = 200
opt
reset_opt(opt)
opt
opt = set_opt(a = 1)
add_opt(opt, b = 2)
opt
```

setGlobalOptions *Option Generator*

Description

Option Generator

Usage

```
setGlobalOptions(...)
```

```
set_opt(...)
```

Arguments

... Specification of options, see the ****Details**** section.

Details

The simplest way is to construct an option function (e.g. 'opt()') as:

```
““ opt = set_opt( "a" = 1, "b" = "text" ) ““
```

Then users can get or set the options by

```
““ opt() opt("a") opt$a opt[["a"]] opt(c("a", "b")) opt("a", "b") opt("a" = 2) opt$a = 2 opt[["a"]] = 2
opt("a" = 2, "b" = "new_text") ““
```

Options can be reset to their default values by:

```
““ opt(RESET = TRUE) # or reset_opt(opt) ““
```

The value for each option can be set as a list which contains more complex configurations:

```
““ opt = set_opt( "a" = list( .value = 1, .length = 1, .class = "numeric", .validate = function(x) x > 0
) ) ““
```

The different fields in the list can be used to filter or validate the option values.

- `‘.value‘`: The default value. - `‘.length‘`: The valid length of the option value. It can be a vector, the check will be passed if one of the length fits. - `‘.class‘`: The valid class of the option value. It can be a vector, the check will be passed if one of the classes fits. - `‘.validate‘`: Validation function. The input parameter is the option value and should return a single logical value. - `‘.failed_msg‘`: Once validation failed, the error message that is printed. - `‘.filter‘`: Filtering function. The input parameter is the option value and it should return a filtered option value. - `‘.read.only‘`: Logical. The option value can not be modified if it is set to `‘TRUE‘`. - `‘.visible‘`: Logical. Whether the option is visible to users. - `‘.private‘`: Logical. The option value can only be modified in the same namespace where the option function is created. - `‘.synonymous‘`: a single option name which should have been already defined ahead of current option. The option specified will be shared by current option.
- `‘.description‘`: a short text for describing the option. The description is only used when printing the object.

For more detailed explanation, please go to the vignette.

Examples

```
opt = set_opt(  
  a = 1,  
  b = "text"  
)  
opt  
# for more examples, please go to the vignette
```

[.GlobalOptionsFun *Getter and setter functions*

Description

Getter and setter functions

Usage

```
## S3 method for class 'GlobalOptionsFun'  
x[nm]  
  
dump_opt(x, nm)  
  
## S3 method for class 'GlobalOptionsFun'  
x[[nm]]  
  
## S3 replacement method for class 'GlobalOptionsFun'  
x[[nm]] <- value  
  
## S3 method for class 'GlobalOptionsFun'  
names(x)  
  
## S3 method for class 'GlobalOptionsFun'  
.DollarNames(x, pattern = "")  
  
## S3 method for class 'GlobalOptionsFun'  
x$nm  
  
## S3 replacement method for class 'GlobalOptionsFun'  
x$nm <- value
```

Arguments

x	The option object returned by [<code>set_opt()</code>] or [<code>setGlobalOptions()</code>].
nm	A single option name.
value	The value which is assigned to the option.
pattern	Ignore.

Details

'[' (single bracket) returns a single option object.

'dump_opt()' is identical to '['.

'[[' (double brackets) returns the value of the option.

The '.DollarNames' method makes the option object look like a list that it allows option name completion after '\$' (by double clicking the "enter/return" key).

Examples

```
opt = set_opt(a = 1, b = "b")
opt["a"]
opt["b"]
dump_opt(opt, "a")
dump_opt(opt, "b")
opt[["a"]]
opt[["b"]]
opt[["a"]] = 200
opt[["a"]]
names(opt)
opt$a
opt$a = 100
opt$a
```

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