

Package ‘wyz.code.testthat’

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Type Package

Title Wizardry Code Offensive Programming Test Generation

Version 1.1.16

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Description Allows to generate automatically 'testthat' code files from offensive programming test cases. Generated test files are complete and ready to run. Using 'wyz.code.testthat' you will earn a lot of time, reduce the number of errors in test case production, be able to test immediately generated files without any need to view or modify them, and enter a zero time latency between code implementation and industrial testing. As with 'testthat', you may complete provided test cases according to your needs to push testing further, but this need is nearly void when using 'wyz.code.offensiveProgramming'. Refer to chapter 9 of Offensive Programming Book, Fabien GELINEAU (2019, ISBN:979-10-699-4075-8), to learn about details and get value from this package.

Encoding UTF-8

LazyData true

License GPL-3

Depends R (>= 3.6)

Imports methods, data.table (>= 1.11.8), tidyr, lubridate (>= 1.7.4),
wyz.code.offensiveProgramming (>= 1.1.17), R6 (>= 2.4.0)

Suggests testthat, knitr, rmarkdown

RoxygenNote 6.1.1

VignetteBuilder knitr

NeedsCompilation no

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generateAllUnitTestsFromObject
Generate All Unit Tests From Object

Description

Generate testthat code form an instrumented offensive programming object.

Usage

```
generateAllUnitTestsFromObject(object_o_1, sourceFile_s_1,
                               sourcePackage_s_1, targetFolder_s_1,
                               overwriteFile_b_1 = TRUE, verbose_b_1 = FALSE)
```

Arguments

object_o_1 the instrumented offensive programming object to consider
sourceFile_s_1 the source package file related to the offensive programming object
sourcePackage_s_1
 the package name that holds the offensive programming object
targetFolder_s_1
 the folder where to write produced testthat code files
overwriteFile_b_1
 A boolean value, either TRUE or FALSE to switch on or off the overwriting of the
 output file. Beware, as it is on by default!
verbose_b_1 A boolean value, either TRUE or FALSE to switch on or off the processing ver-
 bosity!

Details

Generates automatically, all the testthat files with compliant thestthat code, from the offensive programming object.

Value

A list with two fields named `class` and `filenames`. Former provides the class of the analyzed and mined offensive programming object, the latter gives back all produced testthat file names.

Note

This is rather easy to use function that implements a quite complex algorithm based on meta-programmation to generate testthat code.

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References

See [EvaluationMode](#) for more information.

Refer to [test_file](#) from package testthat.

Refer to [runTestCase](#) from package wyz.code.offensiveProgramming.

Examples

```
library(data.table)
library(wyz.code.offensiveProgramming)
library(wyz.code.testthat)

source_file <- 'code-samples/both-defs/good/full/AdditionTCFIG1.R'
source_package <- 'wyz.code.offensiveProgramming'
source(system.file(source_file, package = source_package))

object <- AdditionTCFIG1()
g <- gautfo(object, source_file, source_package, tempdir())
print(g)
# $class
# [1] "AdditionTCFIG1"
#
# $filenames
#
#                               filename overwritten
# 1:      /tmp/RtmpKLCrXA/test_AdditionTCFIG1-addDouble.R      TRUE
# 2:      /tmp/RtmpKLCrXA/test_AdditionTCFIG1-addInteger.R      TRUE
# 3:      /tmp/RtmpKLCrXA/test_AdditionTCFIG1-divideByZero.R      TRUE
# 4: /tmp/RtmpKLCrXA/test_AdditionTCFIG1-generateWarning.R      TRUE
# 5:      /tmp/RtmpKLCrXA/test_AdditionTCFIG1-generateError.R      TRUE
# 6:      /tmp/RtmpKLCrXA/test_AdditionTCFIG1-addMultiDouble.R      TRUE
# 7: /tmp/RtmpKLCrXA/test_AdditionTCFIG1-addMultiInteger.R      TRUE
```

generateUnitTestFile *Generate testthat Unit Test File*

Description

Generate one testthat unit test file from an instrumented offensive programming object. One test file per function is created. It holds all the related tests, organized by evaluation mode. See [EvaluationMode](#) for more information.

Usage

```
generateUnitTestFile(filename_s_1, content_s,  
                    overwrite_b_1 = FALSE,  
                    verbose_b_1 = TRUE)
```

Arguments

filename_s_1	the name of the unit test file to generate
content_s	the content of the unit test file to generate
overwrite_b_1	A boolean value, either TRUE or FALSE to switch on or off the overwriting of the output file.
verbose_b_1	A boolean value, either TRUE or FALSE to switch on or off the output message from this function.

Value

Returns the file name. It might be different from the one provided, as `testthat` requires to follow some file naming conventions. They are enforced by this function.

Note

This function is provided for convenience. It may ease your own way to generate `testthat` code.

To put this package in action, simply use [gautfo](#) that offers a much more straightforward way to get results.

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References

Refer to [test_file](#) from package `testthat`.

Refer to [runTestCase](#) from package `wyz.code.offensiveProgramming`.

Examples

```
##---- typical example ----  
fn <- file.path(tempdir(), 'myFile')  
fr <- generateUnitTestFile(fn, c("# a comment", "x <- 2"))  
cat(paste(readLines(fr$filename), collapse = '\n'))  
# a comment  
# x <- 2
```

opTestthatInformation Package Functions Information

Description

list package functions

Usage

```
opTestthatInformation()
```

Value

A data.table with following columns

name	the object name
category	the category of the object describe by function name. Could be CLASS, FUNCTION or DATA.
nature	either INTERNAL or EXPORTED.
stratum	the stratum the object belongs to. Values are CORE, LAYER_1, LAYER_2, LAYER_3.
phasing	main usage phase of the object. Values are DESIGN, BUILD, TEST, RUN, MAINTAIN, EVOLVE and TRANSVERSAL.
intent	main global intent of the object. Values are PARTS_BUILDING, PARTS_ASSEMBLY, QUALITY_CONTROL, FEEDBACK, STATISTICS, CONTENT_GENERATION and UTILITIES.

Classification

STRATUM \mapsto LAYER_3

PHASING \mapsto RUN

INTENT \mapsto FEEDBACK

Note

The call must be qualified by the package name, especially to avoid collisions.

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Examples

```
opTestthatInformation()
```

testthatFactory *A factory to produce testthat code*

Description

Produces testthat code from an instrumented offensive programming object.

Usage

```
testthatFactory()
```

Value

Returns a function that manages dispatch depending on targeted offensive programming object test case evaluation mode value.

Note

This function is provided for convenience. It may ease your own way to generate testthat code from an instrumented offensive programming object.

To put this package in action, simply use [gautfo](#) that offers a much more straightforward way to get results.

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References

See [EvaluationMode](#) for more information.

Refer to [test_file](#) from package testthat.

Refer to [runTestCase](#) from package `wyz.code.offensiveProgramming`.

Examples

```
##---- typical example ----
rv <- testthatFactory()(c(call('isTRUE', TRUE), call('isFALSE', FALSE)), 'correct')
print(rv)
# [[1]]
# expect_true(isTRUE(TRUE))
#
# [[2]]
# expect_true(isFALSE(FALSE))
```

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