Package 'retry'

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Type Package

Title Repeated Evaluation

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Description Provide simple mechanism to repeatedly evaluate an expression until either it succeeds or timeout exceeded. It is useful in situations that random failures could happen.

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URL https://github.com/randy3k/retry

Encoding UTF-8

RoxygenNote 7.3.0

Suggests testthat (>= 2.1.0), covr

Imports rlang, later

NeedsCompilation no

Author Randy Lai [aut, cre]

Maintainer Randy Lai <randy.cs.lai@gmail.com>

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retry-package *retry: Repeated Evaluation*

Description

Provide simple mechanism to repeatedly evaluate an expression until either it succeeds or timeout exceeded. It is useful in situations that random failures could happen.

Author(s)

Maintainer: Randy Lai <randy.cs.lai@gmail.com>

See Also

Useful links:

- https://github.com/randy3k/retry

retry *Repeatedly evaluate an expression*

Description

Repeatedly evaluate an expression until a condition is met or timeout is exceeded.

Usage

```
retry(
  expr,
  upon = "error",
  when = NULL,
  until = NULL,
  envir = parent.frame(),
  silent = FALSE,
  timeout = Inf,
  max_tries = Inf,
  interval = 0.1,
  later_run_now = FALSE
)
```

Arguments

expr	an expression to be evaluated, supports quasiquotation.
upon	a vector of condition classes. The expression will be evaluated again after the delay if a condition is thrown. See the `classes` parameter of `rlang::catch_cnd`.
when	regular expression pattern that matches the message of the condition. It is used to decide if we need to evaluate `expr`.
until	a function of two arguments. This function is used to check if we need to evaluate `expr`. The first argument is the result of `expr` and the second argument is the condition thrown when `expr` was evaluated. It could be also a one sided formula that is later converted to a function using `rlang::as_function`.
envir	the environment in which the expression is to be evaluated.
silent	suppress messages and warnings
timeout	raise an error if this amount of time in seconds has passed.
max_tries	maximum number of attempts
interval	delay between retries.
later_run_now	execute `later::run_now()` periodically when `later` is loaded?

Examples

```
retry(10, until = ~TRUE)  # returns immediately

f <- function(x) {
    if (runif(1) < 0.9) {
        stop("random error")
    }
    x + 1
}
# keep retring when there is a random error
retry(f(1), when = "random error")
# keep retring until a condition is met
retry(f(1), until = function(val, cnd) val == 2)
# or using one sided formula
retry(f(1), until = ~ . == 2)

try({
  # it doesn't capture the error of "a" + 1
  retry(f("a"), when = "random error")
})

try({
  # an error is raised after 1 second
  retry(stop("foo"), when = "foo", timeout = 1)
})

try({
  # timeout also works for indefinite R code
  retry(while(TRUE) {}, until = ~FALSE, timeout = 1)
})
```

`wait_until` *Wait until a condition is met*

Description

Block the current runtime until the expression returns `TRUE`.

Usage

```
wait_until(
  expr,
  envir = parent.frame(),
  timeout = Inf,
  interval = 0.1,
  later_run_now = TRUE
)
```

Arguments

`expr`	an expression to check, supports quasiquotation.
`envir`	the environment in which the expression is to be evaluated.
`timeout`	raise an error if this amount of time in second has passed.
`interval`	delay between retries.
`later_run_now`	execute `later::run_now()` periodically `later` is loaded?

Examples

```
s <- Sys.time()
system.time(wait_until(Sys.time() - s > 1))

z <- 0
later::later(function() z <<- 1, 1)
wait_until(z == 1)
z == 1
```

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