

Package ‘R62S3’

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Title Automatic Method Generation from R6

Version 1.3.1

Description After defining an R6 class, R62S3 is used to automatically generate optional S3/S4 generics and methods for dispatch. Also allows piping for R6 objects.

Depends R (>= 3.5.0)

Imports checkmate, methods

Suggests testthat, R6, pkgdown

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Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

URL <https://github.com/RaphaelS1/R62S3/>

BugReports <https://github.com/RaphaelS1/R62S3/issues>

NeedsCompilation no

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R62Fun

Method Generator from R6 Class

Description

Auto-generates methods from an R6 Class.

Usage

```
R62Fun(R6Class, assignEnvir = parent.env(environment()),
       detectGeneric = TRUE, mask = FALSE,
       dispatchClasses = list(R6Class))
```

Arguments

R6Class	R6ClassGenerator to generate public methods from
assignEnvir	environment in which to assign the functions, default is parent of current environment.
detectGeneric	logical, if TRUE (default) detects if the method has a S3 generic and defines functions accordingly
mask	logical, should the new method mask existing ones? See details.
dispatchClasses	list of classes to assign S3 dispatch methods on. See Details.

Details

Searches in a given R6 class for all public methods that are not 'initialize' or 'clone'. Creates a function to call each of the R6 methods.

Additional parameters allow the user to specify if a generic function should be detected. If so then a dispatch method is created instead of a standard function. The mask parameter determines if masking should occur, if TRUE then the function is created even if one of the same name exists, if FALSE then the function name is appended with ".ClassName" like a dispatch method.

If mask = FALSE or detectGeneric = TRUE, dispatchClasses specifies what class the method should be associated with, i.e. method.ClassName.

Value

Assigns methods to the chosen environment.

Examples

```
printMachine <- R6::R6Class("printMachine",
  public = list(initialize = function() {},
  printer = function(str) {print(str)}))
pm <- printMachine$new()
R62Fun(printMachine, assignEnvir = .GlobalEnv)
```

```
pm$printer("Test String A")
printer(pm, "Test String B")
```

R62S3

S3 Method Generator from R6 Class

Description

Auto-generates S3 generics and public methods from an R6 Class.

Usage

```
R62S3(R6Class, dispatchClasses = list(R6Class),
      assignEnvir = parent.env(environment()), mask = FALSE)
```

Arguments

R6Class	R6ClassGenerator to generate public methods from
dispatchClasses	list of classes to assign S3 dispatch methods on
assignEnvir	environment in which to assign the S3 generics/methods, default is parent of current environment.
mask	logical, determines if non-generic functions should be masked if found, see details.

Details

Searches in a given R6 class for all public methods that are not 'initialize' or 'clone'. For each method if a generic does not already exist, one is created and assigned to the given environment. Methods are created for every generic, following standard S3 convention.

In some cases a function may be defined without being a generic, if mask is TRUE then this function is masked by R62S3 and a generic is created with the same name. If mask is FALSE then this function is treated like a generic and only the method is created.

Value

Assigns methods and generics to the chosen environment.

Examples

```
printMachine <- R6::R6Class("printMachine",
  public = list(initialize = function() {},
  printer = function(str) {print(str)}))
pm <- printMachine$new()
R62S3(printMachine, assignEnvir = .GlobalEnv)
pm$printer("Test String A")
printer(pm, "Test String B")
```

R62S4

S4 Method Generator from R6 Class

Description

Auto-generates S4 generics and public methods from an R6 Class.

Usage

```
R62S4(R6Class, dispatchClasses = list(R6Class),
      assignEnvir = parent.env(environment()), mask = FALSE)
```

Arguments

R6Class	R6ClassGenerator to generate public methods from
dispatchClasses	list of classes to assign S4 dispatch methods on
assignEnvir	environment in which to assign the S4 methods, default is parent of current environment.
mask	logical, determines if non-generic functions should be masked if found, see details.

Details

Searches in a given R6 class for all public methods that are not 'initialize' or 'clone'. For each method if a generic does not already exist, one is created and assigned to the given environment. Methods are created for every generic, following standard S4 convention.

In some cases a function may be defined without being a generic, if mask is TRUE then this function is masked by R62S4 and a generic is created with the same name. If mask is FALSE then this function is treated like a generic and only the method is created.

Value

Assigns methods and generics to the chosen environment.

Examples

```
printMachine <- R6::R6Class("printMachine", public = list(initialize = function() {},
                                                         printer = function(str) {print(str)}))
pm <- printMachine$new()
R62S4(printMachine, assignEnvir = .GlobalEnv)
pm$printer("Test String A")
printer(pm, "Test String B")
```

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