

Package ‘MakefileR’

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Title Create 'Makefiles' Using R

Description A user-friendly interface for the construction of
'Makefiles'.

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URL <https://gitlab.com/fvafrcu/MakefileR>

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MakefileR-package	<i>Create 'Makefiles' Using R</i>
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Description

A user-friendly interface for the construction of 'Makefiles'.

Details

You will find the details in
 vignette("An_Introduction_to_MakefileR", package = "MakefileR").

Author(s)

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See Also

Useful links:

- <https://gitlab.com/fvafrcu/MakefileR>

c.MakefileR_group	<i>Concatenation of rules</i>
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Description

Rules can be appended to groups and Makefiles using the `c` function or the `+` operator.

Usage

```
## S3 method for class 'MakefileR_group'
c(..., recursive = FALSE)

## S3 method for class 'MakefileR_group'
x + y
```

Arguments

..., x, y	[MakefileR] Rules, the first (x or the first element of ...) must be of class MakefileR_group (created by make_group or makefile)
recursive	[any] Unused

Examples

```

c(make_group(sep = ""),
  make_group(make_comment("Dummy targets"),
    make_rule(".FORCE"), make_rule(".SILENT")),
  make_group(make_comment("Definitions"),
    make_def("A", "a")))

makefile() + (make_group() + make_comment("Definitions") + make_def("A", "a"))

```

makefile	<i>Creates a Makefile</i>
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Description

A Makefile consists of a list of rules, definition, comments and other items.

Usage

```
makefile(..., .dots = NULL)
```

Arguments

...	[MakefileR] Items created by make_rule or other make_ functions
.dots	[list] Further rules in addition to ...

Details

Use the [c](#) function or the [+](#) operator to append rules, definitions, comments, plain text, and groups.

Value

An object of class MakefileR_file

References

<https://www.gnu.org/software/make/manual/>

See Also

[make_rule](#), [make_def](#), [make_comment](#), [make_text](#), [make_group](#), [c.MakefileR_group](#)

Examples

```
makefile(make_rule("all", c("first_target", "second_target")))
```

make_comment	<i>Creates a Makefile comment</i>
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Description

For helping the reader understand what's happening

Usage

```
make_comment(...)
```

Arguments

...	[character] Comments without leading hash #
-----	--

Details

Use the `c` function or the `+` operator to append comments to groups and Makefiles.

Value

An object of class `MakefileR_comment`

References

<https://www.gnu.org/software/make/manual/>

See Also

Other items: [make_def\(\)](#), [make_group\(\)](#), [make_rule\(\)](#), [make_text\(\)](#)

Examples

```
make_comment("This is a comment")
```

make_def	<i>Creates a variable definition in a Makefile</i>
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Description

A variable definition in a Makefile consists of a variable name and its definition. Both are separated by the equality sign =.

Usage

```
make_def(variable, definition, operator = "=")
```

Arguments

variable	[character(1)] Variable name
definition	[character(1)] Definition for this variable
operator	[character(1)] Which operator to use, default: =

Details

No quoting is applied to the definition by this function. Currently, both variable and definition are required to be character values of length one.

Use the `c` function or the `+` operator to append definitions to groups and Makefiles.

Value

An object of class `MakefileR_def`

References

<https://www.gnu.org/software/make/manual/>

See Also

[makefile](#), [make_group](#)

Other items: [make_comment\(\)](#), [make_group\(\)](#), [make_rule\(\)](#), [make_text\(\)](#)

Examples

```
make_def("R_USER_LIBRARY", .libPaths()[[1L]])
makefile() +
  make_def("R_USER_LIBRARY", .libPaths()[[1L]])
```

make_group	<i>Creates a group of Makefile items</i>
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Description

Helps separating similar rules.

Usage

```
make_group(..., .dots = NULL, sep = NULL)
```

Arguments

...	[MakefileR] Items created by make_rule or other make_ functions
.dots	[list] Further rules in addition to ...
sep	[character(1)] Separator between group items, NULL (the default) means no separator.

Details

Use the [c](#) function or the [+](#) operator to append groups to other groups and Makefiles (thus creating nested groups).

Value

An object of class MakefileR_group

References

<https://www.gnu.org/software/make/manual/>

See Also

[c.MakefileR_group](#)

Other items: [make_comment\(\)](#), [make_def\(\)](#), [make_rule\(\)](#), [make_text\(\)](#)

Examples

```
makefile(make_rule("all", c("first_target", "second_target")))
```

make_rule	<i>Creates a Makefile rule</i>
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Description

A rule in a Makefile consists of a (list of) targets which may depend on one or more dependencies each. Optionally, a script is executed to create the target. Generally, multiple targets mean that the rule is identical for each of the individual targets, and multiple dependencies mean that *all* of them are required to build *each* of the targets. In the script, the target can be referenced by `$(@)`, and the first dependency can be referenced by `$(<)`. Note that the dollar sign has a special meaning in a Makefile, use `$$` in scripts that need to use the dollar sign themselves.

Usage

```
make_rule(targets, deps = NULL, script = NULL)
```

Arguments

targets	[character] Target names
deps	[character] Dependency names
script	[character] A script to execute to build the targets.

Details

Use the `c` function or the `+` operator to append rules to groups and Makefiles.

Value

An object of class `MakefileR_rule`

References

<https://www.gnu.org/software/make/manual/>

See Also

[makefile](#)

Other items: [make_comment\(\)](#), [make_def\(\)](#), [make_group\(\)](#), [make_text\(\)](#)

Examples

```
make_rule("all", c("first_target", "second_target"))
make_rule(".FORCE")
make_rule("first_target", ".FORCE", "echo 'Building first target'")
make_rule("second_target", "first_target",
  c("echo 'Building second target'", "echo 'Done'"))

makefile() +
  make_rule("all", c("first_target", "second_target")) +
  make_rule(".FORCE") +
  make_rule("first_target", ".FORCE", "echo 'Building first target'") +
  make_rule("second_target", "first_target",
    c("echo 'Building second target'", "echo 'Done'"))
```

make_text	<i>Creates a custom Makefile entry</i>
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Description

For anything else not covered by the other `make_` functions, such as the `export` statement for exporting Makefile variables.

Usage

```
make_text(...)
```

Arguments

...	[character] Custom text
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Details

Use the `c` function or the `+` operator to append comments to groups and Makefiles.

Value

An object of class `MakefileR_text`

References

<https://www.gnu.org/software/make/manual/>

See Also

Other items: [make_comment\(\)](#), [make_def\(\)](#), [make_group\(\)](#), [make_rule\(\)](#)

Examples

```
make_text("export SOME_VARIABLE")
```

write_makefile	<i>Writes a Makefile to a file</i>
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Description

Makefiles, as created by [makefile](#), only exist in memory until they are written to a file by this function.

Usage

```
write_makefile(makefile, file_name)
```

Arguments

makefile	[MakefileR] A Makefile, created by makefile
file_name	[character(1)] Target file name

Value

The value returned by [writeLines](#)

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