

Package: rprojroot (via r-universe)

October 11, 2026

Title Finding Files in Project Subdirectories

Version 2.1.1.9021

Description Robust, reliable and flexible paths to files below a project root. The 'root' of a project is defined as a directory that matches a certain criterion, e.g., it contains a certain regular file.

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URL <https://rprojroot.r-lib.org/>, <https://github.com/r-lib/rprojroot>

BugReports <https://github.com/r-lib/rprojroot/issues>

Depends R (>= 3.0.0)

Suggests covr, knitr, lifecycle, rlang, rmarkdown, testthat (>= 3.2.0), withr

VignetteBuilder knitr

Config/testthat/edition 3

Encoding UTF-8

Roxygen list(markdown = TRUE, load = ``source")

Config/autostyle/scope line_breaks

Config/autostyle/strict true

Config/Needs/website tidyverse/tidytemplate

Config/roxygen2/version 8.1.1.9000

Repository <https://cynkra.r-universe.dev>

Date/Publication 2026-10-11 00:32:32 UTC

RemoteUrl <https://github.com/r-lib/rprojroot>

RemoteRef HEAD

RemoteSha 4d2f450c3f67b98a3599fe8531bdda1c4c928cc1

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rprojroot-package	<i>rprojroot: Finding Files in Project Subdirectories</i>
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Description

Robust, reliable and flexible paths to files below a project root. The 'root' of a project is defined as a directory that matches a certain criterion, e.g., it contains a certain regular file.

Details

See the "Value" section in `root_criterion()` for documentation of root criterion objects, and `criteria` for useful predefined root criteria.

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See Also

Useful links:

- <https://rprojroot.r-lib.org/>
- <https://github.com/r-lib/rprojroot>
- Report bugs at <https://github.com/r-lib/rprojroot/issues>

Examples

```
criteria
## Not run:
is_r_package$find_file("NAMESPACE")
root_fun <- is_r_package$make_fix_file()
root_fun("NAMESPACE")

## End(Not run)
```

criteria	<i>Prespecified criteria</i>
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Description

This is a collection of commonly used root criteria.

Usage

`is_rstudio_project`

`is_vscode_project`

`is_r_package`

`is_remake_project`

`is_drake_project`

`is_targets_project`

`is_pkgdown_project`

`is_renv_project`

`is_projectile_project`

`is_quarto_project`

`is_git_root`

`is_svn_root`

`is_vcs_root`

`is_testthat`

`from_wd`

`criteria`

Details

`is_rstudio_project` looks for a file with extension `.Rproj`.

`is_vscode_project` looks for a `.vscode/settings.json` file.

`is_r_package` looks for a DESCRIPTION file.

is_remake_project looks for a remake.yml file.

is_drake_project looks for a .drake directory.

is_targets_project looks for a _targets.R file.

is_pkgdown_project looks for a _pkgdown.yml, _pkgdown.yaml, pkgdown/_pkgdown.yml and/or inst/_pkgdown.yml file.

is_renv_project looks for an renv.lock file.

is_projectile_project looks for a .projectile file.

is_quarto_project looks for a _quarto.yml file.

is_git_root looks for a .git directory.

is_svn_root looks for a .svn directory.

is_vcs_root looks for the root of a version control system, currently only Git and SVN are supported.

is_testthat looks for the testthat directory, works when developing, testing, and checking a package.

from_wd uses the current working directory.

find_root

Find the root of a directory hierarchy

Description

A *root* is defined as a directory that contains a regular file whose name matches a given pattern and which optionally contains a given text. The search for a root starts at a given directory (the working directory by default), and proceeds up the directory hierarchy.

get_root_desc() returns the description of the criterion for a root path. This is especially useful for composite root criteria created with `|.root_criterion()`.

Usage

```
find_root(criterion, path = ".")
```

```
get_root_desc(criterion, path)
```

Arguments

criterion	[root_criterion] A criterion, one of the predefined criteria or created by <code>root_criterion()</code> . Will be coerced using <code>as_root_criterion()</code> .
path	[character(1)] The start directory.

Details

Starting from the working directory, the `find_root()` function searches for the root. If a root is found, the `...` arguments are used to construct a path; thus, if no extra arguments are given, the root is returned. If no root is found, an error is thrown.

Value

The normalized path of the root as specified by the search criterion. Throws an error if no root is found

See Also

`utils::glob2rx()` `file.path()`

Examples

```
## Not run:
find_root(has_file_pattern(
  pattern = glob2rx("DESCRIPTION"),
  contents = "^Package: "
))

## End(Not run)
```

`find_root_file`*File paths relative to the root of a directory hierarchy*

Description

`find_root_file()` is a wrapper around `find_root()` that appends an arbitrary number of path components to the root using `base::file.path()`.

Usage

```
find_root_file(..., criterion, path = ".")
```

```
find_rstudio_root_file(..., path = ".")
```

```
find_package_root_file(..., path = ".")
```

```
find_remake_root_file(..., path = ".")
```

```
find_testthat_root_file(..., path = ".")
```

Arguments

<code>...</code>	[character] Further path components passed to <code>file.path()</code> . All arguments must be the same length or length one.
<code>criterion</code>	[root_criterion] A criterion, one of the predefined <code>criteria</code> or created by <code>root_criterion()</code> . Will be coerced using <code>as_root_criterion()</code> .
<code>path</code>	[character(1)] The start directory.

Details

This function operates on the notion of relative paths. The `...` argument is expected to contain a path relative to the root. If the first path component passed to `...` is already an absolute path, the `criterion` and `path` arguments are ignored, and `...` is forwarded to `file.path()`.

Value

The normalized path of the root as specified by the search criteria, with the additional path components appended. Throws an error if no root is found.

See Also

`find_root()` `utils::glob2rx()` `base::file.path()`

Examples

```
## Not run:
find_package_root_file("tests", "testthat.R")
has_file("DESCRIPTION", "^Package: ")$find_file
has_file("DESCRIPTION", "^Package: ")$make_fix_file(".")

## End(Not run)
```

root_criterion	<i>Is a directory the project root?</i>
----------------	---

Description

Objects of the `root_criterion` class decide if a given directory is a project root.

Usage

```

root_criterion(testfun, desc, subdir = NULL)

is_root_criterion(x)

as_root_criterion(x)

## S3 method for class 'character'
as_root_criterion(x)

## S3 method for class 'root_criterion'
as_root_criterion(x)

## S3 method for class 'root_criterion'
x | y

has_file(filepath, contents = NULL, n = -1L, fixed = FALSE)

has_dir(filepath)

has_file_pattern(pattern, contents = NULL, n = -1L, fixed = FALSE)

has_basename(basename, subdir = NULL)

```

Arguments

testfun	[function list(function)] A function with one parameter that returns TRUE if the directory specified by this parameter is the project root, and FALSE otherwise. Can also be a list of such functions.
desc	[character] A textual description of the test criterion, of the same length as testfun.
subdir	[character] If given, the criterion will also be tested in the subdirectories defined by this argument, in the order given. The first existing directory will be used as a starting point. This is used for the is_testthat criterion that needs to <i>descend</i> into tests/testthat if starting at the package root, but stay inside tests/testthat if called from a testthat test.
x	[object] An object.
y	[object] An object.
filepath	[character(1)] File path (can contain directories).
contents, fixed	[character(1)] If contents is NULL (the default), file contents are not checked. Otherwise, contents is a regular expression (if fixed is FALSE) or a search string (if fixed is TRUE), and file contents are checked matching lines.

n	[integerish(1)] Maximum number of lines to read to check file contents.
pattern	[character(1)] Regular expression to match the file name against.
basename	[character(1)] The required name of the root directory.

Details

Construct criteria using `root_criterion` in a very general fashion by specifying a function with a path argument, and a description.

The `as_root_criterion()` function accepts objects of class `root_criterion`, and character values; the latter will be converted to criteria using `has_file`.

Root criteria can be combined with the `|` operator. The result is a composite root criterion that requires either of the original criteria to match.

The `has_file()` function constructs a criterion that checks for the existence of a specific file (which itself can be in a subdirectory of the root) with specific contents.

The `has_dir()` function constructs a criterion that checks for the existence of a specific directory.

The `has_file_pattern()` function constructs a criterion that checks for the existence of a file that matches a pattern, with specific contents.

The `has_basename()` function constructs a criterion that checks if the `base::basename()` of the root directory has a specific name, with support for case-insensitive file systems.

Value

An S3 object of class `root_criterion` with the following members:

`testfun` The `testfun` argument

`desc` The `desc` argument

`subdir` The `subdir` argument

`find_file` A function with `...` and `path` arguments that returns a path relative to the root, as specified by this criterion. The optional `path` argument specifies the starting directory, which defaults to `"."`. The function forwards to `find_root_file()`, which passes `...` directly to `file.path()` if the first argument is an absolute path.

`make_fix_file` A function with a `path` argument that returns a function that finds paths relative to the root. For a criterion `cr`, the result of `cr$make_fix_file(".")(...)` is identical to `cr$find_file(...)`. The function created by `make_fix_file()` can be saved to a variable to be more independent of the current working directory.

Examples

```
root_criterion(function(path) file.exists(file.path(path, "somefile")), "has somefile")
has_file("DESCRIPTION")
is_r_package
## Not run:
is_r_package$find_file
```

```
is_r_package$make_fix_file(".")
```

```
## End(Not run)
```

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