# devtools

## Document (🗀 man/)

🗀 man/ contains the documentation for your functions, the help pages in your package.

- ☑ Use roxygen comments to document each function beside its definition
- ☑ Document the name of each exported data set
- ☑ Include helpful examples for each function

### WORKFLOW

1. Add roxygen comments in your .R files
2. Convert roxygen comments into documentation with one of:

   devtools::**document()**
   Converts roxygen comments to .Rd files and places them in 🗀 man/. Builds NAMESPACE.

   **Ctrl/Cmd + Shift + D** (Keyboard Shortcut)

3. Open help pages with **?** to preview documentation
4. Repeat

### .Rd FORMATTING TAGS

| | |
|---|---|
| \emph{italic text} | \email{name@@foo.com} |
| \strong{bold text} | \href{url}{display} |
| \code{function(args)} | \url{url} |
| \pkg{package} | |
| | \link[=dest]{display} |
| \dontrun{code} | \linkS4class{class} |
| \dontshow{code} | \code{\link{function}} |
| \donttest{code} | \code{\link[package]{function}} |
| \deqn{a + b (block)} | \tabular{lcr}{ |
| \eqn{a + b (inline)} | left \tab centered \tab right \cr |
| | cell \tab cell \tab cell \cr |
| | } |

### ROXYGEN2

The **roxygen2** package lets you write documentation inline in your .R files with a shorthand syntax. devtools implements roxygen2 to make documentation.

- Add roxygen documentation as comment lines that begin with **#'**.
- Place comment lines directly above the code that defines the object documented.
- Place a roxygen **@** tag (right) after **#'** to supply a specific section of documentation.
- Untagged lines will be used to generate a title, description, and details section (in that order)

```
#' Add together two numbers.
#'
#' @param x A number.
#' @param y A number.
#' @return The sum of \code{x} and \code{y}.
#' @examples
#' add(1, 1)
#' @export
add <- function(x, y) {
  x + y
}
```

### COMMON ROXYGEN TAGS

| | | | |
|---|---|---|---|
| @aliases | @inheritParams | **@seealso** | |
| @concepts | @keywords | @format | |
| @describeIn | **@param** | @source | data |
| **@examples** | @rdname | @include | |
| **@export** | **@return** | @slot | S4 |
| @family | @section | @field | RC |

## Teach (🗀 vignettes/)

🗀 vignettes/ holds documents that teach your users how to solve real problems with your tools.

- ☑ Create a 🗀 vignettes/ directory and a template vignette with
  devtools::**use_vignette()**
  Adds template vignette as vignettes/my-vignette.Rmd.
- ☑ Append YAML headers to your vignettes (like right)
- ☑ Write the body of your vignettes in R Markdown (rmarkdown.rstudio.com)

```
---
title: "Vignette Title"
author: "Vignette Author"
date: "`r Sys.Date()`"
output: rmarkdown::html_vignette
vignette: >
  %\VignetteIndexEntry{Vignette Title}
  %\VignetteEngine{knitr::rmarkdown}
  \usepackage[utf8]{inputenc}
---
```

## Add Data (🗀 data/)

The 🗀 data/ directory allows you to include data with your package.

- ☑ Save data as .Rdata files (suggested)
- ☑ Store data in one of **data/**, **R/Sysdata.rda**, **inst/extdata**
- ☑ Always use **LazyData: true** in your DESCRIPTION file.

devtools::**use_data()**
Adds a data object to data/ (R/Sysdata.rda if **internal = TRUE**)

devtools::**use_data_raw()**
Adds an R Script used to clean a data set to data-raw/. Includes data-raw/ on .Rbuildignore.

Store data in

- **data/** to make data available to package users
- **R/sysdata.rda** to keep data internal for use by your functions.
- **inst/extdata** to make raw data available for loading and parsing examples. Access this data with **system.file()**

## Organize (🗎 NAMESPACE)

The 🗎 NAMESPACE file helps you make your package self-contained: it won't interfere with other packages, and other packages won't interfere with it.

- ☑ Export functions for users by placing **@export** in their roxygen comments
- ☑ Import objects from other packages with **package::object** (recommended) or **@import**, **@importFrom**, **@importClassesFrom**, **@importMethodsFrom** (not always recommended)

### WORKFLOW

1. Modify your code or tests.
2. Document your package (devtools::**document()**)
3. Check NAMESPACE
4. Repeat until NAMESPACE is correct

**SUBMIT YOUR PACKAGE**
r-pkgs.had.co.nz/release.html

RStudio