

Packages : the whole game

Chiapello Juliette 9 juillet 2021 - Stage LMJL - Encadrant : Aymeric Stamm

R Packages - Cheat sheet

Libraries

For details see : <https://r-pkgs.org/>

For personal start-up configuration with devtools and testthat, write in your .Rprofile startup file

```
library(devtools)
library(testthat)
```

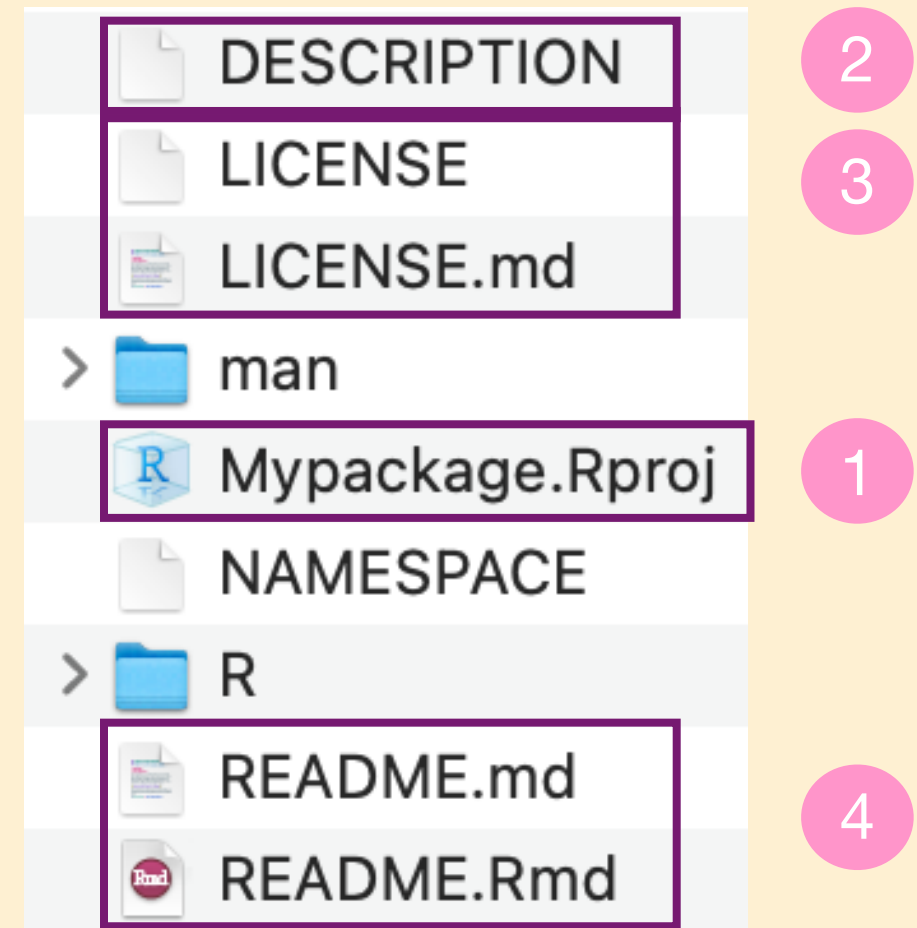
OR

```
if (interactive()) {
  suppressMessages(require(devtools))
}
```

Add also testthat

FIRST SETUP (Do it once)

- Create your package :
`create_package("path/Mypackage")`
- `Mypackage.Rproj` session is opened 1
- Edit the `DESCRIPTION` file : 2
 - Make yourself the author
 - Write some descriptive text in the TITLE and DESCRIPTION fields
- Choose a license (see <https://r-pkgs.org/license.html> for details) :
Ex : `use_mit_license("Jane Doe")` (Write your name and surname) 3
- Initialize a `README.md` (and fill the fields)
(Optional if your package is only for you without using GitHub)
`use_readme_rmd()`
`build_readme()` 4







WORKING FLOW (Do it cyclically)

Open `Mypackage.Rproj`

Run `install()` if you want :
➡ it installs your package on your computer and you can run `library(Mypackage)` to access your package whenever you want !

`check()`

- ➡ It checks that the hole package works !
- ➡ You must correct errors/warnings/notes if needed

Shortcuts : CTRL + SHIFT + E  
CMD + SHIFT + E  


Add a function
`use_r("Afunction")`
The file `Afunction.R` is created

Write functions,
write classes,
...

Write the function in the created file `Afunction.R`





If you need to use an fonction from another package to write your actual function, run :
`use_package("package_name")`
➡ This adds the package to the "Imports" section of the DESCRIPTION file.

To call the function, use :
`package_name::thefunctionyouneed()`

 Do not create too many dependencies !
You can also re-write some functions





`load_all()`

➡ Make `Afunction` available in the current session
(Better to avoid running the functions. Save them and load them with `load_all()`)

Shortcuts : CTRL + SHIFT + L  
CMD + SHIFT + L  

Write the documentation :
Place the cursor somewhere in the function and then click on :
`Code > Insert Roxygen Skeleton`
Fill the fields. Then run :

`document()`

Shortcuts : CTRL + SHIFT + D  
CMD + SHIFT + D  

`load_all()`

➡ You can use `Afunction` and its documentation in the current session !



Create a unit tests file

`use_testthat()`
`use_test("Afunction")`

Write unit tests in the created file `test-Afunction.R`

Check all unit tests with `test()`

Or use a shortcut :

CTRL + SHIFT + T  
CMD + SHIFT + T 