Packaging

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2024-05-18

Structure of a package

- DESCRIPTION: Describes the name, title, license, author and purpose of the package.
- NAMESPACE: Makes the functions available to the user.
- man/:
- R/: the R-code
- tests/:
- …: additional files

Create the DESCRIPTION file

A description file should contian the name of the package, a tiltle, a description of the purpose of the package, a Version, an author and the license. Additional information can be provided as well.

- package:
- Title:
- Description:
- Version: 1.0
- Authors@R:
- License:

```r
# Create the description file without extension
file.create("ducksay/DESCRIPTION")
```

```
## Warning in file.create("ducksay/DESCRIPTION"): kann Datei 'ducksay/DESCRIPTION'
## nicht erzeugen. Grund 'No such file or directory'
```

```
## [1] FALSE
```

```r
package <- "Package: ducksay"
title <-  "Title: Duck Say2"
description <-   "Description: Say 'hello' with the duck."
version <- "Version: 1.0"
authors <- "Authors@R: person('Henrik-Alexander', 'Schubert', email = 'schubert@demogr.mpg.de', role = 

license <- "License: MIT + LICENCE"

# Combine the results
print(rbind(package, title, description, version, authors, license)[, 1])
```

```
##
##                                                                                             "Package:
##
##                                                                                             "Title: D
##                                                                                                     des
##                                                                       "Description: Say 'hello' with tl
##
##                                                                                                  "Vers
##
## "Authors@R: person('Henrik-Alexander', 'Schubert', email = 'schubert@demogr.mpg.de', role = c('aut',
##
##                                                                                        "License: MIT +
```

Creating tests

If you want to include some tests and unit tests, you use the packages 'devtools'.

Writing the R code

The folder of the package contains a subdirectory called 'R'. In this folder, there is a R-script with the package-name that contains the functions.

Writing the description

The description is written inside the subdirectory 'man', which stands for manual. The folder contains a .Rd-file with the package-name. Inside the file, the description is written in R documentation language.

Building the package

Example

In this example, we develop a package that takes a string input and prints a duck, which says the string. The package is going to be called ducksay.