

# Quick R Package

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## Overview

We are about to create the QuickPackage R package:

1. Create a dummy function to come into the package
2. Create the package structure
3. Update the package content
4. Build/check/install
5. Enjoy!

```
> ## This is the dummy function that will return  
> ## information about our 'QuickPackage'  
> qpf <- function()  
+   packageDescription("QuickPackage")
```

```
> ## This creates the package template  
> package.skeleton("QuickPackage", list = c("qpf"))
```

*Creating directories ...*

*Creating DESCRIPTION ...*

*Creating NAMESPACE ...*

*Creating Read-and-delete-me ...*

*Saving functions and data ...*

*Making help files ...*

*Done.*

*Further steps are described in*

*'./QuickPackage/Read-and-delete-me'.*

QuickPackage structure:

```
QuickPackage/  
|-- DESCRIPTION  
|-- man  
|   |-- qpf.Rd  
|   `-- QuickPackage-package.Rd  
|-- NAMESPACE  
|-- R  
|   `-- qpf.R  
`-- Read-and-delete-me
```

- ▶ Read and delete Read-and-delete-me
- ▶ Update DESCRIPTION
- ▶ Write a proper package documentation file or delete it (this is the only optional documentation) and update the man page for `qpf` (see next slide)

```
\name{qpf}  
\alias{qpf}  
\title{ A test function }  
\description{  
    Returns package information.  
}  
\usage{  
qpf()  
}  
\value{  
An object of class \code{packageDescription}.  
}  
\examples{  
qpf()  
}
```

In a terminal:

1. Build the package with  
R CMD build QuickPackage
2. Check the package with  
R CMD check QuickPackage\_1.0.tar.gz
3. If any, fix errors and warnings and repeat steps 1 and 2.
4. Install the package with  
R CMD INSTALL QuickPackage\_1.0.tar.gz



```
> library("QuickPackage")  
> qpf()
```

Package: QuickPackage

Type: Package

Title: A quick and mini R package

Version: 1.0

Author: Laurent Gatto <lg390@cam.ac.uk>

Maintainer: Laurent Gatto <lg390@cam.ac.uk>

Description: Mini intro on building R packages.

License: GPL-2

Packaged: 2014-01-03 14:12:50 UTC; lgatto

Built: R 3.1.0; ; 2014-01-03 14:13:10 UTC; unix

-- File: /home/lgatto/R/x86\_64-unknown-linux-gnu-library/3

## References

- ▶ R package development, Robert Stojnic and Laurent Gatto  
<https://github.com/lgatto/RPackageDevelopment>
- ▶ Writing R Extensions, R Development Core Team, (get it with `help.start()`)
- ▶ This work is licensed under a CC BY-SA 3.0 License.
- ▶ Course web page and more material:  
<https://github.com/lgatto/TeachingMaterial>

```
> toLatex(sessionInfo())
```

- ▶ R Under development (unstable) (2013-10-16 r64064),  
x86\_64-unknown-linux-gnu
- ▶ Locale: LC\_CTYPE=en\_GB.UTF-8, LC\_NUMERIC=C,  
LC\_TIME=en\_GB.UTF-8, LC\_COLLATE=en\_GB.UTF-8,  
LC\_MONETARY=en\_GB.UTF-8, LC\_MESSAGES=en\_GB.UTF-8,  
LC\_PAPER=en\_GB.UTF-8, LC\_NAME=C, LC\_ADDRESS=C,  
LC\_TELEPHONE=C, LC\_MEASUREMENT=en\_GB.UTF-8,  
LC\_IDENTIFICATION=C
- ▶ Base packages: base, datasets, graphics, grDevices, methods,  
stats, utils
- ▶ Other packages: knitr 1.5, QuickPackage 1.0
- ▶ Loaded via a namespace (and not attached): evaluate 0.5.1,  
formatR 0.10, highr 0.3, stringr 0.6.2, tools 3.1.0