

Quick R Package

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Computational Statistics for Genome Biology

28th June 2013

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  
|   `-- qfd.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 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: 2013-06-27 17:11:18 UTC; lgatto
```

```
Built: R 3.1.0; ; 2013-06-27 17:11:39 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) (2013-06-16 r62969), 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=C, 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 1.2, QuickPackage 1.0
- ▶ Loaded via a namespace (and not attached): digest 0.6.3, evaluate 0.4.3, formatR 0.7, stringr 0.6.2, tools 3.1.0