Quick R Package

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May 10, 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 \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: 2013-05-10 09:02:57 UTC; lgatto
Built: R 3.1.0; ; 2013-05-10 09:03:07 UTC; unix

-- File: /home/lgatto/R/x86_64-unknown-linux-gnu-library/3.
```

References

- Advanced R Programming, Robert Stojnic and Laurent Gatto
  http://www.training.cam.ac.uk/gsls/event/413639
- Writing R Extensions, R Development Core Team, (get it with
  `help.start()`)

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

- R Under development (unstable) (2013-04-05 r62500),
  `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