

Development of package **pisar**

A. Blejec

February 5, 2021

Contents

1	Preparation	2
2	Export as source for package	4
2.1	Extract code	4
2.2	Documentation	7
2.3	Check	8
2.4	Check results	9
2.5	Build a package	19
3	PDF documentation	21

Warning: package 'devtools' was built under R version 4.0.3

Warning: package 'usethis' was built under R version 4.0.3

1 Preparation

Set package source directory

```
> purl <- TRUE
> (pkgPath <- gsub("/R/", "/R/packages/", dirname(getwd())))
[1] "C:/__D/OMIKE/pisar"
> (pkgPath <- gsub("/R/", "/R/packages/", dirname(getwd())))
[1] "C:/__D/OMIKE/pisar"
> (pkgName <- basename(dirname(getwd())))
[1] "pisar"
> dir(pkgPath)
[1] "_COPYRIGHT"           "_DESCRIPTION"
[3] "_pkgdown.yml"         "_VERSION"
[5] "data"                 "DESCRIPTION"
[7] "devel"                 "doc"
[9] "docs"                 "FAIRDOM.log"
[11] "gitHeadInfo.gin"      "inst"
[13] "man"                   "NAMESPACE"
[15] "out"                   "pisar-initialize-corrected.R"
[17] "pisar.prj"             "pisar.prj.bak"
[19] "pisar.Rproj"           "R"
[21] "README.md"            "vignettes"
> dir(file.path(pkgPath, "R"))
[1] "pisar-initialize.R" "README.md"
> fctFile <- c("pisar-initialize.Rnw")
> (pkgFile <- gsub("\\.Rnw$", "\\R", fctFile))
[1] "pisar-initialize.R"
```

Files and directories:

Original R source file(s): `pisar-initialize.Rnw`

Package directory: `C:/__D/OMIKE/pisar`

Package source file(s): `pisar-initialize.R`

```
> childtxt <- ""

> for (i in 1:length(fctFile)) {
+   childtxt <- paste(childtxt, knit_child(file.path("../devel", fctFile[i])
+     quiet = TRUE))
+ }
```

2 Export as source for package

perform steps for building a package. Extract code, make documentation files (*.Rd), build a package.

2.1 Extract code

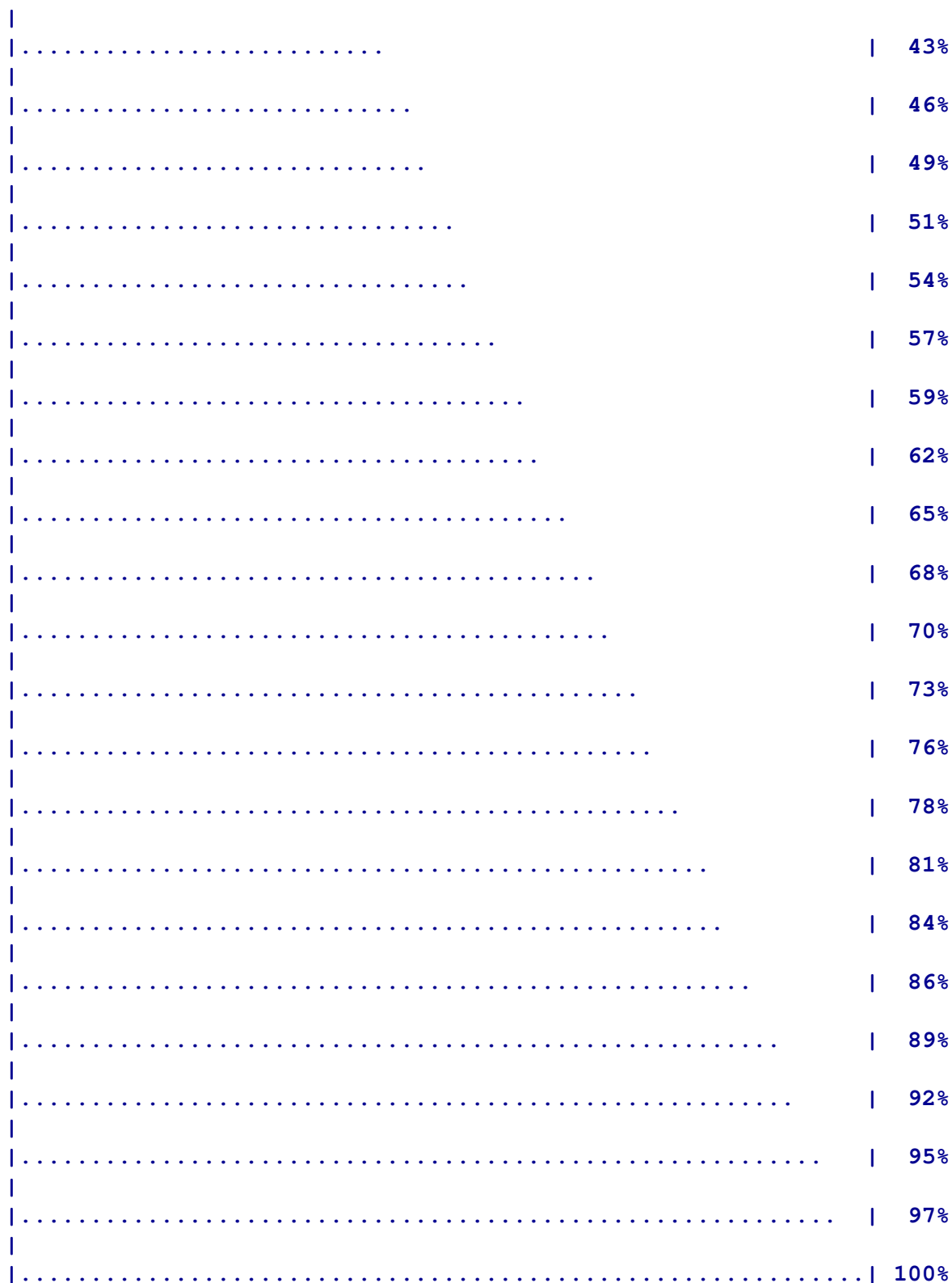
Code is extracted to `pkgPath`.

```
> childtxt <- ""
> for (i in 1:length(fctFile)) {
+   cat(fctFile[i], "\n")
+   childtxt <- paste(childtxt, purl(file.path("../devel", fctFile[i])),
+     output = file.path(pkgPath, "R", pkgFile[i]))
+ }
```

`pisar-initialize.Rnw`

processing file: `../devel/pisar-initialize.Rnw`

		0%
..		3%
...		5%
.....		8%
.....		11%
.....		14%
.....		16%
.....		19%
.....		22%
.....		24%
.....		27%
.....		30%
.....		32%
.....		35%
.....		38%
.....		41%



output file: C:/__D/OMIKE/pisar/R/pisar-initialize.R

```
> file.path(pkgPath, "R")
[1] "C:/__D/OMIKE/pisar/R"
> # dir(file.path(pkgPath, 'R'))
```

C:/__D/OMIKE/pisar/R/pisar-initialize.R

2.2 Documentation

Probably not needed if we do the check?

```
> devtools::document(pkgPath)
Updating pizar documentation
Loading pizar
Writing NAMESPACE
Writing NAMESPACE
> usethis::use_package("knitr")
Setting active project to 'C:/__D/OMIKE/pizar'
Warning in if (delta < 0) {: the condition has length > 1 and only the first e
Warning in if (delta > 0) {: the condition has length > 1 and only the first e
* Refer to functions with `knitr::fun()`
> usethis::use_package("rio")
* Refer to functions with `rio::fun()`
> usethis::use_package("tools")
* Refer to functions with `tools::fun()`
> usethis::use_package("RCurl")
* Refer to functions with `RCurl::fun()`
> # usethis::use_package('httr') usethis::use_package('jsonlite')
> usethis::use_build_ignore(c("devel"))
```

2.3 Check

```
> # system.time(check <- devtools::check(pkgPath))  
> system.time(miss <- devtools::missing_s3(pkgPath))
```

Loading `pisar`

user	system	elapsed
0.25	0.10	0.35

2.4 Check results

```
> check()
```

```
Updating pisar documentation
```

```
Loading pisar
```

```
Writing NAMESPACE
```

```
Writing NAMESPACE
```

```
-- Building -----
```

```
Setting env vars:
```

```
* CFLAGS      : -Wall -pedantic
```

```
* CXXFLAGS    : -Wall -pedantic
```

```
* CXX11FLAGS  : -Wall -pedantic
```

```
-----
```

```
<U+221A>  checking for file 'C:\__D\OMIKE\pisar/DESCRIPTION'
```

```
-  preparing 'pisar':
```

```
  checking DESCRIPTION meta-information ...
```

```
  checking DESCRIPTION meta-information ...
```

```
<U+221A>  checking DESCRIPTION meta-information
```

```
-  installing the package to build vignettes
```

```
  creating vignettes ...
```

```
  creating vignettes ...
```

```
E  creating vignettes (1m 2.6s)
```

```
  duplicated vignette title:
```

```
    'my-vignette'
```

```
--- re-building 'FAIRdom-and-R.Rmd' using rmarkdown
```

```
Warning in engine$weave(file, quiet = quiet, encoding = enc) :
```

```
  Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
```

```
Warning in .Internal(as.vector(x, mode)) :
```

```
  closing unused connection 4 (https://testing.sysmo-db.org)
```

```
Warning: closing unused connection 7 (https://testing.sysmo-db.org/assays/3)
```

```
Warning: closing unused connection 6 (https://testing.sysmo-db.org/Studies/)
```

```
Warning: closing unused connection 5 (https://testing.sysmo-db.org/investig)
```

```
Warning: closing unused connection 4 (https://testing.sysmo-db.org/projects)
```



```

--- finished re-building 'FAIRdom-and-R.Rmd'

--- re-building 'FAIRdom2R.Rmd' using rmarkdown
Warning in engine$weave(file, quiet = quiet, encoding = enc) :
  Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
--- finished re-building 'FAIRdom2R.Rmd'

--- re-building 'my-vignette.Rmd' using rmarkdown
Warning in engine$weave(file, quiet = quiet, encoding = enc) :
  Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
--- finished re-building 'my-vignette.Rmd'

--- re-building 'HowTo-Use-pISA-tree-in-R.Rnw' using knitr
Quitting from lines 215-217 (HowTo-Use-pISA-tree-in-R.Rnw)
Error: processing vignette 'HowTo-Use-pISA-tree-in-R.Rnw' failed with diagn
no applicable method for 'getMeta' applied to an object of class "c('pISame
--- failed re-building 'HowTo-Use-pISA-tree-in-R.Rnw'

SUMMARY: processing the following file failed:
  'HowTo-Use-pISA-tree-in-R.Rnw'

Error: Vignette re-building failed.
Error: Duplicate vignette titles.
  Ensure that the %\VignetteIndexEntry lines in the vignette sources
  correspond to the vignette titles.
Execution halted

```

```

Error in (function (command = NULL, args = character(), error_on_status = TRUE
E> * checking for file 'C:\__D\OMIKE\pisar/DESCRIPTION' ... OK
E> * preparing 'pisar':
E> * checking DESCRIPTION meta-information ... OK
E> * installing the package to build vignettes
E> * creating vignettes ... ERROR
E> duplicated vignette title:
E>   'my-vignette'
E>
E> --- re-building 'FAIRdom-and-R.Rmd' using rmarkdown
E> Warning in engine$weave(file, quiet = quiet, encoding = enc) :
E>   Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
E> Warning in .Internal(as.vector(x, mode)) :
E>   closing unused connection 4 (https://testing.sysmo-db.org)
E> Warning: closing unused connection 7 (https://testing.sysmo-db.org/assays/3
E> Warning: closing unused connection 6 (https://testing.sysmo-db.org/Studies/
E> Warning: closing unused connection 5 (https://testing.sysmo-db.org/investig
E> Warning: closing unused connection 4 (https://testing.sysmo-db.org/projects
E> --- finished re-building 'FAIRdom-and-R.Rmd'
E>
E> --- re-building 'FAIRdom2R.Rmd' using rmarkdown
E> Warning in engine$weave(file, quiet = quiet, encoding = enc) :
E>   Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
E> --- finished re-building 'FAIRdom2R.Rmd'
E>

```

```

E> --- re-building 'my-vignette.Rmd' using rmarkdown
E> Warning in engine$weave(file, quiet = quiet, encoding = enc) :
E>   Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
E> --- finished re-building 'my-vignette.Rmd'
E>
E> --- re-building 'HowTo-Use-pISA-tree-in-R.Rnw' using knitr
E> Quitting from lines 215-217 (HowTo-Use-pISA-tree-in-R.Rnw)
E> Error: processing vignette 'HowTo-Use-pISA-tree-in-R.Rnw' failed with diagn
E> no applicable method for 'getMeta' applied to an object of class "c('pISame
E> --- failed re-building 'HowTo-Use-pISA-tree-in-R.Rnw'
E>
E> SUMMARY: processing the following file failed:
E>   'HowTo-Use-pISA-tree-in-R.Rnw'
E>
E> Error: Vignette re-building failed.
E> Error: Duplicate vignette titles.
E>   Ensure that the %\VignetteIndexEntry lines in the vignette sources
E>   correspond to the vignette titles.
E> Execution halted

```

2.5 Build a package

Build the package

```
> devtools::build(pkgPath, manual = TRUE, quiet = FALSE)
```

```
checking for file 'C:\__D\OMIKE\pisar/DESCRIPTION' ...
```

```
<U+221A> checking for file 'C:\__D\OMIKE\pisar/DESCRIPTION'
```

```
- preparing 'pisar':  
  checking DESCRIPTION meta-information ...
```

```
checking DESCRIPTION meta-information ...
```

```
<U+221A> checking DESCRIPTION meta-information
```

```
- installing the package to build vignettes
```

```
creating vignettes ...
```

```
creating vignettes ...
```

```
E creating vignettes (59.8s)  
  duplicated vignette title:  
    'my-vignette'
```

```
--- re-building 'FAIRdom-and-R.Rmd' using rmarkdown
```

```
Warning in engine$weave(file, quiet = quiet, encoding = enc) :
```

```
  Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
```

```
Warning in .Internal(as.vector(x, mode)) :
```

```
  closing unused connection 4 (https://testing.sysmo-db.org)
```

```
Warning: closing unused connection 7 (https://testing.sysmo-db.org/assays/3
```

```
Warning: closing unused connection 6 (https://testing.sysmo-db.org/Studies/
```

```
Warning: closing unused connection 5 (https://testing.sysmo-db.org/investig
```

```
Warning: closing unused connection 4 (https://testing.sysmo-db.org/projects
```

```
--- finished re-building 'FAIRdom-and-R.Rmd'
```

```
--- re-building 'FAIRdom2R.Rmd' using rmarkdown
```

```
Warning in engine$weave(file, quiet = quiet, encoding = enc) :
```

```
  Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
```

```
--- finished re-building 'FAIRdom2R.Rmd'
```

```

--- re-building 'my-vignette.Rmd' using rmarkdown
Warning in engine$weave(file, quiet = quiet, encoding = enc) :
  Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
--- finished re-building 'my-vignette.Rmd'

--- re-building 'HowTo-Use-pISA-tree-in-R.Rnw' using knitr
Quitting from lines 215-217 (HowTo-Use-pISA-tree-in-R.Rnw)
Error: processing vignette 'HowTo-Use-pISA-tree-in-R.Rnw' failed with diagn
no applicable method for 'getMeta' applied to an object of class "c('pISAME
--- failed re-building 'HowTo-Use-pISA-tree-in-R.Rnw'

SUMMARY: processing the following file failed:
  'HowTo-Use-pISA-tree-in-R.Rnw'

Error: Vignette re-building failed.
Error: Duplicate vignette titles.
  Ensure that the %\VignetteIndexEntry lines in the vignette sources
  correspond to the vignette titles.
Execution halted

```

```

Error in (function (command = NULL, args = character(), error_on_status = TRUE
E> * checking for file 'C:\_D\OMIKE\pisar/DESCRIPTION' ... OK
E> * preparing 'pisar':
E> * checking DESCRIPTION meta-information ... OK
E> * installing the package to build vignettes
E> * creating vignettes ... ERROR
E> duplicated vignette title:
E>   'my-vignette'
E>
E> --- re-building 'FAIRdom-and-R.Rmd' using rmarkdown
E> Warning in engine$weave(file, quiet = quiet, encoding = enc) :
E>   Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
E> Warning in .Internal(as.vector(x, mode)) :
E>   closing unused connection 4 (https://testing.sysmo-db.org)
E> Warning: closing unused connection 7 (https://testing.sysmo-db.org/assays/3
E> Warning: closing unused connection 6 (https://testing.sysmo-db.org/Studies/
E> Warning: closing unused connection 5 (https://testing.sysmo-db.org/investig
E> Warning: closing unused connection 4 (https://testing.sysmo-db.org/projects
E> --- finished re-building 'FAIRdom-and-R.Rmd'
E>
E> --- re-building 'FAIRdom2R.Rmd' using rmarkdown
E> Warning in engine$weave(file, quiet = quiet, encoding = enc) :
E>   Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
E> --- finished re-building 'FAIRdom2R.Rmd'
E>
E> --- re-building 'my-vignette.Rmd' using rmarkdown
E> Warning in engine$weave(file, quiet = quiet, encoding = enc) :
E>   Pandoc (>= 1.12.3) and/or pandoc-citeproc not available. Falling back to
E> --- finished re-building 'my-vignette.Rmd'
E>
E> --- re-building 'HowTo-Use-pISA-tree-in-R.Rnw' using knitr
E> Quitting from lines 215-217 (HowTo-Use-pISA-tree-in-R.Rnw)

```

```

E> Error: processing vignette 'HowTo-Use-pISA-tree-in-R.Rnw' failed with diagn
E> no applicable method for 'getMeta' applied to an object of class "c('pISame
E> --- failed re-building 'HowTo-Use-pISA-tree-in-R.Rnw'
E>
E> SUMMARY: processing the following file failed:
E>   'HowTo-Use-pISA-tree-in-R.Rnw'
E>
E> Error: Vignette re-building failed.
E> Error: Duplicate vignette titles.
E>   Ensure that the %\VignetteIndexEntry lines in the vignette sources
E>   correspond to the vignette titles.
E> Execution halted
> devtools::load_all()
Loading pisar

```

Install

```

> devtools::install(pkgPath)
vctrs      (0.3.4  -> 0.3.6 ) [CRAN]
fansi      (0.4.1  -> 0.4.2 ) [CRAN]
crayon     (1.3.4  -> 1.4.0 ) [CRAN]
cli        (2.2.0  -> 2.3.0 ) [CRAN]
Rcpp       (1.0.5  -> 1.0.6 ) [CRAN]
tibble     (3.0.4  -> 3.0.6 ) [CRAN]
cpp11      (0.2.5  -> 0.2.6 ) [CRAN]
forcats    (0.5.0  -> 0.5.1 ) [CRAN]
xfun       (0.19   -> 0.20  ) [CRAN]
data.table (1.13.2 -> 1.13.6) [CRAN]
knitr      (1.30   -> 1.31  ) [CRAN]
Installing 11 packages: vctrs, fansi, crayon, cli, Rcpp, tibble, cpp11, forcats
Error: (converted from warning) package 'knitr' is in use and will not be inst
> ## str(out)(shell(paste( file.path(R.home("bin"), "Rcmd.exe"), "INSTALL
> ## --no-multiarch --with-keep.source', pkgPath) ,intern=FALSE))

```

Load

```

> devtools::load_all()
Loading pisar
> cat("Package:", pkgName, "\n")
Package: pisar
> library(pkgName, character.only = TRUE)
> help(package = (pkgName))
Warning in file.show(outfile, delete.file = TRUE, title = gettextf("Documentat

```

3 PDF documentation

```

> (pkgName <- basename(dirname(getwd())))
[1] "pisar"
> (instPath <- find.package(pkgName))
[1] "C:/D/OMIKE/pisar"
> pdfFile <- file.path(getwd(), paste(pkgName, "pdf", sep = "."))
> if (file.exists(pdfFile)) file.remove(pdfFile)
[1] TRUE
> system(paste(shQuote(file.path(R.home("bin"), "R")), "CMD", "Rd2pdf", shQuote
[1] 0
> dir(pattern = pkgName)
[1] "pisar-api.Rnw"           "pisar-functions.Rnw"
[3] "pisar-initialize.Rnw"    "pisar-initialize.synctex(busy) "
[5] "pisar-initialize.tex"    "pisar-makePkg.log"
[7] "pisar-makePkg.pdf"       "pisar-makePkg.Rnw"
[9] "pisar-makePkg.synctex"   "pisar-makePkg.tex"

> help(package = (pkgName), help.type = "pdf")
Warning in file.show(outfile, delete.file = TRUE, title = gettextf("Documentat

```

Send package to R Windows builder

```

> devtools::build_win(pkgPath)

```

SessionInfo

Windows 10 x64 (build 19041)

- R version 4.0.2 (2020-06-22), x86_64-w64-mingw32
- Locale: LC_COLLATE=Slovenian_Slovenia.1250, LC_CTYPE=Slovenian_Slovenia.1250, LC_MONETARY=Slovenian_Slovenia.1250, LC_NUMERIC=C, LC_TIME=Slovenian_Slovenia.1250
- Running under: Windows 10 x64 (build 19041)
- Matrix products: default
- Base packages: base, datasets, graphics, grDevices, methods, stats, utils
- Other packages: devtools 2.3.2, knitr 1.30, pisaR 0.1.0.9000, usethis 2.0.0
- Loaded via a namespace (and not attached): assertthat 0.2.1, bitops 1.0-6, callr 3.5.1, cellranger 1.1.0, cli 2.2.0, compiler 4.0.2, crayon 1.3.4, curl 4.3, data.table 1.13.2, desc 1.2.0, digest 0.6.27, ellipsis 0.3.1, evaluate 0.14, fansi 0.4.1, forcats 0.5.0, foreign 0.8-80, formatR 1.7, fs 1.5.0, glue 1.4.2, haven 2.3.1, hms 1.0.0, httr 1.4.2, jsonlite 1.7.2, lifecycle 0.2.0, magrittr 2.0.1, memoise 1.1.0, openxlsx 4.2.3, pillar 1.4.7, pkgbuild 1.2.0, pkgconfig 2.0.3, pkgload 1.1.0, prettyunits 1.1.1, processx 3.4.5, ps 1.5.0, purrr 0.3.4, R6 2.5.0, Rcpp 1.0.5, RCurl 1.98-1.2, readxl 1.3.1, remotes 2.2.0, rio 0.5.16, rlang 0.4.10, roxygen2 7.1.1, rprojroot 2.0.2, rstudioapi 0.13, sessioninfo 1.1.1, stringi 1.5.3, stringr 1.4.0, testthat 3.0.1, tibble 3.0.4, tools 4.0.2, vctrs 0.3.4, withr 2.3.0, xfun 0.19, xml2 1.3.2, zip 2.1.1

Project path: C:/_D/OMIKE/pisar

Main file: ../devel/pisar-makePkg.Rnw

View as vignette

Project files can be viewed by pasting this code to R console:

```
> projectName <-"pisaR";  mainFile <-"pisar-makePkg"

> commandArgs ()
> library(tkWidgets)
> openPDF(file.path(dirname(getwd()), "doc",
> paste(mainFile, "PDF", sep=". ")))
> viewVignette("viewVignette", projectName, #
> file.path("../devel", paste(mainFile, "Rnw", sep=". ")))
> #
```