Package ‘NoviceDeveloperResources2’

January 20, 2025

Version 1.1.0

Date 2024-05-04

Title Further Resources to Assist Novice Developers

Maintainer Barry Zeeberg <barryz2013@gmail.com>

Depends R (>= 4.2.0)

Imports utils, NoviceDeveloperResources

Description Assist novice developers when preparing a single package or a set of integrated packages to submit to CRAN. Provide additional resources to facilitate the automation of the following individual or batch processing: check local source packages; build local .tar.gz source files; install packages from local .tar.gz files; detect conflicts between function names in the environment. The additional resources include determining the identity and ordering of the packages to process when updating an imported package.

License GPL (>= 2)

Encoding UTF-8

VignetteBuilder knitr

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

RoxygenNote 7.3.1

Config/testthat/edition 3

NeedsCompilation no

Author Barry Zeeberg [aut, cre]

Repository CRAN

Date/Publication 2024-05-04 17:40:02 UTC

Contents

`bottomUpRecursive` *bottomUpRecursive*

Description

given a list of packages, determine which packages recursively import the packages in the list

Usage

```
bottomUpRecursive(l, p0)
```

Arguments

`l`	return value of retrieveNamespace()
`p0`	list of those packages whose R code has been modified by the developer

Value

returns a list of the original query packages plus the packages that directly import them

Examples

```
## Not run:
# you need to specify dir, packs that are on your own computer !!
dir1<-"~/personal/hearts/hearts_card_game_bayesian_inference"
dir2<-"packages/inference_packages/inference_packages/"
packs<-c("cardUtils","clickableImageMap","editDriver",
"heartsCIM","iterationDriver","logos","playOneTrick",
"playWholeHandDriverPassParams","probTab","relaxDriver")
l<-retrieveNamespace(sprintf("%s/%s",dir1,dir2),packs)
bur<-bottomUpRecursive(l,c("iterationDriver"))

## End(Not run)
```

bottomUpRecursiveDriver *bottomUpRecursiveDriver*

Description

compute a list of all the packages that either directly or indirectly import the original query packages

Usage

```
bottomUpRecursiveDriver(l, p0, verbose)
```

Arguments

`l`	return value of retrieveNamespace()
`p0`	list of those packages whose R code has been modified by the developer
`verbose`	if TRUE print line indicating the recursion level

Value

returns a list of all the packages that either directly or indirectly imports the original query packages

Examples

```
## Not run:
# you need to specify dir, packs that are on your own computer !!
dir1<-"~/personal/hearts/hearts_card_game_bayesian_inference"
dir2<-"packages/inference_packages/inference_packages/"
packs<-c("cardUtils","clickableImageMap","editDriver",
"heartsCIM","iterationDriver","logos","playOneTrick",
"playWholeHandDriverPassParams","probTab","relaxDriver")
l<-retrieveNamespace(sprintf("%s/%s",dir1,dir2),packs)
burd<-bottomUpRecursiveDriver(l,c("iterationDriver"),TRUE)

## End(Not run)
```

PackageDependencies *PackageDependencies*

Description

recursively call recursivePackageDependencies2() and reversePackageDependencies() to recursively delete leaf nodes until packs has been depleted to length zero

Usage

```
PackageDependencies(dir, packs, master, n, verbose)
```

Arguments

`dir` character string containing the name of the directory holding packs

`packs` list of package names

`master` list whose componenets are lists indexed by integer recursion level the components of each recursion level are the return values of retrieveNamespace() and reversePackageDependencies()

`n` integer recursion level

`verbose` if TRUE print line indicating the recursion level

Details

NOTE that the packages in packs do not need to be loaded or attached to the search() path

Value

returns a list whose components are lists indexed by the integer recursion level:

`l` return value of retrieveNamespace()

`ll` return value of reversePackageDependencies()

Examples

```
## Not run:
# you need to specify dir, packs that are on your own computer !!
dir1<-"~/personal/hearts/hearts_card_game_bayesian_inference"
dir2<-"packages/inference_packages/inference_packages/"
packs<-c("cardUtils","clickableImageMap","editDriver",
"heartsCIM","iterationDriver","logos","playOneTrick",
"playWholeHandDriverPassParams","probTab","relaxDriver")
master<-PackageDependencies(sprintf("%s/%s",dir1,dir2),packs, vector("list",length(packs)),1,TRUE)

## End(Not run)
```

`retrieveLeafNodes` *retrieveLeafNodes*

Description

compute a list of the packages in the correct order for processing by checkBuildInstallSourcePackage()

Usage

```
retrieveLeafNodes(master)
```

Arguments

`master` return value of sortedInputForCheckBuildInstallSourcePackageDriver()

Details

the master list may contain some packages that do not need to be processed by checkBuildInstallSourcePackage(). These are weeded out by sortedInputForcheckBuildInstallSourcePackage()

Value

returns a list of the packages in the correct order for processing by checkBuildInstallSourcePackage()

Examples

```
## Not run:
# you need to specify dir, packs that are on your own computer !!
dir1<-"~/personal/hearts/hearts_card_game_bayesian_inference"
dir2<-"packages/inference_packages/inference_packages/"
packs<-c("cardUtils","clickableImageMap","editDriver",
"heartsCIM","iterationDriver","logos","playOneTrick",
"playWholeHandDriverPassParams","probTab","relaxDriver")
master<-PackageDependencies(sprintf("%s/%s",dir1,dir2),packs,vector("list",length(packs)),1,TRUE)
retrieve<-retrieveLeafNodes(master)

## End(Not run)
```

`retrieveNamespace` *retrieveNamespace*

Description

retrieve a list of the imported packages in a NAMESPACE FILE

Usage

```
retrieveNamespace(dir, packs)
```

Arguments

`dir` character string containing the name of the directory holding packs

`packs` list of package names

Value

returns a list containing the intersection of (1) imported package names and (2) packs list

Examples

```
## Not run:
# you need to specify dir, packs that are on your own computer !!
dir1<-"~/personal/hearts/hearts_card_game_bayesian_inference"
dir2<-"packages/inference_packages/inference_packages/"
dir<-sprintf("%s/%s",dir1,dir2)
packs<-c("cardUtils","clickableImageMap","editDriver",
"heartsCIM","iterationDriver","logos","playOneTrick",
"playWholeHandDriverPassParams","probTab","relaxDriver")
rns<-retrieveNamespace(dir,packs)

## End(Not run)
```

reversePackageDependencies

reversePackageDependencies

Description

separate the packages in packs list having length zero or non-zero dependencies

Usage

```
reversePackageDependencies(l)
```

Arguments

`l`	return value of retrieveNamespace()

Details

the return value ll is like:

$original [cardUtils is no longer a name of ll$original since it had length 0]

$original$editDriver

[1] "cardUtils" "clickableImageMap" "heartsCIM" "logos" "probTab"

$zeros

$zeros$cardUtils cardUtils is an element of ll$zeros since l[["cardUtils"]] has length 0

[1] "cardUtils"

Value

returns a list whose components are 2 lists:

`$original` a list whose components are lists of package names that have non-zero length import dependencies ll$original is same as l, but deleting zero-length elements i.e., leaf nodes

`$zeros` a list whose components are lists of package names that have zero length import dependencies (i.e., leaf nodes) ll$zeros zero-length elements, leaf nodes that had been deleted in ll$original

Examples

```
## Not run:
# you need to specify dir, packs that are on your own computer !!
dir1<-"~/personal/hearts/hearts_card_game_bayesian_inference"
dir2<-"packages/inference_packages/inference_packages/"
packs<-c("cardUtils","clickableImageMap","editDriver",
"heartsCIM","iterationDriver","logos","playOneTrick",
"playWholeHandDriverPassParams","probTab","relaxDriver")
l<-retrieveNamespace(sprintf("%s/%s",dir1,dir2),packs)
ll<-reversePackageDependencies(l)

## End(Not run)
```

`sortedInputForCheckBuildInstallSourcePackage` *sortedInputForCheckBuildInstallSourcePackage*

Description

compute a list of packages in the correct order to input to checkBuildInstallSourcePackage()

Usage

```
sortedInputForCheckBuildInstallSourcePackage(retrieve, burd)
```

Arguments

`retrieve` return value of retrieveLeafNodes()

`burd` return value of bottomUpRecursiveDriver()

Value

returns a list of packages in the correct order to input to checkBuildInstallSourcePackage()

Examples

```
## Not run:
# you need to specify dir, packs that are on your own computer !!
dir1<-"~/personal/hearts/hearts_card_game_bayesian_inference"
dir2<-"packages/inference_packages/inference_packages/"
packs<-c("cardUtils","clickableImageMap","editDriver",
"heartsCIM","iterationDriver","logos","playOneTrick",
"playWholeHandDriverPassParams","probTab","relaxDriver")
master<-PackageDependencies(sprintf("%s/%s",dir1,dir2),packs,vector("list",length(packs)),1,TRUE)
l<-retrieveNamespace(sprintf("%s/%s",dir1,dir2),packs)
burd<-bottomUpRecursiveDriver(l,c("iterationDriver"),TRUE)
retrieve<-retrieveLeafNodes(master)
s<-sortedInputForCheckBuildInstallSourcePackage(retrieve,burd)

## End(Not run)
```

`sortedInputForCheckBuildInstallSourcePackageDriver` *sortedInputForCheckBuildInstallSourcePackageDriver*

Description

driver to invoke sequence of functions to retrieve the correctly ordered list of packages as input and to invoke checkBuildInstallSourcePackage()

Usage

```
sortedInputForCheckBuildInstallSourcePackageDriver(dir, packs, p0, verbose)
```

Arguments

`dir`	character string containing the path name of the directory holding the package folders
`packs`	list of package names
`p0`	list of those packages whose R code has been modified by the developer
`verbose`	if TRUE print line indicating the recursion level

Details

This driver is the single master function to run in order to invoke all of the other functions in the packages *NoviceDeveloperResources* and *NoviceDeveloperResources2*.

In the examples, I show the actual call using packages that are currently under development, so they are not yet available (I expect them to be available in mid-2024).

Value

a list whose components are the return values of checkBuildInstallSourcePackage() and conflictOfInterestRestricted()

Examples

```
## Not run:
# you need to specify dir, packs that are on your own computer !!
dir1<-"~/personal/hearts/hearts_card_game_bayesian_inference"
dir2<-"packages/inference_packages/inference_packages/"
dir<-sprintf("%s/%s",dir1,dir2)
packs<-c("cardUtils","clickableImageMap","editDriver",
"heartsCIM","iterationDriver","logos","playOneTrick",
"playWholeHandDriverPassParams","probTab","relaxDriver")
l<-sortedInputForCheckBuildInstallSourcePackageDriver(dir,packs,packs,TRUE)

dir<-"~/personal/hearts/hearts_card_game_bayesian_inference/packages.12.25.23"
packs<-c("parseCreationTime","retrieve","probsDriverDriver","chisqDriver","html",
        "probsRandomDriverDriver","resamplingProbsMatrix","remapping")
lll<-sortedInputForCheckBuildInstallSourcePackageDriver(dir,packs,"retrieve",TRUE)

## End(Not run)
```

Index