

Package ‘phuse’

January 5, 2018

Type Package

Title Web Application Framework for 'PhUSE' Scripts

Version 0.1.5

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Description Make it easy to review, download and execute scripts stored in Github 'phuse-scripts' repository <<https://github.com/phuse-org/phuse-scripts>>. Some examples included show the web application framework using the script metadata. The 'PhUSE' is Pharmaceutical Users Software Exchange <<http://www.phuse.eu>>.

Depends R (>= 3.0.1)

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Encoding UTF-8

LazyData true

RoxygenNote 6.0.1

Suggests testthat

Imports yaml, shiny, RCurl, git2r, rlist

NeedsCompilation no

Repository CRAN

Date/Publication 2018-01-05 13:54:25 UTC

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build_script_df	<i>Build Script Index Dataset</i>
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Description

Grep all the YAML files, parse the metadata and build a data frame containing key metadata tags.

Usage

```
build_script_df(repo_url = "https://github.com/phuse-org/phuse-scripts.git",
  repo_base = "https://github.com/phuse-org/phuse-scripts/raw/master",
  repo_dir = NULL, work_dir = NULL, output_fn = NULL,
  days_to_update = 7, fn_only = FALSE, upd_opt = NULL)
```

Arguments

repo_url	a URL for a remote repository and default to 'https://github.com/phuse-org/phuse-scripts.git'
repo_base	a URL for repository base folder; default to "https://github.com/phuse-org/phuse-scripts/raw/master"
repo_dir	a local directory to host the repository; default to work_dir from crt_workdir if not specified
work_dir	a local directory to host the files containing a list of YAML files; default to tempdir()/myRepo
output_fn	a CSV file name for outputting a list of YAML files; default to "repo_name_yaml.csv"
days_to_update	number of days before the output_fn is updated; default to 7 days. Set it to a negative number make it to update immediately.
fn_only	return file name only; default to FALSE
upd_opt	update option: File RepolBoth

Value

a data frame containing a list of script metadata

Author(s)

Hanming Tu

Examples

```
## Not run:
r1 <- build_script_df()
r2 <- build_script_df(upd_opt = "file")
r3 <- build_script_df(upd_opt = "repo")
r4 <- build_script_df(upd_opt = "both")

## End(Not run)
```

build_inputs*Build Inputs from Script Metadata for Phuse Web Framework*

Description

Build R shiny code for Phuse Web Apps

Usage

```
build_inputs(fn = NULL)
```

Arguments

fn a file name or URL pointing to script metadata file

Value

R shiny code for providing inputs to the script

Author(s)

Hanming Tu

Examples

```
a <- "https://github.com/phuse-org/phuse-scripts/raw/master"
b <- "development/R/scripts"
c <- "Draw_Dist2_R.yml"
f1 <- paste(a,b,c, sep = '/')
r1 <- build_inputs(f1)
```

chk_workdir	<i>Verify work directory</i>
-------------	------------------------------

Description

Verify if the dir is the work directory

Usage

```
chk_workdir(dir, top_dir = NULL, sub_dir = "myRepo")
```

Arguments

dir	a work directory; default to '/Users/user for Mac; "c:/tmp" for Windows
top_dir	a top or root directory; default to '/Users/user for Mac or getwd for other OS
sub_dir	a sub directory

Value

TRUE or FALSE

Author(s)

Hanming Tu

Examples

```
f1 <- tempdir()
r1 <- chk_workdir(f1)
```

create_dir	<i>Create a directory</i>
------------	---------------------------

Description

create a directory

Usage

```
create_dir(r_dir, s_dir = NULL)
```

Arguments

r_dir	root directory
s_dir	sub directory

Value

directory name

Author(s)

Hanming Tu

Examples

```
## Not run:
s1 <- tempdir()
s2 <- "myRepo"
# create dir /{s1}/myRepo if it does not exist
d1 <- create_dir(s1, s2)

## End(Not run)
```

crt_workdir	<i>Create work directory</i>
-------------	------------------------------

Description

define and create a work directory.

Usage

```
crt_workdir(top_dir = NULL, sub_dir = "myRepo", to_crt_dir = TRUE)
```

Arguments

top_dir	a top or root directory; default to '/Users/user for Mac or getwd for other OS
sub_dir	a sub directory
to_crt_dir	whether to create the dir; default to TRUE. If FALSE, just return the dir name

Value

the created directory

Author(s)

Hanming Tu

Examples

```
## Not run:
d1 <- tempdir()
r1 <- crt_workdir(d1)
r2 <- crt_workdir(d1, to_crt_dir = FALSE) # just return the dir

## End(Not run)
```

cvt_class2df *Convert a class to data fram*

Description

Convert class or list to a data frame

Usage

```
cvt_class2df(x, exc = "^_+", condition = FALSE)
```

Arguments

x	a class or list
exc	exclude pattern
condition	condition for excluding

Author(s)

Hanming Tu

Examples

```
r1 <- Sys.getenv()
r2 <- cvt_class2df(r1)
```

cvt_list2df *Convert list to data frame*

Description

convert list to a data frame with the following structure: variable, level, type, value

Usage

```
cvt_list2df(a)
```

Arguments

a	a list returned by read_yaml or any list
---	--

Value

data frame

Author(s)

Hanming Tu

Examples

```
a <- "https://github.com/phuse-org/phuse-scripts/raw/master"
b <- "development/R/scripts"
c <- "Draw_Dist2_R.yml"
f1 <- paste(a,b,c, sep = '/')
r1 <- read_yaml(f1)
r2 <- cvt_list2df(r1)
```

`download_fns`*Download files from a repository*

Description

download files defined in the input data frame.

Usage

```
download_fns(df, tgtDir = NULL,
             baseDir = "https://github.com/phuse-org/phuse-scripts/raw/master")
```

Arguments

<code>df</code>	a data frame containing file names produced from <code>extract_fns</code>
<code>tgtDir</code>	target directory for storing the files
<code>baseDir</code>	base directory in the repository including the repo URL. Default to "https://github.com/phuse-org/phuse-scripts/raw/master"

Author(s)

Hanming Tu

Examples

```
## Not run:
a <- "https://github.com/phuse-org/phuse-scripts/raw/master"
b <- "development/R/scripts"
c <- "Draw_Dist2_R.yml"
f1 <- paste(a,b,c, sep = '/')
f2 <- read_yaml(f1)
f3 <- extract_fns(f2)
f4 <- download_fns(f3)

## End(Not run)
```

download_script	<i>Download files defined in script metadata</i>
-----------------	--

Description

download scripts, data or any file defined in the script metadata.

Usage

```
download_script(cfg, wkDir = "workdir", source_lib = TRUE)
```

Arguments

cfg	a list containing script metadata
wkDir	work directory where the files will be downloaded to
source_lib	whether to source the library defined for the script in the metadata

Value

target directory name

Author(s)

Hanming Tu

Examples

```
## Not run:  
a <- "https://github.com/phuse-org/phuse-scripts/raw/master"  
b <- "development/R/scripts"  
c <- "Draw_Dist2_R.yml"  
f1 <- paste(a,b,c, sep = '/')  
f2 <- read_yaml(f1)  
f3 <- download_script(f2)  
  
## End(Not run)
```

download_script_files *Download files from a repository*

Description

download files defined in the input list from a repository.

Usage

```
download_script_files(fns, tgtDir,  
  baseDir = "https://github.com/phuse-org/phuse-scripts/raw/master",  
  scriptDir = "data/send/PDS/Xpt")
```

Arguments

fns	a list containing file names
tgtDir	target directory for storing the files
baseDir	base directory in the repository including the repo URL. Default to "https://github.com/phuse-org/phuse-scripts/raw/master"
scriptDir	script directory in the repository

Author(s)

Hanming Tu

Examples

```
## Not run:  
fns <- c("dm.xpt", "ex.xpt")  
dir <- tempdir()  
a <- download_script_files(fns, dir)  
  
## End(Not run)
```

extract_fns *Extract File Names from Script Metadata*

Description

extract folders and file names from a list containing script metadata.

Usage

```
extract_fns(lst)
```

Arguments

lst a list containing script metadata

Value

a data frame (subdir, filename) containing parsed file names

Author(s)

Hanming Tu

Examples

```
a <- "https://github.com/phuse-org/phuse-scripts/raw/master"
b <- "development/R/scripts"
c <- "Draw_Dist2_R.yml"
f1 <- paste(a,b,c, sep = '/')
f2 <- read_yaml(f1)
f3 <- extract_fns(f2)
```

get_inputs

Get Inputs from Input Sources

Description

Get inputs from interactive session (shiny webpage), command line or script metadata.

Usage

```
get_inputs(fn = NULL, input = NULL, cmd = NULL)
```

Arguments

fn a file name or URL pointing to script metadata file
input the input parameter from shiny webpage
cmd the commandArgs

Value

a list of input values provided for the script

Author(s)

Hanming Tu

Examples

```
a <- "https://github.com/phuse-org/phuse-scripts/raw/master"  
b <- "development/R/scripts"  
c <- "Draw_Dist2_R.yml"  
f1 <- paste(a,b,c, sep = '/')  
r1 <- get_inputs(f1)
```

get_yml_inputs	<i>Get Inputs from Script Metadata File</i>
----------------	---

Description

Get inputs from script metadata.

Usage

```
get_yml_inputs(fn = NULL)
```

Arguments

fn a file name or URL pointing to script metadata file

Value

a list of input values provided for the script

Author(s)

Hanming Tu

Examples

```
a <- "https://github.com/phuse-org/phuse-scripts/raw/master"  
b <- "development/R/scripts"  
c <- "Draw_Dist2_R.yml"  
f1 <- paste(a,b,c, sep = '/')  
r1 <- get_inputs(f1)
```

init_cfg	<i>Initialize configuration for phuse</i>
----------	---

Description

read script metadata file in the repository and merged it with a local script metadata file if it exists.

Usage

```
init_cfg(cfg)
```

Arguments

cfg a list containing script metadata information

Value

a list containing the merged configuration

Author(s)

Hanming Tu

Examples

```
a <- "https://github.com/phuse-org/phuse-scripts/raw/master"
b <- "development/R/scripts"
c <- "Draw_Dist2_R.yml"
f1 <- paste(a,b,c, sep = '/')
f2 <- read_yaml(f1)
r1 <- init_cfg(f2)
```

merge_lists	<i>Compare and merge two lists</i>
-------------	------------------------------------

Description

compare two lists using the first list as a base; update the values of the first list if the second one has different values; add variables to the first if they do not exist in the first list.

Usage

```
merge_lists(a, b)
```

Arguments

a the 1st list
b the 2nd list

Value

a list containing the merged configuration

Author(s)

Hanming Tu

Examples

```
a <- "https://github.com/phuse-org/phuse-scripts/raw/master"  
b <- "development/R/scripts"  
c <- "Draw_Dist_R.yml"  
f1 <- paste(a,b,c, sep = '/')  
dr <- resolve(system.file("examples", package = "phuse"), "02_display")  
f2 <- paste(dr, "www", "Draw_Dist_R.yml", sep = '/')  
r1 <- read_yaml(f1)  
r2 <- read_yaml(f2)  
r3 <- merge_lists(r1, r2)
```

read_yaml *Read YAML file into a list*

Description

read script metadata file in the repository or in a local folder.

Usage

```
read_yaml(fn)
```

Arguments

fn a URL or file name containing script metadata

Value

a list containing the parsed metadata tags

Author(s)

Hanming Tu

Examples

```
a <- "https://github.com/phuse-org/phuse-scripts/raw/master"
b <- "development/R/scripts"
c <- "Draw_Dist2_R.yml"
f1 <- paste(a,b,c, sep = '/')
r1 <- get_inputs(f1)
```

resolve	<i>Resolve absolute path</i>
---------	------------------------------

Description

Resolve absolute directory

Usage

```
resolve(dir, relpath)
```

Arguments

dir	directory
relpath	relative path

Author(s)

Hanming Tu

Examples

```
resolve("/Users/htu/myRepo", "scripts")
# get "/Users/htu/myRepo/scripts"
```

run_example	<i>Run example</i>
-------------	--------------------

Description

run examples stored in the example folder.

Usage

```
run_example(example = NA, pkg = "phuse", port = NULL,
  launch.browser = getOption("shiny.launch.browser", interactive()),
  host = getOption("shiny.host", "127.0.0.1"), display.mode = c("auto",
  "normal", "showcase"))
```

Arguments

example	Example name
pkg	package name
port	Port number
launch.browser	define the browser- shiny.launch.browser
host	define the host or ip address
display.mode	modes are auto, normal or showcase

Author(s)

Hanming Tu

Examples

```
## Not run:
library(phuse)
run_example("02_display")

## End(Not run)
```

start_phuse

Start Phuse Web Application

Description

start phuse web application framework.

Usage

```
start_phuse(n = 2)
```

Arguments

n	Example number
---	----------------

Author(s)

Hanming Tu

Examples

```
## Not run:
library(phuse)
start_phusee() # default to "02_display"
start_phuse(1) # start "01_html"

## End(Not run)
```

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