Package 'periscope'

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Type Package

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Version 1.0.4

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add_left_sidebar Add the left sidebar to an existing application.

Description

Add the left sidebar to an existing application.

Usage

add_left_sidebar(location)

Arguments

location path of the existing application.

add_reset_button Add the reset button to an existing application.

Description

Add the reset button to an existing application.

Usage

```
add_reset_button(location)
```

Arguments

location path of the existing application.

add_right_sidebar *Add the right sidebar to an existing application.*

Description

Add the right sidebar to an existing application.

Usage

```
add_right_sidebar(location)
```

Arguments

location path of the existing application.

add_ui_body

Add UI Elements to the Body area

Description

This function registers UI elements to the body of the application (the right side). Items are added in the order given.

Usage

add_ui_body(elementlist = NULL, append = FALSE)

Arguments

elementlist	list of UI elements to add to the body
append	whether to append the elementlist to the currently registered elements or re- place the currently registered elements completely
	prace the currently registered elements completely

Shiny Usage

Call this function after creating elements in program/ui_body.R to register them to the application framework and show them on the body area of the dashboard application

See Also

add_ui_sidebar_basic add_ui_sidebar_advanced

Examples

```
require(shiny)
```

```
body1 <- htmlOutput("example1")
body2 <- actionButton("exButton", label = "Example")</pre>
```

```
add_ui_body(list(body1, body2))
```

add_ui_sidebar_advanced

Add UI Elements to the Sidebar (Advanced Tab)

Description

This function registers UI elements to the secondary (rear-most) tab on the dashboard sidebar. The default name of the tab is **Advanced** but can be renamed using the tabname argument.

Usage

```
add_ui_sidebar_advanced(
   elementlist = NULL,
   append = FALSE,
   tabname = "Advanced"
)
```

elementlist	list of UI elements to add to the sidebar tab
append	whether to append the elementlist to the currently registered elements or re- place the currently registered elements completely
tabname	change the label on the UI tab (default = "Advanced")

Shiny Usage

Call this function after creating elements in program/ui_sidebar.R to register them to the application framework and show them on the Advanced tab in the dashboard sidebar

See Also

```
add_ui_sidebar_basic
add_ui_body
```

Examples

require(shiny)

```
s1 <- selectInput("sample1", "A Select", c("A", "B", "C"))
s2 <- radioButtons("sample2", NULL, c("A", "B", "C"))</pre>
```

```
add_ui_sidebar_advanced(list(s1, s2), append = FALSE)
```

add_ui_sidebar_basic Add UI Elements to the Sidebar (Basic Tab)

Description

This function registers UI elements to the primary (front-most) tab on the dashboard sidebar. The default name of the tab is **Basic** but can be renamed using the tabname argument. This tab will be active on the sidebar when the user first opens the shiny application.

Usage

```
add_ui_sidebar_basic(elementlist = NULL, append = FALSE, tabname = "Basic")
```

Arguments

elementlist	list of UI elements to add to the sidebar tab
append	whether to append the elementlist to currently registered elements or replace the currently registered elements.
tabname	change the label on the UI tab (default = "Basic")

Shiny Usage

Call this function after creating elements in ui_sidebar. R to register them to the application framework and show them on the Basic tab in the dashboard sidebar

See Also

add_ui_sidebar_advanced add_ui_body

Examples

require(shiny)

```
s1 <- selectInput("sample1", "A Select", c("A", "B", "C"))
s2 <- radioButtons("sample2", NULL, c("A", "B", "C"))
add_ui_sidebar_basic(list(s1, s2), append = FALSE)</pre>
```

add_ui_sidebar_right Add UI Elements to the Right Sidebar

Description

This function registers UI elements at the right dashboard sidebar. The UI elements to be added depend on the version of shinydashboardPlus in use.

Usage

```
add_ui_sidebar_right(elementlist = NULL, append = FALSE)
```

Arguments

elementlist	list of UI elements to add to the sidebar tab
append	whether to append the elementlist to the currently registered elements or re- place the currently registered elements completely

Shiny Usage

Call this function after creating elements in program/ui_sidebar_right.R to register them to the application framework and show them on the right dashboard sidebar

See Also

add_ui_sidebar_basic add_ui_body shinydashboardPlusGallery

Examples

```
## Not run:
require(shiny)
require(shinydashboardPlus)
```

- # shinydashboardPlus changed significantly in version 2.0 and has
- $\ensuremath{\texttt{\#}}$ different syntax for the element content, here is an example for each
- # shinydashboardPlus < 2.0</pre>

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create_new_application

Create a new templated framework application

Description

Creates ready-to-use templated application files using the periscope framework. The application can be created either empty (default) or with a sample/documented example application.

A running instance of the exact sample application that will be created is hosted here if you would like to see the sample application before creating your own copy.

Usage

```
create_new_application(
    name,
    location,
    sampleapp = FALSE,
    resetbutton = TRUE,
    rightsidebar = TRUE,
    leftsidebar = TRUE,
    custom_theme_file = NULL
)
```

name	name for the new application and directory
location	base path for creation of name
sampleapp	whether to create a sample shiny application
resetbutton	whether the reset button should be added on the Advanced (left) sidebar.

rightsidebar	parameter to set the right sidebar. It can be TRUE/FALSE or a character con-
	taining the name of a shiny::icon().
leftsidebar	whether the left sidebar should be enabled.
custom_theme_fi	le
	location of custom theme settings yaml file. Default value is NULL.

Name

The name directory must not exist in location. If the code detects that this directory exists it will abort the creation process with a warning and will not create an application template.

Use only filesystem-compatible characters in the name (ideally w/o spaces)

Directory Structure

name

- -- www (supporting shiny files)
- -- program (user application)
- -- -- data (user application data)
- -- -- fxn (user application function)
- -- log (log files)

File Information

All user application creation and modifications will be done in the **program** directory. The names & locations of the framework-provided .R files should not be changed or the framework will fail to work as expected.

name/program/ui_body.R :

Create body UI elements in this file and register them with the framework using a call to add_ui_body

name/program/ui_sidebar.R :

Create sidebar UI elements in this file and register them with the framework using a call to add_ui_sidebar_basic or add_ui_sidebar_advanced

name/program/ui_sidebar_right.R :

Create right sidebar UI elements in this file and register them with the framework using a call to add_ui_sidebar_right

name/program/data directory :

Use this location for data files. There is a **.gitignore** file included in this directory to prevent accidental versioning of data

name/program/global.R :

Use this location for code that would have previously resided in global.R and for setting application parameters using set_app_parameters. Anything placed in this file will be accessible across all user sessions as well as within the UI context.

name/program/server_global.R :

create_new_application

Use this location for code that would have previously resided in server.R above (i.e. outside of) the call to shinyServer(...). Anything placed in this file will be accessible across all user sessions.

name/program/server_local.R :

Use this location for code that would have previously resided in server.R inside of the call to shinyServer(...). Anything placed in this file will be accessible only within a single user session.

name/www/periscope_style.yaml :

This is the application custom styling yaml file. User can update application different parts style using this file.

Do not modify the following files:

name\global.R
name\server.R
name\ui.R
name\www\img\loader.gif
name\www\img\tooltip.png

Right Sidebar

value
FALSE --- no sidebar
TRUE --- sidebar with default icon ('gears').
"table" --- sidebar with table icon. The character string should be a valid "font-awesome" icon.

See Also

shiny:icon()
shinydashboard:dashboardPage()

Examples

```
# sample app named 'mytestapp' created in a temp dir
create_new_application(name = 'mytestapp', location = tempdir(), sampleapp = TRUE)
# sample app named 'mytestapp' with a right sidebar using a custom icon created in a temp dir
create_new_application(name = 'mytestapp', location = tempdir(), sampleapp = TRUE,
rightsidebar = "table")
# blank app named 'myblankapp' created in a temp dir
create_new_application(name = 'myblankapp', location = tempdir())
# blank app named 'myblankapp' with a green skin created in a temp dir
```

blank app named myblankapp with a green skin created in a temp dir create_new_application(name = 'myblankapp', location = tempdir()) # blank app named 'myblankapp' without a left sidebar created in a temp dir create_new_application(name = 'myblankapp', location = tempdir(), leftsidebar = FALSE) downloadablePlot downloadablePlot Module

Description

Server-side function for the downloadablePlotUI. This is a custom plot output paired with a linked downloadFile button.

Usage

```
downloadablePlot(
```

```
...,
logger,
filenameroot,
aspectratio = 1,
downloadfxns = list(),
visibleplot
```

```
)
```

Arguments

	free parameters list for shiny to pass session variables based on the module call(session, input, output) variables. <i>Note</i> : The first argument of this function must be the ID of the Module's UI element
logger	logger to use
filenameroot	the base text used for user-downloaded file - can be either a character string or a reactive expression returning a character string
aspectratio	the downloaded chart image width:height ratio (ex: $1 =$ square, $1.3 = 4:3$, $0.5 = 1:2$). Where not applicable for a download type it is ignored (e.g. data, html downloads)
downloadfxns	a named list of functions providing download images or data tables as return values. The names for the list should be the same names that were used when the plot UI was created.
visibleplot	function or reactive expression providing the plot to display as a return value. This function should require no input parameters.

Notes

When there are no values to download in any of the linked downloadfxns the button will be hidden as there is nothing to download.

Shiny Usage

This function is not called directly by consumers - it is accessed in server.R using the same id provided in downloadablePlotUI:

downloadablePlot(id, logger, filenameroot, downloadfxns, visibleplot)

downloadablePlotUI

See Also

downloadablePlotUI

Examples

```
# Inside server_local.R
```

```
# downloadablePlot("object_id1",
# logger = ss_userAction.Log,
# filenameroot = "mydownload1",
# aspectratio = 1.33,
# downloadfxns = list(png = myplotfxn, tsv = mydatafxn),
# visibleplot = myplotfxn)
```

downloadablePlotUI downloadablePlotUI

Description

Creates a custom plot output that is paired with a linked downloadFile button. This module is compatible with ggplot2, grob and lattice produced graphics.

Usage

```
downloadablePlotUI(
    id,
    download_hovertext = NULL,
    width = "100%",
    height = "400px",
    btn_halign = "right",
    btn_valign = "bottom",
    btn_overlap = TRUE,
    clickOpts = NULL,
    hoverOpts = NULL,
    brushOpts = NULL
)
```

id	character id for the object	
downloadtypes	vector of values for download types	
download_hovertext		
	download button tooltip hover text	
width	plot width (any valid css size value)	
height	plot height (any valid css size value)	

btn_halign	horizontal position of the download button ("left", "center", "right")
btn_valign	vertical position of the download button ("top", "bottom")
btn_overlap	whether the button should appear on top of the bottom of the plot area to save on vertical space (<i>there is often a blank area where a button can be overlayed</i> <i>instead of utilizing an entire horizontal row for the button below the plot area</i>)
clickOpts	NULL or an object created by the clickOpts function
hover0pts	NULL or an object created by the hoverOpts function
brush0pts	NULL or an object created by the brushOpts function

Example

```
downloadablePlotUI("myplotID", c("png", "csv"), "Download Plot or Data", "300px")
```

Notes

When there is nothing to download in any of the linked downloadfxns the button will be hidden as there is nothing to download.

This module is NOT compatible with the built-in (base) graphics (*such as basic plot, etc.*) because they cannot be saved into an object and are directly output by the system at the time of creation.

Shiny Usage

Call this function at the place in ui.R where the plot should be placed.

Paired with a call to downloadablePlot(id, ...) in server.R

See Also

downloadablePlot downloadFileButton clickOpts hoverOpts brushOpts

Examples

Description

Server-side function for the downloadableTableUI. This is a custom high-functionality table paired with a linked downloadFile button.

Usage

```
downloadableTable(
```

```
...,
logger,
filenameroot,
downloaddatafxns = list(),
tabledata,
selection = NULL
```

Arguments

)

	free parameters list to pass table customization options. See example below. <i>Note</i> : The first argument of this function must be the ID of the Module's UI element	
logger	logger to use	
filenameroot	the base text used for user-downloaded file - can be either a character string or a reactive expression returning a character string	
downloaddatafxns		
	a named list of functions providing the data as return values. The names for the list should be the same names that were used when the table UI was created.	
tabledata	function or reactive expression providing the table display data as a return value. This function should require no input parameters.	
selection	function or reactive expression providing the row_ids of the rows that should be selected	

Details

Generated table can highly customized using function ?DT:::datatable same arguments except for 'options' and 'selection' parameters.

For 'options' user can pass the same ?DT:::datatable options using the same names and values one by one separated by comma.

For 'selection' parameter it can be either a function or reactive expression providing the row_ids of the rows that should be selected.

Also, user can apply the same provided ?DT:: formatCurrency columns formats on passed dataset using format functions names as keys and their options as a list.

Value

Reactive expression containing the currently selected rows in the display table

Notes

- When there are no rows to download in any of the linked downloaddatafxns the button will be hidden as there is nothing to download.
- selection parameter has different usage than DT::datatable selection option. See parameters usage section.
- DT::datatable options editable, width and height are not supported

Shiny Usage

This function is not called directly by consumers - it is accessed in server.R using the same id provided in downloadableTableUI:

downloadableTable(id, logger, filenameroot, downloaddatafxns, tabledata, rownames, caption, selection)

Note: calling module server returns the reactive expression containing the currently selected rows in the display table.

See Also

downloadableTableUI

Examples

```
# Inside server_local.R
```

```
# selectedrows <- downloadableTable(</pre>
```

```
# "object_id1",
```

```
# logger = ss_userAction.Log,
```

```
# filenameroot = "mydownload1"
```

```
# downloaddatafxns = list(csv = mydatafxn1, tsv = mydatafxn2),
```

```
# tabledata = mydatafxn3,
```

```
# rownames = FALSE,
```

```
# caption = "This is a great table! By: Me",
```

```
# selection = mydataRowIds,
```

```
# colnames = c("Area", "Delta", "Increase"),
```

```
# filter = "bottom",
```

```
# width = "150px",
```

```
# height = "50px",
```

```
# extensions = 'Buttons',
```

```
# plugins = 'natural',
```

```
# editable = TRUE,
```

```
# dom = 'Bfrtip',
```

```
# buttons = c('copy', 'csv', 'excel', 'pdf', 'print'),
```

```
# formatStyle = list(columns = c('Area'), color = 'red'),
```

```
# formatStyle = list(columns = c('Increase'), color = DT::styleInterval(0, c('red', 'green'))),
```

```
# formatCurrency = list(columns = c('Delta')))
```

selectedrows is the reactive return value, captured for later use

downloadableTableUI downloadableTable UI

Description

Creates a custom high-functionality table paired with a linked downloadFile button. The table has search and highlight functionality, infinite scrolling, sorting by columns and returns a reactive dataset of selected items.

Usage

```
downloadableTableUI(
    id,
    downloadtypes = c("csv"),
    hovertext = NULL,
    contentHeight = "200px",
    singleSelect = FALSE
)
```

Arguments

id	character id for the object
downloadtypes	vector of values for data download types
hovertext	download button tooltip hover text
contentHeight	viewable height of the table (any valid css size value)
singleSelect	whether the table should only allow a single row to be selected at a time (FALSE by default allows multi-select).

Table Features

- Consistent styling of the table
- downloadFile module button functionality built-in to the table
- · Ability to show different data from the download data
- Table is automatically fit to the window size with infinite y-scrolling
- Table search functionality including highlighting built-in
- Multi-select built in, including reactive feedback on which table items are selected

Example

```
downloadableTableUI("mytableID", c("csv", "tsv"),"Click Here", "300px")
```

Notes

When there are no rows to download in any of the linked downloaddatafxns the button will be hidden as there is nothing to download.

Shiny Usage

Call this function at the place in ui.R where the table should be placed.

Paired with a call to downloadableTable(id, ...) in server.R

See Also

downloadableTable downloadFileButton

Examples

downloadFile downloadFile Module

Description

Server-side function for the downloadFileButton. This is a custom high-functionality button for file downloads supporting single or multiple download types. The server function is used to provide the data for download.

Usage

```
downloadFile(..., logger, filenameroot, datafxns = list(), aspectratio = 1)
```

	free parameters list for shiny to pass session variables based on the module call(session, input, output) variables. <i>Note:</i> The first argument of this function must be the ID of the Module's UI element
logger	logger to use
filenameroot	the base text used for user-downloaded file - can be either a character string or a reactive expression that returns a character string
datafxns	a named list of functions providing the data as return values. The names for the list should be the same names that were used when the button UI was created.

aspectratio the downloaded chart image width:height ratio (ex: 1 = square, 1.3 = 4:3, 0.5 = 1:2). Where not applicable for a download type it is ignored (e.g. data downloads).

Shiny Usage

This function is not called directly by consumers - it is accessed in server.R using the same id provided in downloadFileButton:

downloadFile(id, logger, filenameroot, datafxns)

See Also

downloadFileButton downloadFile_ValidateTypes downloadFile_AvailableTypes

Examples

```
# Inside server_local.R
#single download type
# downloadFile("object_id1",
#
               logger = ss_userAction.Log,
#
               filenameroot = "mydownload1"
               datafxns = list(csv = mydatafxn1),
#
#
               aspectratio = 1)
#multiple download types
# downloadFile("object_id2",
#
               logger = ss_userAction.Log,
#
               filenameroot = "mytype2",
#
               datafxns = list(csv = mydatafxn1, xlsx = mydatafxn2),
#
               aspectratio = 1)
```

downloadFileButton downloadFileButton UI

Description

Creates a custom high-functionality button for file downloads with two states - single download type or multiple-download types. The button image and pop-up menu (if needed) are set accordingly. A tooltip can also be set for the button.

Usage

```
downloadFileButton(id, downloadtypes = c("csv"), hovertext = NULL)
```

Arguments

id	character id for the object
downloadtypes	vector of values for data download types
hovertext	tooltip hover text

Button Features

- Consistent styling of the button, including a hover tooltip
- Single or multiple types of downloads
- · Ability to download different data for each type of download

Example

```
downloadFileUI("mybuttonID1", c("csv", "tsv"), "Click Here") downloadFileUI("mybuttonID2",
"csv", "Click to download")
```

Shiny Usage

Call this function at the place in ui.R where the button should be placed.

It is paired with a call to downloadFile(id, ...) in server.R

See Also

downloadFile_ValidateTypes downloadFile_AvailableTypes

Examples

```
# Inside ui_body.R or ui_sidebar.R
```

downloadFile_AvailableTypes

downloadFile Helper

Description

Returns a list of all supported types

Usage

downloadFile_AvailableTypes()

Value

a vector of all supported types

See Also

downloadFileButton downloadFile

```
downloadFile_ValidateTypes
```

downloadFile Helper

Description

Checks a given list of file types and warns if an invalid type is included

Usage

downloadFile_ValidateTypes(types)

Arguments

types list of types to test

Value

the list input given in types

Example

```
downloadFile_ValidateTypes(c("csv", "tsv"))
```

See Also

downloadFileButton downloadFile

get_url_parameters Get URL Parameters

Description

This function returns any url parameters passed to the application as a named list. Keep in mind url parameters are always user-session scoped

Usage

get_url_parameters(session)

Arguments

session shiny session object

Value

named list of url parameters and values. List may be empty if no URL parameters were passed when the application instance was launched.

logging-entrypoints Entry points for logging actions

Description

Generate a log record and pass it to the logging system.

Usage

logdebug(msg, ..., logger = "")
loginfo(msg, ..., logger = "")
logwarn(msg, ..., logger = "")
logerror(msg, ..., logger = "")

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periscope

Arguments

msg	the textual message to be output, or the format for the arguments
	if present, msg is interpreted as a format and thevalues are passed to it to form the actual message.
logger	the name of the logger to which we pass the record

Details

A log record gets timestamped and will be independently formatted by each of the handlers handling it.

Leading and trailing whitespace is stripped from the final message.

periscope

Periscope Shiny Application Framework

Description

This package supports a ui-standardized environment as well as a variety of convenience functions for shiny applications. Base reusable functionality as well as UI paradigms are included to ensure a consistent user experience regardless of application or developer.

Details

A gallery of example apps is hosted at http://periscopeapps.org

Function Overview

Create a new framework application instance: create_new_application

Set application parameters in program/global.R: set_app_parameters

Get any url parameters passed to the application: get_url_parameters

Register user-created UI objects to the requisite application locations: add_ui_sidebar_basic add_ui_sidebar_advanced add_ui_sidebar_right add_ui_body Included shiny modules with a customized UI:

downloadFileButton

downloadableTableUI downloadablePlotUI

High-functionality standardized tooltips: ui_tooltip

More Information

browseVignettes(package = 'periscope')

remove_reset_button *Remove the reset button from an existing application.*

Description

Remove the reset button from an existing application.

Usage

```
remove_reset_button(location)
```

Arguments

location path of the existing application.

set_app_parameters Set Application Parameters

Description

This function sets global parameters customizing the shiny application.

Usage

```
set_app_parameters(
   title,
   titleinfo = NULL,
   loglevel = "DEBUG",
   showlog = TRUE,
   app_version = "1.0.0"
)
```

ui_tooltip

Arguments	
title	application title text
titleinfo	character string, HTML value or NULL
	 A character string will be used to set a link target. This means the user will be able to click on the application title and be redirected in a new window to whatever value is given in the string. Any valid URL, File, or other script functionality that would normally be accepted in an tag is allowed. An HTML value will be used to as the HTML content for a modal pop-up window that will appear on-top of the application when the user clicks on the application title. Supplying NULL will disable the title link functionality.
loglevel	character string designating the log level to use for the userlog (default = 'DE-BUG')
showlog	enable or disable the visible userlog at the bottom of the body on the application. Logging will still take place, this disables the visible functionality only.
app_version	character string designating the application version (default = $'1.0.0'$).

Shiny Usage

Call this function from program/global.R to set the application parameters.

ui_tooltip	Insert a standardized tooltip	
------------	-------------------------------	--

Description

This function inserts a standardized tooltip image, label (optional), and hovertext into the application UI

Usage

```
ui_tooltip(id, label = "", text = "")
```

id	character id for the tooltip object
label	text label to appear to the left of the tooltip image
text	tooltip text shown when the user hovers over the image

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