Package ‘bsplus’

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Type Package

Title Adds Functionality to the R Markdown + Shiny Bootstrap Framework

Version 0.1.3

Description The Bootstrap framework lets you add some JavaScript functionality to your web site by adding attributes to your HTML tags - Bootstrap takes care of the JavaScript <https://getbootstrap.com/docs/3.3/javascript/>. If you are using R Markdown or Shiny, you can use these functions to create collapsible sections, accordion panels, modals, tooltips, popovers, and an accordion sidebar framework (not described at Bootstrap site). Please note this package was designed for Bootstrap 3.3.

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Depends R (>= 3.3.0)

Imports htmltools, magrittr, purrr, lubridate, stringr, rmarkdown, glue, jsonlite, methods

URL https://github.com/ijlyttle/bsplus

BugReports https://github.com/ijlyttle/bsplus/issues

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bs_accordion  

**Accordion panel-group**

**Description**

An accordion is a set of collapsible panels where, at most, one panel-body is visible.

**Usage**

bs_accordion(id)

```r
## S3 method for class 'bsplus_accordion'
bs_append(tag, title, content, ...)
```

```r
## S3 method for class 'bsplus_accordion'
bs_set_opts(tag, panel_type = "primary", use_heading_link = TRUE, ...)
```

**Arguments**

- `id` character, unique id for accordion <div/>, also serves as root id for panels appended using bs_append()
- `tag` htmltools::[tag][htmltools::tag], accordion <div/> to which to append a panel
- `title` character (HTML) or htmltools::[tagList][htmltools::tagList], title for the panel heading
- `content` character (HTML) or htmltools::[tagList][htmltools::tagList], content for the panel body
other arguments (not used)

panel_type character, one of the standard Bootstrap types c("default","primary","success","info","warning","danger")

use_heading_link logical, indicates whether to make the entire panel heading clickable.

Details

All of these functions return a bsplusAccordion object (which is also an htmltools::tag[htmltools::tag], <div/>), so you can compose an accordion by piping. There are three parts to this system:

1. A constructor function for the accordion, bsAccordion()
2. A function to set options for subsequent panels, bs_set_opts()
3. A function to append a panel to the group, bs_append()

The verb append is used to signify that you can append an arbitrary number of panels to an accordion.

For the constructor, bsAccordion(), it is your responsibility to ensure that id is unique among HTML elements in your page. If you have non-unique id’s, strange things may happen to your page.

Value

bsplusAccordion object (htmltools::tag[htmltools::tag], <div/>)

See Also

https://getbootstrap.com/docs/3.3/javascript/#collapse-example-accordion

Examples

bsAccordion(id = "meet_the_beatles") %>%
  bs_set_opts(panel_type = "success", use_heading_link = TRUE) %>%
  bs_append(title = "John Lennon", content = "Rhythm guitar, vocals") %>%
  bs_set_opts(panel_type = "info") %>%
  bs_append(title = "Paul McCartney", content = "Bass guitar, vocals")

bs_accordion_sidebar  Accordion-sidebar panel-group

Description

Combines Bootstrap accordion with the functionality of shiny::sidebarLayout[shiny::sidebarLayout], allowing you to add another dimension to your shiny apps.
bs_accordion_sidebar

Usage

bs_accordion_sidebar(
  id,
  spec_side = c(width = 4, offset = 0),
  spec_main = c(width = 8, offset = 0),
  position = c("left", "right")
)

use_bs_accordion_sidebar()

## S3 method for class 'bsplus_accordion_sidebar'
bs_append(tag, title_side, content_side, content_main, ...)

## S3 method for class 'bsplus_accordion_sidebar'
bs_set_opts(
  tag,
  panel_type_active = "success",
  panel_type_inactive = "primary",
  use_main_enclosure = TRUE,
  ...
)

Arguments

id character, unique id for accordion-sidebar <div/>, also serves as root id for panels appended using bs_append()

spec_side numeric, column specification for sidebar panels

spec_main numeric, column specification for main panels

position character, indicates where to put the sidebar panels with respect to the main panels

tag htmltools::[tag][htmltools::tag], accordion-sidebar <div/> to which to append a panel

title_side character (HTML) or htmltools::[tagList][htmltools::tagList], title for the sidebar panel

content_side character (HTML) or htmltools::[tagList][htmltools::tagList], content for the sidebar panel

content_main character (HTML) or htmltools::[tagList][htmltools::tagList], content for the main panel

... other arguments (not used)

panel_type_active character, indicated bootstrap type for active-panel header, one of c("default","primary","success","info","warning","danger")

panel_type_inactive character, indicated bootstrap type for inactive-panel header, one of c("default","primary","success","info","warning","danger")

use_main_enclosure logical, indicates if main content is to be wrapped in a Bootstrap panel
Details

If you use a `bs_accordion_sidebar()`, you will have to call the function `use_bs_accordion_sidebar()` somewhere in your UI. This attaches some JavaScript needed for your accordion sidebar to work properly.

All of these functions return a `bsplus_accsidebar` object, (which is also an htmltools::[tag][htmltools::tag], `<div/>`), so you can compose an accordion sidebar by piping. There are three parts to this system:

1. A constructor function for the accordion-sidebar, `bs_accordion_sidebar()`
2. A function to set options for subsequent panels, `bs_set_opts()`
3. A function to append a panel-set to an accordion-sidebar, `bs_append()`

The verb *append* is used to signify that you can append an arbitrary number of panels-sets to an accordion-sidebar.

For the constructor, `bs_accordion_sidebar()`, it is your responsibility to ensure that `id` is unique among HTML elements in your page. If you have non-unique `id`’s, strange things may happen to your page.

Value

`bsplus_accsidebar` object (htmltools::[tag][htmltools::tag], `<div/>`)

Examples

```r
bs_accordion_sidebar(id = "meet_the_beatles") %>%
  bs_append(
    title_side = "John Lennon",
    content_side = "Rhythm guitar, vocals",
    content_main = "Dear Prudence"
  ) %>%
  bs_append(
    title_side = "Paul McCartney",
    content_side = "Bass guitar, vocals",
    content_main = "Blackbird"
  )
```

## Not run:
use_bs_accordion_sidebar()

## End(Not run)

---

**getDescription**

**Carousel**

Description

A carousel is used to enclose a set of (typically) images, providing controls to move slides back-and-forth.
Usage

```r
## S3 method for class 'bsplus_carousel'
bs_append(tag, content, caption = NULL, ...)

bs_carousel(id, use_indicators = FALSE, use_controls = TRUE)
```

Arguments

- `tag`: htmltools::tag, carousel <div/> to which to append a panel
- `content`: character (HTML) or htmltools::tagList, content for the slide
- `caption`: character (HTML) or htmltools::tagList, caption for the slide
- `...`: other args (not used)
- `id`: character, unique id for accordion <div/>, also serves as root id for slides appended using `bs_append()`
- `use_indicators`: logical, denotes use of slide-position indicators (dots)
- `use_controls`: logical, denotes use of controls (chevrons at sides)

Details

All of these functions return a `bsplus_carousel` object (which is also an htmltools::tag, <div/>), so you can compose a carousel by piping. There are two parts to this system:

1. A constructor function for the carousel, `bs_carousel()`
2. A function to append a slide to the carousel, `bs_append()`

The verb *append* is used to signify that you can append an arbitrary number of slides to a carousel. For the constructor, `bs_carousel()`, it is your responsibility to ensure that `id` is unique among HTML elements in your page. If you have non-unique id's, strange things may happen to your page.

Value

`bsplus_carousel` object (htmltools::tag, <div/>)

See Also

- [https://getbootstrap.com/docs/3.3/javascript/#carousel](https://getbootstrap.com/docs/3.3/javascript/#carousel)
- `bs_carousel_image()`, `bs_carousel_caption()`

Examples

```r
bs_carousel(id = "with_the_beatles") %>%
  bs_append(content = bs_carousel_image(src = "img/john.jpg")) %>%
  bs_append(content = bs_carousel_image(src = "img/paul.jpg")) %>%
  bs_append(content = bs_carousel_image(src = "img/george.jpg")) %>%
  bs_append(content = bs_carousel_image(src = "img/ringo.jpg"))
```
Description

This function makes it a little easier to make Bootstrap-friendly buttons; it wraps `htmltools::tags` for buttons.

Usage

```r
defs::bs_button(
  label,
  button_type = c("default", "primary", "success", "info", "warning", "danger"),
  button_size = c("default", "large", "small", "extra-small"),
  ...
)
```

Arguments

- `label`: character (HTML), button label
- `button_type`: character, one of the standard Bootstrap types
- `button_size`: character, size of the button
- `...`: attributes (named arguments) and children (unnamed arguments) of the button, passed to

Value

Object with S3 class, `shiny.tag`, `<button/>`.

See Also

`https://getbootstrap.com/docs/3.3/css/#buttons`

Examples

```r
bs_button("Click me", button_type = "primary", button_size = "small")
```
bs_carousel_caption  Carousel caption

Description
Helper function to generate HTML for a carousel caption.

Usage
bs_carousel_caption(title = NULL, body = NULL)

Arguments
- title character, caption title
- body character, caption body

Value
htmltools::tag[htmltools::tag] <div/> for carousel caption

See Also
bs_carousel()

bs_carousel_image  Carousel image

Description
Helper function to generate HTML for a carousel image.

Usage
bs_carousel_image(...)

Arguments
- ... additional arguments passed to htmltools::tag[htmltools::tag]$img, typically includes src

Details
This function wraps htmltools::tag[htmltools::tag]$img, but adding a class to center the image in the carousel.
Value

htmltools::[tag][htmltools::tag], </img>

See Also

bs_carousel()

---

bs_collapse  
**Collapsible element**

Description

This is useful for content that you may wish to be hidden when the page is initialized, but that can be revealed (and subsequently hidden) by clicking a button or a link.

Usage

bs_collapse(id, content = NULL, show = FALSE)

bs_attach_collapse(tag, id-collapse)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>character, unique id for the collapsible &lt;div/&gt;</td>
</tr>
<tr>
<td>content</td>
<td>character (HTML) or htmltools::[tagList][htmltools::tagList], content for the collapsible &lt;div/&gt;</td>
</tr>
<tr>
<td>show</td>
<td>logical, indicates if collapsible &lt;div/&gt; is shown when page is initialized</td>
</tr>
<tr>
<td>tag</td>
<td>htmltools::[tag][htmltools::tag], button or link to which to attach a collapsible &lt;div/&gt;</td>
</tr>
<tr>
<td>id-collapse</td>
<td>character, id of the collapsible &lt;div/&gt; to attach</td>
</tr>
</tbody>
</table>

Details

There are two parts to this system:

1. A collapsible <div/>, created using bs_collapse()
2. At least one button (<button/>) or link (<a/>) to which the id of the collapsible <div/> is attached, using bs_attach_collapse()

The verb attach is used to signify that we are attaching the id of our collapsible <div/> to the tag in question (a button or a link). Note that you can attach the id of a collapsible <div/> to more than one button or link.

It is your responsibility to ensure that id is unique among HTML elements in your page. If you have non-unique id’s, strange things may happen to your page.
bs_embed_popover

Value

bsCollapse() htmltools::[tag][htmltools::tag]. <div/>
bsAttachCollapse() htmltools::[tag][htmltools::tag], modified copy of tag (button or link)

See Also

https://getbootstrap.com/docs/3.3/javascript/#collapse

Examples

library("htmltools")

bsCollapse(id = "id_yeah", "Yeah Yeah Yeah")
bsButton("She Loves You", button_type = "primary") %>%
  bsAttachCollapse("id_yeah")

bs_embed_popover  Popover

Description

A popover can be a useful way to add a somewhat-verbose explanation to a tag.

Usage

bs_embed_popover(tag, title = NULL, content = NULL, placement = "top", ...)
use_bs_popover()

Arguments

tag htmltools::[tag][htmltools::tag], generally <button/> or <a/>, into which to embed the popover

title character, title for the popover, generally text

content character, content for the popover body, can be HTML

placement character, placement of the popover with respect to tag

... other named arguments, passed to bs_set_data()

Details

To activate the use of popovers in your page, you will need to call the use_bs_popover() function somewhere.

The verb embed is used to signify that you are embedding information into a tag. This implies that you can embed, at most, one “thing” into a particular tag. You should not, for example, expect to embed both a tooltip and a popover into a tag.
bs_embed_tooltip

Value
htmltools::[tag][htmltools::tag], modified copy of tag

See Also
bs_embed_tooltip(), https://getbootstrap.com/docs/3.3/javascript/#popovers

Examples

```r
library("htmltools")

bs_button("A button") %>%
  bs_embed_popover(title = "I'm a popover", content = "Really!")
```

Description
A tooltip can be a useful way to add a few words of explanation to a tag.

Usage
bs_embed_tooltip(tag, title = ",", placement = "top", ...)

use_bs_tooltip()

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tag</td>
<td>htmltools::[tag][htmltools::tag], generally &lt;button/&gt; or &lt;a/&gt;, into which to embed the tooltip</td>
</tr>
<tr>
<td>title</td>
<td>character, title for the tooltip</td>
</tr>
<tr>
<td>placement</td>
<td>character, placement of the tooltip with respect to tag</td>
</tr>
<tr>
<td>...</td>
<td>other named arguments, passed to bs_set_data()</td>
</tr>
</tbody>
</table>

Details
To activate the use of tooltips in your page, you will need to call the use_bs_tooltip() function somewhere.

The verb *embed* is used to signify that you are embedding information into a tag. This implies that you can embed, at most, one “thing” into a particular tag. You should not, for example, expect to embed both a tooltip and a popover into a tag.

Value
htmltools::[tag][htmltools::tag], modified copy of tag
See Also

bs_embed_popover(), https://getbootstrap.com/docs/3.3/javascript/#tooltips

Examples

```r
library("htmltools")
bs_button("I'm a button") %>%
  bs_embed_tooltip(title = "I'm a tooltip")
```

---

### bs_modal

#### Modal window

Modal windows are useful to make detailed explanations, and are typically attached to buttons or links. Thus, there are two parts to this system:

#### Usage

```r
bs_modal(
  id,
  title,
  body,
  footer = bs_modal_closebutton(label = "Close"),
  size = c("medium", "large", "small")
)
```

bs_modal_closebutton(label = "Close", title)

bs_attach_modal(tag, id_modal)

#### Arguments

- **id** character, unique id for the modal window
- **title** character, title for the modal window (this argument is deprecated for bs_modal_closebutton, use label instead)
- **body** character (HTML) or htmltools::tagList, content for the body of the modal window
- **footer** character (HTML) or htmltools::tagList, content for the footer of the modal window
- **size** character, size of the modal window
- **label** character (HTML), label for the close-button
- **tag** htmltools::tag, button or link to which to attach the modal window
- **id_modal** character, unique id of modal window to attach
bs_modal

Details

1. A modal window, created using `bs_modal()`

2. At least one button or link to which the id of the modal window is attached, using `bs_attach_modal()`

The verb `attach` is used to signify that we are attaching the id of our modal window to the tag in question (generally a button or a link). This implies that you can attach the id of a modal window to more than one button or link.

It is your responsibility to ensure that id is unique among HTML elements in your page. If you have non-unique id’s, strange things may happen to your page.

Your code may be cleaner if you can import the content for the modal body from an external source. Here, the function `shiny::includeMarkdown` be useful.

If you want to compose your own footer for the modal window, the function `bs_modal_closebutton()` can be useful.

Value

`bs_modal()` `htmltools::tag`, `<div/>

`bs_attach_modal()` `htmltools::tag`, modified copy of `tag`

`bs_modal_closebutton()` `htmltools::tag`, `<button/>

See Also

`shiny::includeMarkdown`

Examples

```r
library("htmltools") # also needs 'markdown' package
library("shiny")

bs_modal(id = "modal", title = "I'm a modal", body = "Yes, I am.")
bs_button("Click for modal") %>%
  bs_attach_modal(id_modal = "modal")

bs_modal(
  id = "modal_large",
  title = "I'm a modal",
  size = "large",
  body = includeMarkdown(system.file("markdown", "modal.md", package = "bsplus"))
)
bs_button("Click for modal") %>%
  bs_attach_modal(id_modal = "modal_large")
```
Description
This function makes it a little easier to make Bootstrap-friendly panels; it wraps htmltools::tags for panels.

Usage
bs_panel(
  id = NULL,
  panel_type = c("default", "primary", "success", "info", "warning", "danger"),
  heading = NULL,
  body = NULL,
  ...,
  footer = NULL
)

Arguments
id character, unique identifier
panel_type character, one of the standard Bootstrap types
heading character (HTML) or htmltools::tagList(), content for the heading
body character (HTML) or htmltools::tagList(), content for the body
... character (HTML) or htmltools::tagList(), other content
footer character (HTML) or htmltools::tagList(), content for the footer

Value
Object with S3 class, shiny.tag, <div/>

See Also
https://getbootstrap.com/docs/3.3/css/#panels

Examples
library("htmltools")

bs_panel(
  panel_type = "primary",
  heading = tags$h3("title"),
  body = tags$p("Some very important content")
)
**bs_set_data**

Sets Bootstrap data- and aria- attributes.

**Description**

Helper function to manage attributes for Bootstrap’s JavaScript components.

**Usage**

```r
bs_set_data(tag, ...)  
bs_set_aria(tag, ...)  
```

**Arguments**

- `tag`
  - htmltools::tag
  - ...  
  - named arguments used to set the attributes of `tag`

**Details**

One of the mechanisms used by the API for Bootstrap JavaScript-components is an html elements’ attributes. These attribute names are prefixed with "data-" or "aria-", depending on the function. When expressed in html, attributes themselves have the properties:

- Logical values are expressed as "true" or "false".
- Time durations are expressed as number of milliseconds.
- Vector (non scalar) values are expressed in a space-delimited list.

The purpose of this function is to let you express these values in ways familiar to you as an R user. For example:

- Logical values can be expressed as logicals: TRUE or FALSE.
- Time durations can be expressed using lubridate durations.
- Vector (non scalar) values can be expressed as vectors.

Note that this returns a modified copy of the tag sent to it, so it is pipeable.

**Value**

htmltools::tag, modified copy of tag

See Also

Bootstrap JavaScript Components
Examples

library("htmltools")
library("lubridate")

tags$div() %>%
  bs_set_data(
    target = "#foobar",
    delay = dseconds(1),
    placement = c("right", "auto")
  ) %>%
  bs_set_aria(expanded = FALSE)

---

render_html_fragment  Renders and returns an HTML fragment

Description

This is a wrapper around the rmarkdown::render function. The principal difference is that the function is designed to return an HTML fragment (rather than writing to a file). This function is useful to populate the content of a modal window.

Usage

render_html_fragment(input, output_format = rmarkdown::html_fragment(), ...)

Arguments

- **input**: character, path to input file
- **output_format**: rmarkdown output format, provided so you can specify arguments
- **...**: other arguments passed to rmarkdown::render

Details

This function is being deprecated in favor of shiny::includeMarkdown

Value

htmltools::tag

Examples

```r
## Not run:
my_file <- system.file("markdown", "modal.md", package = "bsplus")
render_html_fragment(my_file)
```

## End(Not run)
shinyInput_label_embed

Embed an element into the label of a Shiny-input tag

Description

The element embedded into the Shiny input will be pulled to the right edge of the label.

Usage

shinyInput_label_embed(tag, element)

Arguments

tag Shiny input, such as shiny::numericInput
element htmltools::tag to be embedded into label of tag

Details

To promote consistency, the following convention is proposed:

For links (activated by clicking), embed a shiny::icon("info-circle"); this is the default for shiny_iconlink(). For elements activated by hovering, embed a shiny::icon("info").

Value

Shiny input, modified copy of tag

See Also

shiny_iconlink()

Examples

library("shiny")

numericInput(inputId = "foo", label = "Enter a number", value = 0) %>%
shinyInput_label_embed(
  shiny_iconlink() %>%
  bs_embed_popover(title = "Number", content = "Not a complex number")
)
shiny_iconlink  

Create link containing Shiny icon

Description
You can use this helper function to wrap link element around a shiny::icon[shiny::icon]. It may be useful to attach a modal window to (or embed a popover into) into such a link.

Usage
shiny_iconlink(name = "info-circle", id = NULL, ...)

Arguments

name character, name of the icon, passed to shiny::icon[shiny::icon]
id character, option ID for the link
... other arguments passed to shiny::icon[shiny::icon]

Value
htmltools::tag[htmltools::tag], <a/>

See Also
shinyInput_label_embed(), shiny::icon[shiny::icon], bs_attach_modal(), bs_embed_popover(), bs_embed_tooltip()

Examples
shiny_iconlink()

shiny_iconlink() %>%
  bs_embed_popover(title = "Help!", content = "I need somebody")

---

Pipe

Description
Like dplyr, bsplus also uses the pipe function, %>% to turn function composition into a series of imperative statements.

Arguments

lhs, rhs An object and a function to apply to it
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