Package ‘spsComps’

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Title  'systemPipeShiny' UI and Server Components
Version  0.3.0
Date  2021-05-12
Description  The systemPipeShiny (SPS) framework comes with many UI and server com-ponents. However, installing the whole frame-work is heavy and takes some time. If you would like to use UI and server compo-ments from SPS in your own Shiny apps, do not hesitate to try this package.
Depends  R (>= 4.0.0), shiny (>= 1.5.0)
Imports  assertthat, stringr, glue (>= 1.4.0), magrittr, shinytoastr, shinyAce, htmltools, utils, R6, crayon
Suggests  testthat, shinyjqui, spsUtil (>= 0.1.2)
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R topics documented:

  addLoader ......................................................... 2
  animateAppend .................................................. 9
  animateIcon ..................................................... 10
  animateUI ....................................................... 12
**addLoader**

---

### Description

Add/remove CSS loaders from server to any Shiny/HTML component. It is useful to indicate busy status when some code is running in the server and when it finishes, remove the loader to indicate clear status.

### Value

CSS load in R6 class

### Methods

**Public methods:**

- `addLoader$new()`
- `addLoader$show()`
- `addLoader$hide()`
- `addLoader$destroy()`
- `addLoader$recreate()`
• addLoader$clone()

**Method** `new()`: create a loader object

**Usage:**

```r
addLoader$new(
  target_selector = "",
  isID = TRUE,
  type = "default",
  src = "",
  id = "",
  height = NULL,
  width = height,
  color = "#337ab7",
  opacity = 1,
  method = "replace",
  block = TRUE,
  center = TRUE,
  bg_color = "#eee",
  footer = NULL,
  z_index = 2000,
  alert = FALSE,
  session = shiny::getDefaultReactiveDomain()
)
```

**Arguments:**

- `target_selector` string, which Shiny component you want to add the loader to? a shiny component ID or a valid CSS selector if isID = FLASE. for example, you have a button and want to add animation to it:

  ```r
  actionButton(inputId = "btn")
  ```

  This function is used in server only, so if you are in shiny module, use `ns()` for ID on UI but **DO NOT** add the `ns()` wrapper on server.

- `isID` bool, is your selector an ID?
- `type` string, one of "circle", "dual-ring", "facebook", "heart", "ring", "roller", "default", "ellipsis", "grid", "hourglass", "ripple", "spinner", "gif", default is "default".
- `src` string, online URL or local path of the gif animation file if you would like to upload your own loader.
- `id` string, the unique ID for the loader, if not provided, a random ID will be given. If you are using shiny modules, **DO NOT** use `session$ns('YOUR_ID')` to wrap it. Loaders live on the top level of the document.
- `height` string, \( \text{r} \text{em}, "1.5\text{rem}, "1.5\text{em}, \text{or pixel}, \text{like "10px". Default is NULL, will be automatically calculated based on the target component. It is recommend to use NULL for "replace" and "inline" method to let it automatically be calculated, but required for "full_screen" method.} \)
addLoader

width string, default is the same as height to make it square.
color string, any valid CSS color name, or hex color code
opacity number, between 0-1
method one of "replace", "inline", "full_screen", see details
block bool, for some input components, once the loader starts, it can also block user interaction
with the component, very useful for "inline" method, eg. prevent users from clicking the button while some process is still running.
center bool, try to place the load to the center of the target for "inline" and "replace" and center of the screen for "full_screen".
bg_color string, any valid CSS color name, or hex color code. Only works for "full_screen" method.
footer Additional Shiny/HTML component to add below the loader, like a title h1("load title"). inline method does not have a footer.
z_index number, only works for "full_screen" method, what CSS layer should the overlay be places. In HTML, all elements have the default of 0.
alert bool, should alert if target cannot be found or other javascript errors? mainly for debugging
session shiny session

Details:
Methods:
  • replace: use a HTML div with the same CSS styles to replace the original target, but add the loader inside and remove original content inside. When the loader is hide, show the original div and hide this loader div. Height and width is the original div’s height unless specially specified. Good example of this will be some plot outputs.
  • inline: append the loader as the first child of target HTML container. loader’s height and width is the original div’s height unless specially specified. In addition, this methods will disable all inputs and buttons inside the target container, so this method can be useful on some buttons.
  • full_screen: Do not change anything of the target HTML container, add an overlay to cover the whole page when show and hide the overlay when hide. This method requires the height to be specified manually. Under this method, bg_color and z_index can also be changed.

New container:
addLoader$new() method only stores the loader information, the loader is add to your document upon the first time addLoader$show() is called.

Required javascript and css files:
Unfortunately, js and css required by this function cannot be added automatically from the server end. These files have to be added before app start. Add spsDepend(’css~loader’) somewhere in your UI to add the dependency.

Returns: A R6 loader object

Method show(): show the loader

Usage:
addLoader$show(alert = FALSE)

Arguments:
alert bool, if the target selector or loader is not found, alert on UI? For debugging purposes.

Details: Make sure your target element is visible when the time you call this show method, otherwise, you will not get it if height and width is rely on auto-calculation for "replace" and "inline" method. "full_screen" method is not affected.

Method hide(): hide the loader

Usage:
addLoader$hide(alert = FALSE)

Arguments:
alert bool, if the target selector or loader is not found, alert on UI? For debugging purposes.

Method destroy(): Destroy current loader

Usage:
addLoader$destroy(alert = FALSE)

Arguments:
alert bool, if the target selector or loader is not found, alert on UI? For debugging purposes.

Details: hide and remove current loader from the current document

Method recreate(): recreate the loader

Usage:
addLoader$recreate(
  type = "default",
  src = NULL,
  id = "",
  height = NULL,
  width = height,
  color = "#337ab7",
  opacity = 1,
  method = "replace",
  block = TRUE,
  center = TRUE,
  bg_color = "#eee",
  footer = NULL,
  z_index = 2000,
  alert = FALSE
)

Arguments:
type string, one of "circle", "dual-ring", "facebook", "heart", "ring", "roller", "default", "ellipse",
  "grid", "hourglass", "ripple", "spinner", "gif", default is "default".
src string, online URL or local path of the gif animation file if you would like to upload your
  own loader.
id string, the unique ID for the loader, if not provided, a random ID will be given. If you are
  using shiny modules, DO NOT use session$ns(’YOUR_ID’) to wrap it. Loaders live on
  the top level of the document.
height  string, (r)em, "1.5rem", "1.5em", or pixel, like "10px". Default is NULL, will be automatically calculated based on the target component. It is recommend to use NULL for "replace" and "inline" method to let it automatically be calculated, but required for "full_screen" method.

width  string, default is the same as height to make it square.

color  string, any valid CSS color name, or hex color code

opacity  number, between 0-1

method  one of "replace", "inline", "full_screen", see details

block  bool, for some input components, once the loader starts, it can also block user interaction with the component, very useful for "inline" method, eg. prevent users from clicking the button while some process is still running.

center  bool, try to place the load to the center of the target for "inline" and "replace" and center of the screen for "full_screen".

bg_color  string, any valid CSS color name, or hex color code. Only works for "full_screen" method.

footer  Additional Shiny/HTML component to add below the loader, like a title h1("load title"). inline method does not have a footer.

z_index  number, only works for "full_screen" method, what CSS layer should the overlay be placed. In HTML, all elements have the default of 0.

alert  bool, should alert if target cannot be found or other javascript errors? mainly for debugging

Details: This method will first disable then destroy (remove) current loader, and finally store new information of the new loader.

Note: this method only refresh loader object on the server, the loader is not recreated until the next time show method is called.

Method clone(): The objects of this class are cloneable with this method.

Usage:

addLoader$clone(deep = FALSE)

Arguments:

depth  Whether to make a deep clone.

Examples

if (interactive()){
  ui <- fluidPage(
    h4("Use buttons to show and hide loaders with different methods"),
    spsDepend("css-loader"), # required
tags$b("Replace"), br(),
    actionButton("b_re_start", "Replace"),
    actionButton("b_re_stop", "stop replace"),
    br(), tags$b("Inline"), br(),
    actionButton("b_in_start", "Inline"),
    actionButton("b_in_stop", "stop inline"),
    br(), tags$b("Full screen"), br(),
    actionButton("b_fs_start", "Full screen 2s"), br(),
    h4("Add loaders to a big HTML chunk"),
  )}
server <- function(input, output, session) {
  # Init loaders
  loader_replace <- addLoader$new("b_re_start", type = "facebook")
  loader_inline <- addLoader$new("b_in_start", color = "green", method = "inline")
  loader_fs <- addLoader$new("b_fs_start", color = "pink", method = "full_screen",
    bg_color = "#eee", height = "30rem", type = "heart")
  loader_chunk <- addLoader$new("chunk", type = "spinner", color = "orange",
    footer = h5("chunk loader"))

  # toggle loaders
  ## replace
  observeEvent(input$b_re_start, {
    loader_replace$show()
  })
  observeEvent(input$b_re_stop, {
    loader_replace$hide()
  })
  ## inline
  observeEvent(input$b_in_start, {
    loader_inline$show()
  })
  observeEvent(input$b_in_stop, {
    loader_inline$hide()
  })
  ## full screen
  observeEvent(input$b_fs_start, {
    loader_fs$show()
    Sys.sleep(2)
    loader_fs$hide()
  })
  ## chunk
  observeEvent(input$chunk_start, {
    loader_chunk$show()
  })
observeEvent(input$chunk_stop, {
    loader_chunk$hide()
})

shinyApp(ui, server)

if (interactive()){
    ui <- bootstrapPage(
        spsDepend("css-loader"), # required
        h4("Add loaders to Shiny `render` events"),
        tags$b("Replace"), br(),
        selectizeInput(inputId = "n_re",
            label = "Change this to render the following plot",
            choices = c(10, 20, 35, 50)),
        plotOutput(outputId = "p_re"),
        br(), tags$b("Full screen"), br(),
        selectInput(inputId = "n_fs",
            label = "Change this to render the following plot",
            choices = c(10, 20, 35, 50)),
        plotOutput(outputId = "p_fs")
    )
}

server <- function(input, output, session) {
    # create loaders
    l_re <- addLoader$new("p_re")
    l_fs <- addLoader$new("p_fs",
        color = "pink", method = "full_screen",
        bg_color = "#eee", height = "30rem", type = "grid",
        footer = h4("Replotting..."))
    # use loaders in rendering
    output$p_re <- renderPlot({
        on.exit(l_re$hide())
        # to make it responsive
        # (always create a new one by calculating the new height and width)
        l_re$recreate()$show()
        Sys.sleep()
        hist(faithful$eruptions,
            probability = TRUE,
            breaks = as.numeric(input$n_re),
            xlab = "Duration (minutes)",
            main = "Geyser eruption duration")
    })
    output$p_fs <- renderPlot({
        on.exit(l_fs$hide())
        l_fs$show()
        Sys.sleep()
        hist(faithful$eruptions,
            probability = TRUE,
animateAppend  Append animation to a Shiny element

Description
Append animation to a Shiny element

Usage
animateAppend(element, animation, speed = NULL, hover = FALSE)

animateAppendNested(
  element,
  animation,
  speed = NULL,
  hover = FALSE,
  display = "inline-block",
  ...
)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>element</td>
<td>the shiny element to append, must have &quot;shiny.tag&quot; class for animateAppend and can be either &quot;shiny.tag&quot; or &quot;shiny.tag.list&quot; for animateAppendNested.</td>
</tr>
<tr>
<td>speed</td>
<td>string, one of &quot;fast&quot;, &quot;slow&quot;</td>
</tr>
<tr>
<td>hover</td>
<td>bool, trigger animation on hover?</td>
</tr>
<tr>
<td>display</td>
<td>string, CSS display method for the out-most wrapper, one of the valid css display method, like &quot;block&quot;, &quot;inline&quot;, &quot;flex&quot;, default is &quot;inline-block&quot;.</td>
</tr>
<tr>
<td>...</td>
<td>other attributes add to the wrapper, for animateAppendNested only</td>
</tr>
</tbody>
</table>
Details

animateAppend:
Append the animation directly to the element you provide, but can only apply one type of animation.

animateAppendNested:
Append multiple animations to the element you provide by creating a wrapper around the element. Animations are applied on the wrappers. This may cause some unknown issues, especially on the display property. Try change the display may fix the issues. It is safer to use animateAppend. Read more about CSS display: https://www.w3schools.com/cssref/pr_class_display.asp

Value

returns a Shiny element

Examples

```r
if (interactive()){  
  library(shiny)

  ui <- fluidPage(
    icon("home") %>%
      animateAppend("ring"),
    h2("Append animation", class = "text-primary") %>%
      animateAppend("pulse"),
    br(),
    h2("Nested animations", class = "text-primary") %>%
      animateAppendNested("ring") %>%
      animateAppendNested("pulse") %>%
      animateAppendNested("passing"),
    tags$span("Other things"),
    h2("Nested animations display changed", class = "text-primary") %>%
      animateAppendNested("ring") %>%
      animateAppendNested("pulse", display = "block", style = "width: 30%"),
    tags$span("Other things")
  )

  server <- function(input, output, session) {
    
  }

  shinyApp(ui, server)
}
```

animateIcon

Font awesome animated icons
animateIcon

Description

Greatly enhance the shiny::icon with animations. Built on top of font-awesome-animation.

Usage

animateIcon(
  name,
  animation = NULL,
  speed = NULL,
  hover = FALSE,
  color = "",
  size = NULL,
  ...
)

Arguments

name  
string, the name of the font-awesome icon

animation  

speed  
string, one of "fast", "slow"

hover  
bool, trigger animation on hover?

color  
string, color of the icon, a valid color name or hex code

size  
string, change font-awesome icon size, one of "xs", "sm", "lg", "2x", "3x", "5x", "7x", "10x". See examples.

...  
append additional attributes you want to the icon

Details

If you don’t specify any animation, it will work the same as the original shiny::icon function. Fully compatible with any shiny functions that requires an icon as input.

Value

a icon tag

Examples

if(interactive()){
  library(shiny)

  ui <- fluidPage(
    style = "text-align: center;",
    tags$label("same as original icon function"), br(),
    animateIcon("home"), br(),
    tags$label("Change animation and color"), br(),
  )
animateIcon(
    name = "home", animation = "horizontal", speed = "slow", color = "red"
  ), br(),
tags$label("work in a button"), br(),
actionButton(
    "a", "a", icon = animateIcon("spinner", "spin", "fast")
  ), br(),
tags$label("hover your mouse on the next one"), br(),
animateIcon(
    name = "wrench", animation = "wrench", hover = TRUE, color = "green"
  ), br(),
tags$label("change size"), br(),
animateIcon("home"),
animateIcon("home", size = "xs"),
animateIcon("home", size = "sm"),
animateIcon("home", size = "lg"),
animateIcon("home", size = "2x"),
animateIcon("home", size = "3x"),
animateIcon("home", size = "5x"),
animateIcon("home", size = "7x"),
animateIcon("home", size = "10x")
)

server <- function(input, output, session) {
  }
shinyApp(ui, server)
}

animateUI

Add/remove animation to any HTML/shiny component

Description

Add animation to a HTML or component and remove it

Usage

animateUI(selector, animation, speed = NULL, hover = FALSE, isID = TRUE)

animateServer(
    selector,
    animation = NULL,
    speed = NULL,
    hover = FALSE,
    isID = TRUE,
    session = shiny::getDefaultReactiveDomain()
)
animateUI

```r
animationRemove(
    selector,
    isID = TRUE,
    alert = FALSE,
    session = shiny::getDefaultReactiveDomain()
)
```

Arguments

- **selector**: string, a shiny component ID or a valid CSS selector if `isID = FALSE`. For example, you have a button and want to add animation to it:
  ```r
  actionButton(inputId = "btn")
  ```
  Then the selector is "btn" `selector = 'btn'`. If you are using shiny modules, use `ns()` to wrap it in UI for the button `actionButton(inputId = ns("btn"))`, and also add `ns()` to selector `selector = ns('btn')` for the `animateUI` function. If you are using the server side functions `animateServer` and `animationRemove`, **DO NOT** add the `ns()` wrapper.


- **speed**: string, one of "fast", "slow"

- **hover**: bool, trigger animation on hover?

- **isID**: bool, is your selector an ID?

- **session**: the current shiny session

- **alert**: bool, for `animationRemove` only: if the component is not found or it does not contain any animation or the animation is not added by spsComps, alert on UI? More like for debugging purposes.

Details

- **animateUI**: use on the UI side, which means add the animation when UI loads complete.
- **animateServer**: use on the server side. Use server to trigger the animation on a component at some point.
- **animationRemove**: use on the server side, to remove animation on a certain component.

Selector:

Usually for beginners use the shiny component ID is enough, but sometimes a HTML element may not have the 'id' attribute. In this case, you can still animate the element by advanced CSS selector. For these selectors, turn off the `isID = FALSE` and provide the selector in a single string. Google "CSS selector" to learn more.

**only server functions:**

If you use `animateServer` or `animationRemove` on the server, you need to add `spsDepend("animation")` somewhere in your UI to load the required CSS and javascript, inside `$tags$head()` is preferred. see examples.
animateUI

Value

see details

Examples

```r
if(interactive()){
  library(shiny)
  
  ui <- fluidPage(
    spsDepend("animation"),
    column(6,
      h3("Adding animations from UI"),
      tags$label("to a button"), br(),
      actionButton("btn1", "random button"), br(),
      animateUI("btn1", animation = "ring"),
      tags$label("to some text"), br(),
      p(id = "mytext", class = "text-red", "some move text"), br(),
      animateUI("mytext", animation = "horizontal", speed = "fast"),
      tags$label("on hover, move mouse on the red thumb"), br(),
      actionButton("btn2", "", icon = icon(id = "myicon", "thumbs-o-up"),
        style = "color: red; border: initial; border-color: transparent;"), br(),
      animateUI("btn2", animation = "bounce", speed = "fast", hover = TRUE),
      tags$label("on a plot"), br(),
      plotOutput("plot1"),
      animateUI("plot1", animation = "float", speed = "fast")
    ),
    column(6,
      h3("Adding/removing animations from server"),
      tags$label("use a button to control"), br(),
      actionButton("btn3", "animate itself"),
      actionButton("btn4", "stop animation"), br(),
      tags$label("advanced selector in for complex group"), br(),
      sliderInput("myslider", label = "animating if less than 5",
        value = 0,
        min = 0, max = 10,
        step = 1
      ),
      sliderInput("myslider2", min = 0, max = 10, value = 10,
        label = "this one will not be selected"
    )
  )

  server <- function(input, output, session) {
```
```r
output$plot1 <- renderPlot(plot(1:10, 10:1))
observeEvent(input$myslider, {
  if (input$myslider <= 5) {
    animateServer(
      # the slider container does not has the ID, it is inside
      selector = ".shiny-input-container:has(#myslider)",
      animation = "horizontal", speed = "slow", isID = FALSE
    )
  } else {
    animationRemove(
      selector = ".shiny-input-container:has(#myslider)",
      isID = FALSE
    )
  }
})
observeEvent(input$btn3, {
  animateServer("btn3", animation = "flash", speed = "slow")
})
observeEvent(input$btn4, {
  animationRemove("btn3")
})
}
shinyApp(ui, server)
```

---

bsAlert

**Bootstrap3 alert**

### Description

Add a Bootstrap3 alert component to the UI

### Usage

```r
bsAlert(..., status = "success", closeable = TRUE)
```

### Arguments

- `...`: any shiny tag or tagList you want to add to the alert body, or any additional attributes you want to add to the alert element.
- `status`: string, one of "success", "info", "warning", "danger"
- `closeable`: bool, can the alert be closed?

### Details

Read more here: https://getbootstrap.com/docs/3.3/components/#alerts
Value

shiny tag element

Examples

```r
if(interactive()) {
  library(shiny)
  ui <- fluidPage(
    bsAlert(tags$b("Success: "), "You made it", status = "success"),
    bsAlert(tags$b("Info: "), "Something happened", status = "info"),
    bsAlert(tags$b("Warning: "), "Something is not right", status = "warning"),
    bsAlert(tags$b("Danger: "), "Oh no...", status = "danger")
  )
  server <- function(input, output, session) {}
  shinyApp(ui, server)
}
```

bsPopover

Enhanced Bootstrap3 popover

Description

Add popover to any Shiny element you want. You can also customize color, font size, background color, and more for each individual popover.

Usage

```r
bsPopover(
  tag,
  title = "",
  content = "",
  placement = "top",
  bgcolor = "#ebebeb",
  titlecolor = "black",
  contentcolor = "black",
  titlesize = "14px",
  contentsize = "12px",
  titleweight = "600",
  contentweight = "400",
  opacity = 1,
  html = FALSE,
  trigger = "hover focus"
)
```

```r
bsHoverPopover(
  tag,
  title = "",
  content = "",
```
bsPopover

placement = "top",
bgcolor = "#ebebeb",
titlecolor = "black",
contentcolor = "black",
titlesize = "14px",
contentsize = "12px",
titleweight = "600",
contentweight = "400",
opacity = 1,
html = FALSE,
trigger = "hover focus"
)

bsPop(
tag,
title = "",
content = "",
placement = "top",
status = "primary",
titlesize = "14px",
contentsize = "12px",
titleweight = "600",
contentweight = "400",
opacity = 1,
html = TRUE,
trigger = "hover focus"
)

Arguments

tag a shiny tag as input
title string, popover title
content string, popover content
placement string, one of "top", "bottom", "left", "right", where to put the tooltip
bgcolor string, background color, valid value of CSS color name or hex value or rgb value
titlecolor string, title text color, valid value of CSS color name or hex value or rgb value
contentcolor string, content text color, valid value of CSS color name or hex value or rgb value
titlesize string, title text font size, valid value of CSS font size, like "10px", "1rem".
contentsize string, content text font size, valid value of CSS font size, like "10px", "1rem".
titleweight string, CSS valid font weight unit
contentweight string, CSS valid content font weight unit
opacity numeric, between 0 and 1
html bool, allow title contain HTML code? like "<strong>abc</strong>"
bsPopover

trigger string, how to trigger the tooltip, one or combination of click | hover | focus | manual.

status string, used only for wrapper bsPop, see details

Details

2. For font weight, see: https://www.w3schools.com/cssref/pr_font_weight.asp
3. bsHoverPopover is the old name but we still keep it for backward compatibility.

Convenient wrapper function:
bsPop is the convenient function for bsPopover, which has the background and content color set to 5 different bootstrap colors, you can use status to set, one of "primary", "info", "success", "warning", "danger"

Value

shiny tag

Examples

if(interactive()){
  library(shiny)
  library(magrittr)
  ui <- fluidPage(
    br(), br(), br(), br(), br(), br(), column(2),
    actionButton("", "Popover on the left") %>%
      bsPopover("Popover on the left", "content", "left"),
    actionButton("", "Popover on the top") %>%
      bsPopover("Popover on the top", "content", "top"),
    actionButton("", "Popover on the right") %>%
      bsPopover("Popover on the right", "content", "right"),
    actionButton("", "Popover on the bottom") %>%
      bsPopover("Popover on the bottom", "content", "bottom"),
    br(), br(), br(), column(2),
    actionButton("", "primary color") %>%
      bsPopover(
        "primary color", "content", bgcolor = "#0275d8",
        titlecolor = "white", contentcolor = "#0275d8"),
    actionButton("", "danger color") %>%
      bsPopover(
        "danger color", "content", bgcolor = "#d9534f",
        titlecolor = "white", contentcolor = "#d9534f"),
    actionButton("", "warning color") %>%
      bsPopover(
        "warning color", "content", bgcolor = "#f0ad4e",
        titlecolor = "white", contentcolor = "#f0ad4e"),
    br(), br(), column(2),
    actionButton("", "9px & 14px") %>%
      bsPopover("9px", "14", titlesize = "9px", contentsize = ),
    actionButton("", "14px & 12px") %>%
bsPopover

```r
bsPopover("14px", "12", titlesize = "14px"),
actionButton("", "20px & 9px") %>%
bsPopover("20px", "9", titlesize = "20px"),
br(), br(), column(2),
actionButton("", "weight 100 & 800") %>%
bsPopover("weight 100", "800", titleweight = "100", contentweight = "800"),
actionButton("", "weight 400 & 600") %>%
bsPopover("weight 400", "600", titleweight = "400", contentweight = "600"),
actionButton("", "weight 600 & 400") %>%
bsPopover("weight 600", "400", titleweight = "600", contentweight = "400"),
actionButton("", "weight 900 & 200") %>%
bsPopover("weight 900", "200", titleweight = "900", contentweight = "200"),
br(), br(), column(2),
actionButton("", "opacity 0.2") %>%
bsPopover("opacity 0.2", opacity = 0.2),
actionButton("", "opacity 0.5") %>%
bsPopover("opacity 0.5", opacity = 0.5),
actionButton("", "opacity 0.8") %>%
bsPopover("opacity 0.8", opacity = 0.8),
actionButton("", "opacity 1") %>%
bsPopover("opacity 1", opacity = 1),
br(), br(), column(2),
actionButton("f1", "allow html: 'abc<spam class='text-danger'>danger</spam>'") %>%
bsPopover(HTML("abc<spam class='text-danger'>danger</spam>'"),
html = TRUE, bgcolor = "#0275d8"),
actionButton("f2", "allow html: '<s>del content</s>'") %>%
bsPopover(HTML("<s>del content</s>'"), html = TRUE, bgcolor = "#d9534f")
```

server <- function(input, output, session) {}
shinyApp(ui, server)

if(interactive()){
library(shiny)
library(magrittr)
ui <- fluidPage(
br(), br(), br(), br(), br(), br(), column(2),
actionButton("", "primary") %>%
bsPopover("primary", "primary", status = "primary"),
actionButton("", "info") %>%
bsPopover("info", "info", status = "info"),
actionButton("", "success") %>%
bsPopover("success", "success", status = "success"),
actionButton("", "warning") %>%
bsPopover("warning", "warning", status = "warning"),
actionButton("", "danger") %>%
bsPopover("danger", "danger", status = "danger")
)
server <- function(input, output, session) {}
shinyApp(ui, server)
}
bsTooltip

Enhanced Bootstrap3 tooltip

Description
Add tooltip to any Shiny element you want. You can also customize color, font size, background color, trigger event for each individual tooltip.

Usage
bsTooltip(
tag, 
title = "", 
placement = "top", 
bgcolor = "black", 
textcolor = "white", 
fontsize = "12px", 
fontweight = "400", 
opacity = 1, 
html = FALSE, 
trigger = "hover focus"
)

bsTip(
tag, 
title = "", 
placement = "top", 
status = "primary", 
fontsize = "12px", 
fontweight = "400", 
opacity = 1, 
html = FALSE, 
trigger = "hover focus"
)

Arguments
| tag     | a shiny tag as input |
| title   | string, tooltip text |
| placement | string, one of "top", "bottom", "left", "right", where to put the tooltip |
| bgcolor | string, background color, valid value of CSS color name or hex value or rgb value |
| textcolor | string, text color, valid value of CSS color name or hex value or rgb value |
| fontsize | string, text font size, valid value of CSS font size, like "10px", "1rem". |
| fontweight | string, valid font weight unit: https://www.w3schools.com/cssref/pr_font_weight.asp |
bsTooltip

opacity numeric, between 0 and 1

html bool, allow title contain HTML code? like "<strong>abc</strong>" click | hover | focus | manual.

trigger string, how to trigger the tooltip, one or combination of

status string, used only for wrapper bsTip, see details

Details


Convenient wrapper function:

bsTip is the convenient function for bsTooltip, which has the background and content color set to 5 different bootstrap colors, you can use status to set, one of "primary", "info", "success", "warning", "danger"

Value

shiny tag

Examples

if(interactive()){
  library(shiny)
  library(magrittr)
  ui <- fluidPage(
    br(), br(), br(), br(), br(), br(), column(2),
    actionButton("", "Tooltip on the left") %>%
      bsTip("Tooltip on the left", "left"),
    actionButton("", "Tooltip on the top") %>%
      bsTip("Tooltip on the top", "top"),
    actionButton("", "Tooltip on the right") %>%
      bsTip("Tooltip on the right", "right"),
    actionButton("", "Tooltip on the bottom") %>%
      bsTip("Tooltip on the bottom", "bottom"),
    br(), br(), column(2),
    actionButton("", "primary color") %>%
      bsTip("primary color", bgcolor = "#0275d8"),
    actionButton("", "danger color") %>%
      bsTip("danger color", bgcolor = "#d9534f"),
    actionButton("", "warning color") %>%
      bsTip("warning color", bgcolor = "#f0ad4e"),
    br(), br(), column(2),
    actionButton("", "9px") %>%
      bsTip("9px", fontsize = "9px"),
    actionButton("", "14px") %>%
      bsTip("14px", fontsize = "14px"),
    actionButton("", "20px") %>%
      bsTip("20px", fontsize = "20px"),
    br(), br(), column(2),
    actionButton("", "combined") %>%
      bsTip(}
clearableTextInput

A clearable text inputInput control

Description

An UI component with a "X" button in the end to clear the entire entered text. It works the same as TextInput.

Usage

clearableTextInput(
  inputId,
  label = "",
  value = "",
  placeholder = "",
  style = "width: 100%;"
)

Arguments

inputId ID
label text label above
### cssLoader

value : default value
placeholder : place holder text when value is empty
style : additional CSS styles you want to apply

#### Value

a shiny component

#### Examples

```r
if(interactive()){
  ui <- fluidPage(
    clearableTextInput("input1", "This is a input box", style = "width: 50%;"),
    verbatimTextOutput("out1")
  )

  server <- function(input, output, session) {
    output$out1 <- renderPrint(input$input1)
  }

  shinyApp(ui, server)
}
```

---

**cssLoader**

*Create a variety of CSS loaders on UI*

---

**Description**

CSS loaders can improve user experience by adding a small animation icon to a HTML element. spsComps provides you 12 different looking CSS loaders. Unlike other Shiny packages, you have full control of the CSS loader here, like position, color, size, opacity, etc.

**Usage**

```r
cssLoader(
  type = "default",
  src = "",
  id = "",
  height = "1.5rem",
  width = height,
  color =="#337ab7",
  opacity = 1,
  inline = FALSE,
  is_icon = FALSE,
  ...
)
```
cssLoader

Arguments

type  
string, one of "circle", "dual-ring", "facebook", "heart", "ring", "roller", "default", "ellipsis", "grid", "hourglass", "ripple", "spinner", "gif", default is "default".

src  
string, online URL or local path of the gif animation file if you would like to upload your own loader.

id  
string, optional, ID for the component, if not given, a random ID will be given.

height  
string, pixel, like "10px"; or (r)em, "1.5rem", "1.5em". Default is "1.5rem".

width  
string, default is the same as height. For most loader, you want to keep width = height for a square shape.

color  
string, any valid CSS color name, or hex color code

opacity  
number, between 0-1

inline  
bool, do you want the loader be inline? This is useful to turn on if you want to add the loader to a shiny::actionButton, so the loader and button label will be on the same line. See examples.

is_icon  
bool, default uses the HTML div tag, turn on this option will use the i tag for icon. Useful if you want to add the loader as icon argument for the shiny::actionButton. See examples.

...  
other shiny tags or HTML attributes you want to add to the loader.

Details

'rem' unit:
For most modern web apps, including Shiny, 1rem = 10px

Value

returns a css loader component.

Examples

if (interactive()){
  library(shiny)
  heights <- paste0(c(1.5, 3, 5, 8, 10, 15, 20), "rem")
  colors <- list(
    colorRampPalette(c("#00d2ff", "#3a7bd5"))(7),
    colorRampPalette(c("#59c173", "#a17fe0", "#5d26c1"))(7),
    colorRampPalette(c("#667db6", "#0082c8", "#5d26c1", "#667db6"))(7),
    colorRampPalette(c("#f2709c", "#ff9472"))(7),
    colorRampPalette(c("#fc5c7d", "#6a82fb"))(7),
    colorRampPalette(c("#4568dc", "#b06ab3"))(7)
  )
  types <- c("circle", "dual-ring", "facebook", "heart", "ring", "roller", "default", "ellipsis", "grid", "hourglass", "ripple", "spinner")
  ui <- fluidPage(
    lapply(seq_along(types), function(i){
      ...
```r

div(
  h4(types[1]), br(),
  lapply(1:7, function(x){
    cssLoader(
      types[1], height = heights[x],
      color = colors[[if(i > 6) i - 6 else i]][x],
      inline = TRUE
    )
  })),
  br()
)

server <- function(input, output, session) {}
shinyApp(ui, server)
}

# use with buttons
if (interactive()){
  library(shiny)
  ui <- fluidPage(
    actionButton(
      "btn-a", "",
      icon = cssLoader(is_icon = TRUE, inline = TRUE, color = "#3a7bd5"
    ),
    actionButton(
      "btn-b", "Loading",
      icon = cssLoader(type = "hourglass", is_icon = TRUE, color = "#667db6", inline = TRUE)
    )
  )
  server <- function(input, output, session) {}
  shinyApp(ui, server)
}

# use your own
if (interactive()){
  library(shiny)
  spinner <- "https://github.com/lz100/spComps/blob/master/examples/demo/www/spinner.gif?raw=true"
  eater <- "https://github.com/lz100/spComps/blob/master/examples/demo/www/bean_eater.gif?raw=true"
  ui <- fluidPage(
    cssLoader(
      "gif", spinner, height = "50px"
    ),
    cssLoader(
      "gif", spinner, height = "100px"
    ),
    cssLoader(
      "gif", eater, height = "150px"
    ),
    cssLoader(
      "gif", eater, height = "200px"
    )
  )
  server <- function(input, output, session) {}
  shinyApp(ui, server)
}
```
#### gallery

**A shiny gallery component**

#### Description

Create a gallery to display images or photos. The `texts`, `hrefs`, and `images` must have the same length.

If there is any image that you do not want to add links, use "" to occupy the space, e.g. `hrefs = c("https://xxx.com","","https://xxx.com")`

If the link is empty, there will be no hover effect on that image, and you cannot click it. Similar to `hrefs`, for the `texts`, use "" to occupy space.

#### Usage

```r
gallery(
  texts,
  hrefs,
  images,
  Id = NULL,
  title = "Gallery",
  title_color = "#0275d8",
  image_frame_size = 4,
  enlarge = FALSE,
  enlarge_method = c("inline","modal"),
  target_blank = FALSE,
  style = ""
)
```
Arguments

texts vector of labels under each image
hrefs vector of links when each image is clicked
images a vector of image sources, can be online URLs or local resource paths.
Id ID of this gallery
title Title of gallery
title_color Title color
image_frame_size integer, 1-12, this controls width. How large is each image. 12 is the whole width of the screen and 1 is 1/12 of the screen. Consider numbers than can fully divide 12, like 1, 2, 3, 4, 6 or 12 (if you want only 1 image per row).
enlarge bool, when click on the image, enlarge it? If enlarge is enabled, click the photo will enlarge instead of jump to the link. Only the title below contains the link if enlarge is enabled.
enlarge_method how the photo is enlarged on click, one of "inline" – within the gallery change the size of photo to 12, "modal" – display photo in a pop-up modal.
target_blank bool, whether to add target="_blank" to the link?
style additional CSS style you want to add to the most outside component "div"

Details

modal enlarge:
When view the modal enlarged images, click the "X" button or anywhere outside the image to close the full screen view.

Value

a gallery component

Examples

if(interactive()){
  texts <- c("p1", "p2", "", "p4", "p5")
  hrefs <- c("https://github.com/lz100/spsComps/blob/master/1.jpg?raw=true",
              "https://github.com/lz100/spsComps/blob/master/2.jpg?raw=true",
              ",
              "https://github.com/lz100/spsComps/blob/master/5.jpg?raw=true")
  images <- c("https://github.com/lz100/spsComps/blob/master/1.jpg?raw=true",
               "https://github.com/lz100/spsComps/blob/master/2.jpg?raw=true",
               "https://github.com/lz100/spsComps/blob/master/5.jpg?raw=true")
  library(shiny)
  ui <- fluidPage(
    column("}
### heightMatcher

**Match height of one element to the other element**

**Description**
Match the height of one element to the second element. If the height of second element change, the height of first element will change automatically.

**Usage**

```r
div1, div2, isID = TRUE
```

**Arguments**

- `div1` : element ID, or jquery selector if `isID = FALSE`. The first element that you want to match the height to the other element
- `div2` : matched element ID or selector, the other element
- `isID` : bool, if `TRUE`, `div1` and `div2` will be treated as ID, otherwise you can use complex jquery selector

**Value**

`tagList` containing javascript
Examples

```r
if(interactive()){
  library(shiny)
  library(shinyjqui)
  ui <- fluidPage(
    column(
      3, id = "a",
      style = "border: 1px black solid; background-color: gray;",
      p("This block's height is matched with orange one")
    ),
    shinyjqui::jqui_resizable(column(
      2, id = "b",
      style = "border: 1px black solid; background-color: orange;",
      p("drag the bottom-right corner")
    )),
    column(
      3, id = "c",
      style = "border: 1px black solid; background-color: red;",
      p("This block's is not matched with others")
    ),
    heightMatcher("a", "b")
  )
  server <- function(input, output, session) {
    # Try to drag `b` from bottom right corner and see what happens to `a`
    shinyApp(ui, server)
  }
}
```

hexLogo

**Hexagon logo and logo panel**

**Description**

Shiny UI widgets to generate hexagon logo(s). `hexLogo()` generates a single hexagon, and `hexPanel()` generates a panel of hex logos

**Usage**

```r
hexLogo(
  id,  
title = "",  
hex_img,  
hex_link = "",  
footer = "",  
footer_link = "",  
x = ":-10",  
y = ":-20",
```
target_blank = FALSE
)

hexPanel(
  id,
  title,
  hex_imgs,
  hex_links = NULL,
  hex_titles = NULL,
  footers = NULL,
  footer_links = NULL,
  xs = NULL,
  ys = NULL,
  target_blank = FALSE
)

Arguments

id          input ID
title       title of the logo, display on top of logo or title of logo panel displayed on the left
hex_img     single value of hex_imgs
hex_link    single value of hex_links
footer      single value of footers
footer_link single value of footer_links
x           number, X offset, e.g. "-10" instead of -10L
y           number, Y offset
target_blank bool, whether to add target="_blank" to the link?
hex_imgs    a character vector of logo image source, can be online or local, see details
hex_links   a character vector of links attached to each logo, if not NULL, must be the same length as hex_imgs
hex_titles  similar to hex_links, titles of each logo
footers     a character vector of footer attached to each logo
footer_links a character vector of footer links, if not NULL, must be the same length as footers
xs          a character vector X coordinate offset value for each logo image, default -10,
            must be the same length as hex_imgs
ys          Y coordinates offset, must be the same length as xs, default -20

Details

The image in each hexagon is resized to the same size as the hex border and then enlarged 125%. You may want to use x, y offset value to change the image position.

If your image source is local, you need to add your local directory to the shiny server, e.g. addResourcePath("sps", "www"). This example add www folder under my current working directory as sps to the server. Then you can access my images by hex_imgs = "sps/my_img.png".
some args in hexPanel are character vectors, use NULL for the default value. If you want to change value but not all of your logos, use "" to occupy space in the vector. e.g. I have 3 logos, but I only want to add 2 footer and only 1 footer has a link: `footers = c("footer1","footer2",""), footer_links = c("","https://mylink",""). By doing so footers and footer_links has the same required length.

Value

HTML elements, tagList

Examples

```r
if(interactive()){
  ui <- fluidPage(
    hexLogo(
      "logo", "Logo",
      hex_img = "https://live.staticflickr.com/7875/46106952034_954b8775fa_b.jpg",
      hex_link = "https://www.google.com",
      footer = "Footer",
      footer_link = "https://www.google.com"
    ),
    hexLogo(
      "x", "Change X offset",
      hex_img = "https://live.staticflickr.com/7875/46106952034_954b8775fa_b.jpg",
      x = "40"
    ),
    hexLogo(
      "y", "Change Y offset",
      hex_img = "https://live.staticflickr.com/7875/46106952034_954b8775fa_b.jpg",
      y = "-60"
    ),
    hexPanel(
      "demo1", "basic panel:",
      rep("https://live.staticflickr.com/7875/46106952034_954b8775fa_b.jpg", 2)
    ),
    hexPanel(
      "demo2", "panel with links:",
      c(paste0("https://d33wubrfki0l68.cloudfront.net/",
        "2c6239d31be6d037c251c71c3982792f8c4d2d2/12f67/css/images/hex/ggplot2.png"),
        paste0("https://d33wubrfki0l68.cloudfront.net/",
        "621a9c8c5d7b47c4b6d72e8f0f28d14310e8370/193fc/css/images/hex/dplyr.png")
    ),
    c("https://ggplot2.tidyverse.org/", "https://dplyr.tidyverse.org/"),
    c("ggplot2", "dplyr")
  ),
  hexPanel(
    "demo3", "footer with links:",
    rep("https://live.staticflickr.com/7875/46106952034_954b8775fa_b.jpg", 2),
    footers = c("hex1", "hex2"),
    footer_links = rep("https://www.google.com", 2)
  ),
}
```
hexPanel(
  "demo4", "panel offsets",
  hex_imgs = rep("https://live.staticflickr.com/7875/46106952034_954b8775fa_b.jpg", 4),
  footers = paste0("hex", 1:4),
  ys = seq(-20, -50, by = -10),
  xs = seq(20, 50, by = 10)
)
)
server <- function(input, output, session) {
  }
shinyApp(ui, server)

hrefTab

Display a list of links in a row of buttons

Description

hrefTab creates a small section of link buttons

Usage

hrefTab(
  label_texts,  
  hrefs,
  Id = NULL,
  title = "A list of tabs",
  title_color = "#0275d8",
  bg_colors = "#337ab7",
  text_colors = "white",
  target_blank = FALSE,
  ...
)

Arguments

label_texts    individual tab labels
hrefs           individual tab links
Id               optional element ID
title           element title
title_color     title color
bg_colors       individual tab button background color, either 1 value to apply for all of them or specify for each of them in a vector
text_colors     individual tab button text color, either 1 value to apply for all of them or specify for each of them in a vector
target_blank   bool, whether to add target="_blank" to the link?
...               other arguments to be passed to the html element
**hrefTable**

### Details

1. **label_texts**, **hrefs** must be the same length

2. If more than one value is provided for **bg_colors** or/and **text_colors**, the length of these 2 vectors must be the same as **label_texts**

3. Use "" to occupy the space if you do not want a label contains a link, e.g **hrefs = c(“https://google.com/”, “”, “”)**

4. If a label does not have a link, you cannot click it and there is no hovering effects.

### Value

a Shiny component

### Examples

```r
if(interactive()){
  ui <- fluidPage(
    hrefTab(
      title = "Default",
      label_texts = c("Bar Plot", "PCA Plot", "Scatter Plot"),
      hrefs = c("https://google.com/", "", "")
    ),
    hrefTab(
      title = "Different background",
      label_texts = c("Bar Plot", "PCA Plot", "Scatter Plot"),
      hrefs = c("https://google.com/", "", ""),
      bg_colors = c("#eee", "orange", "green")
    ),
    hrefTab(
      title = "Different background and text colors",
      label_texts = c("Bar Plot", "Disabled", "Scatter Plot"),
      hrefs = c("https://google.com/", "", ""),
      bg_colors = c("green", "#eee", "orange"),
      text_colors = c("#caffc1", "black", "blue")
    )
  )

  server <- function(input, output, session) {
  }
  shinyApp(ui, server)
}
```

---

**hrefTable**

*A table of hyper reference buttons*
hrefTable

Description

creates a table in Shiny which the cells are hyper reference (links) buttons. This function is similar to hrefTab, but that function only creates a single row of link buttons, and this function creates a table of rows.

The table has two columns, the first column is row names, second column is different link buttons.

Usage

hrefTable(item_titles, item_labels, item_hrefs, item_title_colors = "#0275d8", item_bg_colors = "#337ab7", item_text_colors = "white", Id = NULL, first_col_name = "Category", second_col_name = "Options", title = "A Table buttons with links", title_color = "#0275d8", target_blank = FALSE, ...)

Arguments

item_titles vector of strings, a vector of titles for table row names
item_labels list, a list of character vectors to specify button labels in each table row, one vector per row
item_hrefs list, a list of character vectors to specify button hrefs links in each table row, one vector per row
item_title_colors a single character value or a character vector to specify button title text colors of each row name
item_bg_colors a single character value or a list, a list of character vectors to specify button background colors in each table row, one vector per row
item_text_colors a single character value or a list, a list of character vectors to specify button text colors in each table row, one vector per row
Id optional ID
first_col_name first column name
second_col_name second column name
title title of this table
title_color table title color
target_blank bool, whether to add target="_blank" to the link?
... other HTML param you want to pass to the table
Details

1. `item_titles`, `item_labels`, `item_hrefs` must have the same length. Each vector in `item_labels`, `item_hrefs` must also have the same length. For example, if we want to make a table of two rows, the first row has 1 cell and the second row has 2 cells:

   ```r
   hrefTable(
     item_titles = c("row 1", "row 2"),
     item_labels = list(c("cell 1"), c("cell 1", "cell 2")),
     item_hrefs = list(c("link1"), c("link1", "link2"))
   )
   ```

1. If `item_title_colors`, `item_text_colors` are given more than one value, the list must have the same length as `item_titles`, and length of each vector in the list must match the vector in `item_labels` in the same order.

2. If `item_title_colors` is given more than one value, the vector must have the same length as `item_titles`.

3. Use "" to occupy the space if you do not want a label contains a link, e.g `item_hrefs = list(c("https://www.google.com/"), c("", ""))`

4. If a label does not have a link, you cannot click it and there is no hovering effects.

Value

HTML elements

Examples

```r
if(interactive()){
  ui <- fluidPage(
    hrefTable(
      title = "default",
      item_titles = c("workflow 1", "unclickable"),
      item_labels = list(c("tab 1"), c("tab 3", "tab 4")),
      item_hrefs = list(c("https://www.google.com/"), c("", ""))
    ),
    hrefTable(
      title = "Change button color and text color",
      item_titles = c("workflow 1", "No links"),
      item_labels = list(c("tab 1"), c("tab 3", "tab 4")),
      item_hrefs = list(c("https://www.google.com/")), c("", "")),
      item_bg_colors = list(c("blue"), c("red", "orange")),
      item_text_colors = list(c("black"), c("yellow", "green"))
    ),
    hrefTable(
      title = "Change row name colors and width",
      item_titles = c("Green", "Red", "Orange"),
      item_labels = list(c("tab 1"), c("tab 3", "tab 4"), c("tab 5", "tab 6", "tab 7")),
      item_hrefs = list(
        c("https://www.google.com/"),
        c("", ""),
        c("https://www.google.com/", "https://www.google.com/", "")
    )
  )
}```
server <- function(input, output, session) {

}

shinyApp(ui, server)

---

**pgPaneUI**

A draggable progress panel

### Description

Creates a panel that displays multiple progress items. Use `pgPaneUI` on UI side and use `pgPaneUpdate` to update it.

A overall progress is automatically calculated on the bottom.

### Usage

```r
pgPaneUI(  
  pane_id,  
  titles,  
  pg_ids,  
  title_main = NULL,  
  opened = FALSE,  
  top = "3%",  
  right = "2%"
)
```

```r
pgPaneUpdate(pane_id, pg_id, value, session = getDefaultReactiveDomain())
```

### Arguments

- `pane_id`  
  Progress panel main ID, use `ns` wrap it on `pgPaneUI` but not on `pgPaneUpdate` if using shiny module

- `titles`  
  labels to display for each progress, must have the same length as `pg_ids`

- `pg_ids`  
  a character vector of IDs for each progress. Don’t forget to use `ns` wrap each ID.

- `title_main`  
  If not specified and `pane_id` contains ‘plot’, title will be ‘Plot Prepare’; has ‘df’ will be ‘Data Prepare’, if neither will be "Progress"

- `opened`  
  bool, if this panel is opened at start
**pgPaneUI**

- **top**: css style offset set to the current window's top
- **right**: css style offset set to the current window's right
- **pg_id**: a character string of ID indicating which progress within this panel you want to update. Do not use `ns(pg_id)` to wrap it on server
- **value**: 0-100 number to update the progress you use pg_id to choose
- **session**: current shiny session

**Value**

returns HTML elements

**Examples**

```r
if(interactive()){  
  # try to slide c under 0  
  ui <- fluidPage(  
    h4("Use your mouse to drag it"),  
    actionButton("a", "a"),  
    actionButton("b", "b"),  
    sliderInput("c", min = -100,  
               max = 100, value = 0,  
               label = "c"),  
    pgPaneUI(  
      pane_id = "thispg",  
      titles = c("this a", "this b", "this c"),  
      pg_ids = c("a", "b", "c"),  
      title_main = "Example Progress",  
      opened = TRUE,  
      top = "30%",  
      right = "50%"  
    )  
  )  
  server <- function(input, output, session) {  
    observeEvent(input$a, {  
      for(i in 1:10){  
        pgPaneUpdate("thispg", "a", i*10)  
        Sys.sleep(0.3)  
      }  
    })  
    observeEvent(input$b, {  
      for(i in 1:10){  
        pgPaneUpdate("thispg", "b", i*10)  
        Sys.sleep(0.3)  
      }  
    })  
    observeEvent(input$c, pgPaneUpdate("thispg", "c", input$c))  
  }  
  shinyApp(ui, server)  
}
```
renderDesc

**Description**
write some text in markdown format and it will help you render to markdown, use `shiny::markdown` but it is collapsible.

**Usage**

```r
renderDesc(id, desc)
```

**Arguments**

- **id**
  - element ID
- **desc**
  - one character string in markdown format

**Value**

HTML elements

**Examples**

```r
if(interactive()){
  desc <-
  "
  # Some desc
  - xxxx
  - bbbb

  This is a [link](https://www.google.com/).

  `Some other things`
  > other markdown things

  1. aaa
  2. bbb
  3. ccc
  
  ui <- fluidPage(
    renderDesc(id = "desc", desc),
  )

  server <- function(input, output, session) {
  }

  shinyApp(ui, server)
}
Description

Exception in Shiny apps can crash the app. Most time we don’t want the app to crash but just stop this code block, inform users and continue with other code blocks. This function is designed to handle these issues.

Usage

```r
shinyCatch(
  expr,
  position = "bottom-right",
  blocking_level = "none",
  shiny = TRUE,
  prefix = "SPS",
  trace_back = spsOption("traceback")
)
```

Arguments

- `expr` expression
- `position` client side message bar position, one of: c("top-right", "top-center", "top-left","top-full-width", "bottom-right", "bottom-center", "bottom-left","bottom-full-width").
- `blocking_level` what level you want to block the execution, one of "error", "warning", "message", default is "none", do not block following code execution.
- `shiny` bool, only show message on console log but not in Shiny app when it is FALSE. Useful if you want to keep the exception only to the server and hide from your users. You do not need to set it to FALSE when purely work outside shiny, it will automatically detect if you are working in a Shiny environment or not.
- `prefix` character, what prefix to display on console for the log, e.g. for error, the default will be displayed as "SPS-ERROR". You can make your own prefix, like prefix = "MY", then, it will be "MY-ERROR". Use "" if you do not want any prefix, like prefix = "", then, it will just be "ERROR". multiple levels
- `trace_back` bool, added since spsComps 0.2, if the expression is blocked or has errors, cat the full trace back? It will display called functions and code source file and line number if possible. Default follows the SPS spsOption("traceback") setting. You can set it by running spsOption("traceback", TRUE). If you do not set it, it will be FALSE. or you can just manually set it for each individual shinyCatch call shinyCatch({...},trace_back = TRUE).

Details

- The blocking works similar to shiny’s `shiny::req()` and `shiny::validate()`. If anything inside fails, it will block the rest of the code in your reactive expression domain.
• It will show error, warning, message by a toastr bar on client end and also log the text on server console depending on the blocking_level (dual-end logging).

• If blocks at error level, function will be stopped and other code in the same reactive context will be blocked.

• If blocks at warning level, warning and error will be blocked.

• message level blocks all 3 levels.

• If blocking_level is other than these 3, no exceptions will be block, and if there is any error, NULL will return and following code will continue to run.

• To have the message displayed on shiny, spsDepend("toastr") must be added in UI if you are working on your own app not under SPS framework. see examples.

• Messages will be displayed for 3s, 5s for warnings and errors will never go away on UI unless users’ mouse hover on the bar or manually close it.

Value

see description and details

Examples

if(interactive()){
  ui <- fluidPage(
    spsDepend("toastr"),
    h4("Run this example on your own computer to better understand exception catch and dual-end logging", class = "text-center"),
    column(6,
      actionButton("btn1","error and blocking"),
      actionButton("btn2","error no blocking"),
      actionButton("btn3","warning but still returns value"),
      actionButton("btn4","warning but blocking returns"),
      actionButton("btn5","message"),
    ),
    column(6,
      verbatimTextOutput("text")
    )
  )
  server <- function(input, output, session) {
    fn_warning <- function() {
      warning("this is a warning!")
      return("warning returns")
    }
    observeEvent(input$btn1, {
      shinyCatch(stop("error with blocking"), blocking_level = "error")
      output$text <- renderPrint("You shouldn't see me")
    })
    observeEvent(input$btn2, {
      shinyCatch(stop("error without blocking"))
      output$text <- renderPrint("I am not blocked by error")
    })
  }
}
shinyCheckPkg

Description

A server end function to check package namespace for some required packages of users’ environment. If all packages are installed, a successful message will be displayed on the bottom-right. If not, pop up a message box in shiny to tell users how to install the missing packages.

This is useful when some of packages are required by a shiny app. Before running into that part of code, using this function to check the required package and pop up warnings will prevent app to crash.

Usage

shinyCheckPkg(
  session,
  cran_pkg = NULL,
  bioc_pkg = NULL,
  github = NULL,
  quietly = FALSE
)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>session</td>
<td>shiny session</td>
</tr>
<tr>
<td>cran_pkg</td>
<td>a vector of package names</td>
</tr>
<tr>
<td>bioc_pkg</td>
<td>a vector of package names</td>
</tr>
</tbody>
</table>
shinyCheckPkg

github a vector of github packages, github package must use the format of "github user name/repoName", eg. c("user1/pkg1", "user2/pkg2")

github

quietly bool, should warning messages be suppressed?

Value

TRUE if pass, sweet alert massage and FALSE if fail

Examples

if(interactive()){
  library(shiny)
  ui <- fluidPage(
    tags$label('Check if package "pkg1", "pkg2", "bioxxx",
      github package "user1/pkg1" are installed'), br(),
    actionButton("check_random_pkg", "check random_pkg"),
    br(), spsHr(),
    tags$label("We can combine `spsValidate` to block server code to prevent
      crash if some packages are not installed.'), br(),
    tags$label("If "shiny" is installed, make a plot.'), br(),
    actionButton("check_shiny", "check shiny"), br(),
    tags$label("If "ggplot99" is installed, make a plot.'), br(),
    actionButton("check_gg99", "check ggplot99"), br(),
    plotOutput("plot_pkg"))
  )
  server <- function(input, output, session) {
    observeEvent(input$check_random_pkg, {
      shinyCheckPkg(session, cran_pkg = c("pkg1", "pkg2"),
        bioc_pkg = "bioxxx", github = "user1/pkg1")
    })
    observeEvent(input$check_shiny, {
      spsValidate(verbose = FALSE, {
        if(!shinyCheckPkg(session, cran_pkg = c("shiny"))) stop("Install packages")
      })
      output$plot_pkg <- renderPlot(plot(1))
    })
    observeEvent(input$check_gg99, {
      spsValidate({
        if(!shinyCheckPkg(session, cran_pkg = c("ggplot99"))) stop("Install packages")
      })
      output$plot_pkg <- renderPlot(plot(99))
    })
  }
  shinyApp(ui, server)
}
Display your code in a bootstrap modal or collapse

Description

Developers often want to show their code in a shiny app. This function creates a button that when clicked, a modal or collapse hidden element will show up to display your code.

Usage

```r
spsCodeBtn(
  id,
  code,
  language = "r",
  label = "",
  title = "Code to Reproduce",
  show_span = FALSE,
  tool_tip = "Show Code",
  placement = "bottom",
  btn_icon = icon("code"),
  display = c("modal", "collapse"),
  size = c("large", "medium", "small"),
  color = "black",
  shape = c("rect", "circular"),
  ...
)
```

Arguments

- `id`: element ID
- `code`: code you want to display, in a character string or vector.
- `language`: string, what programming language is the code, use `shinyAce::getAceModes()` to see options
- `label`: string, label to display on the button
- `title`: string, title of the modal or collapse
- `show_span`: bool, use the `<span>` tag to show a little label of the left of the button? The span text will use text from `tool_tip`
- `tool_tip`: string, what tooltip to display when hover on the button
- `placement`: string, where to display the tooltip
- `btn_icon`: icon, `shiny::icon()`, icon of the button
- `display`: string, one of "modal", "collapse"
- `size`: string, one of "large", "medium", "small", only works for modal
- `color`: string, color of the button
- `shape`: string, shape of the button, one of "rect", "circular",
- `...`: other args pass to the `shiny::actionButton`
Details

1. The modal or collapse has an ID, the ID is your button ID + ".modal" or ".collapse", like "my_button-modal"

2. You could update the code inside the collapse use `shinyAce::updateAceEditor` on server, the code block ID is button ID + ".ace", like "my_button-ace". See examples.

Value

a shiny `tagList`

Examples

```r
if(interactive()){  
  library(shiny)  
  my_code <-
    # load package and data  
    library(ggplot2)  
    data(mpg, package="ggplot2")  
    # mpg <- read.csv("http://goo.gl/uEeRGu")

    # Scatterplot  
    theme_set(theme_bw()) # pre-set the bw theme.  
    g <- ggplot(mpg, aes(cty, hwy))  
    g + geom_jitter(width = .5, size=1) +  
      labs(subtitle="mpg: city vs highway mileage",  
           y="hwy",  
           x="cty",  
           title="Jittered Points")

  html_code <-
    <!-- DOCTYPE html>  
    <html>  
    <body>  
    <h2>ABC</h2>  
    <p id="demo">Some HTML</p>
    </body>  
    </html>  

  ui <- fluidPage(  
    fluidRow(  
      column(  
        6,  
        h3("Display by modal"),  
        column(  
          6,  
          h4("default"),  
          spsCodeBtn(id = "a", my_code)
```
column(6, h4("change color and shape"),
spsCodeBtn(
  id = "b", c(my_code, my_code),
  color = "red", shape = "circular")
),

column(6, h3("Display by collapse"),

column(6, h4("collapse"),
spsCodeBtn(id = "c", my_code, display = "collapse")
),

column(6, h4("different programming language"),
spsCodeBtn(
  id = "d", html_code,
  language = "html", display = "collapse")
)
),
)

fluidRow(
column(6, h3("Update code"),
spsCodeBtn("update-code", "# No code here",
  display = "collapse")
),
actionButton("update", "change code in the left `spsCodeBtn`"),
actionButton("changeback", "change it back")
)

server <- function(input, output, session) {
  observeEvent(input$update, {
    shinyAce::updateAceEditor(
      session, editorId = "update-code-ace",
      value = "# code has changed!\n 1+1"
    )
  })
  observeEvent(input$changeback, {
    shinyAce::updateAceEditor(
      session, editorId = "update-code-ace",
      value = "# No code here"
    )
  })
}

spsCodeBtn
spsDepend

shinyApp(ui, server)
}

spsDepend

Add commonly used HTML dependencies

Description

Add dependencies for some server end functions. For most UI functions, the dependency has been automatically attached for you when you call the function. Most server functions will also attach the dependency for you automatically too. However, a few server functions have to append the dependency before app start like addLoader. So you would need to call in this function somewhere in your UI. Read help of each function for details.

Usage

spsDepend(dep = "", js = TRUE, css = TRUE, listing = TRUE)

Arguments

- **dep**: dependency names, see details
- **js**: bool, use only javascript from this resource if there are both js and css files?
- **css**: bool, use only CSS from this resource if there are both js and css files?
- **listing**: bool, if your dep is invalid, list all options? FALSE will mute it.

Details

For dep, current options are:

- basic: spsComps basic css and js
- update_pg: spsComps pgPaneUpdate function required, js and css
- update_timeline: spsComps spsTimeline function required, js only
- font-awesome: font-awesome, css only
- toaster: comes from shinytoastr package, toaster.js, css and js
- pop-tip: enable enhanced bootstrap popover and tips, required for bsHoverPopover function. js only
- gotop: required by spsGoTop function. js and css
- animation: required for animation related functions to add animations for icons and other elements, like animateServer. js and css
- css-loader: required for loader functions, like addLoader. js and css
- swal2: swal2.js, required by shinyCheckPkg. js only

Value

htmltools::htmlDependency object
Examples

```r
# list all options
spsDepend(""")

# try some options
spsDepend("basic")
spsDepend("font-awesome")

# Then add it to your shiny app
if(interactive()){
  library(shiny)

  ui <- fluidPage(
    tags$i(class = "fa fa-home"),
    spsDepend("font-awesome")
  )

  server <- function(input, output, session) {
  }

  shinyApp(ui, server)
}
```

---

**spsGoTop**  
Go top button

Description

add a go top button on your shiny app. When the user clicks the button, scroll the window all the way to the top. Just add this function anywhere in you UI.

Usage

```r
spsGoTop(
  id = "gotop",
  icon = NULL,
  right = "1rem",
  bottom = "10rem",
  color = "#337ab7"
)
```

Arguments

- `id`: element ID
- `icon`: `shiny::icon` if you do not want to use the default rocket image
- `right`: character string, css style, the button’s position to window right
- `bottom`: character string, css style, the button’s position to window bottom
- `color`: color of the icon.
Details

The button hides if you are on very top of the page. If you scroll down 50px, this button will appear.

Value

a shiny component

Examples

```r
if(interactive()){
  library(shiny)

  ui <- fluidPage(
    h1("Scroll the page...")
  lapply(1:100, function(x) br()),
  spsGoTop("default"),
  spsGoTop("mid", right = "50%", bottom = "50%", icon = icon("home"), color = "red"),
  spsGoTop("up", right = "95%", bottom = "95%", icon = icon("arrow-up"), color = "green")
  )

  server <- function(input, output, session) {
  }

  shinyApp(ui, server)
}
```

---

**spsHr**

Create a horizontal line

Description

Create a horizontal line of your choice

Usage

```r
spsHr(
  status = "info",
  width = 0.5,
  other_color = NULL,
  type = "solid",
  opacity = 1
)
```
spsHr

Arguments

status  string, one of "primary", "info", "success", "warning", "danger". This determines the color of the line.
width  numeric, how wide should the line be, a number larger than 0
other_color  string, if you do not like the default 5 status colors, specify a valid CSS color here. If this is provided status will be ignored.
type  string, one of "solid", "dotted", "dashed", "double", "groove", "ridge", "inset", "outset"
opacity  numeric, a number larger than 0 smaller than 1

Details

Read more about type here: https://www.w3schools.com/css/css_border.asp

Value

HTML <hr> element

Examples

```r
if(interactive()) {
  library(shiny)
  library(magrittr)
  ui <- fluidPage(
    tags$b("Different status"),
    spsHr("info"), spsHr("primary"), spsHr("success"), spsHr("warning"), spsHr("danger"),
    tags$b("custom color"), spsHr(other_color = "purple"), spsHr(other_color = "pink"),
    tags$b("Different width"), lapply(1:5, function(x) spsHr(width = x)),
    tags$b("Different type"), c("solid", "dotted", "dashed", "double", "groove", "ridge", "inset", "outset") %>%
    lapply(function(x) spsHr(type = x, width = 3)),
    tags$b("Different opacity"), lapply(seq(0.2, 1, 0.2), function(x) spsHr(opacity = x))
  )
  server <- function(input, output, session) {}
  shinyApp(ui, server)
}
```
spsTimeline

A shiny timeline component

Description

This timeline is horizontal, use `spsTimeline` to define it and use `updateSpsTimeline` on server to update it.

Usage

```r
spsTimeline(id, up_labels, down_labels, icons, completes)

updateSpsTimeline(
  session, 
  id, 
  item_no, 
  complete = TRUE, 
  up_label = NULL, 
  down_label = NULL
)
```

Arguments

- `id` html ID of the timeline if you are using shiny modules: use namespace function to create the ID but DO NOT use namespace function on server.
- `up_labels` a vector of strings, text you want to display on top of each timeline item, usually like year number. If you do not want any text for a certain items, use "" to occupy the space.
- `down_labels` a vector of strings, text you want to display at the bottom of each timeline item.
- `icons` a list of icon objects. If you do not want an icon for certain items, use `div()` to occupy the space.
- `completes` a vector of TRUE or FALSE, indicating if the items are completed or not. Completed items will become green.
- `session` current shiny session
- `item_no` integer, which item number counting from left to right you want to update
- `complete` bool, is this item completed or not
- `up_label` the item_no associated up label to update
- `down_label` the item_no associated down label to update

Details

`up_labels`, `down_labels`, `icons`, `completes` must have the same length.
spsTitle

Value

returns a shiny component

Examples

```r
if(interactive()){
  ui <- fluidPage(
    column(6,
      spsTimeline(
        "b",
        up_labels = c("2000", "2001"),
        down_labels = c("step 1", "step 2"),
        icons = list(icon("table"), icon("gear")),
        completes = c(FALSE, TRUE)
      ),
    ),
    column(6,
      actionButton("a", "complete step 1"),
      actionButton("c", "uncomplete step 1")
    )
  )

  server <- function(input, output, session) {
    observeEvent(input$a, {
      updateSpsTimeline(session, "b", 1, up_label = "0000", down_label = "Finish")
    })
    observeEvent(input$c, {
      updateSpsTimeline(session, "b", 1, complete = FALSE,
        up_label = "9999", down_label = "Step 1")
    })
  }

  shinyApp(ui, server)
}
```

---

**spsTitle**

*Colorful title element*

---

**Description**

Add a title element to UI

**Usage**

```r
spsTitle(
  title,
  level = "2",
  status = "info",
  other_color = NULL,
)```
spsTitle

    opacity = 1,
    ...
  }

tabTitle(
  title,
  level = "2",
  status = "info",
  other_color = NULL,
  opacity = 1,
  ...
)

Arguments

  title  string, title text
  level  string, level of the title, the larger, the bigger, one of "1", "2", "3", "4", "5", "6"
  status string, one of "primary", "info", "success", "warning", "danger". This determines the color of the line.
  other_color string, if you do not like the default 5 status colors, specify a valid CSS color here. If this is provided, status will be ignored.
  opacity  numeric, a number larger than 0 smaller than 1
  ...
    other attributes and children add to this element

Value

  returns a shiny tag

Examples

  if(interactive()) {
    library(shiny)
    library(magrittr)
    ui <- fluidPage(
      tags$b("Different status"),
      c("primary", "info", "success", "warning", "danger") %>%
        lapply(function(x) spsTitle(x, "4", status = x)),
      tags$b("custom color"),
      spsTitle("purple", "4", other_color = "purple"),
      spsTitle("pink", "4", other_color = "pink"),
      tags$b("Different levels"),
      lapply(as.character(1:6), function(x) spsTitle(paste0("H", x), x)),
      tags$b("Different opacity"),
      lapply(seq(0.2, 1, 0.2), function(x) spsTitle(as.character(x), opacity = x))
    )
    server <- function(input, output, session) {}
    shinyApp(ui, server)
  }
Description

this function is used on server side to usually validate input dataframe or some expression. The usage is similar to shiny::validate but is not limited to shiny render functions and provides better user notification and server-end logging (dual-end logging).

Usage

```r
spsValidate(
    expr, 
    vd_name = "my validation", 
    pass_msg = glue("validation: '{vd_name}' passed"), 
    shiny = TRUE, 
    verbose = spsOption("verbose"), 
    prefix = ""
)
```

Arguments

- **expr**: the expression to validate data or other things. Use `stop("your message")` or generate some errors inside to fail the validation. If there is no error, it will return `TRUE` and display `pass_msg` on both console and shiny app if `verbose = TRUE` or global SPS option `verbose` is `TRUE`. If the expression fails, it will block the code following this function within the same reactive domain to continue, similar to `shinyCatch()`.
- **vd_name**: validate title
- **pass_msg**: string, if pass, what message do you want to show
- **shiny**: bool, show message on console but hide from users? see `shinyCatch()` for more details
- **verbose**: bool, show pass message? Default follows global verbose setting, use `spsUtil::spsOption` to set up the value `spsOption("verbose", TRUE) to turn on and spsOption("verbose", FALSE) to turn off and spsOption("verbose") to check current setting, see examples.
- **prefix**: see prefix in `shinyCatch()`

Details

- To have the message displayed on shiny, `spsDepend("toastr")` must be added in UI if you are working on your own app not under SPS framework, see examples.

Value

If expression fails, block the code following this validation function and no final return, else `TRUE`. 
Examples

```r
if(interactive()){
  ui <- fluidPage(
    spsDepend("toastr"), # need to add toastr dependency
    column(
      4,
      h3("click below to make the plot"),
      p("this button will succeed, verbose on"),
      actionButton("vd1", "make plot 1"),
      plotOutput("p1")
    ),
    column(
      4,
      h3("click below to make the plot"),
      p("this button will succeed, verbose off"),
      actionButton("vd2", "make plot 2"),
      plotOutput("p2")
    ),
    column(
      4,
      h3("click below to make the plot"),
      p("this button will fail, no plot will be made"),
      actionButton("vd3", "make plot 3"),
      plotOutput("p3")
    ),
    column(
      4,
      h3("click below to make the plot"),
      p("this button will fail, but the message is hidden from users"),
      actionButton("vd4", "make plot 4"),
      plotOutput("p4")
    )
  )

  server <- function(input, output, session) {
    mydata <- datasets::iris
    observeEvent(input$vd1, {
      spsOption("verbose", TRUE) # use global sps verbose setting
      spsValidate(
        is.data.frame(mydata), vd_name = "Is dataframe"
      )
      output$p1 <- renderPlot(plot(iris$Sepal.Length, iris$Sepal.Width))
    })
    observeEvent(input$vd2, {
      spsValidate(
        is.data.frame(mydata)
      ),
      vd_name = "Is dataframe",
      verbose = FALSE # use in-function verbose setting
      output$p2 <- renderPlot(plot(iris$Sepal.Length, iris$Sepal.Width))
    })
    observeEvent(input$vd3, {
      spsValidate(
        is.data.frame(mydata)
      ),
      vd_name = "Is dataframe",
      verbose = FALSE # use in-function verbose setting
      output$p3 <- renderPlot(plot(iris$Sepal.Length, iris$Sepal.Width))
    })
    observeEvent(input$vd4, {
      spsValidate(
        is.data.frame(mydata)
      ),
      vd_name = "Is dataframe",
      verbose = FALSE # use in-function verbose setting
      output$p4 <- renderPlot(plot(iris$Sepal.Length, iris$Sepal.Width))
    })
  }
```

spsValidate
is.data.frame(mydata)
if(nrow(mydata) <= 200) stop("Input needs more than 200 rows")
}
print("other things blocked")
output$p3 <- renderPlot(plot(iris$Sepal.Length, iris$Sepal.Width))
})
observeEvent(input$vd4, {
  spsValidate(
    is.data.frame(mydata)
    if(nrow(mydata) <= 200) stop("Input needs more than 200 rows")
  ), shiny = FALSE)
  print("other things blocked")
  output$p4 <- renderPlot(plot(iris$Sepal.Length, iris$Sepal.Width))
})
}
shinyApp(ui, server)
}
# outside shiny example
mydata2 <- list(a = 1, b = 2)
spsValidate({(mydata2)}, "Not empty")
try(spsValidate(stopifnot(is.data.frame(mydata2)), "is dataframe?"), silent = TRUE)

---

textButton

**Text input with an action button**

**Description**

One kind of bootstrap3 input group: a textinput and a button attached to the end

**Usage**

```r
textButton(
  textId,
  btnId = paste0(textId, "_btn"),
  label = ",",
  text_value = "",
  placeholder = "",
  tooltip = "",
  placement = "bottom",
  btn_icon = NULL,
  btn_label = "btn",
  style = "",
  ...
)
```

**Arguments**

- `textId` the text input ID
- `btnId` the button ID, if not specified, it is `textId" + "_btn" like, `textId_btn`
label  label of the whole group, on the top

text_value  initial value of the text input

placeholder  placeholder text of the text input
tooltip  a tooltip of the group
placement  where should the tooltip go?
btn_icon  a shiny::icon of the button
btn_label  text on the button
style  additional CSS style of the group

...  additional args pass to the button, see shiny::actionButton

Value

a shiny input group

Examples

if(interactive()){
  library(shiny)
  ui <- fluidPage(
    column(  
      6,
      textButton(textId = "tbtn_default", label = "default"),
      textButton(
        textId = "tbtn-icon",
        label = "change icon and color",
        btn_icon = icon("home"),
        class = "btn-warning"  # pass to the button
      ),
      textButton(
        textId = "tbtn_style",
        label = "change styles",
        style = "color: red; border: 2px dashed green;"
      ),
      textButton(
        textId = "tbtn_submit",
        label = "interact with shiny server",
        btn_label = "Submit",
        placeholder = "type and submit",
        class = "btn-primary"),
      verbatimTextOutput("tbtn_submit_out")
    )
  )
  server <- function(input, output, session) {
    # watch for the button ID "tbtn_submit" + ".btn"
    observeEvent(input$tbtn_submit_btn, {
      output$tbtn_submit_out <- renderPrint(isolate(input$tbtn_submit))
    })
  }
}
textInputGroup

shinyApp(ui, server)
}

textInputGroup

**Bootstrap 3 text input group**

**Description**

Text input group and custom widgets append to left and right.

**Usage**

```r
textInputGroup(
  textId,
  label = "",
  value = "",
  placeholder = "enter text",
  left_text = NULL,
  right_text = NULL,
  style = "width: 100%;"
)
```

**Arguments**

- `textId`  text box id
- `label`  text label for this input group
- `value`  default value for the text input
- `placeholder`  default placeholder text for the text input if no value
- `left_text`  text or icon add to the left side
- `right_text`  text or icon add to the right side
- `style`  additional style add to the group

**Details**

If no text is specified for both left and right, the return is almost identical to `clearableTextInput`.

**Value**

text input group component
Examples

    if(interactive()){
        ui <- fluidPage(
            textInputGroup("id1", "left", left_text = "a"),
            textInputGroup("id2", "right", right_text = "b"),
            textInputGroup("id3", "both", left_text = ",", right_text = ".00"),
            textInputGroup("id4", "none"),
            textInputGroup("id5", "icon", left_text = icon("home")),
        )
    }

    server <- function(input, output, session) {
    }

    shinyApp(ui, server)
}
Index

addLoader, 2, 46
animateAppend, 9
animateAppendNested (animateAppend), 9
animateIcon, 10
animateServer, 13, 46
animateServer (animateUI), 12
animateUI, 12, 13
animationRemove, 13
animationRemove (animateUI), 12
bsAlert, 15
bsHoverPopover, 18, 46
bsHoverPopover (bsPopover), 16
bsPop, 18
bsPopover, 16, 18
bsTip, 21
bsTip (bsTooltip), 20
bsTooltip, 20, 21
clearableTextInput, 22, 57
cssLoader, 23
gallery, 26
heightMatcher, 28
hexLogo, 29
hexLogo(), 29
hexPanel (hexLogo), 29
hexPanel(), 29
hrefTab, 32, 34
hrefTable, 33
htmltools::htmlDependency, 46
pgPaneUI, 36, 36
pgPanelUpdate, 46
pgPanelUpdate (pgPaneUI), 36
renderDesc, 38
shiny::icon, 11, 47, 56
shiny::icon(), 43
shiny::markdown, 38
shiny::req(), 39
shiny::validate, 53
shiny::validate(), 39
shinyAce::getAceModes(), 43
shinyAce::updateAceEditor, 44
shinyCatch, 39
shinyCatch(), 53
shinyCheckPkg, 41, 46
spsCodeBtn, 43
spsDepend, 46
spsGoTop, 46, 47
spsHr, 48
spsTimeline, 46, 50
spsTitle, 51
spsUtil::spsOption, 53
spsValidate, 53
tabTitle (spsTitle), 51
textButton, 55
textInputGroup, 57
updateSpsTimeline (spsTimeline), 50