Package ‘webex’

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Title  Create Interactive Web Exercises in 'R Markdown'
Description  Functions for easily creating interactive web pages using 'R Markdown' that students can use in self-guided learning.
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Create a fill-in-the-blank question

Usage

```
fitb(answer, width = calculated_width, num = FALSE,
     ignore_case = FALSE, tol = NULL, ignore_ws = TRUE, regex = FALSE)
```

Arguments

- **answer**: The correct answer (can be a vector if there is more than one correct answer).
- **width**: Width of the input box in characters. Defaults to the length of the longest answer.
- **num**: Whether the input is numeric, in which case allow for leading zeroes to be omitted.
- **ignore_case**: Whether to ignore case (capitalization).
- **tol**: The tolerance within which numeric answers will be accepted; i.e. if $\text{abs(response - true.answer)} < \text{tol}$, the answer is correct (implies num=TRUE).
- **ignore_ws**: Whether to ignore whitespace.
- **regex**: Whether to use regex to match answers (concatenates all answers with ‘|’ before matching).

Details

Writes html code that creates an input box widget. Call this function inline in an RMarkdown document. See the Web Exercises RMarkdown template for examples of its use in RMarkdown.

Examples

```
# What is 2 + 2?
fitb(4, num = TRUE)

# What was the name of the Beatles drummer?
fitb(c("Ringo", "Ringo Starr"), ignore_case = TRUE)

# What is pi to three decimal places?
fitb(pi, num = TRUE, tol = .001)
```
hide

Create button revealing hidden content

Description
Create button revealing hidden content

Usage
hide(button_text = "Solution")

Arguments
button_text Text to appear on the button that reveals the hidden content.

Details
Writes HTML to create a content that is revealed by a button press. Call this function inline in an RMarkdown document. Any content appearing after this call up to an inline call to \texttt{unhide()} will only be revealed when the user clicks the button. See the Web Exercises RMarkdown Template for examples.

See Also
unhide

Examples
# default behavior is to generate a button that says "Solution"
hide()

# or the button can display custom text
hide("Click here for a hint")

mcq

Create a multiple-choice question

Description
Create a multiple-choice question

Usage
mcq(opts)
Arguments

 opts        Vector of alternatives. The correct answer is the element(s) of this vector named "answer".

Details

 Writes html code that creates an option box widget, with a single correct answer. Call this function inline in an RMarkdown document. See the Web Exercises RMarkdown template for further examples.

Examples

# How many planets orbit closer to the sun than the Earth?
mcq(c(1, answer = 2, 3))

# Which actor played Luke Skywalker in the movie Star Wars?
mcq(c("Alec Guinness", answer = "Mark Hamill", "Harrison Ford"))

description

Round up from .5

Usage

round2(x, digits = 0)

Arguments

 x        A numeric string (or number that can be converted to a string).
 digits   Integer indicating the number of decimal places ("round") or significant digits ("signif") to be used.

Details

 Implements rounding using the "round up from .5" rule, which is more conventional than the "round to even" rule implemented by R’s built-in round function. This implementation was taken from https://stackoverflow.com/a/12688836.

Examples

round2(c(2, 2.5))

# compare to:
round(c(2, 2.5))
strip_lzero

Strip leading zero from numeric string

Description
Strip leading zero from numeric string

Usage
strip_lzero(x)

Arguments
x A numeric string (or number that can be converted to a string).

Value
A string with leading zero removed.

Examples
strip_lzero("0.05")

style_widgets
Change webex widget style

Description
Change webex widget style

Usage
style_widgets(default = "blue", correct = "red")

Arguments
default The colour of the widgets when the correct answer is not filled in (defaults to blue).
correct The colour of the widgets when the correct answer not filled in (defaults to red).

Details
Call this function inline in an RMarkdown document to change the default and correct colours using any valid HTML colour word (e.g., red, rgb(255,0,0), hsl(0, 100
Examples

# change to green when correct
style_widgets(correct = "green")

# yellow when unfilled, pink when correct
style_widgets("#FFFF00", "#FF3399")

torf  Create a true-or-false question

Description
Create a true-or-false question

Usage
torf(answer)

Arguments
answer  Logical value TRUE or FALSE, corresponding to the correct answer.

Details
Writes html code that creates an option box widget with TRUE or FALSE as alternatives. Call this function inline in an RMarkdown document. See the Web Exercises RMarkdown template for further examples.

Examples

# True or False? 2 + 2 = 4
torf(TRUE)

# True or False? The month of April has 31 days.
torf(FALSE)

unhide  End hidden HTML content

Description
End hidden HTML content

Usage
unhide()
Details

Call this function inline in an RMarkdown document to mark the end of hidden content (see the Web Exercises RMarkdown Template for examples).

See Also

hide

Examples

# just produce the closing </div>
unhide()

webex_default Create default webex document

Description

This function wraps rmarkdown::html_document to configure compilation to embed the default webex CSS and JavaScript files in the resulting HTML.

Usage

webex_default(...)  

Arguments

... Additional function arguments to pass to html_document.

Details

Call this function as the output_format argument for the render function when compiling HTML documents from RMarkdown source.

See Also

render, html_document

Examples

# copy the webex 'R Markdown' template to a temporary file
## Not run:
my_rmd <- tempfile(fileext = "Rmd")
rmarkdown::draft(my_rmd, "webex", "webex")

# compile it
rmarkdown::render(my_rmd, webex::webex_default())

# view the result
browseURL(sub("\.Rmd$", ".html", my_rmd))

## End(Not run)
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