

# Package ‘shinyAce’

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**Type** Package

**Title** Ace Editor Bindings for Shiny

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**Description** Ace editor bindings to enable a rich text editing environment within Shiny.

**License** MIT + file LICENSE

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**Suggests** testthat (>= 2.0.0), dplyr (>= 0.8.3)

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---

.fname_regex	<i>Regular expression for matching the function name in a completion line in the middle of a function call</i>
--------------	--

---

### Description

Regular expression for matching the function name in a completion line in the middle of a function call

### Usage

.fname\_regex

### Format

An object of class character of length 1.

---

.tools *Get namespace to get access to unexported functions, namely RdTags*

---

### **Description**

Get namespace to get access to unexported functions, namely RdTags

### **Usage**

.tools

### **Format**

An object of class environment of length 727.

---

.utils *Get namespace to get access to unexported functions, namely .getHelpFile .assignLinebuffer .assignEnd .guessTokenFromLine .completeToken*

---

### **Description**

Get namespace to get access to unexported functions, namely .getHelpFile .assignLinebuffer .assignEnd .guessTokenFromLine .completeToken

### **Usage**

.utils

### **Format**

An object of class environment of length 521.

---

`aceAnnotate`*Enable Error Annotations for an Ace Code Input*

---

## Description

This function dynamically evaluate R for syntax errors using the [parse](#) function.

## Usage

```
aceAnnotate(inputId, session = shiny::getDefaultReactiveDomain())
```

## Arguments

<code>inputId</code>	The id of the input object
<code>session</code>	The session object passed to function given to shinyServer

## Details

You can implement your own code completer by observing modification events to `input$<editorId>_shinyAce_annotation` where `<editorId>` is the aceEditor id. This input is only used for triggering completion and will contain a random number. However, you can access `session$input[[inputId]]` to get the input text for parsing.

## Value

An observer reference class object that is responsible for offering code annotations. See [observeEvent](#) for more details. You can use `suspend` or `destroy` to pause or stop dynamic code completion.

The observer reference object will send a custom shiny message using `session$sendCustomMessage` to the annotations endpoint containing a json list of annotation metadata objects. The json list should have a structure akin to:

```
[
  {
    row: <int: row of annotation reference>,
    col: <int: column of annotation reference>,
    type: <str: "error", "alert" or "flash">,
    html: <str: html of annotation hover div, used by default over text>,
    text: <num: text of annotation hover div>,
  }
]
```

---

aceAutocomplete      *Enable Code Completion for an Ace Code Input*

---

### Description

This function dynamically auto complete R code pieces using built-in functions `utils::.assignLinebuffer`, `utils::.assignEnd`, `utils::.guessTokenFromLine` and `utils::.completeToken`.

### Usage

```
aceAutocomplete(inputId, session = shiny::getDefaultReactiveDomain())
```

### Arguments

<code>inputId</code>	The id of the input object
<code>session</code>	The session object passed to function given to shinyServer

### Details

You can implement your own code completer by listening to `input$<editorId>_shinyAce_hint` where `<editorId>` is the `aceEditor` id. The input contains

- `linebuffer`: Code/Text at current editing line
- `cursorPosition`: Current cursor position at this line

### Value

An observer reference class object that is responsible for offering code completion. See [observe](#) for more details. You can use `suspend` or `destroy` to pause or stop dynamic code completion.

The observer reference object will send a custom shiny message using `session$sendCustomMessage` to the `codeCompletions` endpoint containing a json list of completion item metadata objects. The json list should have a structure akin to:

```
[
  {
    value:      <str: value to be inserted upon completion (e.g. "print()")>,
    caption:    <str: value to be displayed (e.g. "print() # prints text")>,
    score:      <num: score to pass to ace editor for sorting>,
    meta:       <str: meta text on right of completion>
    r_symbol:   <str: symbol name of completion item>,
    r_envir_name: <str: name of the environment from which the symbol is referenced>,
    r_help_type: <str: a datatype for dispatching help documentation function>,
    completer:  <str: used for dispatching default insertMatch functions>,
  }
]
```

aceEditor

*Render Ace***Description**

Render an Ace editor on an application page.

**Usage**

```
aceEditor(outputId, value, mode, theme, vimKeyBinding = FALSE,
  readOnly = FALSE, height = "400px", fontSize = 12,
  debounce = 1000, wordWrap = FALSE, showLineNumbers = TRUE,
  highlightActiveLine = TRUE, selectionId = NULL, cursorId = NULL,
  hotkeys = NULL, code_hotkeys = NULL, autoComplete = c("disabled",
  "enabled", "live"), autoCompleters = c("snippet", "text", "keyword"),
  autoCompleteList = NULL, tabSize = 4, useSoftTabs = TRUE,
  showInvisibles = FALSE, setBehavioursEnabled = TRUE,
  autoScrollEditorIntoView = FALSE, maxLines = NULL, minLines = NULL,
  placeholder = NULL)
```

**Arguments**

outputId	The ID associated with this element
value	The initial text to be contained in the editor.
mode	The Ace mode to be used by the editor. The mode in Ace is often the programming or markup language that you're using and determines things like syntax highlighting and code folding. Use the <a href="#">getAceModes</a> function to enumerate all the modes available.
theme	The Ace theme to be used by the editor. The theme in Ace determines the styling and coloring of the editor. Use <a href="#">getAceThemes</a> to enumerate all the themes available.
vimKeyBinding	If set to TRUE, Ace will enable vim-keybindings. Default value is FALSE.
readOnly	If set to TRUE, Ace will disable client-side editing. If FALSE (the default), it will enable editing.
height	A number (which will be interpreted as a number of pixels) or any valid CSS dimension (such as "50%", "200px", or "auto").
fontSize	Defines the font size (in px) used in the editor and should be an integer. The default is 12.
debounce	The number of milliseconds to debounce the input. This will cause the client to withhold update notifications until the user has stopped typing for this amount of time. If 0, the server will be notified of every keystroke as it happens.
wordWrap	If set to TRUE, Ace will enable word wrapping. Default value is FALSE.
showLineNumbers	If set to TRUE, Ace will show line numbers.

highlightActiveLine	If set to TRUE, Ace will highlight the active line.
selectionId	The ID associated with a change of selected text
cursorId	The ID associated with a cursor change.
hotkeys	A list whose names are ID names and whose elements are the shortcuts of keys. Shortcuts can either be a simple string or a list with elements 'win' and 'mac' that that specifies different shortcuts for win and mac (see example 05).
code_hotkeys	A nested list. The first element indicates the code type (e.g., "r") The second element is a list whose names are ID names and whose elements are the shortcuts of keys (see hotkeys)
autoComplete	<p>Enable/Disable auto code completion. Must be one of the following:</p> <p>"disabled" Disable Code Autocomplete</p> <p>"enabled" Enable Basic Code Autocomplete. Autocomplete can be triggered using Ctrl-Space, Ctrl-Shift-Space, or Alt-Space.</p> <p>"live" Enable Live Code Autocomplete. In addition to Basic Autocomplete, it will automatically trigger at each key stroke.</p> <p>By default, only local completer is used where all aforementioned code pieces will be considered as candidates. Use <code>autoCompleteList</code> for static completions and <code>aceAutocomplete</code> for dynamic R code completions.</p>
autoCompleters	Character vector of completers to enable. If set to NULL, all completers will be disabled. Select one or more of "snippet", "text", "static", "keyword", and "rlang" to control which completers to use. Default option is to use the "snippet", "text", and "keyword" autoCompleters
autoCompleteList	A named list that contains static code completions candidates. This can be especially useful for Non-Standard Evaluation (NSE) functions such as those in <code>dplyr</code> and <code>ggvis</code> . Each element in list should be a character array whose words will be listed under the element key. For example, to suggests column names from <code>mtcars</code> and <code>airquality</code> , you can use <code>list(mtcars = colnames(mtcars), airquality = colnames(airquality))</code> .
tabSize	Set tab size. Default value is 4
useSoftTabs	Replace tabs by spaces. Default value is TRUE
showInvisibles	Show invisible characters (e.g., spaces, tabs, newline characters). Default value is FALSE
setBehavioursEnabled	Determines if the auto-pairing of special characters, like quotation marks, parenthesis, or brackets should be enabled. Default value is TRUE.
autoScrollEditorIntoView	If TRUE, expands the size of the editor window as new lines are added
maxLines	Maximum number of lines the editor window will expand to when <code>autoScrollEditorIntoView</code> is TRUE
minLines	Minimum number of lines in the editor window when <code>autoScrollEditorIntoView</code> is TRUE
placeholder	A string to use a placeholder when the editor has no content

**Author(s)**

Jeff Allen <jeff@trestletech.com>

**Examples**

```
## Not run:
aceEditor(
  outputId = "myEditor",
  value = "Initial text for editor here",
  mode = "r",
  theme = "ambiance"
)

aceEditor(
  outputId = "myCodeEditor",
  value = "# Enter code",
  mode = "r",
  hotkeys = list(
    helpKey = "F1",
    runKey = list(
      win = "Ctrl-R|Ctrl-Shift-Enter",
      mac = "CMD-ENTER|CMD-SHIFT-ENTER"
    )
  ),
  wordWrap = TRUE, debounce = 10
)

aceEditor(
  outputId = "mySmartEditor",
  value = "plot(wt ~ mpg, data = mtcars)",
  mode = "r",
  autoComplete = "live",
  autoCompleteList = list(mtcars = colnames(mtcars))
)

## End(Not run)
```

---

aceTooltip

*Enable Completion Tooltips for an Ace Code Input*

---

**Description**

This function uses the completion item object to retrieve tooltip information by parsing R [help](#) documentation and rendering to html.

**Usage**

```
aceTooltip(inputId, session = shiny::getDefaultReactiveDomain())
```

### Arguments

inputId	The id of the input object
session	The session object passed to function given to shinyServer

### Details

You can implement your own tooltips by observing modification events to `input$<editorId>_shinyAce_tooltipItem` where `<editorId>` is the `aceEditor` id. This input contains the object passed to `codeCompletion` for this item. See the help for [aceAutocomplete](#) for details on the fields of the completion item object.

### Value

An observer reference class object that is responsible for offering completion tooltips. See [observe](#) for more details. You can use `suspend` or `destroy` to pause or stop dynamic code completion.

The observer reference object will send a custom shiny message using `session$sendCustomMessage` to the `docTooltip` endpoint containing a json list of completion item metadata objects. The json list should have a structure akin to one of:

A text object

```
<str: text to display for tooltip>
```

An object containing a `docHTML` property

```
{  
  docHTML: <str: html to display for tooltip div, used if available>,  
}
```

An object containing a `docText` property

```
{  
  docText: <str: text to display for tooltip div>  
}
```

---

build\_tooltip\_fields *Build the fields used to make an html tooltip*

---

### Description

Build the fields used to make an html tooltip

### Usage

```
build_tooltip_fields(v)
```

**Arguments**

v                      Autocomplete metadata values used for building tooltip info

**Value**

a list with html-formatted character values "title" and "body"

---

getAceModes                      *Get available modes*

---

**Description**

Gets all of the available modes available in the installed version of shinyAce. Modes are often the programming or markup language which will be used in the editor and determine things like syntax highlighting and code folding.

**Usage**

```
getAceModes()
```

**Author(s)**

Jeff Allen <jeff@trestletech.com>

---

getAceThemes                      *Get available themes*

---

**Description**

Gets all of the available themes available in the installed version of shinyAce. Themes determine the styling and colors used in the editor.

**Usage**

```
getAceThemes()
```

**Author(s)**

Jeff Allen <jeff@trestletech.com>

---

get_arg_help	<i>Retrieve argument documentation from help document</i>
--------------	---

---

**Description**

Retrieve argument documentation from help document

**Usage**

```
get_arg_help(..., args = character())
```

**Arguments**

...	Arguments passed on to get_help_file
args	function arguments names to get documentation for

**Value**

A character vector of help

**Examples**

```
shinyAce::get_arg_help("match", package = "base", args = c("table", "nomatch"))
```

---

get_desc_help	<i>Retrieve description section from help document</i>
---------------	--

---

**Description**

Retrieve description section from help document

**Usage**

```
get_desc_help(...)
```

**Arguments**

...	Arguments passed on to get_help_file
-----	--------------------------------------

**Value**

a character value representing the description section of a help document, rendered as HTML

**Examples**

```
shinyAce::get_desc_help("match", package = "base")
```

---

```
get_help_file
```

---

*Retrieve an Rd object of a help query*

---

**Description**

Safely return NULL if an error is encountered.

**Usage**

```
get_help_file(...)
```

**Arguments**

... Arguments passed on to `utils::help`

**topic** usually, a [name](#) or character string specifying the topic for which help is sought. A character string (enclosed in explicit single or double quotes) is always taken as naming a topic. If the value of `topic` is a length-one character vector the topic is taken to be the value of the only element. Otherwise `topic` must be a [name](#) or a [reserved](#) word (if syntactically valid) or character string. See ‘Details’ for what happens if this is omitted.

**package** a name or character vector giving the packages to look into for documentation, or NULL. By default, all packages whose namespaces are loaded are used. To avoid a name being deparsed use e.g. `(pkg_ref)` (see the examples).

**lib.loc** a character vector of directory names of R libraries, or NULL. The default value of NULL corresponds to all libraries currently known. If the default is used, the loaded packages are searched before the libraries. This is not used for HTML help (see ‘Details’).

**verbose** logical; if TRUE, the file name is reported.

**try.all.packages** logical; see Note.

**help\_type** character string: the type of help required. Possible values are "text", "html" and "pdf". Case is ignored, and partial matching is allowed.

**Value**

the Rd object returned from `utils:::getHelpFile`

---

get\_usage\_help      *Retrieve usage section from help document*

---

**Description**

Retrieve usage section from help document

**Usage**

get\_usage\_help(...)

**Arguments**

...      Arguments passed on to get\_help\_file

**Value**

a character value representing the usage section of a help document, rendered as HTML

**Examples**

```
shinyAce::get_usage_help("match", package = "base")
```

---

is.empty      *Check if vector is empty*

---

**Description**

Check if vector is empty

**Usage**

is.empty(x)

**Arguments**

x      vector

**Examples**

```
is.empty(NULL)
is.empty(NA)
is.empty(c())
is.empty("")
is.empty(" ")
is.empty(c(" ", " "))
is.empty(list())
is.empty(list(a = "", b = ""))
```

---

meta_obj	<i>Character value to use for object meta field</i>
----------	---

---

**Description**

Character value to use for object meta field

**Usage**

```
meta_obj()
```

---

meta_pkg	<i>Character value to use for package meta field</i>
----------	--

---

**Description**

Character value to use for package meta field

**Usage**

```
meta_pkg()
```

---

rd_2_html	<i>Convert an Rd object to HTML</i>
-----------	-------------------------------------

---

**Description**

Convert an Rd object to HTML

**Usage**

```
rd_2_html(...)
```

**Arguments**

... additional parameters to pass to [parse\\_Rd](#) when Rd is a filename.

**Value**

a character value of Rd content rendered as HTML

---

re_capture	<i>Retrieve regular expression named capture groups as a list</i>
------------	---

---

**Description**

Retrieve regular expression named capture groups as a list

**Usage**

```
re_capture(x, re, ...)
```

**Arguments**

x a character string to capture from  
re the regular expression to use  
... additional arguments passed to [regexpr](#)

**Value**

a named list of matches

**Examples**

```
shinyAce::re_capture("ak09j b", "(?<num>\\d+)(?<alpha>[a-zA-Z]+)", perl = TRUE)
```

---

r\_completions\_function\_call\_metadata

*R completions when cursor is within a function call*

---

**Description**

R completions when cursor is within a function call

**Usage**

```
r_completions_function_call_metadata(fname, completions)
```

**Arguments**

fname	the function name for which the function call specific completion metadata should be constructed
completions	a character vector of completions. These will serve as the foundation for building added R-specific metadata

---

r\_completions\_general\_metadata

*R completions for general case*

---

**Description**

R completions for general case

**Usage**

```
r_completions_general_metadata(completions)
```

**Arguments**

completions	a character vector of completions. These will serve as the foundation for building added R-specific metadata
-------------	--

---

`r_completions_metadata`*Return completions for a given line of text*

---

**Description**

Return completions for a given line of text

**Usage**

```
r_completions_metadata(line)
```

**Arguments**

`line` the text up until the cursor in the line for autocompletion

---

`shinyAce-options`*Options available for shinyAce*

---

**Description**

`shinyAce.debug` Logical value to enable or disable debugging messages being printed to console. default behavior equivalent to FALSE.

---

`shinyAce_debug`*Function for handling optional debugging messages*

---

**Description**

Function for handling optional debugging messages

**Usage**

```
shinyAce_debug(...)
```

**Arguments**

`...` zero or more objects which can be coerced to character (and which are pasted together with no separator) or (for message only) a single condition object.

---

tooltip_html	<i>A helper for formatting a tooltip entry</i>
--------------	--

---

**Description**

A helper for formatting a tooltip entry

**Usage**

```
tooltip_html(title = "", body = "")
```

**Arguments**

title	a character value to use as the title
body	an html block to embed as the body of the tooltip

---

updateAceEditor	<i>Update Ace Editor</i>
-----------------	--------------------------

---

**Description**

Update the styling or mode of an aceEditor component.

**Usage**

```
updateAceEditor(session, editorId, value, theme, readOnly, mode, fontSize,
  wordWrap, useSoftTabs, tabSize, showInvisibles, border = c("normal",
  "alert", "flash"), autoComplete = c("disabled", "enabled", "live"),
  autoCompleters = c("snippet", "text", "keyword", "static", "rlang"),
  autoCompleteList = NULL)
```

**Arguments**

session	The Shiny session to whom the editor belongs
editorId	The ID associated with this element
value	The initial text to be contained in the editor.
theme	The Ace theme to be used by the editor. The theme in Ace determines the styling and coloring of the editor. Use <a href="#">getAceThemes</a> to enumerate all the themes available.
readOnly	If set to TRUE, Ace will disable client-side editing. If FALSE (the default), it will enable editing.
mode	The Ace mode to be used by the editor. The mode in Ace is often the programming or markup language that you're using and determines things like syntax highlighting and code folding. Use the <a href="#">getAceModes</a> function to enumerate all the modes available.

fontSize	If set, will update the font size (in px) used in the editor. Should be an integer.
wordWrap	If set to TRUE, Ace will enable word wrapping. Default value is FALSE.
useSoftTabs	Replace tabs by spaces. Default value is TRUE
tabSize	Set tab size. Default value is 4
showInvisibles	Show invisible characters (e.g., spaces, tabs, newline characters). Default value is FALSE
border	Set the border 'normal', 'alert', or 'flash'.
autoComplete	Enable/Disable code completion. See <a href="#">aceEditor</a> for details.
autoCompleters	Character vector of completers to enable. If set to NULL, all completers will be disabled.
autoCompletelist	If set to NULL, existing static completions list will be unset. See <a href="#">aceEditor</a> for details.

**Author(s)**

Jeff Allen <jeff@trestletech.com>

**Examples**

```
## Not run:
shinyServer(function(input, output, session) {
  observe({
    updateAceEditor(session, "myEditor", "Updated text for editor here",
      mode = "r", theme = "ambiance")
  })
})
}

## End(Not run)
```

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