

# Package ‘linne’

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**Title** Convenient 'CSS'

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**Description** Conveniently generate 'CSS' using R code.

**License** MIT + file LICENSE

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**VignetteBuilder** knitr

**URL** <https://linne.john-coene.com/>

**BugReports** <https://github.com/JohnCoene/linne/issues>

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**Repository** CRAN

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convenience

*Convenience Functions*

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## Description

Convenience functions for common operations.

## Usage

`important_(value)`

`url_(value)`

`rgb_(r, g, b)`

`rgba_(r, g, b, a = 0.5)`

## Arguments

`value`            Value to use.

`r, g, b, a`        Red, green, blue, and alpha values.

## Functions

- `important_()` - Makes it such that the rule cannot be overwritten by other rules (other selections).
- `rgb_()`, `rgba_()` - Functions for red, green, blue and alpha for transparency.
- `url_()` - Wrap in a `url` CSS function call.

## Examples

```
Linne$
new()$
rule(
  sel_id("id"),
  color = rgba_(255, 255, 255, .6),
  fontSize = important_(20)
)
```

---

Linne

*Linne*

---

## Description

Generate CSS from R code. Initialise a new CSS environment with `new`, use `rule` to define CSS rules.

## Attributes

There are hundreds of attributes to pass to the three-dot construct (`...`), a comprehensive list of them can be found on [w3schools](http://w3schools.com).

Note that Linne accepts camelCase for convenience, e.g.: `font-size` or `fontSize`.

## Methods

### Public methods:

- `Linne$define()`
- `Linne$rule()`
- `Linne$build()`
- `Linne$get_css()`
- `Linne$show_css()`
- `Linne$import()`
- `Linne$include()`
- `Linne$write()`
- `Linne$print()`
- `Linne$inject()`
- `Linne$clone()`

### Method `define()`:

*Usage:*

```
Linne$define(...)
```

*Arguments:*

... Named variables to define.

*Details:* Define variables.

*Returns:* Self: the Linne object.

*Examples:*

```
Linne$new()$define(baseColor = "blue")
```

### Method `rule()`:

*Usage:*

```
Linne$rule(selector, ...)
```

*Arguments:*

*selector* An object of class selector as returned by the `sel_*` family of functions.

... *Declarations:* properties and their values. This accepts camelcase, e.g.: `font-style` or `fontStyle`.

*Details:* Rule

Define a CSS rule.

*Returns:* Self: the Linne object.

*Examples:*

```
Linne$new()$rule(sel_id("myButton"), color = "blue", fontSize = 50)
```

**Method** `build()`:*Usage:*

```
Linne$build()
```

*Details:* Builds CSS

Builds the CSS from definitions and rules.

*Examples:*

```
Linne$
new()$
define(primary_color = 'red')$
rule(
  sel_id("myButton"),
  color = primary_color,
  fontSize = 50
)$
rule(
  sel_class("container"),
  backgroundColor = primary_color
)$
build()
```

**Method** `get_css()`:*Usage:*

```
Linne$get_css(build = TRUE)
```

*Arguments:*

*build* Whether to build the CSS with the build method.

*Details:* Retrieve the CSS

*Returns:* A string.

*Examples:*

```
Linne$new()$rule(sel_id("myId"), fontSize = 20)$get_css()
```

**Method** `show_css()`:*Usage:*

```
Linne$show_css(build = TRUE)
```

*Arguments:*

build Whether to build the CSS with the build method.

*Details:* Prints Generated CSS

*Examples:*

```
Linne$new()$rule(sel_id("myButton"), color = "blue")$show_css()
```

**Method** import():*Usage:*

```
Linne$import(url)
```

*Arguments:*

url URL to import.

*Details:* Import

Import from a url or path.

*Examples:*

```
Linne$new()$import('https://fonts.googleapis.com/css2?family=Roboto')
```

**Method** include():*Usage:*

```
Linne$include(build = TRUE)
```

*Arguments:*

build Whether to build the CSS with the build method.

*Details:* Include in Shiny

Includes the CSS in shiny, place the call to this method anywhere in the shiny UI.

*Returns:* [htmltools::tags](#)

*Examples:*

```
# generate CSS
css <- Linne$
  new()$
  define(grey = '#c4c4c4')$
  rule(
    sel_id("myButton"),
    backgroundColor = 'red',
    fontSize = 20,
    color = grey
  )$
  rule(
    sel_class("aClass"),
    color = grey
  )
)
```

```
# include in an app
library(shiny)
```

```

ui <- fluidPage(
  css$include(),
  h1("Some text", class = "aClass"),
  actionButton("myButton", "Am I red?", class = "aClass")
)

server <- function(input, output){
  output$myPlot <- renderPlot(plot(cars))
}

if(interactive())
  shinyApp(ui, server)

```

**Method write():***Usage:*

```
Linne$write(path = "style.css", pretty = FALSE, build = TRUE)
```

*Arguments:*

path Path to file.

pretty Whether to keep tabs and newlines.

build Whether to build the CSS with the build method.

*Details:* Save

Write the CSS to file.

*Examples:*

```

if(interactive())
  Linne$new()$rule(sel_id("id"), fontStyle = "italic")$write("styles.css")

```

**Method print():***Usage:*

```
Linne$print()
```

*Details:* Print

Prints information on the Linne object.

**Method inject():***Usage:*

```
Linne$inject(build = TRUE, session = shiny::getDefaultReactiveDomain())
```

*Arguments:*

build Whether to build the CSS with the build method.

session A valid shiny session.

*Details:* Inject CSS

Dynamically inject CSS from the server of a shiny application.

*Examples:*

```

library(shiny)

ui <- fluidPage(
  useLinne(),
  actionButton("change", "Change me!")
)

server <- function(input, output){

  linne <- Linne$
    new()$
    rule(
      sel_id("change"),
      color = "white",
      backgroundColor = "black"
    )

  observeEvent(input$change, {
    linne$inject()
  })

}

if(interactive())
  shinyApp(ui, server)

```

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

*Usage:*

```
Linne$clone(deep = FALSE)
```

*Arguments:*

`deep` Whether to make a deep clone.

## Examples

```

## -----
## Method `Linne$define`
## -----

Linne$new()$define(baseColor = "blue")

## -----
## Method `Linne$rule`
## -----

Linne$new()$rule(sel_id("myButton"), color = "blue", fontSize = 50)

## -----
## Method `Linne$build`
## -----

```

```

Linne$
  new()$
  define(primary_color = 'red')$
  rule(
    sel_id("myButton"),
    color = primary_color,
    fontSize = 50
  )$
  rule(
    sel_class("container"),
    backgroundColor = primary_color
  )$
  build()

## -----
## Method `Linne$get_css`
## -----

Linne$new()$rule(sel_id("myId"), fontSize = 20)$get_css()

## -----
## Method `Linne$show_css`
## -----

Linne$new()$rule(sel_id("myButton"), color = "blue")$show_css()

## -----
## Method `Linne$import`
## -----

Linne$new()$import('https://fonts.googleapis.com/css2?family=Roboto')

## -----
## Method `Linne$include`
## -----

# generate CSS
css <- Linne$
  new()$
  define(grey = '#c4c4c4')$
  rule(
    sel_id("myButton"),
    backgroundColor = 'red',
    fontSize = 20,
    color = grey
  )$
  rule(
    sel_class("aClass"),
    color = grey
  )
)

# include in an app

```

```

library(shiny)

ui <- fluidPage(
  css$include(),
  h1("Some text", class = "aClass"),
  actionButton("myButton", "Am I red?", class = "aClass")
)

server <- function(input, output){
  output$myPlot <- renderPlot(plot(cars))
}

if(interactive())
  shinyApp(ui, server)

## -----
## Method `Linne$write`
## -----

if(interactive())
  Linne$new()$rule(sel_id("id"), fontStyle = "italic")$write("styles.css")

## -----
## Method `Linne$inject`
## -----

library(shiny)

ui <- fluidPage(
  useLinne(),
  actionButton("change", "Change me!")
)

server <- function(input, output){

  linne <- Linne$
    new()$
    rule(
      sel_id("change"),
      color = "white",
      backgroundColor = "black"
    )

  observeEvent(input$change, {
    linne$inject()
  })

}

if(interactive())
  shinyApp(ui, server)

```

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pipes

*Infixes*

---

### Description

Convenient pipes for more sophisticated selectors.

### Usage

lhs %child% rhs

lhs %or% rhs

lhs %with% rhs

### Arguments

lhs, rhs            Selectors as returned by sel\_\* family of functions.

### Operators

- **%child%** - Selects elements where right hand is child of left hand, e.g.: `sel_tag('div') %child% sel_class('aClass')` selects elements with aClass who are direct children of div tags.
- **%or%** - Select left hand or right hand, e.g.: `sel_id('myId') %or% sel_class('myClass')` will select both the element with the id and elements with the class. Ideal to select and apply rules multiple elements at once.
- **%with%** - Left hand selector with right hand selector, e.g.: `sel_tag('div') %with% sel_class('aClass')` selects a div with a class of aClass. Ideal to narrow down the selection.

### Examples

```
# select all paragraph 'p' with "red" class
sel_tag("p") %with% sel_class("red")

# the other way around works equally well
sel_class("red") %with% sel_tag("p")

# select multiple elements
# where id = "x" or class = "center"
sel_id("x") %or% sel_class("center")

# select element with id = "x" and parent's id = "y"
sel_id("y") %child% sel_id("x")
```

---

selectors	<i>Selectors</i>
-----------	------------------

---

## Description

Create selectors to select particular elements.

## Usage

```
sel_id(value)

sel_input(value)

sel_all()

sel_class(value)

sel_tag(value)

sel_attr(attribute, value = NULL, tag = NULL)
```

## Arguments

value	Value of selector.
attribute	Name of attribute.
tag	Name of tag.

## Details

The functions will print in the console the CSS selector they compose.

## Functions

- `sel_id()` - Select an object by its id, e.g.: `sel_id('btn')` selects `shiny::actionButton('btn', 'Button')`.
- `sel_all()` - Selects everything.
- `sel_input()` - Selects an input by its id, e.g.: `sel_id('txt')` selects `shiny::textInput('txt', 'Text')`.
- `sel_class()` - Select all elements bearing a specific class, e.g.: `sel_class('cls')`, selects `shiny::h1('hello', class = 'cls')`.
- `sel_tag()` - Select all tags, e.g.: `sel_tag('p')` selects `p('hello')`.
- `sel_attr()` - Select all tags with a specific attribute.

## See Also

`%with%`, `%or%`, and `%child%` as well as `when_active()`, `when_hover()`, and `when_focus()` for more sophisticated element selection.

**Examples**

```
# select element where id = x
sel_id("x")

# select all elements with class = "container"
sel_class("container")
```

---

 useLinne

*Dependency*


---

**Description**

Imports dependencies necessary for the `inject` method to work. Place this function in your shiny UI.

**Usage**

```
useLinne()
```

---

 when

*State*


---

**Description**

Narrows selection to a specific state, e.g.: when it is hovered.

**Usage**

```
when_active(selector)
```

```
when_hover(selector)
```

```
when_focus(selector)
```

**Arguments**

`selector` as returned by [selectors](#).

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