Package 'repr'

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Title Serializable Representations

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Description String and binary representations of objects for several formats / mime types.

URL https://github.com/IRkernel/repr/

BugReports https://github.com/IRkernel/repr/issues/

Depends R (>= 3.0.1)

Imports utils, grDevices, htmltools, jsonlite, pillar (>= 1.4.0), base64enc

Suggests methods, highr, Cairo, stringr, testthat (>= 3.0.0), leaflet

Enhances data.table, tibble, htmlwidgets, vegalite, plotly, geojsonio

Config/testthat/edition 3

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Contents

`repr-package` *The repr package*

Description

String and binary representations of objects for several formats / mime types.

Details

The LaTeX repr of vectors needs `\usepackage[inline]{enumitem}`

The LaTeX repr of functions with the `repr.function.highlight` option set to FALSE needs `\usepackage{minted}`

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See Also

repr, repr-options, repr-generics, repr_text

`*2repr` *Lists mapping mime types (*`mime2repr`*) or format names (*`format2repr`*) to* `repr` *functions*

Description

Lists mapping mime types (`mime2repr`) or format names (`format2repr`) to `repr` functions

Usage

```
mime2repr

format2repr
```

Format

Lists mapping mime/name to function

An object of class `list` of length 18.

Examples

```
names(mime2repr)
names(format2repr)
```

repr *Dynamic representation*

Description

Specify an object and a format to represent it in. Will stop() if no such format is known.

Usage

```
repr(obj, format = "text", ...)
```

Arguments

obj	The object to create a representation for
format	The representation format. repr_<format> is then called. (default: Call repr_text)
...	delegated to the specific repr_<format> function

Value

A character or raw vector of that format or NULL if none is defined. Only the 'text' format is defined for everything (via print())

See Also

repr_text, repr-generics

repr-generics *Representations for specific formats*

Description

Representations for specific formats

Usage

```
repr_html(obj, ...)

## Default S3 method:
repr_html(obj, ...)

repr_markdown(obj, ...)

## Default S3 method:
repr_markdown(obj, ...)
```

```
repr_latex(obj, ...)

## Default S3 method:
repr_latex(obj, ...)

repr_json(obj, ...)

## Default S3 method:
repr_json(obj, ...)

repr_javascript(obj, ...)

## Default S3 method:
repr_javascript(obj, ...)

repr_pdf(obj, ...)

## Default S3 method:
repr_pdf(obj, ...)

repr_png(obj, ...)

## Default S3 method:
repr_png(obj, ...)

repr_jpg(obj, ...)

## Default S3 method:
repr_jpg(obj, ...)

repr_svg(obj, ...)

## Default S3 method:
repr_svg(obj, ...)

repr_geojson(obj, ...)

## Default S3 method:
repr_geojson(obj, ...)

repr_vdom1(obj, ...)

## Default S3 method:
repr_vdom1(obj, ...)

repr_plotly1(obj, ...)

## Default S3 method:
```

```
repr_plotly1(obj, ...)

repr_vegalite2(obj, ...)

## Default S3 method:
repr_vegalite2(obj, ...)

repr_vegalite3(obj, ...)

## Default S3 method:
repr_vegalite3(obj, ...)

repr_vegalite4(obj, ...)

## Default S3 method:
repr_vegalite4(obj, ...)

repr_vega4(obj, ...)

## Default S3 method:
repr_vega4(obj, ...)

repr_vega5(obj, ...)

## Default S3 method:
repr_vega5(obj, ...)
```

Arguments

`obj`	The object to create a repr for
`...`	parameters of the specific `repr_*` functions

See Also

repr_text for the only repr that is always defined

`repr-options` *repr options*

Description

These options are used to control the behavior of repr when not calling it directly. Use `options(repr.* = ...)` and `getOption('repr.*')` to set and get them, respectively.

Usage

```
repr_option_defaults
```

Format

An object of class `list` of length 15.

Details

Once this package is loaded, all options are set to defaults which weren't set beforehand.

Setting all options set to `NULL` are reset to defaults when reloading the package (or calling `repr:::.onload()`).

Options

`repr.plot.*` Those are for representations of `recordedplot` instances:

- `repr.plot.width` Plotting area width in inches (default: 7)
- `repr.plot.height` Plotting area height in inches (default: 7)
- `repr.plot.pointsize` Text height in pt (default: 12)
- `repr.plot.bg` Background color (default: white)
- `repr.plot.antialias` Which kind of antialiasing to use for for lines and text? 'gray', 'subpixel' or 'none'? (default: gray)
- `repr.plot.res` PPI for rasterization (default: 120)
- `repr.plot.quality` Quality of JPEG format in % (default: 90)
- `repr.plot.family` Vector font family. 'sans', 'serif', 'mono' or a specific one (default: sans)

`repr.vector.quote` Output quotation marks for character vectors? (default: TRUE)

`repr.vector.max.items` How many items to display at max. Will insert an item with a horizontal ellipsis to show elision. (default: 400)

`repr.matrix.max.rows` How many rows to display at max. Will insert a row with vertical ellipses to show elision. (default: 60)

`repr.matrix.max.cols` How many cols to display at max. Will insert a column with horizontal ellipses to show elision. (default: 20)

`repr.matrix.latex.colspec` How to layout LaTeX tables when representing matrices or data.frames. List of `row.head`, other `col`, and `end` strings. `end` mainly exists for when you want a vertical line there (default: 'rl', 'l', and '')

`repr.function.highlight` Use the `highr` package to insert highlighting instructions into the code? Needs that package to be installed. (default: FALSE)

`repr.html.deduplicate` Use the html_dependencies manager to only include dependencies once? This can greatly reduce notebook size, but fails if e.g. iframes are used (default: FALSE)

`repr_*.data.table` *Representation of data.table objects*

Description

Representation of data.table objects

Usage

```
## S3 method for class 'data.table'
repr_html(obj, ...)

## S3 method for class 'data.table'
repr_text(obj, ...)

## S3 method for class 'data.table'
repr_latex(obj, ...)
```

Arguments

obj	The list to create a representation for
...	ignored

---

repr_*.factor *Representations of factors*

Description

Representations of factors

Usage

```
## S3 method for class 'factor'
repr_html(obj, ...)

## S3 method for class 'factor'
repr_markdown(obj, ...)

## S3 method for class 'factor'
repr_latex(obj, ...)
```

Arguments

obj	The factor to create a representation for
...	ignored

repr_*.function *Representations of functions*

Description

Representations of functions

Usage

```
## S3 method for class '`function`'
repr_html(obj, highlight = getOption("repr.function.highlight"), ...)

## S3 method for class '`function`'
repr_latex(obj, highlight = getOption("repr.function.highlight"), ...)

## S3 method for class '`function`'
repr_markdown(obj, fenced = TRUE, ...)
```

Arguments

obj	Function to create a representation for
highlight	Should code highlighting be performed
...	ignored
fenced	Should a fenced code block instead of an indented one be used?

repr_*.help_files_with_topic *Representations of help*

Description

Representations of help

Usage

```
## S3 method for class 'help_files_with_topic'
repr_text(obj, ...)

## S3 method for class 'help_files_with_topic'
repr_html(obj, ...)

## S3 method for class 'help_files_with_topic'
repr_latex(obj, ...)
```

Arguments

obj	Help topic to create a representation for
...	ignored

`repr_*.htmlwidget` *HTML widget representations*

Description

Standalone HTML representation and dummy text representation.

Usage

```
html_dependencies

## S3 method for class 'htmlwidget'
repr_text(obj, ...)

## S3 method for class 'htmlwidget'
repr_html(obj, ...)

## S3 method for class 'shiny.tag'
repr_text(obj, ...)

## S3 method for class 'shiny.tag'
repr_html(obj, ...)

## S3 method for class 'shiny.tag.list'
repr_text(obj, ...)

## S3 method for class 'shiny.tag.list'
repr_html(obj, ...)
```

Arguments

obj	The htmlwidget, shiny.tag, or shiny.tag.list to create a representation for
...	ignored

Format

An object of class `environment` of length 4.

Details

`html_dependencies` is an environment containing the following functions. `getOption('repr.html.deduplicate')`

`get()` Get the list of added dependencies

`add(dep)` Marks a dependency as added. Call this e.g. after appending a script tag with the dependency.

`clear()` Clear the list as seen dependencies. Now everything will be added again when encountered.

`dir()` Returns the directory in which the dependencies reside.

`repr_*.list` *Representations of lists*

Description

Representations of lists

Usage

```
## S3 method for class 'list'
repr_html(obj, ...)

## S3 method for class 'list'
repr_markdown(obj, ...)

## S3 method for class 'list'
repr_latex(obj, ...)
```

Arguments

`obj`	The list to create a representation for
`...`	ignored

`repr_*.matrix/data.frame` *Tabular data representations*

Description

HTML, LaTeX, and Markdown representations of Matrix-like objects

Usage

```
## S3 method for class 'matrix'
repr_html(
  obj,
  ...,
  rows = getOption("repr.matrix.max.rows"),
  cols = getOption("repr.matrix.max.cols")
)

## S3 method for class 'data.frame'
repr_html(
  obj,
  ...,
  rows = getOption("repr.matrix.max.rows"),
  cols = getOption("repr.matrix.max.cols")
)

## S3 method for class 'matrix'
repr_latex(
  obj,
  ...,
  rows = getOption("repr.matrix.max.rows"),
  cols = getOption("repr.matrix.max.cols"),
  colspec = getOption("repr.matrix.latex.colspec")
)

## S3 method for class 'data.frame'
repr_latex(
  obj,
  ...,
  rows = getOption("repr.matrix.max.rows"),
  cols = getOption("repr.matrix.max.cols"),
  colspec = getOption("repr.matrix.latex.colspec")
)

## S3 method for class 'matrix'
repr_markdown(
  obj,
  ...,
  rows = getOption("repr.matrix.max.rows"),
  cols = getOption("repr.matrix.max.cols")
)

## S3 method for class 'data.frame'
repr_markdown(
  obj,
  ...,
  rows = getOption("repr.matrix.max.rows"),
```

```
  cols = getOption("repr.matrix.max.cols")
)

## S3 method for class 'matrix'
repr_text(
  obj,
  ...,
  rows = getOption("repr.matrix.max.rows"),
  cols = getOption("repr.matrix.max.cols")
)

## S3 method for class 'data.frame'
repr_text(
  obj,
  ...,
  rows = getOption("repr.matrix.max.rows"),
  cols = getOption("repr.matrix.max.cols")
)
```

Arguments

obj	The matrix or data.frame to create a representation for
...	ignored
rows	The maximum number of rows displayed. The default is given by the option repr.matrix.max.rows
cols	The maximum number of columns displayed. The default is given by the option repr.matrix.max.cols
colspec	The colspec for the LaTeX table. The default is given by the option repr.matrix.latex.colspec

See Also

repr-options for repr.matrix.latex.colspec

---

repr_*.packageIQR *packageIQR representations*

Description

Text representations of packageIQR objects like the list of available example data or vignettes

Usage

```
## S3 method for class 'packageIQR'
repr_text(obj, ...)

## S3 method for class 'packageIQR'
repr_html(obj, ...)
```

Arguments

obj	The packageIQR obj to create a representation for
...	ignored

Examples

```
repr_html(data(package = 'datasets'))
repr_text(vignette(package = 'highr'))
```

---

repr_*.recordedplot *Plot representations*

Description

repr_text.recordedplot only returns a small info string containing the title (if any) while the others return a character vector (SVG) or a raw vector (the rest) containing the image data.

Usage

```
## S3 method for class 'recordedplot'
repr_text(obj, ...)

## S3 method for class 'recordedplot'
repr_png(
  obj,
  width = getOption("repr.plot.width"),
  height = getOption("repr.plot.height"),
  bg = getOption("repr.plot.bg"),
  pointsize = getOption("repr.plot.pointsize"),
  antialias = getOption("repr.plot.antialias"),
  res = getOption("repr.plot.res"),
  ...
)

## S3 method for class 'recordedplot'
repr_jpg(
  obj,
  width = getOption("repr.plot.width"),
  height = getOption("repr.plot.height"),
  bg = getOption("repr.plot.bg"),
  pointsize = getOption("repr.plot.pointsize"),
  antialias = getOption("repr.plot.antialias"),
  res = getOption("repr.plot.res"),
  quality = getOption("repr.plot.quality"),
  ...
```

```
)

## S3 method for class 'recordedplot'
repr_svg(
  obj,
  width = getOption("repr.plot.width"),
  height = getOption("repr.plot.height"),
  bg = getOption("repr.plot.bg"),
  pointsize = getOption("repr.plot.pointsize"),
  antialias = getOption("repr.plot.antialias"),
  family = getOption("repr.plot.family"),
  ...
)

## S3 method for class 'recordedplot'
repr_pdf(
  obj,
  width = getOption("repr.plot.width"),
  height = getOption("repr.plot.height"),
  bg = getOption("repr.plot.bg"),
  pointsize = getOption("repr.plot.pointsize"),
  antialias = getOption("repr.plot.antialias"),
  family = getOption("repr.plot.family"),
  ...
)
```

Arguments

`obj`	The plot to create a representation for
`...`	ignored
`width`	Plot area width in inches (default: 7)
`height`	Plot area height in inches (default: 7)
`bg`	Background color (default: white)
`pointsize`	Text height in pt (default: 12)
`antialias`	Which kind of antialiasing to use for for lines and text? 'gray', 'subpixel' or 'none'? (default: gray)
`res`	For PNG and JPEG, specifies the PPI for rasterization (default: 120)
`quality`	For JPEG, determines the compression quality in % (default: 90)
`family`	Font family for SVG and PDF. 'sans', 'serif', 'mono' or a specific one (default: sans)

Details

All parameters can also be specified using the eponymous `repr.plot.*` repr-options.

Examples

```
dev.new()
dev.control(displaylist = 'enable')
plot(sqrt, main = 'Square root')
p <- recordPlot()
dev.off()

repr_text(p)
```

`repr_*.ts` *Time series representations*

Description

HTML, LaTeX, and Markdown representations of ts objects.

Usage

```
## S3 method for class 'ts'
repr_html(obj, ...)

## S3 method for class 'ts'
repr_latex(obj, ..., colspec = getOption("repr.matrix.latex.colspec"))

## S3 method for class 'ts'
repr_markdown(obj, ...)

## S3 method for class 'ts'
repr_text(obj, ...)
```

Arguments

`obj`	The ts object to create a representation for
`...`	ignored
`colspec`	The colspec for the LaTeX table. The default is given by the option `repr.matrix.latex.colspec`

See Also

repr-options for `repr.matrix.latex.colspec`

repr_*.vector *Representations of vectors*

Description

Representations of vectors

Usage

```
## S3 method for class 'logical'
repr_html(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'integer'
repr_html(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'complex'
repr_html(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'numeric'
repr_html(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'character'
repr_html(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'Date'
repr_html(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'logical'
repr_markdown(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'integer'
repr_markdown(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'complex'
repr_markdown(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'numeric'
repr_markdown(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'character'
repr_markdown(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'Date'
repr_markdown(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'logical'
repr_latex(obj, ..., items = getOption("repr.vector.max.items"))
```

```
## S3 method for class 'integer'
repr_latex(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'complex'
repr_latex(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'numeric'
repr_latex(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'character'
repr_latex(obj, ..., items = getOption("repr.vector.max.items"))

## S3 method for class 'Date'
repr_latex(obj, ..., items = getOption("repr.vector.max.items"))
```

Arguments

obj	The vector to create a representation for
...	ignored
items	The maximum number of items displayed. The default is given by the option repr.vector.max.items

---

repr_geojson.* *Representations of spatial objects: See geojson_list for supported classes.*

Description

Representations of spatial objects: See geojson_list for supported classes.

Usage

```
## S3 method for class 'geo_list'
repr_geojson(obj, ...)

## S3 method for class 'SpatialCollections'
repr_geojson(obj, ...)

## S3 method for class 'SpatialPolygons'
repr_geojson(obj, ...)

## S3 method for class 'SpatialPolygons'
repr_geojson(obj, ...)

## S3 method for class 'SpatialPolygonsDataFrame'
repr_geojson(obj, ...)
```

```
## S3 method for class 'SpatialPoints'
repr_geojson(obj, ...)

## S3 method for class 'SpatialPointsDataFrame'
repr_geojson(obj, ...)

## S3 method for class 'SpatialLines'
repr_geojson(obj, ...)

## S3 method for class 'SpatialLinesDataFrame'
repr_geojson(obj, ...)

## S3 method for class 'SpatialGrid'
repr_geojson(obj, ...)

## S3 method for class 'SpatialGridDataFrame'
repr_geojson(obj, ...)

## S3 method for class 'SpatialPixels'
repr_geojson(obj, ...)

## S3 method for class 'SpatialPixelsDataFrame'
repr_geojson(obj, ...)

## S3 method for class 'SpatialRings'
repr_geojson(obj, ...)

## S3 method for class 'SpatialRingsDataFrame'
repr_geojson(obj, ...)

## S3 method for class 'sf'
repr_geojson(obj, ...)

## S3 method for class 'sfg'
repr_geojson(obj, ...)

## S3 method for class 'sfc'
repr_geojson(obj, ...)
```

Arguments

obj	The spatial object to create a representation for
...	ignored

repr_plotly1.* *Representation as Plotly JSON.*

Description

Representation as Plotly JSON.

Usage

```
## S3 method for class 'plotly'
repr_plotly1(obj, ...)

## S3 method for class 'ggplot'
repr_plotly1(obj, ...)
```

Arguments

obj	The plot_ly plot or ggplot to create a representation for
...	ignored

repr_text *Text representation*

Description

The only representation defined per default for everthing (via print())

Usage

```
repr_text(obj, ...)

## Default S3 method:
repr_text(obj, ...)
```

Arguments

obj	The object to print and then return the output
...	ignored

See Also

repr-generics for other generics

repr_vega* *Representation as* vegalitev2 *or* vega4 *JSON.*

Description

Representation as vegalitev2 or vega4 JSON.

Usage

```
## S3 method for class 'vegalite'
repr_vegalite2(obj, ...)
```

Arguments

obj	The vegalite plot to create a representation for
...	ignored

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