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

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`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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