Package ‘Nozzle.R1’

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Type Package

Title Nozzle Reports

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Description The Nozzle package provides an API to generate HTML reports with dynamic user interface elements based on JavaScript and CSS (Cascading Style Sheets). Nozzle was designed to facilitate summarization and rapid browsing of complex results in data analysis pipelines where multiple analyses are performed frequently on big data sets. The package can be applied to any project where user-friendly reports need to be created.

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LazyLoad yes

Collate ‘nozzle.R’

Repository CRAN

Date/Publication 2013-01-08 19:18:56

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**R topics documented:**

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Description

Provides a high-level API to generate HTML reports with dynamic user interface elements.

Details

Package: Nozzle.R1
Type: Package
Version: 1.0-0
Date: 2013-01-08
License: LGPL (>= 2)
LazyLoad: yes

Nozzle was designed to facilitate summarization and rapid browsing of complex results in data analysis pipelines where multiple analyses are performed frequently on big data sets.

Note

The "R1" in the "Nozzle.R1" package name stands for "revision 1" of the Nozzle R API. All versions of the Nozzle.R1 package will be backwards-compatible and able to render reports generated with earlier versions of the package. When backwards-compatibility of the API can no longer maintained the package name will change to "Nozzle.R2".

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>
addTo

Add child elements to a parent element.

Description
Add child elements to a parent element.

Usage
addTo(parent, ..., row = NA, column = NA)

Arguments
parent Parent element.
... One or more child elements.
row If parent element is a table row and column indices must be provided to add supplementary results to cell in the table.
column If parent element is a table row and column indices must be provided to add supplementary results to cell in the table.

Value
Updated parent element.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

addToInput
Add elements to the "Input" subsection in the "Methods & Data" section of a standard report.

Description
Add elements to the "Input" subsection in the "Methods & Data" section of a standard report.

Usage
addToInput(report, ...)

References
addToIntroduction

Arguments

report        Report element.
...

Elements that will be added to the input section. Often these are paragraph elements.

Value

Updated report element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

addToIntroduction  Add elements to the "Introduction" subsection in the "Overview" section of a standard report.

Description

Add elements to the "Introduction" subsection in the "Overview" section of a standard report.

Usage

addToIntroduction(report, ...)

Arguments

report        Report element.
...

Elements that will be added to the introduction section. Often these are paragraph elements.

Value

Updated report element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>
addToMeta

Add elements to the "Meta" section of a standard report.

Description

Add elements to the "Meta" section of a standard report.

Usage

addToMeta(report, ...)

Arguments

report Report element.
...
Elements that will be added to the references section. These may be any ele-
ments.

Value

Updated report element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

addToMethods

Add elements to the "Methods & Data" section of a standard report.

Description

Add elements to the "Methods & Data" section of a standard report.

Usage

addToMethods(report, ...)

Arguments

report Report element.
...
Elements that will be added to the methods section. Often these are subsection
elements.

Value

Updated report element.
addToReferences
Add elements to the "References" subsection in the "Methods & Data" section of a standard report.

Description
Add elements to the "References" subsection in the "Methods & Data" section of a standard report.

Usage
addToReferences(report, ...)

Arguments
report Report element.
... Elements that will be added to the references section. These should be citation elements.
addToResults

**Value**
Updated report element.

**Author(s)**
Nils Gehlenborg <nils@hms.harvard.edu>

---

Add elements to the "Results" section of a standard report.

**Description**
Add elements to the "Results" section of a standard report.

**Usage**
addToResults(report, ...)

**Arguments**
- `report` Report element.
- `...` Elements that will be added to the results section. Often these are subsection elements.

**Value**
Updated report element.

**Author(s)**
Nils Gehlenborg <nils@hms.harvard.edu>

---

addToSummary

Add elements to the "Summary" subsection in the "Overview" section of a standard report.

**Description**
Add elements to the "Summary" subsection in the "Overview" section of a standard report.

**Usage**
addToSummary(report, ...)

---
Arguments

report Report element.

... Elements that will be added to the overview section. Often these are paragraph elements.

Value

Updated report element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>
**asEmph**

Format text with emphasis (usually resulting in text set in italics).

**Description**

Format text with emphasis (usually resulting in text set in italics).

**Usage**

```r
asEmph(...)  
```

**Arguments**

... One or more strings that will be concatenated.

**Value**

Text with emphasis.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>

---

**asFilename**

Format text as filename.

**Description**

Format text as filename.

**Usage**

```r
asFilename(...)  
```

**Arguments**

... One or more strings that will be concatenated.

**Value**

Text formatted as a filename.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>
asLink  

*Format text as a hyperlink.*

**Description**
Format text as a hyperlink.

**Usage**

\[
asLink(url, \ldots)
\]

**Arguments**

- **url**  
  URL to be for the link.

- **\ldots**  
  One or more strings that will be concatenated to form the text of the link.

**Value**

A hyperlink.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>

---

asParameter  

*Format text as parameter.*

**Description**
Format text as parameter.

**Usage**

\[
\text{asParameter}(\ldots)
\]

**Arguments**

- **\ldots**  
  One or more strings that will be concatenated.

**Value**

Text formatted as a parameter.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>
asReference

Reference a citation, figure or table element.

Description
Reference a citation, figure or table element.

Usage
asReference(element)

Arguments
element Citation, figure or table element.

Value
A reference string for the referenced element that will be resolved when the report is written to file and rendered to HTML.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

asStrong
Format text with strong emphasis (usually resulting in text set in bold).

Description
Format text with strong emphasis (usually resulting in text set in bold).

Usage
asStrong(...)  

Arguments
... One or more strings that will be concatenated.

Value
Text with strong emphasis.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
asSummary

Include a result in text. This is a legacy method and provided only for backwards compatibility.

Description

Include a result in text. This is a legacy method and provided only for backwards compatibility.

Usage

asSummary(result)

Arguments

result The result element.

Value

The result element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

asValue

Format text as value.

Description

Format text as value.

Usage

asValue(...)

Arguments

... One or more strings that will be concatenated.

Value

Text formatted as a value.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>
**DEFAULT.REPORT.FILENAME**

Default filename for reports.

**Description**

Default filename for reports.

**Usage**

```plaintext
DEFAULT.REPORT.FILENAME
```

**Format**

`chr "nozzle"`

---

**DEFAULT.SIGNIFICANT.ENTITY**

Name of entities that are labeled as significant.

**Description**

Name of entities that are labeled as significant.

**Usage**

```plaintext
DEFAULT.SIGNIFICANT.ENTITY
```

**Format**

`chr "statistically significant findings"`
getContactInformationEmail

Get contact email address for report.

Description
Get contact email address for report.

Usage
getContactInformationEmail(report)

Arguments
report Report element.

Value
Contact email address.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getContactInformationLabel

Get label for contact button for report.

Description
Get label for contact button for report.

Usage
getContactInformationLabel(report)

Arguments
report Report element.

Value
Contact email button label.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
getContactInformationMessage

Get contact email default message for report.

Description
Get contact email default message for report.

Usage
getContactInformationMessage(report)

Arguments
report Report element.

Value
Contact email default message.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getContactInformationSubject

Get contact email subject line for report.

Description
Get contact email subject line for report.

Usage
getContactInformationSubject(report)

Arguments
report Report element.

Value
Contact email subject line.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
**getCopyrightOwner**

*Get name of the copyright owner for report.*

**Description**

Get name of the copyright owner for report.

**Usage**

```
getCopyrightOwner(report)
```

**Arguments**

- `report`  Report element.

**Value**

Name of the copyright owner.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>

---

**getCopyrightStatement**

*Get copyright statement for report. This text is linked to the copyright URL.*

**Description**

Get copyright statement for report. This text is linked to the copyright URL.

**Usage**

```
getCopyrightStatement(report)
```

**Arguments**

- `report`  Report element.

**Value**

Text of the copyright statement.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>
getCopyrightUrl

Get copyright URL for report, which is linked to the copyright statement.

Description
Get copyright URL for report, which is linked to the copyright statement.

Usage
getCopyrightUrl(report)

Arguments
report Report element.

Value
Copyright URL.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getCopyrightYear

Get copyright year report.

Description
Get copyright year report.

Usage
getCopyrightYear(report)

Arguments
report Report element.

Value
Copyright year.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
getCreatorDate  
*Get date when report was created.*

**Description**
Get date when report was created.

**Usage**
```r
getCreatorDate(report)
```

**Arguments**
- `report` Report element.

**Value**
Date when report was created or NA.

**Author(s)**
Nils Gehlenborg <nils@hms.harvard.edu>

---

gerCreatorName  
*Get name and version of the Nozzle package that was used to create report.*

**Description**
Get name and version of the Nozzle package that was used to create report.

**Usage**
```r
gerCreatorName(report)
```

**Arguments**
- `report` Report element.

**Value**
Name and version of the Nozzle package that created report or NA.

**Author(s)**
Nils Gehlenborg <nils@hms.harvard.edu>
getCustomPrintCss

Get the path or URL of the CSS file to be used to overwrite the default print (not: screen) style sheet.

Description
Get the path or URL of the CSS file to be used to overwrite the default print (not: screen) style sheet.

Usage
getCustomPrintCss(report)

Arguments
report Report element.

Value
Path or URL of CSS file. Can be relative or absolute.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getCustomScreenCss

Get the path or URL of the CSS file to be used to overwrite the default screen (not: print) style sheet.

Description
Get the path or URL of the CSS file to be used to overwrite the default screen (not: print) style sheet.

Usage
getCustomScreenCss(report)

Arguments
report Report element.

Value
Path or URL of CSS file. Can be relative or absolute.
getExportedElement

**Description**

Get an exported element from a report. This can be used to generate aggregate reports. This is an experimental feature of Nozzle and may not lead to the expected results.

**Usage**

```java
getExportedElement(report, exportId)
```

**Arguments**

- `report`: The source report.
- `exportId`: The ID of the exported element. `getExportedElementIds` returns a list of exported element IDs.

**Value**

The exported report element or NULL if the ID does not exist in `report`.

**Note**

Elements containing references should not be exported since references cannot be resolved in the target report. Relative paths in exported elements may have to be adjusted manually if the target report will be located in a different directory.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>
getExportedElementIds

Get the IDs of exported elements from report. This is an experimental feature of Nozzle and may not lead to the expected results.

Description

Get the IDs of exported elements from report. This is an experimental feature of Nozzle and may not lead to the expected results.

Usage

getExportedElementIds(report)

Arguments

report The source report.

Value

The IDs of exported report elements or NULL.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

getFigureFile

Get path or URL of image file associated with a figure element.

Description

Get path or URL of image file associated with a figure element.

Usage

getFigureFile(element)

Arguments

element Figure element.

Value

Path or URL of the image file or NA if element is not a figure.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>
getFigureFileHighRes

Description
Get path or URL of high-resolution of vector-based image file associated with a figure element.

Usage
getFigureFileHighRes(element)

Arguments
- element: Figure element.

Value
Path or URL of the image file or NA if element is not a figure.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getGoogleAnalyticsId

Description
Get Google Analytics tracking ID for report.

Usage
getGoogleAnalyticsId(report)

Arguments

Value
Google Analytics Tracking ID or NA if not set.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
getLogo

Get logo file for one of six positions (three at the top, three at the bottom) in report.

Description
Get logo file for one of six positions (three at the top, three at the bottom) in report.

Usage
getLogo(report, position)

Arguments
- position: One of LOGO.TOP.LEFT, LOGO.TOP.CENTER, LOGO.TOP.RIGHT, LOGO.BOTTOM.LEFT, LOGO.BOTTOM.CENTER, LOGO.BOTTOM.RIGHT.

Value
Path or URL to the logo file at position.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getMaintainerAffiliation

Get affiliation of maintainer of report.

Description
Get affiliation of maintainer of report.

Usage
getMaintainerAffiliation(report)

Arguments

Value
Affiliation of the maintainer.
getMaintainerEmail

Get email address of maintainer of report.

Description
Get email address of maintainer of report.

Usage
getMaintainerEmail(report)

Arguments
report Report element.

Value
Email address of the maintainer.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getMaintainerName

Get name of maintainer of report.

Description
Get name of maintainer of report.

Usage
getMaintainerName(report)

Arguments
report Report element.

Value
Name of the maintainer.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
getRendererDate

Get date when report was rendered.

Description
Get date when report was rendered.

Usage
getRendererDate(report)

Arguments
report Report element.

Value
Date when report was rendered or NA.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getRendererName

Get name and version of the Nozzle package that was used to render report.

Description
Get name and version of the Nozzle package that was used to render report.

Usage
getRendererName(report)

Arguments
report Report element.

Value
Name and version of the Nozzle package that rendered report or NA.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
getReportId

Get the ID (a UUID) of report.

Description
Get the ID (a UUID) of report.

Usage
getReportId(report)

Arguments
report Report element.

Value
ID of report or NA.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getReportTitle

Get the title of report.

Description
Get the title of report.

Usage
getReportTitle(report)

Arguments
report Report element.

Value
Title of report

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
getSignificantEntity

Description
Get name of entities that are called out as significant, e.g. "gene". This is currently not being used and might become obsolete in future versions of Nozzle.

Usage
getSignificantEntity(report)

Arguments
report Report element.

Value
Name of entities called out as significant.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getSignificantResultsCount
Get the total number of significant results in report.

Description
Get the total number of significant results in report.

Usage
getSignificantResultsCount(report)

Arguments
report The report.

Value
Number of significant results.
getSoftwareVersion

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getSoftwareName
Get the name of the software that used Nozzle to generate report.

Description
Get the name of the software that used Nozzle to generate report.

Usage
getSoftwareName(report)

Arguments
report Report element.

Value
Name of the software that used Nozzle to generate report.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

getSoftwareVersion
Get the version of the software that used Nozzle to generate report.

Description
Get the version of the software that used Nozzle to generate report.

Usage
getSoftwareVersion(report)

Arguments
report Report element.

Value
Version of the software that used Nozzle to generate report.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
**getDescription**

Get the first element of the "Summary" subsection in the "Overview" section in a standard report.

**Description**

Get the first element of the "Summary" subsection in the "Overview" section in a standard report.

**Usage**

```plaintext
getDescription(report)
```

**Arguments**

- **report**
  The report.

**Value**

A report element.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>

---

**getTableFile**

Get path or URL of file associated with table element.

**Description**

Get path or URL of file associated with table element.

**Usage**

```plaintext
getTableFile(element)
```

**Arguments**

- **element**
  Table element.

**Value**

Path or URL.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>
<table>
<thead>
<tr>
<th>Output type</th>
<th>Description</th>
<th>Usage</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTML.FRAGMENT</td>
<td>Output type.</td>
<td>HTML.FRAGMENT</td>
<td>chr &quot;html_fragment&quot;</td>
</tr>
<tr>
<td>HTML.REPORT</td>
<td>Output type.</td>
<td>HTML.REPORT</td>
<td>chr &quot;html_standalone&quot;</td>
</tr>
<tr>
<td>IMAGE.TYPE.PDF</td>
<td>Image type.</td>
<td>IMAGE.TYPE.PDF</td>
<td>num 2</td>
</tr>
</tbody>
</table>

**Description**

Output type.

**Usage**

HTML.FRAGMENT

**Format**

chr "html_fragment"

**Description**

Output type.

**Usage**

HTML.REPORT

**Format**

chr "html_standalone"

**Description**

Image type.

**Usage**

IMAGE.TYPE.PDF

**Format**

num 2
**IMAGE.TYPE.RASTER**

Image type.

**Description**
Image type.

**Usage**
```javascript
IMAGE.TYPE.RASTER
```

**Format**
```javascript
num 0
```

**IMAGE.TYPE.SVG**

Image type.

**Description**
Image type.

**Usage**
```javascript
IMAGE.TYPE.SVG
```

**Format**
```javascript
num 1
```

**isFigure**
Test if element is a figure element.

**Description**
Test if element is a figure element.

**Usage**
```javascript
isFigure(element)
```

**Arguments**
- `element` Element to test.
Value
TRUE if the element is a figure, FALSE otherwise.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

---

**isTable**  
*Test if element is a table element.*

---

Description
Test if element is a table element.

Usage

```
isTable(element)
```

Arguments

- `element`  
  Element to test.

Value
TRUE if the element is a table, FALSE otherwise.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

---

**LOGO.BOTTOM.CENTER**  
*Logo position.*

---

Description
Logo position.

Usage

```
LOGO.BOTTOM.CENTER
```

Format

```
num 16
```
**LOGO.BOTTOM.LEFT**

<table>
<thead>
<tr>
<th>Logo Position</th>
<th>Description</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOGO.BOTTOM.LEFT</td>
<td>Logo position.</td>
<td>LOGO.BOTTOM.LEFT</td>
</tr>
<tr>
<td>Format</td>
<td>num 8</td>
<td></td>
</tr>
</tbody>
</table>

**LOGO.BOTTOM.RIGHT**

<table>
<thead>
<tr>
<th>Logo Position</th>
<th>Description</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOGO.BOTTOM.RIGHT</td>
<td>Logo position.</td>
<td>LOGO.BOTTOM.RIGHT</td>
</tr>
<tr>
<td>Format</td>
<td>num 32</td>
<td></td>
</tr>
</tbody>
</table>

**LOGO.TOP.CENTER**

<table>
<thead>
<tr>
<th>Logo Position</th>
<th>Description</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOGO.TOP.CENTER</td>
<td>Logo position.</td>
<td>LOGO.TOP.CENTER</td>
</tr>
<tr>
<td>Format</td>
<td>num 2</td>
<td></td>
</tr>
</tbody>
</table>
newCitation

Description

Create a citation element.

Usage

newCitation(authors = "", title, publication = "", issue = "", number = "", pages = "", year = ", url = "")
newCustomReport

Arguments

- authors: Names of authors.
- title: Title of the document.
- publication: Name of the publication where the document appeared.
- issue: Issue of the publication.
- number: Number of the publication.
- pages: Pages of the document in the publication.
- year: Year when the document was published.
- url: URL of the document.

Value

New element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

---

newCustomReport Create a new custom report without pre-defined sections.

Description

Create a new custom report without pre-defined sections.

Usage

newCustomReport(..., version = 0)

Arguments

- ...: One or more strings that will be concatenated into the report title.

Value

A new report element.

Author(s)

Nils Gehlenborg (nils@hms.harvard.edu)
newFigure

Create a new list element.

**Description**

Create a new list element.

**Usage**

```r
newFigure(file, ..., fileHighRes = NA,
    type = IMAGE.TYPE.RASTER, exportId = NULL,
    protection = PROTECTION.PUBLIC)
```

**Arguments**

- `file` Path or URL to the image file. Paths can be absolute or relative.
- `...` Strings that will be concatenated to form the figure caption.
- `fileHighRes` Path or URL to a high-resolution or vector-based version of the image file. Paths can be absolute or relative.
- `type` Currently only IMAGE.TYPE.RASTER is allowed.
- `exportId` Unique string to identify this element. Used to retrieve the element using `getExportedElement`.
- `protection` Protection level. One of PROTECTION.PUBLIC, PROTECTION.GROUP, PROTECTION.PRIVATE.

**Value**

New element.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>

---

newJournalCitation

Create a citation element that represents a document published in a journal. This is a convenience wrapper for `newCitation`.

**Description**

Create a citation element that represents a document published in a journal. This is a convenience wrapper for `newCitation`.

**Usage**

```r
newJournalCitation(authors, title, publication, issue,
    number, pages, year, url = ""
```
newList

Arguments

  authors       Names of authors.
  title         Title of the document.
  publication   Name of the publication where the document appeared.
  issue         Issue of the publication.
  number        Number of the publication.
  pages         Pages of the document in the publication.
  year          Year when the document was published.
  url           URL of the document.

Value

  New element.

Author(s)

  Nils Gehlenborg <nils@hms.harvard.edu>

newList         Create a new list element.

Description

  Create a new list element.

Usage

  newList(..., isNumbered = FALSE, exportId = NULL, 
           protection = PROTECTION.PUBLIC)

Arguments

  ...         Elements of type paragraph, list or result that will form the items in the list.
  isNumbered  If set to FALSE, the list will be unordered with bullet points. If set to TRUE, the 
              list will be numbered with arabic numerals.
  exportId    Unique string to identify this element. Used to retrieve the element using getExportedElement.
  protection  Protection level. One of PROTECTION.PUBLIC, PROTECTION.GROUP or 
              PROTECTION.PRIVATE.

Value

  New element.

Author(s)

  Nils Gehlenborg <nils@hms.harvard.edu>
newParagraph  

Create a new paragraph element.

Description
Create a new paragraph element.

Usage

newParagraph(..., exportId = NULL,  
protection = PROTECTION.PUBLIC)

Arguments

... Strings that will be concatenated to form the text of the paragraph.
exportId Unique string to identify this element. Used to retrieve the element using getExportedElement.
protection Protection level. One of PROTECTION.PUBLIC, PROTECTION.GROUP, PROTECTION.PRIVATE.

Value
New element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

newParameterList  

Create a new parameter list element. A parameter list is an unnumbered list of the form param_1 = value_1, ..., param_n = value_n where param_i is formatted as a parameter and value_i is formatted as a value.

Description
Create a new parameter list element. A parameter list is an unnumbered list of the form param_1 = value_1, ..., param_n = value_n where param_i is formatted as a parameter and value_i is formatted as a value.

Usage

newParameterList(..., separator = " = ", exportId = NULL,  
protection = PROTECTION.PUBLIC)
newReport

Arguments

... 2n strings that will be concatenated to form the parameter-value pairs. Strings at positions 1, ..., 2n - 1 will be treated as parameters 1 through n and strings at positions 2, ..., 2n will be treated as values 1 through n.

separator String to be used to separate parameters and values. Whitespace characters need to be supplied if required.

exportId Unique string to identify this element. Used to retrieve the element using getExportedElement.

protection Protection level. One of PROTECTION.PUBLIC, PROTECTION.GROUP, PROTECTION.PRIVATE.

Value

New element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

newReport  Create a new report with pre-defined sections Overview/Introduction, Overview/Summary, Results, Methods & Data/Input, Methods & Data/References and Meta Data.

Description

Create a new report with pre-defined sections Overview/Introduction, Overview/Summary, Results, Methods & Data/Input, Methods & Data/References and Meta Data.

Usage

newReport(..., version = 0)

Arguments

... One or more strings that will be concatenated into the report title.

version Version number. Not in use.

Value

A new report element.

Author(s)

Nils Gehlenborg (nils@hms.harvard.edu)
newResult | Create a new result element.

Description
Create a new result element.

Usage
newResult(..., isSignificant = FALSE,
        protection = PROTECTION.PUBLIC)

Arguments

... One or more strings that will be concatenated to form the text associated with
the result (often just a scalar or single string).

isSignificant If TRUE, the result will be declared significant.

protection Protection level. One of PROTECTION.PUBLIC, PROTECTION.GROUP, PRO-
       TECTION.PRIVATE.

Value
New element.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

---

newSection | Create a new section element.

Description
Create a new section element.

Usage
newSection(..., class = "", exportId = NULL,
        protection = PROTECTION.PUBLIC)
newSubSection

Arguments

... Strings that will be concatenated to form the section title.
class If set to SECTION.CLASS.RESULTS, results can be reported in this section. If set to SECTION.CLASS.META the section will be a meta data section.
exportId Unique string to identify this element. Used to retrieve the element using getExportedElement.
protection Protection level. One of PROTECTION.PUBLIC, PROTECTION.GROUP, PROTECTION.PRIVATE.

Value

New element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

newSubSection (Create a new subsection element)

Description

Create a new subsection element.

Usage

newSubSection(..., exportId = NULL,
protection = PROTECTION.PUBLIC)

Arguments

... Strings that will be concatenated to form the subsection title.
exportId Unique string to identify this element. Used to retrieve the element using getExportedElement.
protection Protection level. One of PROTECTION.PUBLIC, PROTECTION.GROUP, PROTECTION.PRIVATE.

Value

New element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>
newSubSubSection

Create a new subsubsection element.

Description

Create a new subsubsection element.

Usage

newSubSubSection(..., exportId = NULL,
  protection = PROTECTION.PUBLIC)

Arguments

... Strings that will be concatenated to form the subsubsection title.
exportId Unique string to identify this element. Used to retrieve the element using getExportedElement.
protection Protection level. One of PROTECTION.PUBLIC, PROTECTION.GROUP, PROTECTION.PRIVATE.

Value

New element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

newTable

Create new table element.

Description

Create new table element.

Usage

newTable(table, ..., file = NA,
  significantDigits = TABLE.SIGNIFICANT.DIGITS,
  exportId = NULL, protection = PROTECTION.PUBLIC)
newWebCitation

Arguments

- **table**: A matrix or data frame containing the table data. Column names will be extracted and used as column headers.
- **...**: Strings that will be concatenated to form the table caption.
- **file**: Path or URL to a file containing the full table. It is recommended to only show a relevant subset of all results in the report itself to increase readability.
- **significantDigits**: Number of significant digits used to trim all numeric columns. The default is TABLE.SIGNIFICANT.DIGITS.
- **exportId**: Unique string to identify this element. Used to retrieve the element using getExportedElement.
- **protection**: Protection level. One of PROTECTION.PUBLIC, PROTECTION.GROUP, PROTECTION.PRIV ATE.

Value

New element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

---

newWebCitation

*Create a citation element that represents a document published online.*

*This is a convenience wrapper for newCitation.*

Description

Create a citation element that represents a document published online. This is a convenience wrapper for newCitation.

Usage

```r
newWebCitation(authors, title, url)
```

Arguments

- **authors**: Names of authors.
- **title**: Title of the document.
- **url**: URL of the document.

Value

New element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>
PROTECTION.GROUP  Group visibility.

Description
Group visibility.

Usage
PROTECTION.GROUP

Format
num 5

PROTECTION.PRIVATE  Private visibility.

Description
Private visibility.

Usage
PROTECTION.PRIVATE

Format
num 10

PROTECTION.PUBLIC  Public visibility.

Description
Public visibility.

Usage
PROTECTION.PUBLIC

Format
num 0
<table>
<thead>
<tr>
<th><strong>PROTECTION.TCGA</strong></th>
<th><strong>Group visibility.</strong></th>
</tr>
</thead>
</table>

**Description**

Group visibility.

**Usage**

PROTECTION.TCGA

**Format**

num 5

<table>
<thead>
<tr>
<th><strong>RDATA.REPORT</strong></th>
<th><strong>Output type.</strong></th>
</tr>
</thead>
</table>

**Description**

Output type.

**Usage**

RDATA.REPORT

**Format**

chr "rdata"

<table>
<thead>
<tr>
<th><strong>SECTION.CLASS.META</strong></th>
<th><strong>Section class.</strong></th>
</tr>
</thead>
</table>

**Description**

Section class.

**Usage**

SECTION.CLASS.META

**Format**

chr "meta"
Description
Section class.

Usage

setContactInformation

Format

chr "results"

setContactInformation 
Set contact information for report. This is used to create a "contact" button in the top right corner of the report, e.g. to collect feedback about the report.

Description
Set contact information for report. This is used to create a "contact" button in the top right corner of the report, e.g. to collect feedback about the report.

Usage

setContactInformation(report, email, subject, message, 
label = NA)

Arguments

report 
Report element.

email 
Email address of the recipient of contact emails.

subject 
Subject of the email to be sent.

message 
Message used to pre-populate the email body.

label 
Label for the button, e.g. "Contact Us".

Value
Updated report element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>
**setCopyright**

Set copyright message for report.

**Description**

Set copyright message for report.

**Usage**

```r
setCopyright(report, owner, year, statement = NA, url = NA)
```

**Arguments**

- **report**: Report element.
- **owner**: Copyright owner, e.g. "The President and Fellows of Harvard College".
- **year**: Copyright year, e.g. "2012" or "2011-2013".
- **statement**: Copyright statement, e.g. "All rights reserved.".
- **url**: A URL that will be linked to the copyright owner.

**Value**

Updated report element.

**Author(s)**

Nils Gehlenborg <nils@hms.harvard.edu>

**setCustomPrintCss**

Set the path or URL of the CSS file to be used to overwrite the default print (not: screen) style sheet. Can be relative or absolute.

**Description**

Set the path or URL of the CSS file to be used to overwrite the default print (not: screen) style sheet. Can be relative or absolute.

**Usage**

```r
setCustomPrintCss(report, cssFile)
```

**Arguments**

- **report**: Report element.
- **cssFile**: URL or a relative or absolute path to a CSS file.
setFigureFile

Description
Set path or URL of image file associated with a figure element. Paths can relative or absolute.

Usage
setFigureFile(element, file)

setCustomScreenCss
Set the path or URL of the CSS file to be used to overwrite the default screen (not: print) style sheet. Can be relative or absolute.

Description
Set the path or URL of the CSS file to be used to overwrite the default screen (not: print) style sheet. Can be relative or absolute.

Usage
setCustomScreenCss(report, cssFile)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>report</td>
<td>Report element.</td>
</tr>
<tr>
<td>cssFile</td>
<td>URL or a relative or absolute path to a CSS file.</td>
</tr>
</tbody>
</table>

Value
Updated report element.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
setFigureFileHighRes

Arguments

- element: A figure element.
- file: Path or URL of the image file.

Value

Updated figure element or NA if `element` is not a figure.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

---

Description

Set path or URL of high-resolution or vector-based image file associated with a figure element. Paths can be relative or absolute.

Usage

```
setFigureFileHighRes(element, file)
```

Arguments

- element: A figure element.
- file: Path or URL of the image file.

Value

Updated figure element or NA if `element` is not a figure.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>
setGoogleAnalyticsId  
Set the Google Analytics tracking ID to be embedded in this report ("web property id", usually starts with "UA-").

Description
Set the Google Analytics tracking ID to be embedded in this report ("web property id", usually starts with "UA-").

Usage
setGoogleAnalyticsId(report, id)

Arguments
- id: Web property ID for the Google Analytics tracking account.

Value
Updated report element.

Note
A (free) Google Analytics account is required.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

References
http://www.google.com/analytics

setLogo  
Set a logo file for one of six positions (three at the top, three at the bottom) in report, e.g. an institute logo.

Description
Set a logo file for one of six positions (three at the top, three at the bottom) in report, e.g. an institute logo.

Usage
setLogo(report, filename, position)
Arguments

report Report element.
filename Path or URL to the logo file (relative) to the final location of the report HTML file.
position One of LOGO.TOP.LEFT, LOGO.TOP.CENTER, LOGO.TOP.RIGHT, LOGO.BOTTOM.LEFT, LOGO.BOTTOM.CENTER, LOGO.BOTTOM.RIGHT.

Value

Updated report element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>
setMaintainerEmail

Set email address of maintainer of report.

Description
Set email address of maintainer of report.

Usage
setMaintainerEmail(report, ...)

Arguments
- ...: One or more strings that will be concatenated to form the email address of the maintainer.

Value
Updated report element.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

setMaintainerName

Set name of maintainer of report.

Description
Set name of maintainer of report.

Usage
setMaintainerName(report, ...)

Arguments
- ...: One or more strings that will be concatenated to form the name of the maintainer.

Value
Updated report element.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
**setNextReport**

Set the URL and title of the "next" report after `report`. This will be accessible through the utility menu.

**Description**

Set the URL and title of the "next" report after `report`. This will be accessible through the utility menu.

**Usage**

`setNextReport(report, url, ...)`

**Arguments**

- `url`: URL of the next report.
- `...`: One or more strings that will be concatenated to form the title of the next report.

**Value**

Updated report element.

**Author(s)**

nils

**setParentReport**

Set the URL and title of the "parent" report above `report`. This will be accessible through the utility menu.

**Description**

Set the URL and title of the "parent" report above `report`. This will be accessible through the utility menu.

**Usage**

`setParentReport(report, url, ...)`

**Arguments**

- `url`: URL of the next report.
- `...`: One or more strings that will be concatenated to form the title of the parent report.
Value

Updated report element.

Author(s)

nils

---

**setPreviousReport**

*Set the URL and title of the "previous" report before report. This will be accessible through the utility menu.*

---

**Description**

Set the URL and title of the "previous" report before report. This will be accessible through the utility menu.

**Usage**

`setPreviousReport(report, url, ...)`

**Arguments**

- `report` Report object.
- `url` URL of the next report.
- `...` One or more strings that will be concatenated to form the title of the previous report.

**Value**

Updated report element.

**Author(s)**

nils
setReportTitle

Set the title of report.

Description

Set the title of report.

Usage

setReportTitle(report, ...)

Arguments

report Report element.
...
One or more strings that will be concatenated to form the title of the report.

Value

Updated report element or NA if report has no title element.

Author(s)

Nils Gehlenborg <nils@hms.harvard.edu>

setSignificantEntity Set name of entities that are called out as significant, e.g. "gene". This is currently not being used and might become obsolete in future versions of Nozzle.

Description

Set name of entities that are called out as significant, e.g. "gene". This is currently not being used and might become obsolete in future versions of Nozzle.

Usage

setSignificantEntity(report, ...)

Arguments

report Report element.
...
List of strings that will be concatenated to form the name of the entities.

Value

Updated report element.
setSoftwareVersion

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

setSoftwareName

Set the name of the software that used Nozzle to generate report, e.g. "My Report Generator Script".

Description
Set the name of the software that used Nozzle to generate report, e.g. "My Report Generator Script".

Usage
setSoftwareName(report, ...)

Arguments
report Report element.
... One or more strings that will be concatenated to form the name of the software.

Value
Updated report element.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

setSoftwareVersion

Set the name of the software that used Nozzle to generate report, e.g. "Version 1.2".

Description
Set the name of the software that used Nozzle to generate report, e.g. "Version 1.2".

Usage
setSoftwareVersion(report, ...)

Arguments
report Report element.
... One or more strings that will be concatenated to form the version of the software.
setTableFile

Value
Updated report element.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>

---

**setTableFile**

*Set path or URL of file associated with table element.*

---

**Description**
Set path or URL of file associated with table element.

**Usage**
```
setTableFile(element, file)
```

**Arguments**
- **element**
  Table element.
- **file**
  Path or URL to file.

**Value**
Updated element.

**Author(s)**
Nils Gehlenborg <nils@hms.harvard.edu>

---

**TABLE.SIGNIFICANT.DIGITS**

*Default number of significant digits to be used to trim numeric columns in tables.*

---

**Description**
Default number of significant digits to be used to trim numeric columns in tables.

**Usage**
```
TABLE.SIGNIFICANT.DIGITS
```

**Format**
```
num 2
```
writeReport  Write report to file.

Description
Write report to file.

Usage
writeReport(report, filename = DEFAULT.REPORT.FILENAME,
debug = FALSE, output = c(HTML.REPORT, RDATA.REPORT),
credits = TRUE, level = PROTECTION.PUBLIC,
debugCss = NA, debugJavaScript = NA)

Arguments
- report: The report to be written.
- filename: Name of the output file without file extension.
- debug: If TRUE, external CSS (debugCss) and JavaScript (debugJavaScript) can be supplied.
- output: A list of output formats. Any combination of HTML.REPORT and RDATA.REPORT is allowed.
- credits: If TRUE, a note and a link will be included at the bottom of the report to indicate that it was created with Nozzle.
- level: The protection level of the report. If set to PROTECTION.PUBLIC only elements with protection level PROTECTION.PUBLIC (default) will be included in the report. If set to PROTECTION.GROUP, then all elements with protection level PROTECTION.PUBLIC and PROTECTION.GROUP will be included. If set to PROTECTION.PRIVATE all elements will be included.
- debugCss: A path or URL to a CSS file that should be used instead of the built-in CSS. Only used if debug is TRUE.
- debugJavaScript: A path or URL to a JavaScript file that should be used instead of the built-in JavaScript. Only used if debug is TRUE.

Author(s)
Nils Gehlenborg <nils@hms.harvard.edu>
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