Package ‘rvest’

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Title Easily Harvest (Scrape) Web Pages
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Guess and repair faulty character encoding.

Description

These functions help you respond to web pages that declare incorrect encodings. You can use `guess_encoding` to figure out what the real encoding is (and then supply that to the `encoding` argument of `html`), or use `repair_encoding` to fix character vectors after the fact.

Usage

```r
guess_encoding(x)
repair_encoding(x, from = NULL)
```

Arguments

- `x` A character vector.
- `from` The encoding that the string is actually in. If `NULL`, `guess_encoding` will be used.

Description

These function are wrappers around tools from the fantastic stringi package, so you’ll need to make sure to have that installed.

Examples

```r
# A file with bad encoding included in the package
path <- system.file("html-ex", "bad-encoding.html", package = "rvest")
x <- read_html(path)
x %>% html_nodes("p") %>% html_text()

guess_encoding(x)
# Two valid encodings, only one of which is correct
read_html(path, encoding = "ISO-8859-1") %>% html_nodes("p") %>% html_text()
read_html(path, encoding = "ISO-8859-2") %>% html_nodes("p") %>% html_text()
```
**google_form**  
*Make link to google form given id*

**Description**

Make link to google form given id

**Usage**

```r
google_form(x)
```

**Arguments**

- `x` Unique identifier for form

**Examples**

```r
google_form("1M9B8DsYNFY0jpwSK6ur_bZf8Rv_04ma3rmaaBiveoUI")
```

---

**html_form**  
*Parse forms in a page.*

**Description**

Parse forms in a page.

**Usage**

```r
html_form(x)
```

**Arguments**

- `x` A node, node set or document.

**See Also**

HTML 4.01 form specification: [http://www.w3.org/TR/html401/interact/forms.html](http://www.w3.org/TR/html401/interact/forms.html)

**Examples**

```r
html_form(read_html("https://hadley.wufoo.com/forms/libraryrequire-quiz/"))
html_form(read_html("https://hadley.wufoo.com/forms/r-journal-submission/"))

box_office <- read_html("http://www.boxofficemojo.com/movies/?id=ateam.htm")
box_office %>% html_node("form") %>% html_form()
```
html_nodes

Select nodes from an HTML document

Description

More easily extract pieces out of HTML documents using XPath and CSS selectors. CSS selectors are particularly useful in conjunction with http://selectorgadget.com/: it makes it easy to find exactly which selector you should be using. If you haven’t used CSS selectors before, work your way through the fun tutorial at http://flukeout.github.io/

Usage

html_nodes(x, css, xpath)

html_node(x, css, xpath)

Arguments

x

Either a document, a node set or a single node.

css, xpath

Nodes to select. Supply one of css or xpath depending on whether you want to use a CSS or XPath 1.0 selector.

html_node vs html_nodes

html_node is like [[] i.e. it always extracts exactly one element. When given a list of nodes, html_node will always return a list of the same length, the length of html_nodes might be longer or shorter.

CSS selector support

CSS selectors are translated to XPath selectors by the selectr package, which is a port of the python cssselect library, https://pythonhosted.org/cssselect/.

It implements the majority of CSS3 selectors, as described in http://www.w3.org/TR/2011/REC-css3-selectors-20110929/. The exceptions are listed below:

- Pseudo selectors that require interactivity are ignored: :hover, :active, :focus, :target, :visited
- The following pseudo classes don’t work with the wild card element, *: *:first-of-type, *:last-of-type, *:nth-of-type, *:nth-last-of-type, *:only-of-type
- It supports :contains(text)
- You can use !=[foo!=bar] is the same as :not([foo=bar])
- :not() accepts a sequence of simple selectors, not just single simple selector.
Examples

# CSS selectors ----------------------------------------------
url <- paste0(
  "https://web.archive.org/web/20190202054736/",
  "https://www.boxofficemojo.com/movies/?id=ateam.htm"
)
ateam <- read_html(url)
html_nodes(ateam, "center")
html_nodes(ateam, "center font")
html_nodes(ateam, "center font b")

# But html_node is best used in conjunction with %>% from magrittr
# You can chain subsetting:
ateam %>% html_nodes("center") %>% html_nodes("td")
ateam %>% html_nodes("center") %>% html_nodes("font")

td <- ateam %>% html_nodes("center") %>% html_nodes("td")
td

# When applied to a list of nodes, html_nodes() returns all nodes,
# collapsing results into a new nodelist.
td %>% html_nodes("font")

# html_node() returns the first matching node. If there are no matching
# nodes, it returns a "missing" node
if (utils::packageVersion("xml2") > "0.1.2") {
  td %>% html_node("font")
}

# To pick out an element at specified position, use magrittr::extract2
# which is an alias for [[
library(magrittr)
ateam %>% html_nodes("table") %>% extract2(1) %>% html_nodes("img")
ateam %>% html_nodes("table") %>% extract(1) %>% html_nodes("img")

# Find all images contained in the first two tables
ateam %>% html_nodes("table") %>% extract(1:2) %>% html_nodes("img")
ateam %>% html_nodes("table") %>% extract(1:2) %>% html_nodes("img")

# XPath selectors ---------------------------------------------
# chaining with XPath is a little trickier - you may need to vary
# the prefix you're using - // always selects from the root node
# regardless of where you currently are in the doc
ateam %>%
  html_nodes(xpath = "//center//font//b") %>%
  html_nodes(xpath = "//b")

---

**html_session**

Simulate a session in an html browser.

**Description**

Simulate a session in an html browser.
Usage

```r
html_session(url, ...)

is.session(x)
```

Arguments

- `url`: Location to start session.
- `...`: Any additional httr config to use throughout session.
- `x`: An object to test to see if it's a session.

Methods

A session object responds to a combination of httr and html methods: use `httr::cookies()`, `httr::headers()`, and `httr::status_code()` to access properties of the request; and `html_nodes()` to access the html.

Examples

```r
# http://stackoverflow.com/questions/15853204

s <- html_session("http://hadley.nz")
s %>% jump_to("hadley-wickham.jpg") %>% jump_to("/") %>% session_history()
s %>% jump_to("hadley-wickham.jpg") %>% back() %>% session_history()
s %>% follow_link(css = "p a")
```

---

### html_table

Parse an html table into a data frame.

**Description**

Parse an html table into a data frame.

**Usage**

```r
html_table(x, header = NA, trim = TRUE, fill = FALSE, dec = ".")
```

**Arguments**

- `x`: A node, node set or document.
- `header`: Use first row as header? If NA, will use first row if it consists of `<th>` tags.
- `trim`: Remove leading and trailing whitespace within each cell?
- `fill`: If TRUE, automatically fill rows with fewer than the maximum number of columns with NAs.
- `dec`: The character used as decimal mark.
Assumptions

html_table currently makes a few assumptions:

- No cells span multiple rows
- Headers are in the first row

Examples

```r
sample1 <- minimal_html("<table>
  <tr><th>Col A</th><th>Col B</th></tr>
  <tr><td>1</td><td>x</td></tr>
  <tr><td>4</td><td>y</td></tr>
  <tr><td>10</td><td>z</td></tr>
</table>"

sample1 %>%
  html_node("table") %>%
  html_table()

# Values in merged cells will be duplicated
sample2 <- minimal_html("<table>
  <tr><th>A</th><th>B</th><th>C</th></tr>
  <tr><td>1</td><td>2</td><td>3</td></tr>
  <tr><td colspan=2>4</td><td>5</td></tr>
  <tr><td>6</td><td colspan=2>7</td></tr>
</table>"

sample2 %>%
  html_node("table") %>%
  html_table()

# If the table is badly formed, and has different number of columns
# in each row, use 'fill = TRUE' to fill in the missing values
sample3 <- minimal_html("<table>
  <tr><th>A</th><th>B</th><th>C</th></tr>
  <tr><td colspan=2>1</td><td>2</td></tr>
  <tr><td colspan=2>3</td></tr>
  <tr><td>4</td></tr>
</table>"

sample3 %>%
  html_node("table") %>%
  html_table(fill = TRUE)
```

---

**html_text**  
Extract attributes, text and tag name from html.

**Description**  
Extract attributes, text and tag name from html.
Usage

html_text(x, trim = FALSE)

html_name(x)

html_children(x)

html_attrs(x)

html_attr(x, name, default = NA_character_)

Arguments

x A document, node, or node set.
trim If TRUE will trim leading and trailing spaces.
name Name of attribute to retrieve.
default A string used as a default value when the attribute does not exist in every node.

Value

html_attr, html_tag and html_text, a character vector; html_attrs, a list.

Examples

movie <- read_html("https://en.wikipedia.org/wiki/The_Lego_Movie")
cast <- html_nodes(movie, "tr:nth-child(8) .plainlist a")
html_text(cast)
html_name(cast)
html_attrs(cast)
html_attr(cast, "href")

jump_to

Navigate to a new url.

Description

jump_to() takes a url (either relative or absolute); follow_link takes an expression that refers to a link (an <a> tag) on the current page.

Usage

jump_to(x, url, ...)
follow_link(x, i, css, xpath, ...)
Arguments

- **x**: A session.
- **url**: A URL, either relative or absolute, to navigate to.
- **...**: Any additional htr configs to apply to this request.
- **i**: You can select with:
  - **an integer**: selects the ith link
  - **a string**: first link containing that text (case sensitive)
- **css**: Nodes to select. Supply one of css or xpath depending on whether you want to use a CSS or XPath 1.0 selector.
- **xpath**: Nodes to select. Supply one of css or xpath depending on whether you want to use a CSS or XPath 1.0 selector.

Examples

```r
s <- html_session("http://hadley.nz")
s <- s %>% follow_link("github")
s <- s %>% back()
s %>% follow_link("readr")
```

---

**pluck**

Extract elements of a list by position.

Description

Extract elements of a list by position.

Usage

```r
pluck(x, i, type)
```

Arguments

- **x**: A list
- **i**: A string or integer.
- **type**: Type of output, if known
Description

History navigation tools

Usage

```r
session_history(x)

back(x)
```

Arguments

- `x`: A session.

---

### set_values

Set values in a form.

Description

Set values in a form.

Usage

```r
set_values(form, ...)
```

Arguments

- `form`: Form to modify
- `...`: Name-value pairs giving fields to modify

Value

An updated form object

Examples

```r
search <- html_form(read_html("http://www.google.com"))[1]
set_values(search, q = "My little pony")
set_values(search, hl = "fr")
## Not run: set_values(search, btnI = "blah")
```
Submit a form back to the server.

**Description**

Submit a form back to the server.

**Usage**

```r
submit_form(session, form, submit = NULL, ...)
```

**Arguments**

- `session`: Session to submit form to.
- `form`: Form to submit
- `submit`: Name of submit button to use. If not supplied, defaults to first submission button on the form (with a message).
- `...`: Additional arguments passed on to `httr::GET()` or `httr::POST()`

**Value**

If successful, the parsed html response. Throws an error if http request fails.
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