

# Package ‘HTMLUtils’

January 25, 2024

**Type** Package

**Title** Facilitates Automated HTML Report Creation

**Version** 0.1.9

**Date** 2024-01-10

**Depends** R2HTML

**Imports** methods, grDevices

**Suggests**

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**Description** Facilitates automated HTML report creation, in particular framed HTML pages and dynamically sortable tables.

**License** GPL

**LazyLoad** yes

**Repository** CRAN

**NeedsCompilation** no

**Date/Publication** 2024-01-25 20:00:03 UTC

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HTMLUtils-package      *Facilitates Automated HTML Report Creation*

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**Description**

Facilitates automated HTML report creation, in particular framed HTML pages and dynamically sortable tables.

**Details**

Package: HTMLUtils  
 Type: Package  
 Title: Facilitates Automated HTML Report Creation  
 Version: 0.1.7  
 Date: 2015-01-17  
 Depends: R2HTML  
 Suggests:  
 Author: "Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>  
 Maintainer: "Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>  
 License: GPL  
 LazyLoad: yes  
 Packaged: 2012-05-17 21:56:35 UTC; mloecher  
 Repository: CRAN  
 Date/Publication: 2012-05-18 05:59:13

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BasicHTML      *creates a basic HTML page displaying plots and annota*

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**Description**

Creates a basic HTML page displaying plots and annotations that can easily be navigated. The plots can be created either 'on the fly' by passing the appropriate commands or beforehand in which case just the filenames need to be passed.

**Usage**

```
BasicHTML(cmds = NULL, HTMLobjects, Captions, MenuLabels, Comments = NULL,
          file = "tmp.html", title = "", width = 480, height = 480,
          FRAMES = FALSE, JSPATH = "jsc", LaunchPage = FALSE, APPEND = FALSE,
          href = NULL, verbose = 0)
```

**Arguments**

cmds	list of commands that generates the plots. If missing, the graphfiles are assumed to exist already.
HTMLobjects	list of graph filenames, either to be created by the list of commands or to be copied to the Figures subdirectory and/or dataframes to be displayed in sortable tables.
Captions	vector of captions; these go directly below the graphs
MenuLabels	vector of labels for the main page.
Comments	Text/comments to be written between the graphs
file	file name of main page; '.html' extension will be added. The 'main' and 'menu' pages use this base as well.
title	title to be written in the navigation/menu page
width	width for all graphfiles
height	height for all graphfiles
FRAMES	is this an HTML page with frames ?
JSPATH	path that should contain the jsc components. If non existing, user will be prompted for installation.
LaunchPage	launch the page ?
APPEND	append to existing HTML page ?
href	links to other HTML pages
verbose	level of verbosity

**Value**

no return value

**Author(s)**

"Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>

**See Also**

[FramedHTML](#)

**Examples**

```

if (interactive()){
  owd=setwd(tempdir())

  BasicHTML(cmds = list("plot(rnorm(100));","plot(1:10);"),
            HTMLobjects = list("Fig1.png", "Fig2.png"),
            Captions=c("Gaussian noise","seq 1:10"),
            MenuLabels = c("Marvel at the graph below","scatterplots are nice"),
            title="Test Page",width=480, height=480, verbose=1, JSPATH = NULL)

```

#example with plots and graphfiles having been generated beforehand:

```

png("Fig1.png");
  plot(rnorm(100));
dev.off()
png("Fig2.png");
  plot(1:10);
dev.off();

```

```

BasicHTML( HTMLobjects = list("Fig1.png", "Fig2.png"),
           Captions=c("Gaussian noise","seq 1:10"),
           MenuLabels = c("Marvel at the graph below","scatterplots are nice"),
           title="Test Page",
           width=480, height=480, verbose=1, JSPATH = NULL);

```

#example with absolute paths for graphfiles :

```

Fig1 <- paste(tempdir(),"/Fig1.png",sep="")
png(Fig1);

```

```
    plot(rnorm(100));
  dev.off()

  Fig2 <- paste(tempdir(), "/Fig2.png", sep="")

  png(Fig2);

  plot(1:10);

  dev.off();

BasicHTML( HTMLObjects = list(Fig1, Fig2),

  Captions=c("Gaussian noise", "seq 1:10"),

  MenuLabels = c("Marvel at the graph below", "scatterplots are nice"), title="Test Page",

  width=480, height=480, verbose=1, JSPATH = NULL);

#cleanup:

#system(paste("rm ", Fig1));system(paste("rm ", Fig2))

#example with sorted table:

x <- cbind.data.frame(x1 = round(rnorm(10),3), x2 = round(runif(10),3));

attr(x, "HEADER") <- "some random numbers";

BasicHTML(HTMLObjects = list("Fig1.png", x, "Fig2.png"),

  Captions=c("Gaussian noise", "Gaussian and uniform random numbers", "seq 1:10"),

  file = paste(Sys.getenv("HOME"), "/public_html/tmp/tmp.html", sep=""),

  JSPATH = "../jsc");

setwd(owd)

}
```

**Description**

Creates a framed HTML page displaying plots and annotations that can easily be navigated. The plots can be created either 'on the fly' by passing the appropriate commands or beforehand in which case just the filenames need to be passed.

The user has a great deal of flexibility in choosing appropriate directory structures.

**Usage**

```
FramedHTML(cmds = NULL, basepath = c("./", paste(Sys.getenv("HOME"),
"/public_html/", sep = ""))[1], path = "tmp", Graphpath = "Figures/",
DiagnosticsPath = "Diagnostics", file = "tmp", HTMLobjects,
Captions, MenuLabels1, MenuLabels2, href = NULL, Comments = NULL,
title = "", width = 480, height = 480, FRAMES = FALSE, JSPATH = "jsc",
REFRESH = "", img.logo.path = paste(Sys.getenv("HOME"), "/public_html/",
sep = ""), img.logo = NULL, img.href = "http://www.sensenetworks.com",
APPEND = FALSE, verbose = 1)
```

**Arguments**

cmds	list of commands that generates the plots. If missing, the graphfiles are assumed to exist already.
basepath	base path of 'public_html' directory
path	subdirectory of basepath; will be created if non existing
Graphpath	subdirectory of 'basepath/path/' containing the graphfiles; will be created if non existing
DiagnosticsPath	subdirectory of 'basepath/path/' containing the graphfiles; will be created if non existing
file	file name of main page; '.html' extension will be added. The '_main' and '_menu' pages use this base as well.
HTMLobjects	list of graph filenames, either to be created by the list of commands or to be copied to the Figures subdirectory and/or dataframes to be displayed in sortable tables.
Captions	vector of captions; these go directly below the graphs
MenuLabels1	vector of labels for the menu navigation page. It helps to keep these succinct and short !.
MenuLabels2	vector of labels for the main page; these go on top of the individual graphs, so they are complementary to the captions.

href	links to other HTML pages
Comments	Text/comments to be written between the graphs
title	title to be written in the navigation/menu page
width	width for all graphfiles
height	height for all graphfiles
FRAMES	is this an HTML page with frames ?
JSPATH	path that should contain the jsc components. If non existing, user will be prompted for installation.
REFRESH	Meta refresh is a method of instructing a web browser to automatically refresh the current web page after a given time interval
img.logo.path	path to search for the logo pic in the frame
img.logo	filename of logo to display
img.href	link of logo to point to.
APPEND	append to existing HTML page ?
verbose	level of verbosity

**Value**

no return values

**Note**

There is not much error checking. In particular, the lengths of the arguments `cmds`, `graphfiles`, `Captions`, `MenuLabels1`, `MenuLabels2` need to be all the same !

**Author(s)**

"Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>

**See Also**

[BasicHTML](#)

**Examples**

```
if (interactive()){
  #example with plots and graphfiles being generated on the fly:
  owd=setwd(tempdir())
  system("mkdir Figures")

  FramedHTML(cmds = list("plot(rnorm(100));","plot(1:10);"),
```

```

HTMLObjects =list("Fig1.png", "Fig2.png"),
Captions=c("Gaussian noise","seq 1:10"),
MenuLabels1 = c("Label1","Label2"),
MenuLabels2 = c("Marvel at the graph below","scatterplots are nice"),
Comments = c("100 random numbers","Simple plot"), title="Test Page",
width=480, height=480, verbose=1)

```

#example with plots and graphfiles having been generated beforehand:

```

png("Fig1.png");
  plot(rnorm(100));
dev.off()
png("Fig2.png");
  plot(1:10);
dev.off();

```

```

FramedHTML( HTMLObjects = list("Fig1.png", "Fig2.png"),
  Captions=c("Gaussian noise","seq 1:10"),
MenuLabels1 = c("Label1","Label2"),
MenuLabels2 = c("Marvel at the graph below","scatterplots are nice"),
Comments = c("100 random numbers","Simple plot"), title="Test Page",
width=480, height=480, verbose=1);

```

#example with absolute paths for graphfiles :

```

Fig1 <- paste(tempdir(),"/Fig1.png",sep="")
png(Fig1);

```

```

    plot(rnorm(100));

dev.off()

Fig2 <- paste(tempdir(),"/Fig2.png",sep="")

png(Fig2);

    plot(1:10);

dev.off();

```

```

FramedHTML( HTMLObjects = list(Fig1, Fig2), Captions=c("Gaussian noise","seq 1:10"),

  MenuLabels1 = c("Label1","Label2"),

  MenuLabels2 = c("Marvel at the graph below","scatterplots are nice"),

  Comments = c("100 random numbers","Simple plot"),

  title="Test Page",width=480, height=480, verbose=1);

#cleanup:

#system(paste("rm ", Fig1));system(paste("rm ", Fig2))

#example with sorted table:

x <- cbind.data.frame(x1 = round(rnorm(10),3), x2 = round(runif(10),3));

attr(x, "HEADER") <- "some random numbers";

FramedHTML(HTMLObjects = list("Fig1.png", x, "Fig2.png"),

  MenuLabels1 = c("Label1","Label2","Label3"),

  MenuLabels2 = c("Marvel at the graph below","JavaScript rocks","scatterplots are nice"),

  Captions=c("Gaussian noise","Gaussian and uniform random numbers", "seq 1:10"),Comments = NULL,

  path = "tmp", file = "index");

#example with sorted tables only, no figures:

x <- cbind.data.frame(x1 = round(rnorm(10),3), x2 = round(runif(10),3));

attr(x, "HEADER") <- "some random numbers";

```

```
y <- cbind.data.frame(y1 = rbinom(10,50,0.3), y2 = rbinom(10,100,0.15));
attr(y, "HEADER") <- "rbinom";

FramedHTML(HTMLObjects = list( x, y),
            MenuLabels1 = c("x","y"),
            MenuLabels2 = c("JavaScript rocks","Secret numbers"),
            Captions=c("Gaussian and uniform random numbers", "Binomial draws"),Comments = NULL,
            path = "tmp", file = "index");

setwd(owd)
}
```

---

HTMLhref

*adds an href item to the current HTML page*

---

### **Description**

adds an href item to the current HTML page

### **Usage**

```
HTMLhref(href, txt, file = get(".HTML.file"), append = TRUE)
```

### **Arguments**

href	HTML reference/URL
txt	text to display
file	file to write to
append	append to file (default TRUE)

### **Author(s)**

"Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>

---

HTMLsortedTable	<i>create sortable table</i>
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**Description**

create sortable table using JavaScript components in JSCPATH directory

**Usage**

```
HTMLsortedTable(x, TITLE = "", HEADER = "", file = "tmp.html",  
                JSCPATH = "jsc", path = paste(Sys.getenv("HOME"), "/public_html/",  
                sep = ""), debug = 0)
```

**Arguments**

x	data frame or matrix with column names
TITLE	title for the HTML page
HEADER	header to display for the sorted table
file	file name of main page; '.html' extension will be added. The '_main' and '_menu' pages use this base as well.
JSCPATH	path that should contain the jsc components. If non existing, user will be prompted for installation.
path	directory to create the file in
debug	level of verbosity

**Author(s)**

"Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>

---

InstallJSC	<i>installs the JS components</i>
------------	-----------------------------------

---

**Description**

prompts the user to install the JS components to the relevant directory, which enables dynamically sortable tables.

**Usage**

```
InstallJSC(JSCPATH)
```

**Arguments**

JSPATH            path to install the jsc directory to. Recommended is the base public html directory.

**Author(s)**

"Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>

---

makePathName            *create appropriate directory structure if needed*

---

**Description**

create appropriate directory structure if needed

**Usage**

```
makePathName(path, MakePath = TRUE, verbose = 0)
```

**Arguments**

path            path to create  
MakePath        if yes, create directory if not exists  
verbose         level of verbosity

**Value**

returns absolute path

**Author(s)**

"Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>

---

myHTMLInitFile	<i>Begins / Ends a new HTML report output</i>
----------------	---

---

### Description

Those two functions handle the beginning and the ending of a HTML report, by writing the HTML `<body><head><title></title></head>...</body>` tags and their options. When working manually, the user may need to use it's own functions or to explicitly write to a file using `cat("", file=)`.

### Usage

```
myHTMLInitFile(outdir = tempdir(), filename = "index", extension = "html",

HTMLframe = TRUE, BackGroundColor = "FFFFFF", BackGroundImg = "",

Title = "R output", NavTitle = "", CSSFile = "R2HTML.css",

useLaTeX = TRUE, useGrid = TRUE, img.logo.path = paste(Sys.getenv("HOME"),

"/public_html/", sep = ""), img.logo = "logo-SenseNetworks.png",

img.href = "http://www.sensenetworks.com", JSPATH = NULL,

APPEND = FALSE, REFRESH = "")
```

### Arguments

outdir	directory to store the output
filename	target HTML report filename
extension	target HTML report extension (htm, html,...)
HTMLframe	should the output be handled by frames [boolean]
BackGroundColor	option bgcolor for HTML tag <code>&lt;body&gt;</code>
BackGroundImg	option background for HTML tag <code>&lt;body&gt;</code>
Title	string to pass to HTML <code>&lt;title&gt;</code> tag
NavTitle	title of navigation page
CSSFile	path and name of a CSS file to use

useLaTeX	boolean - add required references to javascript AsciiMathML in order to use as.latex
useGrid	boolean - add required references to javascript grid in order to use R2HTML grid functions
img.logo.path	path to search for the logo pic in the frame
img.logo	filename of logo to display, if NULL no logo to display!
img.href	link of logo to point to.
JSPATH	directory that contains the javascript code
APPEND	append to existing HTML page ?
REFRESH	Meta refresh is a method of instructing a web browser to automatically refresh the current web page after a given time interval.

**Author(s)**

"Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>

---

MyReportBegin

*gracefully initializes the HTML page*

---

**Description**

gracefully initializes the HTML page

**Usage**

```
MyReportBegin(file = "report.html", title = "My Report Title",
              header = NULL)
```

**Arguments**

file	filename
title	title for HTML page
header	header yes/no

**Author(s)**

"Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>

---

MyReportEnd                    *gracefully finalizes the HTML page*

---

**Description**

gracefully finalizes the HTML page

**Usage**

```
MyReportEnd(file = "report.html")
```

**Arguments**

file                    file to append to

**Author(s)**

"Markus Loecher, Berlin School of Economics and Law (BSEL)" <markus.loecher@gmail.com>

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