

MarkDoc (4.0) Stata Help Files

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1 markdoc

Title

markdoc — a general-purpose literate programming package for Stata that produces dynamic analysis documents in various formats, such as **pdf**, **docx**, **odt**, **html**, **epub**, **markdown**, presentation slides in **pdf** or **html**, as well as dynamic Stata package help files **sthlp**.

To improve applications of the package for developing educational materials and encouraging university lecturers to ask students to practice literate programming for taking notes or doing their semester projects, MarkDoc was programmed to include unique features. For example, it includes a syntax highlighter, it recognizes markdown, html, and latex markup languages, it can render latex mathematical notations in **pdf**, **docx**, **html**, **odt**, and **tex** documents, automatically capture graphs from Stata and include them in the document, creates dynamic tables, and supports writing dynamic text for interpreting the analysis. Moreover, a user-friendly GUI interface was developed for the package (try [db markdoc](#)) to make using **MarkDoc** easier for newbies. These features make the package a complete tool for documenting data analysis, Stata packages, as well as a tool for producing educational materials within Stata Do-file editor.

The source code of the project [is hosted on GitHub](#) and also, the package documentation [is hosted on GitHub wiki](#). all contributions to the package, including improving the documentation or providing further examples are welcome. further resources are available in the webpages below.

[Homepage](#)
[Journal Article](#)
[MarkDoc Documentation Manual](#)
[Release Notes](#)
[Examples](#)
[Please ask your questions on stataлист.org](#)

Syntax

produce dynamic documents , presentation slides , or help files interactively

```
markdoc filename [, pandoc(str) printer(str) install test replace export(name)
markup(name) numbered style(name) template(str) toc title(str) author(str)
affiliation(str) address(str) summary(str) date master statax noisily ]
```

where [filename](#) can be:

| | |
|-------------------|---|
| smcl | converts <i>smcl</i> log file to any of the supported document formats. The <i>smcl</i> log is used for creating <i>dynamic document</i> as well as <i>dynamic slides</i> . |
| do | executes the <i>do-file</i> in a "cleared workspace" and produces a <i>dynamic document</i> or <i>dynamic slides</i> . A cleared workspace ensures the reproducibility of the analysis because it neglects the data that is already loaded in Stata and requires the user to load the data that is used for the analysis in the <i>do-file</i> . |
| ado mata | MarkDoc handles Stata programs differently. It creates sthlp help files or package vignettes (pdf , html , docx , etc) from Stata programming script files. This process merely extracts the documentation from the source. The documentation can be written with either <i>smcl</i> or Markdown or a combination of both. |

MarkDoc package also includes a few more commands that can be used to facilitate writing the dynamic document or dynamic slides. These commands are briefly described below, while the [complete documentation is available on GitHub wiki](#):

write dynamic text using any of the supported markup languages. You can also use this command to write text within a loop or a program.

```
txt [code] [display_directive [display_directive [...]]]
```

include an image in the document. if *filename* is missing, **img** command captures, saves, and imports the current graph from Stata automatically.

```
img [filename] [, markup(str) title(str) width(int) height(int) markup(str) left
center ]
```

create a dynamic table in Markdown documents (Not supported in HTML and LaTeX). This command has several directives for styling the table, creating nested tables, and aligning the content of each column.

```
tbl ([, #... ] [\ #, #... ] [\ [...]] ) [, title(str)]
```

execute **pandoc** commands directly from Stata

```
pandoc command ]
```

convert html files to pdf using **wkhtmltopdf** software

```
wkhtmltopdf command ]
```

| MarkDoc options | Description |
|--------------------------|--|
| <u>pandoc</u> (str) | specify the path to Pandoc software on the operating system |
| <u>printer</u> (str) | specify the path to PDF driver on the operating system |
| <u>install</u> | Installs the required packages and software automatically on the user's machine, if they are not accessible |
| <u>test</u> | examines if MarkDoc is working properly by creating a test document |
| <u>replace</u> | replace the exported file if already exists |
| <u>export</u> (name) | exports the <i>smclfile</i> to any of the supported document formats which are pdf , slide (i.e. pdf slides), docx , odt , tex , html , epub , and md |
| <u>markup</u> (name) | specify the markup language used for writing the document and the default is Markdown |
| <u>numbered</u> | numbers Stata commands in the dynamic document. |
| <u>unc</u> | specify that markdoc is being accessed from a Windows server with UNC file paths |
| <u>style</u> (name) | specify the style of the document for HTML, PDF, Docx, and LaTeX documents. The available styles are simple , stata , and formal . If the document is exported in LaTeX format, the stata option (also if used with master option) will produce a LaTeX article in the Stata Journal style , even if the document is written in Markdown. In other words, you can write your stata journal article using Markdown . |
| <u>template</u> (str) | renders the document using an external style sheet file. When the document is written in Markdown or HTML and exported to HTML or PDF, a CSS filename can be specified to alter the appearance of the document. Similarly, when the document is written in Markdown and exported to Microsoft Word Docx or Open Office ODT, a reference document with the similar format can be used to alter the style of the exported document (i.e. create a reference document, change the styles and themes, and use it as a template file). If the document is written in LaTeX, this option can also be used to add the required packages to the dynamic document by providing a file that includes the packages and the template set up. |
| <u>toc</u> | creates table of content in PDF, Microsoft Word Docx, and LaTeX documents |
| <u>title</u> (str) | specify the title of the document |
| <u>author</u> (str) | specify the author of the document |
| <u>affiliation</u> (str) | specify the author affiliation in the document |
| <u>address</u> (str) | specify the author's contact information in the document |
| <u>summary</u> (str) | specify the summary of the document |
| <u>date</u> | specify the current date in the document |

| | |
|-----------------------|--|
| master | while creating a LaTeX or HTML document, MarkDoc only translates the content of the <code>smcl</code> file to <code>tex</code> or <code>html</code> respectively. Since the document does not include the required layout, it cannot be compiled (although it can be imported in a document). This option creates the layout in LaTeX and HTML to allow compiling the document. Many features of the HTML document (that are written with HTML markup) such as mathematical notations require this option. Otherwise, the user should build the layout from scratch. |
| build | when generating dynamic package documentation in <code>sthlp</code> format, the build option will also create the stata.toc and pkgname.pkg automatically, so that you can host an installable version of the package on GitHub or your personal website. |
| statax | highlights the syntax of Stata codes in the HTML and PDF documents using Statax , which is a JavaScript syntax highlighter engine for Stata |
| <u>noisily</u> | enables extended log for debugging markdoc |

Installation

The latest release as well as archived older versions of **markdoc** are hosted on [GitHub](#) website. MarkDoc receives weekly updates on GitHub so I recommend you to "watch" (subscribe) the repository's updates on GitHub to get the latest news about the package.

markdoc depends on several other Stata modules. If you have the [__github](#) package installed, you can install **markdoc** and all of its dependencies by typing:

```
. github install haghish/markdoc
```

The **github** command is used for searching, installing, and uninstalling Stata packages with their dependencies from GitHub website. to install the **github** command, type:

```
. net install github, from("https://haghish.github.io/github/")
```

Description

markdoc is a general-purpose literate programming package for Stata that produces *dynamic analysis documents*, *package vignette documentation*, *dynamic presentation slides*, as well as *dynamic Stata package help files*.

For creating a dynamic document or presentation slides, MarkDoc requires a `smcl` log-file as input and converts it to other formats. For generating dynamic Stata help files or package vignette documentation, MarkDoc requires a Stata script-file (`do`, `ado`, `mata`) as input and exports the documentations written within the source. Visit MarkDoc homepage for documentation about generating [dynamic Stata help files and documentations](#).

MarkDoc supports three different markup languages which are [Markdown](#), [HTML](#), and [LaTeX](#). All of these markup languages can also include an image in the document, support writing dynamic text, and creating dynamic table. MarkDoc can export documents in various file formats including **pdf** document and **slide**, Microsoft Office **docx**, Open Office and LibreOffice **odt**, LaTeX **tex**, **html**, **epub**, Markdown **md**, **slidy** HTML-based slide, and also **sthlp** and **smcl** for Stata documentation. If file format is not specified, MarkDoc creates a markdown **md** file. MarkDoc [requires the Weaver package](#) for making use of the **txt**, **tbl**, and **img** commands which are used for writing dynamic text, creating dynamic tables, and importing figures automatically in the document, respectively. MarkDoc also [requires the Statax package](#) which provides [a JavaScript syntax highlighter for Stata and Mata code](#) in HTML and PDF documents.

MarkDoc creates the dynamic documents by converting `smcl` log-file to other file formats mentioned above or parsing the documentation written in Stata script files. The documentation should be written within the source files using a special notations that are separated from regular comments. Weaving the dynamic document or dynamic slides can take place at any point without requiring closing the log-file, which provides live-preview of the document. This is the biggest advantage of MarkDoc and [Weaver](#) packages to other classic literate programming packages which cannot provide live-preview of the document in an interactive analysis session.

MarkDoc supports both Stata and [Mata](#) languages. Therefore, advanced users who work or program in Mata, can use Markdoc - with the same syntax and markup notation - to produce a dynamic document or slides, or document their programs. The same source that is used for generating dynamic Stata **sthlp** help files, can be used to produce Microsoft Word **docx**, **pdf**, etc.

For a more detailed documentation and examples, visit [MarkDoc Homepage](#).

Writing mathematical notation

markdoc can render LaTeX mathematical notations not only when the document is exported to LaTeX **tex**, but also when the document is exported to **pdf** document or **slide**, Microsoft Office **docx**, OpenOffice and LibreOffice **odt**, and **html**.

Mathematical notations can be inline a text paragraph or on a separate line. For writing inline notations, place the notation between single dollar signs (e.g. $10^2 + b^2 = c^2$). For including notation on a separate line, place the notations between double dollar signs (e.g. $10^2 + b^2 = c^2$). The example below demonstrates how to export a PDF presentation slides with notations:

```
. qui log using example, replace

/**
Mathematical notations can be inline a text paragraph e.g.  $a^2 + b^2 = c^2$ 
or on a separate line such as:

 $a^2 + b^2 = c^2$ 
**/

. qui log c
. markdoc example, export(slide) printer("/usr/texbin/pdflatex")
```

Inserting an image or figure in the document

Any of the supported markup languages can be used to insert a figure in the document. In general, there are two ways for inserting an image in the document. First, you can use Markdown, HTML, or LaTeX syntax for inserting an image — that is already saved in your hard drive — in the document. The other solution is using [img](#) command. **img** command can take the [filename](#) of exsisting image on the hard drive and print the markup code (Markdown, HTML, or LaTeX. the default is Markdown) int he document. **img** command can also auto-export the current graph and import it in the document. For more information in this regard see the [img help file](#) and also [Examples and explanations on MarkDoc homepage](#)

Writing dynamic text

the [txt](#) command is borrowed from [weaver](#) package to print dynamic text in the the exported dynamic document. It can be used for interpreting the analysis results or dynamically referring to values of scalars or macros in the dynamic document. Writing dynamic text allows the content of the text to change by altering analysis codes and thus is the desirable way for explaining the analysis results. The text and macros can be styled using any of the supported markup languages in MarkDoc which are *markdown*, *LaTeX*, and *HTML*. This command is fully documented in the [txt help file](#).

Creating dynamic tables with tbl command

the [tbl](#) command also belongs to [weaver](#) package. The syntax of this command is similar to [matrix input](#), however, it can include *String*, digits, scalars, and macros to create a dynamic table. This command is fully documented in the [tbl help file](#).

Markers

In addition to 3 markup languages, MarkDoc also introduces a few handy markers for annotating the smcl log-file. These markers can be used to specify what parts of the log-file should not appear in the dynamic document. The table below provides a brief summary of these annotating markers. In general, comments - unless they appear after a command - will be ignored in the dynamic document. However, the markers mentioned below are "special comments" that will influence the MarkDoc process.

| Marker | Description |
|---------------------------------|---|
| <u>Creating text block</u> | |
| <pre>/** ... **/</pre> | creates a block of comments in the smcl file that will be interpreted in the dynamic document |
| <u>Hiding command or output</u> | |
| <pre>/**/ command</pre> | only include the output in the dynamic document |
| <pre>/***/ command</pre> | only include the command in the dynamic document |
| <u>Hiding a section</u> | |

```
//OFF
```

```
...
```

Anything placed after "//OFF" until "//ON" markers will be **ignored** in the dynamic document

```
//ON
```

Appending external files

```
//IMPORT filename
```

Include an external text file (Markdown, HTML, LaTeX) to the dynamic document

Apart from the writing markers " /*** " and " ***/ ", which are used for writing text, the other markers **are not supported within loops**. Simply because smcl log-file does not print the output after each command in the loop. Nonetheless, writing markup text within the loop is not recommended either because it only gets printed once. For active writing within the loop or a program, see the [txt](#) command or [weaver](#) package.

Writing text in the do-file

As noted, MarkDoc package allows writing and styling text as a comment in the do file. Text can be placed between "/***" and "***/" signs, where these signs are placed on separate lines individually. Here is an example:

```
/***
```

```
Text heading
```

```
subheading
```

```
When you write a dynamic document in MarkDoc, place text between  
the "/***" and "***/" signs. But they should be placed on separate lines,  
as shown in this example.
```

```
***/
```

Hiding commands in dynamic document

Use "/**/" sign before each Stata command to hide it from the document. However, this sign does not hide the command outputs, but only the command itself.

Here is an example:

```
/**/ sysuse auto
```

```
/**/ regress price mpg
```

Hiding output in dynamic document

Use "/***/" sign before each Stata command to hide its output in the dynamic document. However, this sign does not hide the command itself, but only the output. In contrast to [quietly](#) command which hides the output in the smcl log, the "/***/" sign only eliminates the output in the dynamic document and the output will be registered in the smcl log file. Using this marker is very similar to the example above.

Hiding a large part of the smcl file

If you want to register several commands and outputs in the smcl log, but you wish to remove them from the dynamic document, begin the section you wish to hide with "//OFF" on a separate line as shown below. MarkDoc will ignore anything that comes after this marker until you specify "//ON" marker which will continue interpreting the smcl log. In contrast to turning the [log off](#) and [log on](#) for ignoring part of the code in the document, these markers allow you to save everything in the log file and yet, exclude them in the dynamic document. Note that these markers cannot be written in Stata interactively and should be placed or run from the do file.

```
//OFF
```

```
command
```

```
command
```

```
...
```

```
//ON
```

Supported markup languages

MarkDoc supports three markup languages which are [Markdown](#), [HTML](#), and [LaTeX](#). Whereas writing with Markdown allows exporting the document in any format (including HTML and LaTeX), writing with HTML or LaTeX requires exporting the document in **PDF** or **html** and **tex** format respectively. Markup languages should not be used together in one document because MarkDoc processes each markup language differently.

Markdown syntax

Writing with Markdown can make your script files appealing. It is a fairly minimalistic language which makes your text distinguishable from the computer code, in contrast to HTML and LaTeX, which add to the complexity of the code. To learn about using Markdown syntax for styling text and importing graphs, see [Writing with Markdown in Stata](#).

Software Installation

The MarkDoc package requires additional software which can be installed manually or automatically. The required software are [Pandoc](#) and [wkhtmltopdf](#) driver. They are both open-source freeware, supported for any common operating system such as Microsoft Windows, Macintosh, and Linux. Naturally, users who wish to use LaTeX markup for writing the documentation, will need a [TeX distribution with pdfLaTeX](#).

After a manual installation, the path to executable Pandoc should be specified in **pandoc(str)** option. Similarly, the path to executable wkhtmltopdf or pdfLaTeX should be given to **printer(str)** option. Note that the **printer(str)** option is only needed for compiling **pdf** document.

With automatic installation (i.e. using the **install** option), Pandoc and Wkhtmltopdf are downloaded and placed in Weaver directory which is located in /ado/plus/Weaver/ on your machine. To find the location of ado/plus/ directory on your machine use the [sysdir](#) command which returns the system directories. The usual complete paths to the Weaver directory are shown below. Note that username refers to your machine's username.

Windows: *C:\ado\plus\Weaver*

Macintosh: */Users/username/Library/Application Support/Stata/ado/plus/Weaver*

Unix: */home/username/ado/plus/Weaver*

Set file paths permanently

After manual installation, the paths to the executable Pandoc, wkhtmltopdf, and pdfLaTeX can be permanently set using **weave setup** command. This command will open *weaversetup.ado* document, where you can define the file paths as global

weave setup

Software troubleshoot

As mentioned, the required software can be installed manually or automatically. The optional automatic installation is expected to work properly in Microsoft Windows **XP**, Windows **7**, and Windows **8.1**, Macintosh **OSX 10.9.5**, Linux **Mint 17 Cinnamon** (32bit & 64bit), Ubuntu **14** (64bit), and **CentOS 7** (64bit). Other operating systems may require manual software installation.

However, if for some technical or permission reasons MarkDoc fails to download, access, or run Pandoc, install it manually and provide the file path to Pandoc using **pandoc(str)** option. visit [Installing Pandoc for Stata packages](#) for more information regarding manual installation of Pandoc.

Calling Pandoc

[Pandoc commands can also be executed from Stata](#). This command takes the path to the executable Pandoc from MarkDoc and allows you to use Pandoc seamlessly for converting files within Stata

```
pandoc ./example.tex -o ./example.html
```

Remarks

If the log-file is closed exactly using "**qui log c**" command, Markdoc automatically removes this command from the end of the file.

Similarly, MarkDoc removes "qui log off" from the logfile. Therefore "qui log off" and "qui log on" can be used to separate codes in the dofile that are not wanted in the dynamic document, but still required in for the analysis. Nonetheless, this is not a proper practice and can harm the transparency of the analytic session. The log-file should include as much information about the history of the analysis as possible. Use the "Markers" for hiding sections of the log-file in the dynamic document.

Dynamic Document Examples

```
set linesize 90

qui log using example, replace

/***
Introduction to MarkDoc (heading 1)


---



Using Markdown (heading 2)


---



Writing with __markdown__ syntax allows you to add text and graphs to
__smcl__ logfile and export it to a editable document format. I will demonstrate
the process by using the __Auto.dta__ dataset.

###Get started with MarkDoc (heading 3)
I will open the dataset, list a few observations, and export a graph.
Then I will export the logfile to Microsoft Office docx format.
***

/****/ sysuse auto, clear
/**/ list in 1/5
histogram price
graph export graph.png, width(400) replace

/***
Adding a graph or image in the report


---



Adding a graph using Markdown


---



In order to add a graph using Markdown, I export the graph in PNG format.
You can explain the graph in the "brackets" and define the file path in parentheses

![explain the graph](./graph.png)
***

qui log c

markdoc example, replace export(html) install
markdoc example, replace export(docx)
markdoc example, replace export(tex) master
markdoc example, replace export(pdf)
markdoc example, replace export(epub)
```

Dynamic Slide Examples

```
qui log using example, replace

/***


---


title:MarkDoc Dynamic Slides
author: E. F. Haghish


---



Slide 1


---



- Writing with __markdown__ syntax allows you to add text and graphs
to __smcl__ logfile and export it to a editable document format. I will demonstrate
the process by using the __Auto.dta__ dataset.

- I will open the dataset, list a few observations, and export a graph.
Then I will export the logfile to Microsoft Office docx format.

Adding commands and output


---


***/
```

```
sysuse auto, clear
histogram price    graph export graph.png, width(400) replace

/****
Adding image in a slide
-----

! [Histogram of the price variable] (./graph.png)
****/

qui log c markdoc example, replace export(slide) install printer("/usr/texbin/pdflatex")
```

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[MarkDoc Homepage](#)
Package Updates on [Twitter](#)

Also see

[Weaver](#): HTML & PDF Dynamic Report producer
[Statax](#): JavaScript syntax highlighter for Stata

This help file was dynamically produced by [MarkDoc Literate Programming package](#)

2 Additional programs

2.1 txt

Title

txt — Prints string and values of scalar expressions or macros in dynamic document. By default, the command writes a text paragraph. The primary purpose of the command is writing dynamic text to interpret analysis results in the dynamic document. This command belongs to [Weaver](#) package, but it also supports the [MarkDoc](#) package. The syntax for both packages is similar, but the **txt** command behaves differently based on which package is in use. If Weaver log is on, **txt** functions for Weaver package only. This document only describes the **txt** command in Weaver package. For using the command in [MarkDoc](#) package [see the MarkDoc documentation on GitHub wiki](#)

Syntax

Prints dynamic text on the Weaver log or smcl log. The **code** subcommand prints the output "as is" in the dynamic document.

```
txt [code] [display_directive [display_directive [...]]]
```

where the *display_directive* is

```
Weaver Markup
"double-quoted string "
`"compound double-quoted string "`
[%fmt] [=] exp
_skip(#)
_column(#)
_newline[(#)]
_dup(#)
'
''
```

Description

txt prints dynamic text i.e. strings and values of scalar expressions or macros in the Weaver or the smcl log-file. **txt** also prints output from the user-written Stata programs. Any of the supported markup languages can be used to alter the string and scalar expressions. This command is to some extent similar to **display** command in Stata. For example, it can be used to carry out a mathematical calculation by typing **txt 1+1**. It also supports many of the display directives as well.

Note that in contrast to the [display](#) command that prints the [scalar](#) unformatted, the **txt** command uses the default **%10.2f** format for displaying the scalar. This feature helps the users avoid specifying the format for every scalar, due to popularity of this format. However, specifying the format expression can overrule the default format. For example:

```
. scalar num = 10.123
. txt "The value of the scalar is " %5.1f num
```

The example above will print the scalar with only 1 decimal number. This feature only supports scalar interpretation and does not affect the [macro](#) contents.

Display directives

The supported *display_directive* s are used in do-files and programs to produce formatted output. The directives are

| Weaver Markup | A simplified markup language for annotating the content of the HTML log |
|------------------------------------|--|
| "double-quoted string " | displays the string without the quotes |
| `"compound double-quoted string "` | display the string without the outer quotes; allows embedded quotes |
| [% <i>fmt</i>] [=] exp | allows results to be formatted; see [U] 12.5 Formats: Controlling how data are displayed . |
| _ skip (#) | skips # columns |
| _ column (#) | skips to the #th column |
| _ newline | goes to a new line |
| _ newline (#) | skips # lines |
| _ dup (#) | repeats the next directive # times |
| , | displays one blank between two directives |

,,

places no blanks between two directives

Mathematical notations

The **txt** command can be used for writing mathematical notations in Weaver package, both in HTML and LaTeX log files. Writing mathematical notations in the HTML log is made possible by including **MathJax** engine, a JavaScript-based engine for rendering LaTeX notations in HTML format. To do so, notations should begin with `"\"` and end with `"\"` for rendering notations within the text and double dollar sign `"$"` or alternatively, the `"\[` and `"\"` for rendering notations in a separate line. For more information in this regard, see [mathematical notations](#) documentation.

When Weaver package is running, the **code** subcommand appends the dynamic text to the

Examples

As a hand calculator:

```
. txt 2 * 2
```

As might be used in do-files and programs:

```
. sysuse auto
. summarize price
. txt "mean of Price variable is " r(mean) " and SD is " %9.3f r(sd)
```

If the text only includes string and macro, the double quotations can be ignored. The **txt** command will interpret all of the *display_directives* and scalars as string (so it's not recommended):

```
. local n 9.9
. txt Not recommended, but you may also print the value of `n' without double quote
```

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[Weaver Homepage](#)

Package Updates on [Twitter](#)

This help file was dynamically produced by [MarkDoc Literate Programming package](#)

2.2 `img`

Title

img — captures and imports images and graphs into the dynamic document. This command belongs to [Weaver](#) package but it also supports the [MarkDoc](#) package. This document only describes **txt** in Weaver package. For using the command in MarkDoc package, [read the MarkDoc manual](#).

Syntax

Import graphical files in the dynamic document

```
img [using filename] [, title(str) width(int) height(int) left center ]
```

Automatically include the *current graph* from Stata in the dynamic document

```
img [, title(str) width(int) height(int) left center ]
```

Description

The **img** command imports images and graphs into the dynamic document. Any graphical file that is compatible with a web-browser can be inserted in the html log. This command belongs to [Weaver](#) package but it also supports the [MarkDoc](#) package. The syntax for both packages is the same but the **img** command behave differently based on which of the packages is in use. If Weaver html log and smcl log are open at the same time, the command only functions for Weaver and not for MarkDoc. In contrast, when Weaver html log is not open and scml log is on, it will function for MarkDoc package.

Options

title(str) specify a header string (title) for the figure

width(int) define the width of the figure. This option must be used with **height**(int) option. Otherwise, it will keep the actual height of the figure and only changes the width.

height(int) define the height of the figure. This option must be used with **width**(int) option for the same reason mentioned above.

left this option is the default and it aligns the figure to the left-side of the dynamic document.

center aligns the figure to the center of the dynamic document.

Examples

You have created a graph in Stata. Before importing in the HTML log, you should export it in a format that can be interpreted in html. Such as PNG which is recommended because it is lossless format and the same file can be used for publication.

```
. sysuse auto
. histogram price
. graph export price.png, replace

. img using price.png
. img using price.png, title("Histogram of the Price variable")
. img using price.png, w(300) h(200) center
```

Alternatively, the image can be obtained from Stata automatically

```
. histogram mpg
. img, title("Histogram of the MPG variable")
```

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[Weaver Homepage](#)

Package Updates on [Twitter](#)

2.3 tbl

Title

tbl — creates a dynamic table in **HTML**, **LaTeX**, or **Markdown**. It can also align each column to left, center, or right, and also create multiple-columns for hierarchical tables. This command belongs to [Weaver](#) package, but it also supports the [MarkDoc](#) package. For using the command in [MarkDoc](#) package [see the MarkDoc documentation on GitHub wiki](#)

Syntax

Creates dynamic table in HTML/Markdown

```
tbl (*[,*...] [\ *[,*...] [\ [...]]])    [, title(str) width(int) height(int) left center ]
```

where the ***** represents a *display directive* which is

```
"double-quoted string "  
`"compound double-quoted string "  
[%fmt] [=] exp  
,  
{l}  
{c}  
{r}  
{col #}
```

Display directives

The supported *display directive* s are:

| | |
|------------------------------------|---|
| "double-quoted string " | displays the string without the quotes |
| `"compound double-quoted string "' | display the string without the outer quotes; allows embedded quotes |
| [%fmt] [=] exp | allows results to be formatted; see [U] 12.5 Formats: Controlling how data are displayed |
| , | separates the directives of each column of the table |
| {l} | if placed before any of the directives mentioned above, this directive create a left-aligned column. |
| {c} | creates a center-aligned column. |
| {r} | creates a right-aligned column. |
| {col #} | if placed before any of the directives mentioned above, this directive will create a multi-column by merging # number of columns. |

Description

tbl is a command in [Weaver](#) package that creates a dynamic table in HTML or LaTeX, depending on the markup language used in Weaver log. If Weaver HTML is in use, **tbl** will be able to interpret the [Weaver Markup](#) codes as well as [Weaver mathematical notations](#). In other words, Weaver Markups and Weaver mathematical notations can be used as a display directives within the **tbl** command to alter other directives or display mathematical signs and formulas. Advanced users can also use HTML code to alter the table.

If LaTeX markup is used for creating the Weaver log, then **tbl** command creates a LaTeX table. However, neither [Weaver Markup](#) nor [Weaver mathematical notations](#) are not supporting LaTeX. Instead, LaTeX mathematical notations can be used for writing mathematical notations or altering the table.

Remarks

Note that the **tbl** command parses the rows using the backslash symbol. Therefore, to include LATEX notations in a dynamic table that begin with a backslash such as **\beta** or **95\%**, double backslash should be used to avoid conflict with the parsing syntax (e.g. **\\beta** and **95\\%**)

Examples

```
creating a simple 2x3 table with string and numbers  
. tbl ("Column 1", "Column 2", "Column 3" \ 10, 100, 1000 )
```

creating a table that includes scalars and aligns the columns to left, center, and right respectively

```
. tbl ({l}"Left", {c}"Centered", {r}"Right" \ c(os), c(machine_type), c(username))
```

write mathematical notations

```
. tbl ("\"( \\beta \)", "\"( \\epsilon \)" \ "\"( \\sum \)", "\"( \\prod \)")
```

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[Weaver Homepage](#)

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3 Calling third-party software within Stata

3.1 pandoc

Title

pandoc — executing [Pandoc](#) from Stata seamlessly

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Syntax

pandoc [*anything*] [, *options*]

| <i>options</i> | Description |
|--------------------|--|
| pandoc(str) | path to executable pandoc on the operating system |
| install | installs a portable version of Pandoc, if it is not accessible |

Description

[Pandoc](#) is a document convertor freeware. The [MarkDoc](#) package uses this application to produce dynamic documents, slides, and package documentation. This program is a supplementary command that allows using this application for other purposes, outside MarkDoc.

Example

executing Pandoc command
`. pandoc filename -o filename`

adding more Pandoc arguments
`. pandoc -s -S filename -o filename`

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3.2 wkhtmltopdf

Title

wkhtmltopdf — renders **html** documents to **pdf** within Stata

Syntax

```
wkhtmltopdf [options] filename.html filename.pdf
```

See the [options](#) which is a link to the **wkhtmltopdf** manual, explaining the arguments you can add to adjust the pdf output.

Description

[MarkDoc](#) requires the [wkhtmltopdf](#) software to convert **html** to **pdf** without requiring installing LaTeX. Moreover, **MarkDoc** provides automatic installation of wkhtmltopdf which is very convenient.

However, **MarkDoc** is not the only software that deals with documents in Stata and many users show interest to create dynamic documents in their own way. To help them create **pdf** documents, this command was created to convert their **html** documents to **pdf**.

Example

```
convert html file to pdf
. wkhtmltopdf myfile.html myfile.pdf
```

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