

dyntext — Process Stata dynamic tags in text file

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Description

`dyntext` converts a dynamic text file—a file containing both plain text and Stata commands—to an output file in text format. Stata processes the Stata dynamic tags (see [\[RPT\] Dynamic tags](#)) in the dynamic text file and creates the output text file.

If you want to convert a dynamic text file to an HTML or Word (`.docx`) document, see [\[RPT\] dyndoc](#). If you want to convert a Markdown document to an HTML or Word document, see [\[RPT\] markdown](#).

Quick start

Convert text file `myfile.txt` with Stata dynamic tags to a text file `output.txt` with Stata output `dyntext myfile.txt, saving(output.txt)`

Same as above, and overwrite the existing `output.txt`
`dyntext myfile.txt, saving(output.txt) replace`

Syntax

```
dyntext srcfile [arguments], saving(targetfile) [options]
```

srcfile is a plain text file containing [Stata dynamic tags](#). *srcfile* and *targetfile* may be any text format (`.txt`, `.html`, `.do`).

arguments are stored in the local macros ‘1’, ‘2’, and so on for use in *srcfile*; see [\[U\] 16.4.1 Argument passing](#).

You may enclose *srcfile* and *targetfile* in double quotes and must do so if they contain blanks or other special characters.

<i>options</i>	Description
* <u>s</u> aving(<i>targetfile</i>)	specify the target file to be saved
<u>r</u> eplace	replaces the target file if it already exists
<u>n</u> oremove	do not process <code><<dd_remove>></code> and <code><</dd_remove>></code> dynamic tags
<u>n</u> ostop	do not stop when an error occurs

* `saving(targetfile)` is required.

Options

`saving(targetfile)` specifies the target file to be saved. `saving()` is required.

`replace` specifies that the target file be replaced if it already exists.

`noremove` specifies that `<<dd_remove>>` and `<</dd_remove>>` tags not be processed.

`nostop` allows the document to continue being processed even if an error occurs. By default, `dyntext` stops processing the document if an error occurs. The error can be caused either by a malformed dynamic tag or by executing Stata code within the tag.

Remarks and examples

[stata.com](http://www.stata.com)

A dynamic document contains both static narrative and dynamic tags. Dynamic tags are instructions for `dyntext` to perform a certain action, such as run a block of Stata code, insert the result of a Stata expression in text, export a Stata graph to an image file, or include a link to the image file. Any changes in the data or in Stata will change the output as the document is created. The main advantages of using dynamic documents are

- results in the document come from executing commands instead of being copied from Stata and pasted into the document;
- no need to maintain parallel do-files; and
- any changes in data or in Stata are reflected in the final document when it is created.

► Example 1

Let's consider an example. Suppose that we have `dyntext_ex.txt` with the following text that includes [Stata dynamic tags](#). Because we are writing in plain text, we use `-` to indicate Stata command names, variable names, etc.

----- begin dyntext_ex.txt -----

```
<<dd_version: 2>>
```

```
Using Stata dynamic tags in a text file with the -dyntext- command
```

```
=====
```

```
Let us consider an example where we study the -mpg- and -weight- variables in
-auto.dta-. In our examples below, we will first write the commands so that
they will be displayed in our output text file. Then, we will write the
commands so that Stata will process the Stata dynamic tags, displaying the
results of the Stata commands in the output text file.
```

```
We first use the -sysuse- command to load the dataset and then describe
the data using the -describe- command.
```

```
<<dd_ignore>>
<<dd_do>>
sysuse auto, clear
describe
<</dd_do>>
<</dd_ignore>>
```

```
This produces the following Stata results:
```

```
<<dd_do>>
sysuse auto, clear
describe
<</dd_do>>
```

```
Now, we want to check if -mpg- is always greater than 0 and less than 100.
We use the -assert- command to perform the check. In this case, we do not
```

want to include any output in the output text file, so we use the `-quietly-` attribute to modify the behavior of the `-dd_do-` Stata dynamic tag.

```
<<dd_ignore>>
<<dd_do:quietly>>
assert mpg > 0 & mpg < 100
<</dd_do>>
<</dd_ignore>>

<<dd_do:quietly>>
assert mpg > 0 & mpg < 100
<</dd_do>>
```

If the data do not satisfy the conditions, `-dyntext-` will fail with an error message, which will occur if we run the same `-assert-` command in a do-file.

Next, we want to summarize the `-weight-` variable:

```
<<dd_ignore>>
<<dd_do>>
summarize weight
<</dd_do>>
<</dd_ignore>>
```

This produces the following in the output text file:

```
<<dd_do>>
summarize weight
<</dd_do>>
```

We want to use the minimum and maximum values of `-weight-` in a sentence. Instead of copying and pasting the numbers from the `-summarize-` output, we can use the `-dd_display-` Stata dynamic tag with the `-r(min)-` and `-r(max)-` stored results

```
<<dd_ignore>>
The variable weight has minimum value <<dd_display: %4.2f 'r(min)'\>> and
has maximum value <<dd_display: %4.2f 'r(max)'\>>.
<</dd_ignore>>
```

which produces the following in the output text file:

```
> The variable weight has minimum value <<dd_display: %4.2f 'r(min)'\>>
and has maximum value <<dd_display: %4.2f 'r(max)'\>>.
```

The `-dd_display-` dynamic tag uses Stata's `-display-` command to evaluate expressions. It can be used as a calculator. For example, if we want to include the range = max - min in a sentence, instead of calculating the number and then copying and pasting it, we can use

```
<<dd_ignore>>
The variable weight has range <<dd_display: %4.2f 'r(max)'\-'r(min)'\>>.
<</dd_ignore>>
```

which produces the following in the output text file:

```
> The variable weight has range <<dd_display: %4.2f 'r(max)'\-'r(min)'\>>.
```

end dyntext_ex.txt

We can copy this file to our working directory by typing

```
. copy https://www.stata-press.com/data/r18/reporting/dyntext_ex.txt .
```

To generate the output file in Stata, we then type

```
. dyntext dyntext_ex.txt, saving(dyntext_res.txt)
```

which produces the following:

Using Stata dynamic tags in a text file with the `-dyntext-` command

Let us consider an example where we study the `-mpg-` and `-weight-` variables in `-auto.dta-`. In our examples below, we will first write the commands so that they will be displayed in our output text file. Then, we will write the commands so that Stata will process the Stata dynamic tags, displaying the results of the Stata commands in the output text file.

We first use the `-sysuse-` command to load the dataset and then describe the data using the `-describe-` command.

```
<<dd_do>>
sysuse auto, clear
describe
<</dd_do>>
```

This produces the following Stata results:

```
. sysuse auto, clear
(1978 automobile data)
. describe
Contains data from /usr/local/stata17/ado/base/a/auto.dta
Observations:      74      1978 automobile data
Variables:         12      13 Apr 2020 17:45
                        (_dta has notes)
```

Variable name	Storage type	Display format	Value label	Variable label
make	str18	%-18s		Make and model
price	int	%8.0gc		Price
mpg	int	%8.0g		Mileage (mpg)
rep78	int	%8.0g		Repair record 1978
headroom	float	%6.1f		Headroom (in.)
trunk	int	%8.0g		Trunk space (cu. ft.)
weight	int	%8.0gc		Weight (lbs.)
length	int	%8.0g		Length (in.)
turn	int	%8.0g		Turn circle (ft.)
displacement	int	%8.0g		Displacement (cu. in.)
gear_ratio	float	%6.2f		Gear ratio
foreign	byte	%8.0g	origin	Car origin

Sorted by: foreign

Now, we want to check if `-mpg-` is always greater than 0 and less than 100. We use the `-assert-` command to perform the check. In this case, we do not want to include any output in the output text file, so we use the `-quietly-` attribute to modify the behavior of the `-dd_do-` Stata dynamic tag.

```
<<dd_do:quietly>>
assert mpg > 0 & mpg < 100
<</dd_do>>
```

If the data do not satisfy the conditions, `-dyntext-` will fail with an error message, which will occur if we run the same `-assert-` command in a do-file.

Next, we want to summarize the `-weight-` variable:

```
<<dd_do>>
summarize weight
<</dd_do>>
```

This produces the following in the output text file:

```
. summarize weight
Variable |      Obs      Mean   Std. dev.      Min      Max
-----+-----
weight  |      74  3019.459   777.1936     1760    4840
```

We want to use the minimum and maximum values of `-weight-` in a sentence. Instead of copying and pasting the numbers from the `-summarize-` output, we can use the `-dd_display-` Stata dynamic tag with the `-r(min)-` and `-r(max)-` stored results

The variable `weight` has minimum value `<<dd_display: %4.2f 'r(min)'\>>` and has maximum value `<<dd_display: %4.2f 'r(max)'\>>`.

which produces the following in the output text file:

```
> The variable weight has minimum value 1760.00
and has maximum value 4840.00.
```

The `-dd_display-` dynamic tag uses Stata's `-display-` command to evaluate expressions. It can be used as a calculator. For example, if we want to include the range = max - min in a sentence, instead of calculating the number and then copying and pasting it, we can use

The variable `weight` has range `<<dd_display: %4.2f 'r(max)'\-'r(min)'\>>`.

which produces the following in the output text file:

```
> The variable weight has range 3080.00.
```

end dyntext_res.txt



□ Technical note

Because `quietly` and `capture` suppress the results of the command from being produced, you should not use these prefix commands with Stata code to be converted by `dyntext`.



References

- Gillman, M. S. 2018. [Some commands to help produce Rich Text Files from Stata](#). *Stata Journal* 18: 197–205.
- Jann, B. 2016. [Creating L^AT_EX documents from within Stata using texdoc](#). *Stata Journal* 16: 245–263.

Also see

- [RPT] [Dynamic documents intro](#) — Introduction to dynamic documents
- [RPT] [Dynamic tags](#) — Dynamic tags for text files
- [RPT] [dyndoc](#) — Convert dynamic Markdown document to HTML or Word (.docx) document
- [RPT] [markdown](#) — Convert Markdown document to HTML file or Word (.docx) document

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