

levelsof — Levels of variable

Syntax	Description	Options	Remarks and examples
Stored results	Acknowledgments	References	Also see

Syntax

```
levelsof varname [if] [in] [, options]
```

<i>options</i>	Description
<code>clean</code>	display string values without compound double quotes
<code>local(<i>macname</i>)</code>	insert the list of values in the local macro <i>macname</i>
<code>missing</code>	include missing values of <i>varname</i> in calculation
<code>separate(<i>separator</i>)</code>	separator to serve as punctuation for the values of returned list; default is a space

Description

`levelsof` displays a sorted list of the distinct values of *varname*.

Options

`clean` displays string values without compound double quotes. By default, each distinct string value is displayed within compound double quotes, as these are the most general delimiters. If you know that the string values in *varname* do not include embedded spaces or embedded quotes, this is an appropriate option. `clean` does not affect the display of values from numeric variables.

`local(macname)` inserts the list of values in local macro *macname* within the calling program's space. Hence, that macro will be accessible after `levelsof` has finished. This is helpful for subsequent use, especially with `foreach`; see [P] [foreach](#).

`missing` specifies that missing values of *varname* be included in the tabulation. The default is to exclude them.

`separate(separator)` specifies a separator to serve as punctuation for the values of the returned list. The default is a space. A useful alternative is a comma.

Remarks and examples

[stata.com](#)

`levelsof` serves two different functions. First, it provides a compact list of the distinct values of *varname*. More commonly, it is useful when you desire to cycle through the distinct values of *varname* with (say) `foreach`; see [P] [foreach](#). `levelsof` leaves behind a list in `r(levels)` that may be used in a subsequent command.

`levelsof` may hit the limits imposed by your Stata. However, it is typically used when the number of distinct values of *varname* is modest.

The terminology of levels of a factor has long been standard in experimental design. See [Cochran and Cox \(1957, 148\)](#), [Fisher \(1942\)](#), or [Yates \(1937, 5\)](#).

▷ Example 1

```
. use http://www.stata-press.com/data/r13/auto
(1978 Automobile Data)

. levelsof rep78
1 2 3 4 5

. display "r(levels)"
1 2 3 4 5

. levelsof rep78, miss local(mylevs)
1 2 3 4 5 .

. display "mylevs"
1 2 3 4 5 .

. levelsof rep78, sep(,)
1,2,3,4,5

. display "r(levels)"
1,2,3,4,5

Showing value labels when defined:
. levelsof factor, local(levels)
. foreach l of local levels {
.     di "-> factor = ': label (factor) '1'"
.     whatever if factor == '1'
. }
```

◀

Stored results

`levelsof` stores the following in `r()`:

```
Macros
    r(levels)      list of distinct values
```

Acknowledgments

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References

- Cochran, W. G., and G. M. Cox. 1957. *Experimental Designs*. 2nd ed. New York: Wiley.
- Cox, N. J. 2001. `dm90: Listing distinct values of a variable`. *Stata Technical Bulletin* 60: 8–11. Reprinted in *Stata Technical Bulletin Reprints*, vol. 10, pp. 46–49. College Station, TX: Stata Press.
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- Yates, F. 1937. *The Design and Analysis of Factorial Experiments*. Harpenden, England: Technical Communication 35, Imperial Bureau of Soil Science.

Also see

[P] **foreach** — Loop over items

[D] **codebook** — Describe data contents

[D] **inspect** — Display simple summary of data's attributes

[R] **tabulate oneway** — One-way table of frequencies