

ds — List variables matching name patterns or other characteristics

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Description

`ds` lists variable names of the dataset currently in memory in a compact or detailed format, and lets you specify subsets of variables to be listed, either by name or by properties (for example, the variables are numeric). In addition, `ds` leaves behind in `r(varlist)` the names of variables selected so that you can use them in a subsequent command.

`ds`, typed without arguments, lists all variable names of the dataset currently in memory in a compact form.

Quick start

List variables in alphabetical order

```
ds, alpha
```

List all string variables

```
ds, has(type string)
```

List all numeric variables

```
ds, has(type numeric)
```

As above, but exclude date-formatted variables

```
ds, not(format %td* type string)
```

List all variables whose label includes the phrase “my text” regardless of case

```
ds, has(varlabel "*my text*") insensitive
```

Menu

Data > Describe data > Compactly list variable names

Syntax

Simple syntax

```
ds [ , alpha ]
```

Advanced syntax

```
ds [ varlist ] [ , options ]
```

options

Description

Main

<code>not</code>	list variables not specified in <i>varlist</i>
<code><u>a</u>lpha</code>	list variables in alphabetical order
<code><u>d</u>etail</code>	display additional details
<code><u>v</u>arwidth(#)</code>	display width for variable names; default is <code>varwidth(12)</code>
<code><u>s</u>kip(#)</code>	gap between variables; default is <code>skip(2)</code>

Advanced

<code>has(<i>spec</i>)</code>	describe subset that matches <i>spec</i>
<code>not(<i>spec</i>)</code>	describe subset that does not match <i>spec</i>
<code><u>i</u>nsensitive</code>	perform case-insensitive pattern matching
<code><u>i</u>ndent(#)</code>	indent output; seldom used

`insensitive` and `indent(#)` are not shown in the dialog box.

spec

Description

<code><u>t</u>ype <i>typelist</i></code>	specified types
<code><u>f</u>ormat <i>patternlist</i></code>	display format matching <i>patternlist</i>
<code><u>v</u>arlabel [<i>patternlist</i>]</code>	variable label or variable label matching <i>patternlist</i>
<code><u>c</u>har [<i>patternlist</i>]</code>	characteristic or characteristic matching <i>patternlist</i>
<code><u>v</u>allabel [<i>patternlist</i>]</code>	value label or value label matching <i>patternlist</i>

typelist used in `has(type typelist)` and `not(type typelist)` is a list of one or more types, each of which may be numeric, string, `str#`, `strL`, `byte`, `int`, `long`, `float`, or `double`, or may be a *numlist* such as `1/8` to mean “`str1 str2 ... str8`”. Examples include

<code>has(type int)</code>	is of type <code>int</code>
<code>has(type byte int long)</code>	is of integer type
<code>not(type int)</code>	is not of type <code>int</code>
<code>not(type byte int long)</code>	is not of the integer types
<code>has(type numeric)</code>	is a numeric variable
<code>not(type string)</code>	is not a string (<code>str#</code> or <code>strL</code>) variable (same as above)
<code>has(type 1/40)</code>	is <code>str1</code> , <code>str2</code> , ..., <code>str40</code>
<code>has(type str#)</code>	is <code>str1</code> , <code>str2</code> , ..., <code>str2045</code> but not <code>strL</code>
<code>has(type strL)</code>	is of type <code>strL</code> but not <code>str#</code>
<code>has(type numeric 1/2)</code>	is numeric or <code>str1</code> or <code>str2</code>

patternlist used in, for instance, `has(format patternlist)`, is a list of one or more *patterns*. A pattern is the expected text with the addition of the characters `*` and `?`. `*` indicates 0 or more characters go here, and `?` indicates exactly 1 character goes here. Examples include

<code>has(format *f)</code>	format is <code>%#.##f</code>
<code>has(format %t*)</code>	has time or date format
<code>has(format %-*s)</code>	is a left-justified string
<code>has(varl *weight*)</code>	variable label includes word <code>weight</code>
<code>has(varl *weight* *Weight*)</code>	variable label has <code>weight</code> or <code>Weight</code>

To match a phrase, enclose the phrase in quotes.

<code>has(varl "some phrase")</code>	variable label has <code>some phrase</code>
--------------------------------------	---

If instead you used `has(varl *some phrase*)`, then only variables having labels ending in `some` or starting with `phrase` would be listed.

Options

Main

`not` specifies that the variables in *varlist* not be listed. For instance, `ds pop*`, `not` specifies that all variables not starting with the letters `pop` be listed. The default is to list all the variables in the dataset or, if *varlist* is specified, the variables specified.

`alpha` specifies that the variables be listed in alphabetical order. If the variable contains Unicode characters other than plain ASCII, the sort order is determined strictly by the underlying byte order. See [U] 12.4.2.5 **Sorting strings containing Unicode characters**.

`detail` specifies that detailed output identical to that of `describe` be produced. If `detail` is specified, `varwidth()`, `skip()`, and `indent()` are ignored.

`varwidth(#)` specifies the display width of the variable names; the default is `varwidth(12)`.

`skip(#)` specifies the number of spaces between variable names, where all variable names are assumed to be the length of the longest variable name; the default is `skip(2)`.

`has(spec)` and `not(spec)` select from the dataset (or from *varlist*) the subset of variables that meet or fail the specification *spec*. Selection may be made on the basis of storage type, variable label, value label, display format, or characteristics. Only one `not`, `has()`, or `not()` option may be specified.

`has(type string)` selects all string variables. Typing `ds, has(type string)` would list all string variables in the dataset, and typing `ds pop*, has(type string)` would list all string variables whose names begin with the letters `pop`.

`has(varlabel)` selects variables with defined variable labels. `has(varlabel *weight*)` selects variables with variable labels including the word “weight”. `not(varlabel)` would select all variables with no variable labels.

`has(vallabel)` selects variables with defined value labels. `has(vallabel yesno)` selects variables whose value label is `yesno`. `has(vallabel *no)` selects variables whose value label ends in the letters `no`.

`has(format patternlist)` specifies variables whose format matches any of the patterns in *patternlist*. `has(format *f)` would select all variables with formats ending in `f`, which presumably would be all `%#.#f`, `%0#.#f`, and `%-#.#f` formats. `has(format *f *fc)` would select all variables with formats ending in `f` or `fc`. `not(format %t* %-t*)` would select all variables except those with date or time-series formats.

`has(char)` selects all variables with defined characteristics. `has(char problem)` selects all variables with a characteristic named `problem`.

The following options are available with `ds` but are not shown in the dialog box:

`insensitive` specifies that the matching of the *pattern* in `has()` and `not()` be case insensitive.

Note that the case insensitivity applies only to ASCII characters.

`indent(#)` specifies the amount the lines are indented.

Remarks and examples

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

If `ds` is typed without any operands, then a compact list of the variable names for the data currently in memory is displayed.

► Example 1

`ds` can be especially useful if you have a dataset with over 1,000 variables, but you may find it convenient even if you have considerably fewer variables.

```
. use http://www.stata-press.com/data/r14/educ3
(ccdb46, 52-54)
. ds
fips      popcol   medhhinc  tlf      emp      clfbcls  z
crimes    perhspls medfinc   clf      empmanuf clfuebls adjinc
pcrimes   perclpls state     clffem   emptrade famnw    perman
crimrate  prcolhs  division  clfue    empserv  fam2w    pertrade
pop25pls  medage   region    empgovt  osigind  famwsamp perserv
pophspls  perwhite dc         empself  osigindp pop18pls perother
```

▷ Example 2

You might wonder why you would ever specify a *varlist* with this command. Remember that a *varlist* understands the ‘*’ abbreviation character and the ‘-’ dash notation; see [U] 11.4 [varlists](#).

```
. ds p*
pcrimes  pophspls  perhspls  prcolhs  pop18pls  pertrade  perother
pop25pls  popcol    perclpls  perwhite  perman    perserv

. ds popcol-clfue
popcol  perclpls  medage  medhhinc  state  region  tlf  clffem
perhspls  prcolhs  perwhite  medfinc  division  dc  clf  clfue
```

▷ Example 3

Because the primary use of `ds` is to inspect the names of variables, it is sometimes useful to let `ds` display the variable names in alphabetical order.

```
. ds, alpha
adjinc  crimes  empmanuf  famwsamp  osigindp  perserv  pophspls
clf  crimrate  empself  fips  pcrimes  pertrade  prcolhs
clfbls  dc  empself  medage  perclpls  perwhite  region
clffem  division  emptrade  medfinc  perhspls  pop18pls  state
clfue  emp  fam2w  medhhinc  perman  pop25pls  tlf
clfuebls  empgovt  famnw  osigind  perother  popcol  z
```

Stored results

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

```
Macros
      r(varlist)    the varlist of found variables
```

Acknowledgments

`ds` was originally written by StataCorp. It was redesigned and rewritten by Nicholas J. Cox of the Department of Geography at Durham University, UK, and coeditor of the *Stata Journal* and author of *Speaking Stata Graphics*. The purpose was to include the selection options `not`, `has()`, and `not()`; to produce better-formatted output; and to be faster. Cox thanks Richard Goldstein, William Gould, Kenneth Higbee, Jay Kaufman, Jean Marie Linhart, and Fred Wolfe for their helpful suggestions on previous versions.

References

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- . 2001. `dm78.1`: Describing variables in memory: Update to Stata 7. *Stata Technical Bulletin* 60: 3. Reprinted in *Stata Technical Bulletin Reprints*, vol. 10, p. 17. College Station, TX: Stata Press.
- . 2010a. `Speaking Stata: Finding variables`. *Stata Journal* 10: 281–296.
- . 2010b. `Software Updates: Finding variables`. *Stata Journal* 10: 691–692.
- . 2012. `Software Updates: Finding variables`. *Stata Journal* 12: 167.
- Weiss, M. 2008. `Stata tip 66: ds—A hidden gem`. *Stata Journal* 8: 448–449.

Also see

[D] **cf** — Compare two datasets

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

[D] **compare** — Compare two variables

[D] **compress** — Compress data in memory

[D] **describe** — Describe data in memory or in file

[D] **format** — Set variables' output format

[D] **label** — Manipulate labels

[D] **lookfor** — Search for string in variable names and labels

[D] **notes** — Place notes in data

[D] **order** — Reorder variables in dataset

[D] **rename** — Rename variable