Description Syntax Options Remarks and examples Also see

Description

program define defines and manipulates programs. define is required if *program_name* is any of the words: define, dir, drop, list, or plugin.

program dir lists the names of all the programs stored in memory.

program list lists the contents of the named program or programs. program list _all lists the contents of all programs stored in memory.

program drop eliminates the named program or programs from memory. program drop _all eliminates all programs stored in memory. program drop _allado eliminates all programs stored in memory that were loaded from ado-files. See [U] 17 Ado-files for an explanation of ado-files.

See [U] 18 Programming Stata for a description of programs. The remarks below address only the use of the program dir, program drop, and program list commands.

See [P] trace for information on debugging programs.

See the Combined subject table of contents for programming, which immediately follows the Contents, for a subject summary of the programming commands.

Syntax

Define program

```
program [define] program_name [, [nclass | rclass | eclass | sclass]
byable(recall[, noheader] | onecall) properties(namelist) sortpreserve
```

plugin]

List names of programs stored in memory

<u>pr</u>ogram <u>di</u>r

Eliminate program from memory

program drop { program_name [program_name [...]] | _all | _allado }

List contents of program

program list [program_name [program_name [...]]|_all]

Options

- nclass states that the program being defined does not return results in r(), e(), or s(), and is the default.
- rclass states that the program being defined returns results in r(). This is done using the return command; see [P] return. If the program is not explicitly declared to be rclass, then it may not change or replace results in r().
- eclass states that the program being defined returns results in e() or modifies already existing results in e(). This is done using the ereturn command; see [P] return and [P] ereturn. If the program is not explicitly declared to be eclass, it may not directly replace or change results in e().
- sclass states that the program being defined returns results in s(). This is done using the sreturn command; see [P] return. If the program is not explicitly declared to be sclass, then it may not directly change or replace results in s(), but it still may clear s() by using sreturn clear.
- byable(recall[, noheader] | onecall) specifies that the program allow Stata's by varlist: prefix. There are two styles for writing byable programs: byable(recall) and byable(onecall). The writing of byable programs is discussed in [P] byable.
- properties (*namelist*) states that *program_name* has the specified properties. *namelist* may contain up to 80 characters, including separating spaces. See [P] **program properties**.
- sortpreserve states that the program changes the sort order of the data and that Stata is to restore the original order when the program concludes; see [P] sortpreserve.
- plugin specifies that a plugin (a specially compiled C program) be dynamically loaded and that the plugin define the new command; see [P] plugin.

Remarks and examples

The program dir command lists the names of all the programs stored in memory. program list lists contents of the program or programs.

Example 1

When you start Stata, there are no programs stored in memory. If you type program dir, Stata displays an empty list:

. program dir

Later during the session, you might see

program	dir	
(output omitted)		
ado	756	_pred_se
ado	644	<pre>logit_p.GenScores</pre>
ado	306	logit_p.GetRhs
ado	5296	logit_p
ado	339	predict
(output omitted)		
ado	559	logit.Replay
ado	4272	logit.Estimate
ado	827	logit
ado	287	webuse.Query
ado	588	webuse.Set
ado	269	webuse.GetDefault
ado	686	webuse
1	18187	

The ado in front indicates that the program was automatically loaded and thus can be automatically dropped should memory become scarce; see [U] 17 Ado-files. The number is the size, in bytes, of the program. Notice the logit_p.GetRhs and logit_p.GenScores entries. These programs are defined in the logit_p.ado file and were loaded when logit_p was loaded.

Let's now create two of our own programs with program:

```
. program rng
 1. args n a b
 2. if "'b'"=="" {
 З.
       display "You must type three arguments: n a b"
 4.
       exit
 5.}
 6. drop _all
 7. set obs 'n'
 8. generate x = (_n-1)/(_N-1)*('b'-'a')+'a'
 9. end
. program smooth
 1. args v1 v2
 2. confirm variable 'v1'
 3. confirm new variable 'v2'
 4. generate 'v2' = cond(_n==1|_n==_N, 'v1', ('v1'[_n-1]+'v1'+'v1'[ n+1])/3)
 5. end
```

After you type program, lines are collected until you type a line with the word end. For our purposes, it does not matter what these programs do. If we were now to type program dir, we would see

```
. program dir
           286 smooth
           319 rng
 (output omitted)
                _pred_se
 ado
           756
           644 logit_p.GenScores
 ado
 ado
           306 logit_p.GetRhs
          5296 logit_p
 ado
 ado
           339 predict
 (output omitted)
           559 logit.Replay
 ado
          4272 logit.Estimate
827 logit
 ado
 ado
 ado
           287 webuse.Query
           588 webuse.Set
 ado
 ado
           269 webuse.GetDefault
 ado
           686 webuse
        118792
```

We can list a program by using the program list command:

```
. program list smooth
smooth:
  1. args v1 v2
  2. confirm variable 'v1'
  3. confirm new variable 'v2'
  4. generate 'v2' = cond(_n==1|_n==_N, 'v1', ('v1'[_n-1]+'v1'+'v1'[_n+1])/3)
```

If we do not specify the program that we want listed, program list lists all the programs stored in memory.

The program drop command eliminates programs from memory. Typing program drop *pro-gram_name* eliminates *program_name* from memory. Typing program drop _all eliminates all programs from memory.

```
. program drop smooth
. program dir
           319 rng
 (output omitted)
 ado
           756
                pred se
 ado
           644 logit_p.GenScores
 ado
           306
                logit p.GetRhs
 ado
          5296
                logit_p
 ado
           339
                predict
 (output omitted)
           559 logit.Replay
 ado
 ado
          4272
               logit.Estimate
 ado
           827
                logit
           287 webuse.Query
 ado
           588 webuse.Set
 ado
 ado
           269
                webuse.GetDefault
 ado
           686
                webuse
        118506
 program drop all
 program dir
```

Also see

- [P] **byable** Make programs byable
- [P] discard Drop automatically loaded programs
- [P] sortpreserve Sort within programs
- [P] trace Debug Stata programs
- [D] clear Clear memory
- [R] query Display system parameters
- [U] 18 Programming Stata

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