mata describe — Describe contents of Mata’s memory

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Description

mata describe lists the names of the matrices and functions in memory, including the amount of memory consumed by each.

mata describe using libname describes the contents of the specified .mlib library; see [M-3] mata mlib.

Syntax

: mata describe [namelist] [, all]

: mata describe using libname

where namelist is as defined in [M-3] namelists. If namelist is not specified, “* *(*)” is assumed.

This command is for use in Mata mode following Mata’s colon prompt. To use this command from Stata’s dot prompt, type

. mata: mata describe ...

Option

all specifies that automatically loaded library functions that happen to be in memory are to be included in the output.

Remarks and examples

mata describe is often issued without arguments, and then everything in memory is described:

: mata describe

<table>
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<th># bytes</th>
<th>type</th>
<th>name and extent</th>
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<tr>
<td>50</td>
<td>real matrix</td>
<td>foo()</td>
</tr>
<tr>
<td>1,600</td>
<td>real matrix</td>
<td>X[10,20]</td>
</tr>
<tr>
<td>8</td>
<td>real scalar</td>
<td>x</td>
</tr>
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</table>
mata describe using libname lists the functions stored in a `.mlib' library:

```
: mata describe using lmatabase

# bytes     type           name and extent
508 auto structdef scalar      AsArray_char()
188 auto structdef scalar      AsArray_dup()
312 auto structdef scalar      AsArray_top()
984 auto numeric vector        Corr()
864 auto numeric vector        Corrslowly()
400 auto real matrix           Dmatrix()
340 auto real matrix           Hilbert()

(output omitted)
672 auto transmorphic colvector vech()
184 auto real scalar           whether_ssd()
```

**Diagnostics**

The reported memory usage does not include overhead, which usually amounts to 64 bytes, but can be less (as small as zero for recently used scalars).

The reported memory usage in the case of pointer matrices reflects the memory used to store the matrix itself and does not include memory consumed by siblings.

**Also see**

[M-5] `sizeof()' — Number of bytes consumed by object

[M-3] `Intro' — Commands for controlling Mata