Perl Debugger Quick Reference Card

Revision 0.1 for Perl Debugger version 5.8.x
Andrew Ford refcards.com™

The perl debugger is included in the standard Perl distribution and is invoked on a program with the `-d` switch:

```
perl -d program
```

You can start a debugger session without a program by saying:

```
perl -d -e 0
```

Debugger Commands

The debugger reads commands from the files `.perldb` in the current and home directories, and stops before the first run-time executable statement, displaying the line it is about to execute and a prompt:

```
DB<1>
```

If you run code from the debugger and hit another breakpoint, the prompt will look like `DB<<42>>`. The numbers within the angle brackets are the command numbers, used when repeating commands.
Any input to the debugger that is not recognized is executed as Perl code in the current package.
Prefixing a command with '`|`' pipes the output to your current pager.

Help and Quiting

`h`	display summary help
`h h`	display extended help
`h` *command*	display help on *command*
`man` [*manpage*]	view documentation
`q`	quit the debugger

Debugger Control

`!` *number*	re-execute debugger command
`H` [*-number*]	display debugger history
`source` *filename*	execute commands from file
`save` *filename*	save history to file
`=` *alias string*	set alias
`=`	list aliases
`!!` *command*	execute shell command

Examining Data

`p` *expr*	print expression
`x` [*depth*] *expr*	pretty-print *expr*
`m` *expr*	list methods that may be called on *expr*
`i` *class*	print nested parents of *class*
`M`	display loaded modules
`S` [[!]pattern]	list subroutines matching *pattern*
`V` [*pkg* [[~|!]*vars*]]	list matching variables in package *pkg*
`X` [[~|!]*vars*]	list matching variables in current pkg
`y` [*level* [[~|!]*vars*]]	list matching lexical variables
`e`	display thread id
`E`	display all thread ids

Listing Code

`f` *filename*	view source in file *filename*
`.`	display next line to be executed
`l`	list next window of lines
`-`	list previous window of lines
`l` *lineno*	list single line *lineno*
`l` *subname*	list lines starting at *subname*
`l` *start+nlines*	list lines *start*
`l` *start-end*	list lines *start* to *end*
`v` [*lineno*]	
/pattern[/]	search forwards for [pattern]
?*pattern*[?]	search backwards for [pattern]

Controlling Execution

`c`	continue execution
`c` *subname*	set one-time bkpt at *subname* and continue
`c` *lineno*	set one-time bkpt at *lineno* and continue
`n`	next statement
`s`	single step
<CR>	repeat last `n` or `s`
`r`	continue, stop on return from current sub
`R`	restart debugger
`rerun`	rerun session to current position
`rerun` *number*	rerun session to numbered command
`rerun` *-n*	rerun session to number'th-to-last command
`T`	print a stack trace
`t` [expr]	set tracing on, off or toggle

Actions, Breakpoints and Watch Expressions

The line number for setting actions, breakpoints and watchpoints defaults to the current line.
Actions are Perl statements executed when a line is reached.

`a` [*line*] *cmd* [*cond*]	set an action
`A` *line*	delete the action at *line*
`A *`	delete all actions
`L a`	list actions

Breakpoints...

`b` [*line*] [*cond*]	set a breakpoint at *line*
`b` [*subname*] [*cond*]	set a breakpoint on first line of *subname*
`b postpone` *sub* [*cond*]	set a breakpoint for ...
`b compile` *sub*	set a breakpoint for ...
`b load` *filename*	set a breakpoint for when file is loaded
`B` *line*	delete the breakpoint at *line*
`B *`	delete all breakpoints
`L b`	list breakpoints

Watch expressions...

`w` *expr*	set a watchpoint on a variable
`W` *expr*	delete the watchpoint on a variable
`W *`	delete all watchpoints
`L w`	list watchpoints
`L`	list actions, breakpoints, watchpoints

Pre-Prompt and Post-Prompt Commands

`<` *command*	set a Perl pre-prompt command
`<<` *command*	append to Perl pre-prompt commands
`<?`	list all Perl pre-prompt commands
`<*`	delete all Perl pre-prompt commands
`>` *command*	set a Perl post-prompt command
`>>` *command*	append to Perl post-prompt commands
`>?`	list all Perl post-prompt commands
`>*`	delete all Perl post-prompt commands
`{` *command*	set a debugger pre-prompt command
`{{` *command*	append to debugger pre-prompt commands
`{?`	list all debugger pre-prompt commands
`{*`	delete all debugger pre-prompt commands

Setting Options

`o` *option=expr* `...`	set *option* to *expr*
`o` *option* `...`	set *option* to 1
`o` *option*`? ...`	display the value of *option*

Debugger Variables

`%DB::alias`	table of command aliases
`$DB::doccmd`	
`$DB::single`	
`$DB::signal`	
`$DB::trace`	enables tracing if set to 1
`$DB::fork_TTY`	

Environment Variables

`PERL5DB`	defines the debugger code to be run
`PERLDB_OPTS`	specifies options to the debugger
`PERL_DEBUG_MSTATS`	reports memory usage information

Debugging Options

Options are case insensitive and may be abbreviated.

`ArrayDepth`	
`AutoTrace`	trace mode
`CompactDump`	
`DieLevel`	
`DumpDBFiles`	
`DumpDepth`	
`DumpPackages`	
`DumpReused`	
`Frame`	
`GlobPrint`	control printing of contents of globs
`HiBit`	control quoting of characters `\200`–`\377`
`InhibitExit`	prevent stepping off end of script
`LineInfo`	
`MaxTraceLen`	
`NonStop`	enter non-interactive mode until interrupted
`NoTTY`	
`Ornaments`	
`Pager`	program to use for piped commands
`Quote`	
`PrintRet`	
`RecallCommand`	
`ReadLine`	
`RemotePort`	
`ShellBang`	
`SignalLevel`	
`TkRunning`	
`TTY`	
`undefPrint`	
`UsageOnly`	
`VeryCompact`	
`WarnLevel`	
`WindowSize`	code list window size

Other Useful Modules

`Devel::Cover`
`Devel::DProf`
`Devel::Leak`
`Devel::Peek`
`Devel::SmallProf`
`Devel::Size`
`Devel::Timer`
`Devel::Trace`

Further Sources of Information

perldebtut(1) – the Perl debugging tutorial
perldebug(1) – the Perl debugger manual page
Perl Debugger Pocket Reference, by Richard Foley (O'Reilly & Associates, Inc, 2004, ISBN: 0-596-00503-2)
Pro Perl Debugging, by Richard Foley and Joe McMahon (APress, 2007, ISBN: 1590594541)
Perl Debugged, by Peter E Scott and Ed Wright (Addison Wesley, 2001, ISBN: 0201700549)
`debugger.perl.org`

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