NAME

perl − The Perl 5 language interpreter

SYNOPSIS

perl [**−sTtuUWX**] [**−hv**][**−V**[:*configvar*]] [**−cw**][**−d**[**t**][:*debugger*]][**−D**[*number/list*]] [**−pna**][**−F***pattern*][**−l**[*octal*]][**−0**[*octal/hexadecimal*]] [**−I***dir*][**−m**[**−**]*module*][**−M**[**−**]*'module...'*][**−f**] [**−C**[***number/list***]] [**−S**] [**−x**[*dir*]] [**−i**[*extension*]] [[**−e**|**−E**]*'command'*][**−−**][*programfile*][*argument*]...

For more information on these options, you can run `perldoc perlrun`.

GETTING HELP

The *perldoc* program gives you access to all the documentation that comes with Perl. You can get more documentation, tutorials and community support online at <http://www.perl.org/>.

If you're new to Perl, you should start by running `perldoc perlintro`, which is a general intro for beginners and provides some background to help you navigate the rest of Perl's extensive documentation. Run `perldoc perldoc` to learn more things you can do with *perldoc*.

For ease of access, the Perl manual has been split up into several sections.

Overview

perl	Perl overview (this section)
perlintro	Perl introduction for beginners
perlrun	Perl execution and options
perltoc	Perl documentation table of contents

Tutorials

perlreftut	Perl references short introduction
perldsc	Perl data structures intro
perllol	Perl data structures: arrays of arrays
perlrequick	Perl regular expressions quick start
perlretut	Perl regular expressions tutorial
perlootut	Perl OO tutorial for beginners
perlperf	Perl Performance and Optimization Techniques
perlstyle	Perl style guide
perlcheat	Perl cheat sheet
perltrap	Perl traps for the unwary
perldebtut	Perl debugging tutorial
perlfaq	Perl frequently asked questions
perlfaq1	General Questions About Perl
perlfaq2	Obtaining and Learning about Perl
perlfaq3	Programming Tools
perlfaq4	Data Manipulation
perlfaq5	Files and Formats
perlfaq6	Regexes
perlfaq7	Perl Language Issues
perlfaq8	System Interaction
perlfaq9	Networking

Reference Manual

```
perlsyn             Perl syntax
perldata            Perl data structures
perlop              Perl operators and precedence
perlsub             Perl subroutines
perlfunc            Perl built-in functions
  perlopentut       Perl open() tutorial
  perlpacktut       Perl pack() and unpack() tutorial
perlpod             Perl plain old documentation
perlpodspec         Perl plain old documentation format specification
perlpodstyle        Perl POD style guide
perldiag            Perl diagnostic messages
perldeprecation     Perl deprecations
perllexwarn         Perl warnings and their control
perldebug           Perl debugging
perlvar             Perl predefined variables
perlre              Perl regular expressions, the rest of the story
perlrebackslash     Perl regular expression backslash sequences
perlrecharclass     Perl regular expression character classes
perlreref           Perl regular expressions quick reference
perlref             Perl references, the rest of the story
perlform            Perl formats
perlobj             Perl objects
perltie             Perl objects hidden behind simple variables
  perldbmfilter     Perl DBM filters

perlipc             Perl interprocess communication
perlfork            Perl fork() information
perlnumber          Perl number semantics

perlthrtut          Perl threads tutorial

perlport            Perl portability guide
perllocale          Perl locale support
perluniintro        Perl Unicode introduction
perlunicode         Perl Unicode support
perlunicook         Perl Unicode cookbook
perlunifaq          Perl Unicode FAQ
perluniprops        Index of Unicode properties in Perl
perlunitut          Perl Unicode tutorial
perlebcdic          Considerations for running Perl on EBCDIC platforms

perlsec             Perl security

perlmod             Perl modules: how they work
perlmodlib          Perl modules: how to write and use
perlmodstyle        Perl modules: how to write modules with style
perlmodinstall      Perl modules: how to install from CPAN
perlnewmod          Perl modules: preparing a new module for distribution
perlpragma          Perl modules: writing a user pragma

perlutil            utilities packaged with the Perl distribution

perlfilter          Perl source filters
```

perldtrace Perl's support for DTrace

perlglossary Perl Glossary

Internals and C Language Interface

perlembed Perl ways to embed perl in your C or C++ application
perldebguts Perl debugging guts and tips
perlxstut Perl XS tutorial
perlxs Perl XS application programming interface
perlxstypemap Perl XS C/Perl type conversion tools
perlclib Internal replacements for standard C library functions
perlguts Perl internal functions for those doing extensions
perlcall Perl calling conventions from C
perlmroapi Perl method resolution plugin interface
perlreapi Perl regular expression plugin interface
perlreguts Perl regular expression engine internals

perlapi Perl API listing (autogenerated)
perlintern Perl internal functions (autogenerated)
perliol C API for Perl's implementation of IO in Layers
perlapio Perl internal IO abstraction interface

perlhack Perl hackers guide
perlsource Guide to the Perl source tree
perlinterp Overview of the Perl interpreter source and how it works
perlhacktut Walk through the creation of a simple C code patch
perlhacktips Tips for Perl core C code hacking
perlpolicy Perl development policies
perlgit Using git with the Perl repository

Miscellaneous

perlbook Perl book information
perlcommunity Perl community information

perldoc Look up Perl documentation in Pod format

perlhist Perl history records
perldelta Perl changes since previous version
perl5300delta Perl changes in version 5.30.0
perl5282delta Perl changes in version 5.28.2
perl5281delta Perl changes in version 5.28.1
perl5280delta Perl changes in version 5.28.0
perl5263delta Perl changes in version 5.26.3
perl5262delta Perl changes in version 5.26.2
perl5261delta Perl changes in version 5.26.1
perl5260delta Perl changes in version 5.26.0
perl5244delta Perl changes in version 5.24.4
perl5243delta Perl changes in version 5.24.3
perl5242delta Perl changes in version 5.24.2
perl5241delta Perl changes in version 5.24.1
perl5240delta Perl changes in version 5.24.0
perl5224delta Perl changes in version 5.22.4
perl5223delta Perl changes in version 5.22.3
perl5222delta Perl changes in version 5.22.2
perl5221delta Perl changes in version 5.22.1
perl5220delta Perl changes in version 5.22.0

perl5203delta	Perl changes in version 5.20.3
perl5202delta	Perl changes in version 5.20.2
perl5201delta	Perl changes in version 5.20.1
perl5200delta	Perl changes in version 5.20.0
perl5184delta	Perl changes in version 5.18.4
perl5182delta	Perl changes in version 5.18.2
perl5181delta	Perl changes in version 5.18.1
perl5180delta	Perl changes in version 5.18.0
perl5163delta	Perl changes in version 5.16.3
perl5162delta	Perl changes in version 5.16.2
perl5161delta	Perl changes in version 5.16.1
perl5160delta	Perl changes in version 5.16.0
perl5144delta	Perl changes in version 5.14.4
perl5143delta	Perl changes in version 5.14.3
perl5142delta	Perl changes in version 5.14.2
perl5141delta	Perl changes in version 5.14.1
perl5140delta	Perl changes in version 5.14.0
perl5125delta	Perl changes in version 5.12.5
perl5124delta	Perl changes in version 5.12.4
perl5123delta	Perl changes in version 5.12.3
perl5122delta	Perl changes in version 5.12.2
perl5121delta	Perl changes in version 5.12.1
perl5120delta	Perl changes in version 5.12.0
perl5101delta	Perl changes in version 5.10.1
perl5100delta	Perl changes in version 5.10.0
perl589delta	Perl changes in version 5.8.9
perl588delta	Perl changes in version 5.8.8
perl587delta	Perl changes in version 5.8.7
perl586delta	Perl changes in version 5.8.6
perl585delta	Perl changes in version 5.8.5
perl584delta	Perl changes in version 5.8.4
perl583delta	Perl changes in version 5.8.3
perl582delta	Perl changes in version 5.8.2
perl581delta	Perl changes in version 5.8.1
perl58delta	Perl changes in version 5.8.0
perl561delta	Perl changes in version 5.6.1
perl56delta	Perl changes in version 5.6
perl5005delta	Perl changes in version 5.005
perl5004delta	Perl changes in version 5.004
perlexperiment	A listing of experimental features in Perl
perlartistic	Perl Artistic License
perlgpl	GNU General Public License

Language-Specific

perlcn	Perl for Simplified Chinese (in EUC-CN)
perljp	Perl for Japanese (in EUC-JP)
perlko	Perl for Korean (in EUC-KR)
perltw	Perl for Traditional Chinese (in Big5)

Platform-Specific

```
perlaix             Perl notes for AIX
perlamiga           Perl notes for AmigaOS
perlandroid         Perl notes for Android
perlbs2000          Perl notes for POSIX-BC BS2000
perlce              Perl notes for WinCE
perlcygwin          Perl notes for Cygwin
perldos             Perl notes for DOS
perlfreebsd         Perl notes for FreeBSD
perlhaiku           Perl notes for Haiku
perlhpux            Perl notes for HP-UX
perlhurd            Perl notes for Hurd
perlirix            Perl notes for Irix
perllinux           Perl notes for Linux
perlmacos           Perl notes for Mac OS (Classic)
perlmacosx          Perl notes for Mac OS X
perlnetware         Perl notes for NetWare
perlopenbsd         Perl notes for OpenBSD
perlos2             Perl notes for OS/2
perlos390           Perl notes for OS/390
perlos400           Perl notes for OS/400
perlplan9           Perl notes for Plan 9
perlqnx             Perl notes for QNX
perlriscos          Perl notes for RISC OS
perlsolaris         Perl notes for Solaris
perlsymbian         Perl notes for Symbian
perlsynology        Perl notes for Synology
perltru64           Perl notes for Tru64
perlvms             Perl notes for VMS
perlvos             Perl notes for Stratus VOS
perlwin32           Perl notes for Windows
```

Stubs for Deleted Documents

```
perlboot
perlbot
perlrepository
perltodo
perltooc
perltoot
```

On Debian systems, you need to install the **perl-doc** package which contains the majority of the standard Perl documentation and the *perldoc* program.

Extensive additional documentation for Perl modules is available, both those distributed with Perl and third-party modules which are packaged or locally installed.

You should be able to view Perl's documentation with your **man** (1) program or **perldoc** (1).

Some documentation is not available as man pages, so if a cross-reference is not found by man, try it with perldoc. Perldoc can also take you directly to documentation for functions (with the **–f** switch). See `perldoc --help` (or `perldoc perldoc` or `man perldoc`) for other helpful options perldoc has to offer.

In general, if something strange has gone wrong with your program and you're not sure where you should look for help, try making your code comply with **use strict** and **use warnings**. These will often point out exactly where the trouble is.

DESCRIPTION

Perl officially stands for Practical Extraction and Report Language, except when it doesn't.

Perl was originally a language optimized for scanning arbitrary text files, extracting information from those text files, and printing reports based on that information. It quickly became a good language for many system management tasks. Over the years, Perl has grown into a general-purpose programming language. It's widely used for everything from quick "one-liners" to full-scale application development.

The language is intended to be practical (easy to use, efficient, complete) rather than beautiful (tiny, elegant, minimal). It combines (in the author's opinion, anyway) some of the best features of **sed**, **awk**, and **sh**, making it familiar and easy to use for Unix users to whip up quick solutions to annoying problems. Its general-purpose programming facilities support procedural, functional, and object-oriented programming paradigms, making Perl a comfortable language for the long haul on major projects, whatever your bent.

Perl's roots in text processing haven't been forgotten over the years. It still boasts some of the most powerful regular expressions to be found anywhere, and its support for Unicode text is world-class. It handles all kinds of structured text, too, through an extensive collection of extensions. Those libraries, collected in the CPAN, provide ready-made solutions to an astounding array of problems. When they haven't set the standard themselves, they steal from the best — just like Perl itself.

AVAILABILITY

Perl is available for most operating systems, including virtually all Unix-like platforms. See "Supported Platforms" in perlport for a listing.

ENVIRONMENT

See perlrun.

AUTHOR

Larry Wall <larry@wall.org>, with the help of oodles of other folks.

If your Perl success stories and testimonials may be of help to others who wish to advocate the use of Perl in their applications, or if you wish to simply express your gratitude to Larry and the Perl developers, please write to perl−thanks@perl.org .

FILES

```
"@INC"                  locations of perl libraries
```

"@INC" above is a reference to the built-in variable of the same name; see perlvar for more information.

SEE ALSO

```
http://www.perl.org/        the Perl homepage
http://www.perl.com/        Perl articles (O'Reilly)
http://www.cpan.org/        the Comprehensive Perl Archive
http://www.pm.org/          the Perl Mongers
```

DIAGNOSTICS

Using the `use strict` pragma ensures that all variables are properly declared and prevents other misuses of legacy Perl features.

The `use warnings` pragma produces some lovely diagnostics. One can also use the **−w** flag, but its use is normally discouraged, because it gets applied to all executed Perl code, including that not under your control.

See perldiag for explanations of all Perl's diagnostics. The `use diagnostics` pragma automatically turns Perl's normally terse warnings and errors into these longer forms.

Compilation errors will tell you the line number of the error, with an indication of the next token or token type that was to be examined. (In a script passed to Perl via **−e** switches, each **−e** is counted as one line.)

Setuid scripts have additional constraints that can produce error messages such as "Insecure dependency". See perlsec.

Did we mention that you should definitely consider using the **use warnings** pragma?

BUGS

The behavior implied by the **use warnings** pragma is not mandatory.

Perl is at the mercy of your machine's definitions of various operations such as type casting, **atof**(), and

floating-point output with **sprintf()**.

If your stdio requires a seek or eof between reads and writes on a particular stream, so does Perl. (This doesn't apply to **sysread()** and **syswrite()**.)

While none of the built-in data types have any arbitrary size limits (apart from memory size), there are still a few arbitrary limits: a given variable name may not be longer than 251 characters. Line numbers displayed by diagnostics are internally stored as short integers, so they are limited to a maximum of 65535 (higher numbers usually being affected by wraparound).

You may mail your bug reports (be sure to include full configuration information as output by the myconfig program in the perl source tree, or by `perl -V`) to perlbug@perl.org . If you've succeeded in compiling perl, the perlbug script in the *utils/* subdirectory can be used to help mail in a bug report.

Perl actually stands for Pathologically Eclectic Rubbish Lister, but don't tell anyone I said that.

NOTES

The Perl motto is ''There's more than one way to do it.'' Divining how many more is left as an exercise to the reader.

The three principal virtues of a programmer are Laziness, Impatience, and Hubris. See the Camel Book for why.