

Linux Standard Base Languages Specification 4.1

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LSB Languages Specification

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Contents

I Introductory Elements	1
1 Scope.....	1
2 Normative References	2
3 Requirements	3
4 Terms and Definitions.....	4
5 Documentation Conventions	6
II Python Interpreter.....	7
6 Python Interpreter	8
6.1 Introduction	8
6.2 Python Interpreter Location	8
6.3 Python Interpreter Version.....	8
6.4 Operators and Functions.....	8
6.5 Python Modules	8
6.6 Python Interpreter Command.....	8
III Perl Interpreter.....	14
7 Perl Interpreter	15
7.1 Introduction	15
7.2 Perl Interpreter Location	15
7.3 Perl Interpreter Version.....	15
7.4 Perl Operators and Functions.....	15
7.5 Perl Modules	15
7.6 Perl Interpreter Command.....	18
A GNU Free Documentation License (Informative).....	19
A.1 PREAMBLE	19
A.2 APPLICABILITY AND DEFINITIONS	19
A.3 VERBATIM COPYING	20
A.4 COPYING IN QUANTITY	20
A.5 MODIFICATIONS.....	21
A.6 COMBINING DOCUMENTS	22
A.7 COLLECTIONS OF DOCUMENTS	23
A.8 AGGREGATION WITH INDEPENDENT WORKS	23
A.9 TRANSLATION.....	23
A.10 TERMINATION.....	23
A.11 FUTURE REVISIONS OF THIS LICENSE	24
A.12 How to use this License for your documents	24

List of Tables

2-1 Informative References	2
6-1 Python Modules	8
7-1 Perl Modules.....	15

Foreword

This is version 4.1 of the Linux Standard Base Languages Specification. This specification is one of a series of volumes under the collective title *Linux Standard Base*:

- Core
- C++
- Desktop
- Languages
- Printing

Note that the Core, C++ and Desktop volumes consist of a generic volume augmented by an architecture-specific volume.

Status of this Document

This is a released specification. Other documents may supersede or augment this specification. A list of current Linux Standard Base (LSB) specifications is available at <http://refspecs.linuxfoundation.org> (<http://refspecs.linuxfoundation.org/>).

If you wish to make comments regarding this document in a manner that is tracked by the LSB project, please submit them using our public bug database at <http://bugs.linuxbase.org>. Please enter your feedback, carefully indicating the title of the section for which you are submitting feedback, and the volume and version of the specification where you found the problem, quoting the incorrect text if appropriate. If you are suggesting a new feature, please indicate what the problem you are trying to solve is. That is more important than the solution, in fact.

If you do not have or wish to create a bug database account then you can also e-mail feedback to lsb-discuss@lists.linuxfoundation.org (subscribe (<http://lists.linux-foundation.org/mailman/listinfo/lsb-discuss>), archives (<http://lists.linux-foundation.org/pipermail/lsb-discuss/>)), and arrangements will be made to transpose the comments to our public bug database.

Introduction

The LSB defines a binary interface for application programs that are compiled and packaged for LSB-conforming implementations on many different hardware architectures. A binary specification must include information specific to the computer processor architecture for which it is intended. To avoid the complexity of conditional descriptions, the specification has instead been divided into generic parts which are augmented by one of several architecture-specific parts, depending on the target processor architecture; the generic part will indicate when reference must be made to the architecture part, and vice versa.

This document should be used in conjunction with the documents it references. This document enumerates the system components it includes, but descriptions of those components may be included entirely or partly in this document, partly in other documents, or entirely in other reference documents. For example, the section that describes system service routines includes a list of the system routines supported in this interface, formal declarations of the data structures they use that are visible to applications, and a pointer to the underlying referenced specification for information about the syntax and semantics of each call. Only those routines not described in standards referenced by this document, or extensions to those standards, are described in the detail. Information referenced in this way is as much a part of this document as is the information explicitly included here.

The specification carries a version number of either the form $x.y$ or $x.y.z$. This version number carries the following meaning:

1. The first number (x) is the major version number. Versions sharing the same major version number shall be compatible in a backwards direction; that is, a newer version shall be compatible with an older version. Any deletion of a library results in a new major version number. Interfaces marked as deprecated may be removed from the specification at a major version change.
2. The second number (y) is the minor version number. Libraries and individual interfaces may be added, but not removed. Interfaces may be marked as deprecated at a minor version change. Other minor changes may be permitted at the discretion of the LSB workgroup.
3. The third number (z), if present, is the editorial level. Only editorial changes should be included in such versions.

Since this specification is a descriptive Application Binary Interface, and not a source level API specification, it is not possible to make a guarantee of 100% backward compatibility between major releases. However, it is the intent that those parts of the binary interface that are visible in the source level API will remain backward compatible from version to version, except where a feature marked as "Deprecated" in one release may be removed from a future release. Implementors are strongly encouraged to make use of symbol versioning to permit simultaneous support of applications conforming to different releases of this specification.

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I Introductory Elements

1 Scope

The LSB Languages specification defines components for runtime languages which are found on an LSB conforming system.

2 Normative References

The specifications listed below are referenced in whole or in part by the LSB Languages specification. Such references may be normative or informative; a reference to specification shall only be considered normative if it is explicitly cited as such. The LSB Languages specification may make normative references to a portion of these specifications (that is, to define a specific function or group of functions); in such cases, only the explicitly referenced portion of the specification is to be considered normative.

Table 2-1 Informative References

Name	Title	URL
Perl Core Modules	Perl 5.8.8 Core Modules	http://perldoc.perl.org/5.8.8/index-modules-A.html
Perl Functions	Perl 5.8.8 Functions	http://perldoc.perl.org/5.8.8/perlfunc.html
Perl Language Reference	Perl 5.8.8 Language Reference	http://perldoc.perl.org/5.8.8/index-language.html
Perl Manual	Perl 5.8.8 Manual Page	http://perldoc.perl.org/5.8.8/perlrun.html
Perl Operators	Perl 5.8.8 Operators and Precedence	http://perldoc.perl.org/5.8.8/perlop.html
Perl Syntax	Perl 5.8.8 Syntax	http://perldoc.perl.org/5.8.8/perlsyn.html
Python Library Reference	Python Library Reference Release 2.4.2	http://www.python.org/doc/2.4.2/lib/lib.html
Python Reference Manual	Python Reference Manual Release 2.4.2	http://www.python.org/doc/2.4.2/ref/ref.html

3 Requirements

This specification describes runtime language interpreters which shall be found in specified locations. It also defines a number of runtime modules which shall be in an implementation-defined directory which the interpreters shall search by default.

4 Terms and Definitions

For the purposes of this document, the terms given in *ISO/IEC Directives, Part 2, Annex H* and the following apply.

archLSB

Some LSB specification documents have both a generic, architecture-neutral part and an architecture-specific part. The latter describes elements whose definitions may be unique to a particular processor architecture. The term archLSB may be used in the generic part to refer to the corresponding section of the architecture-specific part.

Binary Standard, ABI

The total set of interfaces that are available to be used in the compiled binary code of a conforming application, including the run-time details such as calling conventions, binary format, C++ name mangling, etc.

Implementation-defined

Describes a value or behavior that is not defined by this document but is selected by an implementor. The value or behavior may vary among implementations that conform to this document. An application should not rely on the existence of the value or behavior. An application that relies on such a value or behavior cannot be assured to be portable across conforming implementations. The implementor shall document such a value or behavior so that it can be used correctly by an application.

Shell Script

A file that is read by an interpreter (e.g., awk). The first line of the shell script includes a reference to its interpreter binary.

Source Standard, API

The total set of interfaces that are available to be used in the source code of a conforming application. Due to translations, the Binary Standard and the Source Standard may contain some different interfaces.

Undefined

Describes the nature of a value or behavior not defined by this document which results from use of an invalid program construct or invalid data input. The value or behavior may vary among implementations that conform to this document. An application should not rely on the existence or validity of the value or behavior. An application that relies on any particular value or behavior cannot be assured to be portable across conforming implementations.

Unspecified

Describes the nature of a value or behavior not specified by this document which results from use of a valid program construct or valid data input. The value or behavior may vary among implementations that conform to this document. An application should not rely on the existence or validity of the value or behavior. An application that relies on any particular value or behavior cannot be assured to be portable across conforming implementations.

In addition, for the portions of this specification which build on IEEE Std 1003.1-2001, the definitions given in *IEEE Std 1003.1-2001, Base Definitions, Chapter 3* apply.

5 Documentation Conventions

Throughout this document, the following typographic conventions are used:

`function()`

the name of a function

command

the name of a command or utility

CONSTANT

a constant value

parameter

a parameter

variable

a variable

Throughout this specification, several tables of interfaces are presented. Each entry in these tables has the following format:

name

the name of the interface

(symver)

An optional symbol version identifier, if required.

[*refno*]

A reference number indexing the table of referenced specifications that follows this table.

For example,

forkpty(GLIBC_2.0) [SUSv3]

refers to the interface named `forkpty()` with symbol version `GLIBC_2.0` that is defined in the `SUSv3` reference.

Note: For symbols with versions which differ between architectures, the symbol versions are defined in the architecture specific parts of ISO/IEC 23360 only.

II Python Interpreter

6 Python Interpreter

6.1 Introduction

The Python interpreter API is described in the Python Library Reference, with the following requirements for an LSB conforming runtime.

6.2 Python Interpreter Location

The Python interpreter binary, or a link to the binary, shall exist at `/usr/bin/python`.

6.3 Python Interpreter Version

The default installed Python version shall be 2.4.2 or greater.

6.4 Operators and Functions

Core Python operators, subroutines, and built-in functions shall be present and shall operate as defined in Python Reference Manual.

6.5 Python Modules

An LSB conforming implementation shall provide the Python modules as described in Table 6-1 with at least the behavior described as mandatory in the referenced underlying specification. Some Python modules may be marked as deprecated, and applications should avoid using these as they may be withdrawn in future releases of this specification.

Table 6-1 Python Modules

array [1]	csv [1]	imp [1]	posix [1]	sys [1]
binascii [1]	datetime [1]	itertools [1]	pwd [1]	syslog [1]
bisect [1]	errno [1]	locale [1]	random [1]	termios [1]
cPickle [1]	exceptions [1]	marshal [1]	re [1]	thread [1]
cStringIO [1]	fcntl [1]	mmap [1]	resource [1]	time [1]
cmath [1]	gc [1]	operator [1]	select [1]	unicodedata [1]
codecs [1]	grp [1]	os [1]	signal [1]	weakref [1]
collections [1]	heapq [1]	ossaudiodev [1]	socket [1]	zipimport [1]
crypt [1]	hotshot [1]	parser [1]	string [1]	zlib [1]

Referenced Specification(s)

[1]. Python Reference Manual

6.6 Python Interpreter Command

This section contains a description of the `python` command.

PYTHON

Name

`python` – an interpreted, interactive, object-oriented programming language

Synopsis

```
python [-d ] [-E ] [-h ] [-i ] [ -m module-name ] [-O ] [ -Q argument ] [-S ] [-t ] [-u ] [-v ] [-V ] [ -W argument ] [-x ] [ -c command | script | - ] [arguments]
```

DESCRIPTION

Python is an interpreted, interactive, object-oriented programming language that combines remarkable power with very clear syntax. For an introduction to programming in Python you are referred to the Python Tutorial. The Python Library Reference documents built-in and standard types, constants, functions and modules. Finally, the Python Reference Manual describes the syntax and semantics of the core language in (perhaps too) much detail. (These documents may be located via the INTERNET RESOURCES below; they may be installed on your system as well.)

Python's basic power can be extended with your own modules written in C or C++. On most systems such modules may be dynamically loaded. Python is also adaptable as an extension language for existing applications. See the internal documentation for hints.

Documentation for installed Python modules and packages can be viewed by running the *pydoc* program.

COMMAND LINE OPTIONS

-c command

Specify the command to execute (see next section). This terminates the option list (following options are passed as arguments to the command).

-d

Turn on parser debugging output (for wizards only, depending on compilation options).

-E

Ignore environment variables like PYTHONPATH and PYTHONHOME that modify the behavior of the interpreter.

-h

Prints the usage for the interpreter executable and exits.

-i

When a script is passed as first argument or the *-c* option is used, enter interactive mode after executing the script or the command. It does not read the \$PYTHONSTARTUP file. This can be useful to inspect global variables or a stack trace when a script raises an exception.

-m module-name

- Searches *sys.path* for the named module and runs the corresponding .py file as a script.
- O
- Turn on basic optimizations. This changes the filename extension for compiled (bytecode) files from .pyc to .pyo. Given twice, causes docstrings to be discarded.
- Q *argument*
- Division control; see PEP 238. The argument must be one of "old" (the default, int/int and long/long return an int or long), "new" (new division semantics, i.e. int/int and long/long returns a float), "warn" (old division semantics with a warning for int/int and long/long), or "warnall" (old division semantics with a warning for all use of the division operator). For a use of "warnall", see the Tools/scripts/fixdiv.py script.
- S
- Disable the import of the module *site* and the site-dependent manipulations of *sys.path* that it entails.
- t
- Issue a warning when a source file mixes tabs and spaces for indentation in a way that makes it depend on the worth of a tab expressed in spaces. Issue an error when the option is given twice.
- u
- Force stdin, stdout and stderr to be totally unbuffered. On systems where it matters, also put stdin, stdout and stderr in binary mode. Note that there is internal buffering in *xreadlines()*, *readlines()* and file-object iterators ("for line in *sys.stdin*") which is not influenced by this option. To work around this, you will want to use "*sys.stdin.readline()*" inside a "while 1:" loop.
- v
- Print a message each time a module is initialized, showing the place (filename or built-in module) from which it is loaded. When given twice, print a message for each file that is checked for when searching for a module. Also provides information on module cleanup at exit.
- V
- Prints the Python version number of the executable and exits.
- w *argument*
- Warning control. Python sometimes prints warning message to *sys.stderr*. A typical warning message has the following form: *file:line: category: message*. By default, each warning is printed once for each source line where it occurs. This option controls how often warnings are printed. Multiple -w options may be given; when a warning matches more than one option, the action for the last matching option is performed. Invalid -w options are ignored (a warning message is printed about invalid options when the first warning is issued). Warnings can also be controlled from within a Python program using the *warnings* module.

The simplest form of *argument* is one of the following *action* strings (or a unique abbreviation): *ignore* to ignore all warnings; *default* to explicitly request the default behavior (printing each warning once per source line); *all* to print a warning each time it occurs (this may generate many messages if a warning is triggered repeatedly for the same source line, such as inside a loop); *module* to print each warning only the first time it occurs in each module; *once* to print each warning only the first time it occurs in the program; or *error* to raise an exception instead of printing a warning message.

The full form of *argument* is *action:message:category:module:line*. Here, *action* is as explained above but only applies to messages that match the remaining fields. Empty fields match all values; trailing empty fields may be omitted. The *message* field matches the start of the warning message printed; this match is case-insensitive. The *category* field matches the warning category. This must be a class name; the match test whether the actual warning category of the message is a subclass of the specified warning category. The full class name must be given. The *module* field matches the (fully-qualified) module name; this match is case-sensitive. The *line* field matches the line number, where zero matches all line numbers and is thus equivalent to an omitted line number.

-x

Skip the first line of the source. This is intended for a DOS specific hack only. Warning: the line numbers in error messages will be off by one!

INTERPRETER INTERFACE

The interpreter interface resembles that of the UNIX shell: when called with standard input connected to a tty device, it prompts for commands and executes them until an EOF is read; when called with a file name argument or with a file as standard input, it reads and executes a *script* from that file; when called with *-c command*, it executes the Python statement(s) given as *command*. Here *command* may contain multiple statements separated by newlines. Leading whitespace is significant in Python statements! In non-interactive mode, the entire input is parsed before it is executed.

If available, the script name and additional arguments thereafter are passed to the script in the Python variable *sys.argv*, which is a list of strings (you must first *import sys* to be able to access it). If no script name is given, *sys.argv[0]* is an empty string; if *-c* is used, *sys.argv[0]* contains the string *'-c'*. Note that options interpreted by the Python interpreter itself are not placed in *sys.argv*.

In interactive mode, the primary prompt is *>>>*; the second prompt (which appears when a command is not complete) is *....*. The prompts can be changed by assignment to *sys.ps1* or *sys.ps2*. The interpreter quits when it reads an EOF at a prompt. When an unhandled exception occurs, a stack trace is printed and control returns to the primary prompt; in non-interactive mode, the interpreter exits after printing the stack trace. The interrupt signal raises the *KeyboardInterrupt* exception; other UNIX signals are not caught (except that *SIGPIPE* is sometimes ignored, in favor of the *IOError* exception). Error messages are written to *stderr*.

FILES AND DIRECTORIES

These are subject to difference depending on local installation conventions; `{prefix}` and `{exec_prefix}` are installation-dependent and should be interpreted as for GNU software; they may be the same. The default for both is `/usr/local`.

`{exec_prefix}/bin/python`

Recommended location of the interpreter.

`{prefix}/lib/python<version> {exec_prefix}/lib/python<version>`

Recommended locations of the directories containing the standard modules.

`{prefix}/include/python<version> {exec_prefix}/include/python<version>`

Recommended locations of the directories containing the include files needed for developing Python extensions and embedding the interpreter.

`~/.pythonrc.py`

User-specific initialization file loaded by the `user` module; not used by default or by most applications.

ENVIRONMENT VARIABLES

PYTHONHOME

Change the location of the standard Python libraries. By default, the libraries are searched in `{prefix}/lib/python<version>` and `{exec_prefix}/lib/python<version>`, where `{prefix}` and `{exec_prefix}` are installation-dependent directories, both defaulting to `/usr/local`. When `$PYTHONHOME` is set to a single directory, its value replaces both `{prefix}` and `{exec_prefix}`. To specify different values for these, set `$PYTHONHOME` to `{prefix}:{exec_prefix}`.

PYTHONPATH

Augments the default search path for module files. The format is the same as the shell's `$PATH`: one or more directory pathnames separated by colons. Non-existent directories are silently ignored. The default search path is installation dependent, but generally begins with `{prefix}/lib/python<version>` (see `PYTHONHOME` above). The default search path is always appended to `$PYTHONPATH`. If a script argument is given, the directory containing the script is inserted in the path in front of `$PYTHONPATH`. The search path can be manipulated from within a Python program as the variable `sys.path`.

PYTHONSTARTUP

If this is the name of a readable file, the Python commands in that file are executed before the first prompt is displayed in interactive mode. The file is executed in the same name space where interactive commands are executed so that objects defined or imported in it can be used without qualification in the interactive session. You can also change the prompts `sys.ps1` and `sys.ps2` in this file.

PYTHONY2K

Set this to a non-empty string to cause the `time` module to require dates specified as strings to include 4-digit years, otherwise 2-digit years are converted based on rules described in the `time` module documentation.

PYTHONOPTIMIZE

If this is set to a non-empty string it is equivalent to specifying the `-O` option. If set to an integer, it is equivalent to specifying `-O` multiple times.

PYTHONDEBUG

If this is set to a non-empty string it is equivalent to specifying the `-d` option. If set to an integer, it is equivalent to specifying `-d` multiple times.

PYTHONINSPECT

If this is set to a non-empty string it is equivalent to specifying the `-i` option.

PYTHONUNBUFFERED

If this is set to a non-empty string it is equivalent to specifying the `-u` option.

PYTHONVERBOSE

If this is set to a non-empty string it is equivalent to specifying the `-v` option. If set to an integer, it is equivalent to specifying `-v` multiple times.

AUTHOR

The Python Software Foundation: <http://www.python.org/psf>

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III Perl Interpreter

7 Perl Interpreter

7.1 Introduction

The Perl interpreter API is described in the Perl Language Reference, with the following requirements for an LSB conforming runtime.

7.2 Perl Interpreter Location

The Perl interpreter binary, or a link to the binary, shall exist at `/usr/bin/perl`.

7.3 Perl Interpreter Version

The default installed Perl version shall be 5.8.8 or greater.

7.4 Perl Operators and Functions

Core Perl operators, subroutines, and built-in functions shall be present and shall operate as defined in Perl Syntax, Perl Operators and Perl Functions.

7.5 Perl Modules

An LSB conforming implementation shall provide the Perl modules as described in Table 7-1 with at least the behavior described as mandatory in the referenced underlying specification. Some Perl modules may be marked as deprecated, and applications should avoid using these as they may be withdrawn in future releases of this specification.

Table 7-1 Perl Modules

AnyDBM_File [1]	Encode::Gue ss [1]	I18N::LangT ags [1]	Net::netent [1]	Text::Abbrev [1]
Attribute::Ha ndlers [1]	Encode::JP [1]	I18N::LangT ags::Detect [1]	Net::protoent [1]	Text::Balance d [1]
AutoLoader [1]	Encode::JP:: H2Z [1]	I18N::LangT ags::List [1]	Net::servent [1]	Text::ParseW ords [1]
AutoSplit [1]	Encode::JP::JI S7 [1]	I18N::Langin fo [1]	O [1]	Text::Sounde x [1]
B::Concise [1]	Encode::KR [1]	IO [1]	Opcode [1]	Text::Tabs [1]
B::Debug [1]	Encode::KR:: 2022_KR [1]	IO::Dir [1]	POSIX [1]	Text::Wrap [1]
B::Deparse [1]	Encode::MIM E::Header [1]	IO::File [1]	PerlIO [1]	Tie::Array [1]
B::Lint [1]	Encode::Sym bol [1]	IO::Handle [1]	PerlIO::enco ding [1]	Tie::File [1]
B::Showlex [1]	Encode::TW [1]	IO::Pipe [1]	PerlIO::scal ar [1]	Tie::Handle [1]
B::Terse [1]	Encode::Unic	IO::Poll [1]	PerlIO::via	Tie::Hash [1]

	ode [1]		[1]	
B::Xref [1]	Encode::Unicode::UTF7 [1]	IO::Seekable [1]	PerlIO::via::QuotedPrint [1]	Tie::Memoize [1]
Benchmark [1]	English [1]	IO::Select [1]	Pod::Checker [1]	Tie::RefHash [1]
CGI [1]	Env [1]	IO::Socket [1]	Pod::Find [1]	Tie::Scalar [1]
CGI::Apache [1]	Exporter [1]	IO::Socket::INET [1]	Pod::Functions [1]	Tie::SubstrHash [1]
CGI::Carp [1]	Exporter::Heavy [1]	IO::Socket::UNIX [1]	Pod::Html [1]	Time::HiRes [1]
CGI::Cookie [1]	ExtUtils::Command [1]	IPC::Msg [1]	Pod::InputObjects [1]	Time::Local [1]
CGI::Pretty [1]	ExtUtils::Command::MM [1]	IPC::Open2 [1]	Pod::LaTeX [1]	Time::gmtime [1]
CGI::Push [1]	ExtUtils::Install [1]	IPC::Open3 [1]	Pod::Man [1]	Time::localtime [1]
CGI::Switch [1] ^a	ExtUtils::Installed [1]	IPC::Semaphore [1]	Pod::ParseLink [1]	Time::tm [1]
CGI::Util [1]	ExtUtils::Liblist [1]	IPC::SysV [1]	Pod::ParseUtils [1]	Unicode::Collate [1]
CPAN [1]	ExtUtils::Liblist::Kid [1]	List::Util [1]	Pod::Parser [1]	Unicode::Normalize [1]
CPAN::FirstTime [1]	ExtUtils::MM_Unix [1]	Locale::Constants [1]	Pod::Perldoc::ToChecker [1]	Unicode::UCD [1]
CPAN::Nox [1]	ExtUtils::MY [1]	Locale::Country [1]	Pod::Perldoc::ToMan [1]	User::grent [1]
Carp [1]	ExtUtils::MakeMaker [1]	Locale::Currency [1]	Pod::Perldoc::ToNroff [1]	User::pwent [1]
Carp::Heavy [1]	ExtUtils::MakeMaker::Config [1]	Locale::Language [1]	Pod::Perldoc::ToPod [1]	attributes [1]
Class::ISA [1] ^a	ExtUtils::Manifest [1]	Locale::Makextext [1]	Pod::Perldoc::ToText [1]	autouse [1]
Class::Struct [1]	ExtUtils::Mkbootstrap [1]	Locale::Script [1]	Pod::PlainText [1]	base [1]
Cwd [1]	ExtUtils::Mksymlists [1]	MIME::Base64 [1]	Pod::Plainer [1] ^a	bigint [1]
DB [1]	ExtUtils::Packlist [1]	MIME::QuotedPrint [1]	Pod::Select [1]	bignum [1]
DBM_Filter	ExtUtils::testl	Math::BigFlo	Pod::Text [1]	bigrat [1]

[1]	ib [1]	at [1]		
DBM_Filter::encode [1]	Fatal [1]	Math::BigInt [1]	Pod::Text::Color [1]	blib [1]
DBM_Filter::int32 [1]	Fcntl [1]	Math::BigInt::Calc [1]	Pod::Text::Overstrike [1]	bytes [1]
DBM_Filter::null [1]	File::Basename [1]	Math::BigInt::CalcEmu [1]	Pod::Text::Termcap [1]	chardnames [1]
DBM_Filter::utf8 [1]	File::CheckTree [1]	Math::BigRat [1]	Pod::Usage [1]	constant [1]
Data::Dumper [1]	File::Compare [1]	Math::Complex [1]	SDBM_File [1]	diagnostics [1]
Devel::DProf [1] ^a	File::Copy [1]	Math::Trig [1]	Safe [1]	fields [1]
Devel::PPPort [1]	File::DosGlob [1]	Memoize [1]	Scalar::Util [1]	filetest [1]
Devel::Peek [1]	File::Find [1]	Memoize::AnyDBM_File [1]	Search::Dict [1]	if [1]
Devel::SelfStubber [1]	File::Glob [1]	Memoize::Expire [1]	SelectSaver [1]	integer [1]
Digest [1]	File::Path [1]	Memoize::ExpireFile [1]	SelfLoader [1]	less [1]
Digest::MD5 [1]	File::Spec [1]	Memoize::ExpireTest [1]	Shell [1] ^a	locale [1]
Digest::base [1]	File::Spec::Functions [1]	Memoize::SDBM_File [1]	Socket [1]	open [1]
Digest::file [1]	File::Spec::Unix [1]	Memoize::Storable [1]	Storable [1]	overload [1]
DirHandle [1]	File::Temp [1]	NEXT [1]	Sys::Hostname [1]	re [1]
Dumpvalue [1]	File::stat [1]	Net::Cmd [1]	Sys::Syslog [1]	sigtrap [1]
Encode [1]	FileCache [1]	Net::Config [1]	Term::ANSIColor [1]	sort [1]
Encode::Aliases [1]	FileHandle [1]	Net::Domain [1]	Term::Complete [1]	strict [1]
Encode::Byte [1]	Filter::Simple [1]	Net::FTP [1]	Term::ReadLine [1]	subs [1]
Encode::CJKConstants [1]	Filter::Util::Call [1]	Net::NNTP [1]	Test::Builder [1]	utf8 [1]
Encode::CN [1]	FindBin [1]	Net::Netrc [1]	Test::Builder::Module [1]	warnings [1]

Encode::CN::HZ [1]	GDBM_File [1]	Net::POP3 [1]	Test::Builder::Tester [1]	warnings::register [1]
Encode::Config [1]	Getopt::Long [1]	Net::Ping [1]	Test::Builder::Tester::Color [1]	
Encode::EBCDIC [1]	Getopt::Std [1]	Net::SMTP [1]	Test::Harness [1]	
Encode::Encoder [1]	Hash::Util [1]	Net::Time [1]	Test::More [1]	
Encode::Encoding [1]	I18N::Collate [1]	Net::hostent [1]	Test::Simple [1]	
Notes: a Deprecated module				

Referenced Specification(s)

[1]. Perl Language Reference

7.6 Perl Interpreter Command

The `perl` command is described in Perl Manual.

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