NAME

grep, **egrep**, **fgrep**, **zgrep**, **zegrep**, **zfgrep** — file pattern searcher

SYNOPSIS

grep [**-abcdDEFGHhIiJLlmnOopqRSsUVvwxZ**] [**-A** *num*] [**-B** *num*] [**-C**[*num*]]
[**-e** *pattern*] [**-f** *file*] [**--binary-files**=*value*] [**--color**[=*when*]]
[**--colour**[=*when*]] [**--context**[=*num*]] [**--label**] [**--line-buffered**]
[**--null**] [*pattern*] [*file ...*]

DESCRIPTION

The **grep** utility searches any given input files, selecting lines that match one or more patterns. By default, a pattern matches an input line if the regular expression (RE) in the pattern matches the input line without its trailing newline. An empty expression matches every line. Each input line that matches at least one of the patterns is written to the standard output.

grep is used for simple patterns and basic regular expressions (BREs); **egrep** can handle extended regular expressions (EREs). See `re_format`(7) for more information on regular expressions. **fgrep** is quicker than both **grep** and **egrep**, but can only handle fixed patterns (i.e. it does not interpret regular expressions). Patterns may consist of one or more lines, allowing any of the pattern lines to match a portion of the input.

zgrep, **zegrep**, and **zfgrep** act like **grep**, **egrep**, and **fgrep**, respectively, but accept input files compressed with the `compress`(1) or `gzip`(1) compression utilities.

The following options are available:

-A *num*, **--after-context**=*num*
: Print *num* lines of trailing context after each match. See also the **-B** and **-C** options.

-a, **--text**
: Treat all files as ASCII text. Normally **grep** will simply print "Binary file ... matches" if files contain binary characters. Use of this option forces **grep** to output lines matching the specified pattern.

-B *num*, **--before-context**=*num*
: Print *num* lines of leading context before each match. See also the **-A** and **-C** options.

-b, **--byte-offset**
: The offset in bytes of a matched pattern is displayed in front of the respective matched line.

-C[*num*, **--context**=*num*]
: Print *num* lines of leading and trailing context surrounding each match. The default is 2 and is equivalent to **-A** *2* **-B** *2*. Note: no whitespace may be given between the option and its argument.

-c, **--count**
: Only a count of selected lines is written to standard output.

--colour=[*when*, **--color**=[*when*]]
: Mark up the matching text with the expression stored in `GREP_COLOR` environment variable. The possible values of when can be 'never', 'always' or 'auto'.

-D *action*, **--devices**=*action*
: Specify the demanded action for devices, FIFOs and sockets. The default action is 'read', which means, that they are read as if they were normal files. If the action is set to 'skip', devices will be silently skipped.

-d *action*, **--directories**=*action*
: Specify the demanded action for directories. It is 'read' by default, which means that the directories are read in the same manner as normal files. Other possible values are 'skip' to silently ignore the directories, and 'recurse' to read them recursively, which has the same effect as the **-R** and **-r** option.

-E, **--extended-regexp**
Interpret *pattern* as an extended regular expression (i.e. force **grep** to behave as **egrep**).

-e *pattern*, **--regexp**=*pattern*
Specify a pattern used during the search of the input: an input line is selected if it matches any of the specified patterns. This option is most useful when multiple **-e** options are used to specify multiple patterns, or when a pattern begins with a dash ('-').

--exclude
If specified, it excludes files matching the given filename pattern from the search. Note that **--exclude** patterns take priority over **--include** patterns, and if no **--include** pattern is specified, all files are searched that are not excluded. Patterns are matched to the full path specified, not only to the filename component.

--exclude-dir
If **-R** is specified, it excludes directories matching the given filename pattern from the search. Note that **--exclude-dir** patterns take priority over **--include-dir** patterns, and if no **--include-dir** pattern is specified, all directories are searched that are not excluded.

-F, **--fixed-strings**
Interpret *pattern* as a set of fixed strings (i.e. force **grep** to behave as **fgrep**).

-f *file*, **--file**=*file*
Read one or more newline separated patterns from *file*. Empty pattern lines match every input line. Newlines are not considered part of a pattern. If *file* is empty, nothing is matched.

-G, **--basic-regexp**
Interpret *pattern* as a basic regular expression (i.e. force **grep** to behave as traditional **grep**).

-H Always print filename headers with output lines.

-h, **--no-filename**
Never print filename headers (i.e. filenames) with output lines.

--help
Print a brief help message.

-I Ignore binary files. This option is equivalent to **--binary-file**=*without-match* option.

-i, **--ignore-case**
Perform case insensitive matching. By default, **grep** is case sensitive.

--include
If specified, only files matching the given filename pattern are searched. Note that **--exclude** patterns take priority over **--include** patterns. Patterns are matched to the full path specified, not only to the filename component.

--include-dir
If **-R** is specified, only directories matching the given filename pattern are searched. Note that **--exclude-dir** patterns take priority over **--include-dir** patterns.

-J, --bz2decompress
Decompress the bzip2(1) compressed file before looking for the text.

-L, **--files-without-match**
Only the names of files not containing selected lines are written to standard output. Pathnames are listed once per file searched. If the standard input is searched, the string "(standard input)" is written.

-l, **--files-with-matches**
Only the names of files containing selected lines are written to standard output. **grep** will only search a file until a match has been found, making searches potentially less expensive. Pathnames are listed once per file searched. If the standard input is searched, the string "(standard input)" is written.

--mmap
Use mmap(2) instead of read(2) to read input, which can result in better performance under some circumstances but can cause undefined behaviour.

-m *num*, **--max-count**=*num*
Stop reading the file after *num* matches.

-n, **--line-number**
Each output line is preceded by its relative line number in the file, starting at line 1. The line number counter is reset for each file processed. This option is ignored if **-c**, **-L**, **-l**, or **-q** is specified.

--null
Prints a zero-byte after the file name.

-O If **-R** is specified, follow symbolic links only if they were explicitly listed on the command line. The default is not to follow symbolic links.

-o, **--only-matching**
Prints only the matching part of the lines.

-p If **-R** is specified, no symbolic links are followed. This is the default.

-q, **--quiet**, **--silent**
Quiet mode: suppress normal output. **grep** will only search a file until a match has been found, making searches potentially less expensive.

-R, **-r**, **--recursive**
Recursively search subdirectories listed.

-S If **-R** is specified, all symbolic links are followed. The default is not to follow symbolic links.

-s, **--no-messages**
Silent mode. Nonexistent and unreadable files are ignored (i.e. their error messages are suppressed).

-U, **--binary**
Search binary files, but do not attempt to print them.

-V, **--version**
Display version information and exit.

-v, **--invert-match**
Selected lines are those *not* matching any of the specified patterns.

-w, **--word-regexp**
The expression is searched for as a word (as if surrounded by '[[:<:]]' and '[[:>:]]'; see re_format(7)).

-x, **--line-regexp**
Only input lines selected against an entire fixed string or regular expression are considered to be matching lines.

-y Equivalent to **-i**. Obsoleted.

-Z, **-z**, **--decompress**
Force **grep** to behave as **zgrep**.

--binary-files=*value*
Controls searching and printing of binary files. Options are *binary*, the default: search binary files but do not print them; *without-match*: do not search binary files; and *text*: treat all files as text.

--context[=*num*]
Print *num* lines of leading and trailing context. The default is 2.

--line-buffered
Force output to be line buffered. By default, output is line buffered when standard output is a terminal and block buffered otherwise.

If no file arguments are specified, the standard input is used.

ENVIRONMENT

GREP_OPTIONS May be used to specify default options that will be placed at the beginning of the argument list. Backslash-escaping is not supported, unlike the behavior in GNU grep.

EXIT STATUS

The **grep** utility exits with one of the following values:

0 One or more lines were selected.
1 No lines were selected.
>1 An error occurred.

EXAMPLES

To find all occurrences of the word ‘patricia’ in a file:

```
$ grep 'patricia' myfile
```

To find all occurrences of the pattern `.Pp` at the beginning of a line:

```
$ grep '^\.Pp' myfile
```

The apostrophes ensure the entire expression is evaluated by **grep** instead of by the user’s shell. The caret ‘^’ matches the null string at the beginning of a line, and the ‘\’ escapes the ‘.’, which would otherwise match any character.

To find all lines in a file which do not contain the words ‘foo’ or ‘bar’:

```
$ grep -v -e 'foo' -e 'bar' myfile
```

A simple example of an extended regular expression:

```
$ egrep '19|20|25' calendar
```

Peruses the file ‘calendar’ looking for either 19, 20, or 25.

SEE ALSO

ed(1), ex(1), gzip(1), sed(1), re_format(7)

STANDARDS

The **grep** utility is compliant with the IEEE Std 1003.1-2008 (“POSIX.1”) specification.

The flags [**-AaBbCDdGHhIJLmoPRSUVwZ**] are extensions to that specification, and the behaviour of the **-f** flag when used with an empty pattern file is left undefined.

All long options are provided for compatibility with GNU versions of this utility.

Historic versions of the **grep** utility also supported the flags [**-ruy**]. This implementation supports those options; however, their use is strongly discouraged.

HISTORY

The **grep** command first appeared in Version 6 AT&T UNIX.

BUGS

The **grep** utility does not normalize Unicode input, so a pattern containing composed characters will not match decomposed input, and vice versa.