



GNU grep Cheat Sheet

GNU grep finds patterns in text files and streams.

Basics

`grep [pattern] FILE`

| | |
|-------------------------------------|---|
| <code>grep '^[A,E].*o' f.txt</code> | Find a string starting with A or E and ending in o |
| <code>grep -f pat.txt f.txt</code> | Scan f.txt, using contents of pat.txt as regex |
| <code>grep -i Gnu f.txt</code> | Find "gnu" in f.txt, ignoring capitalization |
| <code>grep -v gnu f.txt</code> | Find all lines not containing "gnu" (invert match) |
| <code>grep -w 'a.*o' f.txt</code> | Find whole word matches only, ignoring substrings |
| <code>grep -x 'a.*o' f.txt</code> | Find whole line matches only, as in ^(a.*o)\$ |

Output

| | |
|-------------------------|--|
| <code>-c</code> | Print only the number of lines containing a match |
| <code>--colo[u]r</code> | Display matches in color |
| <code>-l</code> | Print the names of files with matches |
| <code>-L</code> | Print the names of files searched that contained <i>no</i> matches |
| <code>-o</code> | Print only the matched part of a line |
| <code>-s</code> | Suppress errors (such as non-existent or unreadable files) |
| <code>-A n</code> | Print <i>n</i> number of lines <i>after</i> a matching line |
| <code>-B n</code> | Print <i>n</i> number of lines <i>before</i> a matching line |
| <code>-C n</code> | Print <i>n</i> number of lines <i>before and after</i> a matching line |

Output prefixes

| | |
|-----------------|--|
| <code>-b</code> | Print the byte offset of the match within the input file |
| <code>-H</code> | Print the filename containing a match |
| <code>-h</code> | Do not print the filename containing a match |
| <code>-n</code> | Print the line number of each match |
| <code>-T</code> | Print an initial Tab before matches so that output is neatly aligned |





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File and directory selection

| | |
|---|---|
| <code>-a</code> | Process a binary file as if it were text |
| <code>-D <skip read></code> | Skip or read a FIFO, device, or socket |
| <code>-d <skip read recurse></code> | Skip, read, or recurse through a directory |
| <code>--exclude '*.sh'</code> | Do not search any file with the .sh suffix |
| <code>--exclude-from FILE</code> | Skip any file listed in FILE |
| <code>--exclude-dir *foo</code> | Skip any directory ending in foo |
| <code>-r</code> | When a directory is encountered, search files in it |
| <code>-R</code> | Search directories and follow symlinks |

Variants

| | |
|-----------------|---|
| <code>-G</code> | Use basic regex (this is the default) |
| <code>-E</code> | Extended regex |
| <code>-F</code> | Interpret the search pattern as a fixed string, not regex |
| <code>-P</code> | Use Perl regex (PCRE) |

Regular expression

| | | | |
|--------------------|---|------------------------|------------------------|
| <code>.</code> | Any single character | | |
| <code>?</code> | Match preceding item zero or one time | | |
| <code>*</code> | Match preceding item zero or more times | | |
| <code>+</code> | Match preceding item one or more times | | |
| <code>{2}</code> | Match preceding item two times | | |
| <code>{3,}</code> | Match preceding item three or more times | | |
| <code>{,4}</code> | Match preceding item at most four times | | |
| <code>{1,5}</code> | Match preceding item at least once, but no more than five times | | |
| <code>[A,B]</code> | Match A or B | <code>[:alnum:]</code> | Alphanumeric character |
| <code>[3-9]</code> | Match all digits 3 to 9 | <code>[:alpha:]</code> | Alphabetic character |
| <code>^</code> | Start of a line | <code>[:digit:]</code> | Digits 0 through 9 |
| <code>\$</code> | End of a line | <code>[:punct:]</code> | Punctuation |
| <code>\s</code> | Space | <code>[:space:]</code> | Space |

