

**NAME**

GNU diff – compare files line by line

**SYNOPSIS**

**diff** [*OPTION*]... *FILES*

**DESCRIPTION**

Compare *FILES* line by line.

Mandatory arguments to long options are mandatory for short options too.

**--normal**

output a normal diff (the default)

**-q, --brief**

report only when files differ

**-s, --report-identical-files**

report when two files are the same

**-c, -C NUM, --context[=*NUM*]**

output *NUM* (default 3) lines of copied context

**-u, -U NUM, --unified[=*NUM*]**

output *NUM* (default 3) lines of unified context

**-e, --ed**

output an ed script

**-n, --rcs**

output an RCS format diff

**-y, --side-by-side**

output in two columns

**-W, --width=*NUM***

output at most *NUM* (default 130) print columns

**--left-column**

output only the left column of common lines

**--suppress-common-lines**

do not output common lines

**-p, --show-c-function**

show which C function each change is in

**-F, --show-function-line=*RE***

show the most recent line matching *RE*

**--label LABEL**

use *LABEL* instead of file name and timestamp (can be repeated)

**-t, --expand-tabs**

expand tabs to spaces in output

**-T, --initial-tab**

make tabs line up by prepending a tab

**--tabsize=*NUM***

tab stops every *NUM* (default 8) print columns

**--suppress-blank-empty**

suppress space or tab before empty output lines

**-l, --paginate**

pass output through 'pr' to paginate it

- r, --recursive**  
recursively compare any subdirectories found
- no-dereference**  
don't follow symbolic links
- N, --new-file**  
treat absent files as empty
- unidirectional-new-file**  
treat absent first files as empty
- ignore-file-name-case**  
ignore case when comparing file names
- no-ignore-file-name-case**  
consider case when comparing file names
- x, --exclude=*PAT***  
exclude files that match *PAT*
- X, --exclude-from=*FILE***  
exclude files that match any pattern in *FILE*
- S, --starting-file=*FILE***  
start with *FILE* when comparing directories
- from-file=*FILE1***  
compare *FILE1* to all operands; *FILE1* can be a directory
- to-file=*FILE2***  
compare all operands to *FILE2*; *FILE2* can be a directory
- i, --ignore-case**  
ignore case differences in file contents
- E, --ignore-tab-expansion**  
ignore changes due to tab expansion
- Z, --ignore-trailing-space**  
ignore white space at line end
- b, --ignore-space-change**  
ignore changes in the amount of white space
- w, --ignore-all-space**  
ignore all white space
- B, --ignore-blank-lines**  
ignore changes where lines are all blank
- I, --ignore-matching-lines=*RE***  
ignore changes where all lines match *RE*
- a, --text**  
treat all files as text
- strip-trailing-cr**  
strip trailing carriage return on input
- D, --ifdef=*NAME***  
output merged file with '#ifdef *NAME*' diffs
- GTYPE-group-format=*GFMT***  
format *GTYPE* input groups with *GFMT*

**--line-format=LFMT**  
 format all input lines with LFMT

**--LTYPE-line-format=LFMT**  
 format LTYPE input lines with LFMT

These format options provide fine-grained control over the output of diff, generalizing **-D/--ifdef**.

LTYPE is 'old', 'new', or 'unchanged'.  
 GTYPE is LTYPE or 'changed'.  
 GFMT (only) may contain:

%< lines from FILE1  
 %> lines from FILE2  
 %= lines common to FILE1 and FILE2  
 %[-][WIDTH][.PREC]){doxX}LETTER  
 printf-style spec for LETTER

LETTERS are as follows for new group, lower case for old group:

F first line number  
 L last line number  
 N number of lines = L-F+1  
 E F-1  
 M L+1

%(A=B?T:E)  
 if A equals B then T else E

LFMT (only) may contain:

%L contents of line  
 %l contents of line, excluding any trailing newline  
 %[-][WIDTH][.PREC]){doxX}n  
 printf-style spec for input line number

Both GFMT and LFMT may contain:

%% %  
 %c'C' the single character C  
 %c'\OOO'  
 the character with octal code OOO  
 C the character C (other characters represent themselves)

**-d, --minimal**  
 try hard to find a smaller set of changes

**--horizon-lines=NUM**  
 keep NUM lines of the common prefix and suffix

**--speed-large-files**  
 assume large files and many scattered small changes

**--color[=WHEN]**  
 colorize the output; WHEN can be 'never', 'always', or 'auto' (the default)

**--palette=PALETTE**

the colors to use when **--color** is active; PALETTE is a colon-separated list of terminfo capabilities

**--help** display this help and exit

**-v, --version**

output version information and exit

FILES are 'FILE1 FILE2' or 'DIR1 DIR2' or 'DIR FILE' or 'FILE DIR'. If **--from-file** or **--to-file** is given, there are no restrictions on FILE(s). If a FILE is '-', read standard input. Exit status is 0 if inputs are the same, 1 if different, 2 if trouble.

## AUTHOR

Written by Paul Eggert, Mike Haertel, David Hayes, Richard Stallman, and Len Tower.

## REPORTING BUGS

Report bugs to: [bug-diffutils@gnu.org](mailto:bug-diffutils@gnu.org)

GNU diffutils home page: [<https://www.gnu.org/software/diffutils/>](https://www.gnu.org/software/diffutils/)

General help using GNU software: [<https://www.gnu.org/gethelp/>](https://www.gnu.org/gethelp/)

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## SEE ALSO

[wdiff\(1\)](#), [cmp\(1\)](#), [diff3\(1\)](#), [sdiff\(1\)](#), [patch\(1\)](#)

The full documentation for **GNU** is maintained as a Texinfo manual. If the **info** and **GNU** programs are properly installed at your site, the command

**info GNU**

should give you access to the complete manual.