## NAME
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*]
>       color output; WHEN is 'never', 'always', or 'auto'; plain **−−color** means **−−color=**'auto'

**−−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
GNU diffutils home page: <https://www.gnu.org/software/diffutils/>
General help using GNU software: <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 **diff** is maintained as a Texinfo manual.  If the **info** and **diff** programs are properly installed at your site, the command

> **info diff**

should give you access to the complete manual.