NAME

diff – display line-by-line differences between pairs of text files

SYNOPSIS

diff [–**bitw**] [–**c** | –**e** | –**f** | –**h** | –**n**] *file1 file2*
diff [–**bitw**] [–**C** *number*] *file1 file2*
diff [–**bitw**] [–**D** *string*] *file1 file2*
diff [–**bitw**] [–**c** | –**e** | –**f** | –**h** | –**n**] [–**l**] [–**r**] [–**s**] [–**S** *name*]
directory1 directory2

AVAILABILITY

SUNWesu

DESCRIPTION

The **diff** utility will compare the contents of *file1* and *file2* and write to standard output a list of changes necessary to convert *file1* into *file2* . This list should be minimal. No output will be produced if the files are identical.

The normal output contains lines of these forms:

n1 **a** *n3,n4*
n1,n2 **d** *n3*
n1,n2 **c** *n3,n4*

where *n1* and *n2* represent lines *file1* and *n3* and *n4* represent lines in *file2* These lines resemble **ed**(1) commands to convert *file1* to *file2*. By exchanging **a** for **d** and reading backward, *file2* can be converted to *file1*. As in **ed**, identical pairs, where *n1*=*n2* or *n3*=*n4*, are abbreviated as a single number.

Following each of these lines come all the lines that are affected in the first file flagged by '**<**', then all the lines that are affected in the second file flagged by '**>**'.

OPTIONS

–**b** Ignores trailing blanks (spaces and tabs) and treats other strings of blanks as equivalent.

–**i** Ignores the case of letters; for example, '**A**' will compare equal to '**a**'.

–**t** Expands TAB characters in output lines. Normal or –**c** output adds character(s) to the front of each line that may adversely affect the indentation of the original source lines and make the output lines difficult to interpret. This option will preserve the original source's indentation.

–**w** Ignores all blanks (SPACE and TAB characters) and treats all other strings of blanks as equivalent; for example, '**if (a = = b)**' will compare equal to '**if(a= =b)**'.

The following options are mutually exclusive:

–**c** Produces a listing of differences with three lines of context. With this option output format is modified slightly: output begins with identification of the files involved and their creation dates, then each change is separated by a line with a dozen *'s. The lines removed from *file1* are marked with '—'; those added to *file2* are marked ' + '. Lines that are changed from one file to the other are marked in both files with ' ! '.

−C *number* Produces a listing of differences identical to that produced by **−c** with *number* lines of context.

−e Produces a script of only **a, c**, and **d** commands for the editor **ed**, which will recreate *file2* from *file1*. In connection with **−e ,** the following shell program may help maintain multiple versions of a file. Only an ancestral file ($1) and a chain of version-to-version **ed** scripts ($2,$3,...) made by **diff** need be on hand. A ''latest version'' appears on the standard output.

(shift; cat $*; echo '1,$p') | ed − $1

Except in rare circumstances, **diff** finds a smallest sufficient set of file differences.

−f Produces a similar script, not useful with **ed**, in the opposite order.

−h Does a fast, half-hearted job. It works only when changed stretches are short and well separated, but does work on files of unlimited length. Options **−e** and **−f** are unavailable with **−h**.

−n Produces a script similar to **−e ,** but in the opposite order and with a count of changed lines on each insert or delete command.

−D *string* Creates a merged version of *file1* and *file2* with C preprocessor controls included so that a compilation of the result without defining *string* is equivalent to compiling *file1*, while defining *string* will yield *file2*.

The following options are used for comparing directories:

−l Produce output in long format. Before the **diff**, each text file is piped through **pr**(1) to paginate it. Other differences are remembered and summarized after all text file differences are reported.

−r Applies **diff** recursively to common subdirectories encountered.

−s Reports files that are the identical; these would not otherwise be mentioned.

−S *name* Starts a directory **diff** in the middle, beginning with the file *name*.

OPERANDS

The following operands are supported:

file1
file2 A path name of a file or directory to be compared. If either *file1* or *file2* is −, the standard input will be used in its place.

directory1
directory2 A path name of a directory to be compared.

If only one of *file1* and *file2* is a directory, **diff** will be applied to the non-directory file and the file contained in the directory file with a filename that is the same as the last component of the non-directory file.

EXAMPLES

If **dir1** is a directory containing a directory named **x**, **dir2** is a directory containing a directory named **x**, **dir1/x** and **dir2/x** both contain files named **date.out**, and **dir2/x** contains a file named **y**, the command:

```
example% diff -r dir1 dir2
```

could produce output similar to:

```
Common subdirectories: dir1/x and dir2/x
Only in dir2/x: y
diff -r dir1/x/date.out dir2/x/date.out
1c1
< Mon Jul  2 13:12:16 PDT 1990
---
> Tue Jun 19 21:41:39 PDT 1990
```

ENVIRONMENT

See **environ**(5) for descriptions of the following environment variables that affect the execution of **diff**: **LC_CTYPE**, **LC_MESSAGES**, and **NLSPATH**.

LC_TIME Determine the locale for affecting the format of file timestamps written with the −**C** and −**c** options.

TZ Determine the locale for affecting the timezone used for calculating file timestamps written with the −**C** and −**c** options.

EXIT STATUS

The following exit values are returned:

0 No differences were found.

1 Differences were found.

>1 An error occurred.

FILES

/tmp/d????? temporary file used for comparison

/usr/lib/diffh executable file for −**h** option

SEE ALSO

bdiff(1), **cmp**(1), **comm**(1), **dircmp**(1), **ed**(1), **pr**(1), **sdiff**(1), **environ**(5)

NOTES

Editing scripts produced under the −**e** or −**f** options are naive about creating lines consisting of a single period (**.**).

Missing NEWLINE at end of file indicates that the last line of the file in question did not have a NEWLINE. If the lines are different, they will be flagged and output; although the output will seem to indicate they are the same.