**DIFF(I)**                                                      **DIFF(I)**

NAME
    diff − differential file comparator

SYNOPSIS
    **diff** [ **−efb** ] name1 name2

DESCRIPTION
    *Diff* tells what lines must be changed in two files to bring them into agreement. If **name1** (**name2**) is '−', the standard input is used. If **name1** (**name2**) is a directory, then a file in that directory whose file-name is the same as the file-name of **name2** (**name1**) is used. The normal output contains lines of these forms:

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

    These lines resemble *ed* commands to convert file **name1** into file **name2.** The numbers after the letters pertain to file **name2.** In fact, by exchanging 'a' for 'd' and reading backward one may ascertain equally how to convert file **name2** into **name1.** 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 '>'.

    The **-b** option causes trailing blanks (spaces and tabs) to be ignored and other strings of blanks to compare equal. The **−e** option produces a script of *a, c* and *d* commands for the editor *ed,* which will recreate file **name2** from file **name1.** The **−f** option produces the same editing commands in the opposite order (not directly usable by *ed.*) 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.

    (cat $2 ... $9; echo 1,$p) | ed − $1

    Except for occasional 'jackpots', *diff* finds a smallest sufficient set of file differences.

FILES
    /tmp/d?????

SEE ALSO
    cmp (I), comm (I), ed (I)

DIAGNOSTICS
    'jackpot' − To speed things up, the program uses hashing. You have stumbled on a case where there is a chance that this has resulted in a difference being called where none actually existed. Sometimes reversing the order of files will make a jackpot go away.

BUGS
    Editing scripts produced under the −e option are naive about creating lines consisting of a single '.'.