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comparisons of character special files need not compare all of the data in those files.

The word `char` in the standard output format comes from historical usage, even though it is actually a byte number. When `cmp` is supported in other locales, implementations are encouraged to use the word `byte` or its equivalent in another language. Users should not interpret this difference to indicate that the functionality of the utility changed between locales.

History of Decisions Made

Some systems report on the number of lines in the identical-but-shorter file case. This is allowed by the inclusion of the *<additional info>* fields in the output format. The restriction on having a leading `<blank>` and no `<newline>`s is to make parsing for the file name easier. It is recognized that some file names containing white-space characters will make parsing difficult anyway, but the restriction does aid programs used on systems where the names are predominantly well behaved.

4.11 `comm` — Select or reject lines common to two files

4.11.1 Synopsis

`comm [-123]` *file1 file2*

4.11.2 Description

The `comm` utility shall read *file1* and *file2*, which should be ordered in the current collating sequence, and produce three text columns as output: lines only in *file1*; lines only in *file2*; and lines in both files.

If the lines in both files are not ordered according to the collating sequence of the current locale, the results are unspecified.

4.11.3 Options

The `comm` utility shall conform to the utility argument syntax guidelines described in 2.10.2.

The following options shall be supported by the implementation:

`-1` Suppress the output column of lines unique to *file1*.

`-2` Suppress the output column of lines unique to *file2*.

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3261 −3 Suppress the output column of lines duplicated in *file1* and *file2*. 1

3262 ### 4.11.4 Operands

3263 The following operands shall be supported by the implementation:

3264 *file1* A pathname of the first file to be compared. If *file1* is −, the stan-
3265 dard input is used.

3266 *file2* A pathname of the second file to be compared. If *file2* is −, the
3267 standard input is used.

3268 If both *file1* and *file2* refer to standard input or to the same FIFO special, block
3269 special, or character special file, the results are undefined.

3270 ### 4.11.5 External Influences

3271 #### 4.11.5.1 Standard Input

3272 The standard input shall be used only if one of the *file1* or *file2* operands refers to
3273 standard input. See Input Files.

3274 #### 4.11.5.2 Input Files

3275 The input files shall be text files.

3276 #### 4.11.5.3 Environment Variables

3277 The following environment variables shall affect the execution of `comm`:

3278 **LANG** This variable shall determine the locale to use for the
3279 locale categories when both **LC_ALL** and the correspond-
3280 ing environment variable (beginning with **LC_**) do not
3281 specify a locale. See 2.6.

3282 **LC_ALL** This variable shall determine the locale to be used to over-
3283 ride any values for locale categories specified by the set-
3284 tings of **LANG** or any environment variables beginning
3285 with **LC_**.

3286 **LC_CTYPE** This variable shall determine the locale for the interpreta-
3287 tion of sequences of bytes of text data as characters (e.g.,
3288 single- versus multibyte characters in arguments and
3289 input files).

3290 **LC_COLLATE** This variable shall determine the locale for the collating
3291 sequence `comm` expects to have been used when the input
3292 files were sorted.

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LC_MESSAGES This variable shall determine the language in which messages should be written.

4.11.5.4 Asynchronous Events

Default.

4.11.6 External Effects

4.11.6.1 Standard Output

The `comm` utility shall produce output depending on the options selected. If the `-1`, `-2`, and `-3` options are all selected, `comm` shall write nothing to standard output.

If the `-1` option is not selected, lines contained only in *file1* shall be written using the format:

`"%s\n"`, *<line in file1>*

If the `-2` option is not selected, lines contained only in *file2* shall be written using the format:

`"%s%s\n"`, *<lead>*, *<line in file2>*

where the string *<lead>* is:

`<tab>` if the `-1` option is not selected, or

null string if the `-1` option is selected.

If the `-3` option is not selected, lines contained in both files shall be written using the format:

`"%s%s\n"`, *<lead>*, *<line in both>*

where the string *<lead>* is:

`<tab><tab>` if neither the `-1` nor the `-2` option is selected, or

`<tab>` if exactly one of the `-1` and `-2` options is selected, or

null string if both the `-1` and `-2` options are selected.

If the input files were ordered according to the collating sequence of the current locale, the lines written shall be in the collating sequence of the original lines.

4.11.6.2 Standard Error

Used only for diagnostic messages.

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3322 #### 4.11.6.3 Output Files

3323 None.

3324 ### 4.11.7 Extended Description

3325 None.

3326 ### 4.11.8 Exit Status

3327 The `comm` utility shall exit with one of the following values:

3328 0 All input files were successfully output as specified.

3329 >0 An error occurred.

3330 ### 4.11.9 Consequences of Errors

3331 Default.

3332 ### 4.11.10 Rationale. *(This subclause is not a part of P1003.2)*

3333 **Examples, Usage**

3334 If the input files are not properly presorted, the output of `comm` might not be use-
3335 ful.

3336 If a file named `posix.2` contains a sorted list of the utilities in this standard, a
3337 file named `xpg3` contains a sorted list of the utilities specified in X/Open Portabil-
3338 ity Guide Issue 3, and a file named `svid89` contains a sorted list of the utilities in
3339 the System V Interface Definition Third Edition:

3340 ```
comm -23 posix.2 xpg3 | comm -23 - svid89
```

3341 would print a list of utilities in this standard not specified by either of the other
3342 documents,

3343 ```
comm -12 posix.2 xpg3 | comm -12 - svid89
```

3344 would print a list of utilities specified by all three documents, and

3345 ```
comm -12 xpg3 svid89 | comm -23 - posix.2
```

3346 would print a list of utilities specified by both XPG3 and *SVID*, but not specified in
3347 this standard.

3348 **History of Decisions Made**

3349 None.

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3350 ## 4.12 `command` — Execute a simple command

3351 ### 4.12.1 Synopsis

3352 `command [-p]` *command_name* `[`*argument* `...]`

3353 ### 4.12.2 Description

3354 The `command` utility shall cause the shell to treat the arguments as a simple com-
3355 mand, suppressing the shell function lookup that is described in 3.9.1.1 item 1
3356 (1)(b). 1

3357 If the *command_name* is the same as the name of one of the special built-in utili-
3358 ties, the special properties in the enumerated list at the beginning of 3.14 shall
3359 not occur. In every other respect, if *command_name* is not the name of a function,
3360 the effect of `command` shall be the same as omitting `command`.

3361 ### 4.12.3 Options

3362 The `command` utility shall conform to the utility argument syntax guidelines
3363 described in 2.10.2.

3364 The following option shall be supported by the implementation:

3365 `-p` Perform the command search using a default value for **PATH** that
3366 is guaranteed to find all of the standard utilities.

3367 ### 4.12.4 Operands

3368 The following operands shall be supported by the implementation:

3369 *argument* One of the strings treated as an argument to *command_name* .

3370 *command_name*
3371 The name of a utility or a special built-in utility.

3372 ### 4.12.5 External Influences

3373 #### 4.12.5.1 Standard Input

3374 None.

3375 #### 4.12.5.2 Input Files

3376 None.

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