



Rocky Enterprise Linux 9.2 Manual Pages on command 'wordexp.3'

C:\>man wordexp.3

WORDEXP(3) Linux Programmer's Manual WORDEXP(3)

NAME

wordexp, wordfree - perform word expansion like a posix-shell

SYNOPSIS

```
#include <wordexp.h>
```

```
int wordexp(const char *s, wordexp_t *p, int flags);
```

```
void wordfree(wordexp_t *p);
```

Feature Test Macro Requirements for glibc (see `feature_test_macros(7)`):

wordexp(), wordfree(): `_XOPEN_SOURCE`

DESCRIPTION

The function `wordexp()` performs a shell-like expansion of the string `s` and returns the result in the structure pointed to by `p`. The data type `wordexp_t` is a structure that at least has the fields `we_wordc`, `we_wordv`, and `we_offs`. The field `we_wordc` is a `size_t` that gives the number of words in the expansion of `s`. The field `we_wordv` is a `char **` that points to the array of words found. The field `we_offs` of type `size_t` is sometimes (depending on flags, see below) used to indicate the number of initial elements in the `we_wordv` array that should be filled with NULLs.

The function `wordfree()` frees the allocated memory again. More precisely, it does not free its argument, but it frees the array `we_wordv` and the strings that points to.

The string argument

Since the expansion is the same as the expansion by the shell (see `sh(1)`) of the parameters to a command, the string `s` must not contain characters that would be illegal in shell command parameters. In particular, there must not be any unescaped newline or `|`, `&`, `;`, `<`, `>`, `(`, `)`, `{`, `}` characters outside a command substitution or parameter substitution context.

If the argument `s` contains a word that starts with an unquoted comment character `#`, then it is unspecified whether that word and all following words are ignored, or the `#` is treated as a non-comment character.

The expansion

The expansion done consists of the following stages: tilde expansion (replacing `~user` by user's home directory), variable substitution (replacing `$FOO` by the value of the environment variable `FOO`), command substitution (replacing `$(command)` or ``command`` by the output of `command`), arithmetic expansion, field splitting, wildcard expansion, quote removal.

The result of expansion of special parameters (`$@`, `$*`, `$#`, `$?`, `$-`, `$$`, `$!`, `$0`) is unspecified.

Field splitting is done using the environment variable `$IFS`. If it is not set, the field separators are space, tab and newline.

The output array

The array `we_wordv` contains the words found, followed by a `NULL`.

The flags argument

The flag argument is a bitwise inclusive OR of the following values:

`WRDE_APPEND`

Append the words found to the array resulting from a previous call.

`WRDE_DOOFFS`

Insert `we_offs` initial `NULL`s in the array `we_wordv`. (These are not counted in the returned `we_wordc`.)

`WRDE_NOCMD`

Don't do command substitution.

`WRDE_REUSE`

The argument `p` resulted from a previous call to `wordexp()`, and `wordfree()` was not called. Reuse the allocated storage.

`WRDE_SHOWERR`

a program, then data races could occur. `wordexp()` calls those functions, so we use `race:utent` to remind users.

CONFORMING TO

POSIX.1-2001, POSIX.1-2008.

EXAMPLE

The output of the following example program is approximately that of `ls [a-c]*.c`.

```
#include <stdio.h>
#include <stdlib.h>
#include <wordexp.h>

int
main(int argc, char **argv)
{
    wordexp_t p;
    char **w;
    int i;
    wordexp("[a-c]*.c", &p, 0);
    w = p.we_wordv;
    for (i = 0; i < p.we_wordc; i++)
        printf("%s\n", w[i]);
    wordfree(&p);
    exit(EXIT_SUCCESS);
}
```

SEE ALSO

`fnmatch(3)`, `glob(3)`

COLOPHON

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