NAME

umask − set file mode creation mask

SYNOPSIS

#include <sys/types.h>
#include <sys/stat.h>

mode_t umask(mode_t *mask***);**

DESCRIPTION

umask() sets the calling process's file mode creation mask (umask) to *mask* & 0777 (i.e., only the file permission bits of *mask* are used), and returns the previous value of the mask.

The umask is used by **open**(2), **mkdir**(2), and other system calls that create files to modify the permissions placed on newly created files or directories. Specifically, permissions in the umask are turned off from the *mode* argument to **open**(2) and **mkdir**(2).

The constants that should be used to specify *mask* are described under **stat**(2).

The typical default value for the process umask is *S_IWGRP* | *S_IWOTH* (octal 022). In the usual case where the *mode* argument to **open**(2) is specified as:

S_IRUSR | S_IWUSR | S_IRGRP | S_IWGRP | S_IROTH | S_IWOTH

(octal 0666) when creating a new file, the permissions on the resulting file will be:

S_IRUSR | S_IWUSR | S_IRGRP | S_IROTH

(because 0666 & ˜022 = 0644; i.e., rw−r−−r−−).

RETURN VALUE

This system call always succeeds and the previous value of the mask is returned.

CONFORMING TO

SVr4, 4.3BSD, POSIX.1-2001.

NOTES

A child process created via **fork**(2) inherits its parent's umask. The umask is left unchanged by **execve**(2).

The umask setting also affects the permissions assigned to POSIX IPC objects (**mq_open**(3), **sem_open**(3), **shm_open**(3)), FIFOs (**mkfifo**(3)), and Unix domain sockets (**unix**(7)) created by the process. The umask does not affect the permissions assigned to System V IPC objects created by the process (using **msgget**(2), **semget**(2), **shmget**(2)).

SEE ALSO

chmod(2), **mkdir**(2), **open**(2), **stat**(2)

COLOPHON

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