NAME

semget - obtain a semaphore id

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

#include <sys/sem.h>

int
semget(*key_t key*, *int nsems*, *int flag*);

DESCRIPTION

Based on the values of *key* and *flag*, **semget**() returns the identifier of a newly created or previously existing set of semaphores. The key is analogous to a filename: it provides a handle that names an IPC object. There are three ways to specify a key:

- IPC_PRIVATE may be specified, in which case a new IPC object will be created.

- An integer constant may be specified. If no IPC object corresponding to *key* is specified and the IPC_CREAT bit is set in *flag*, a new one will be created.

- The ftok(3) function may be used to generate a key from a pathname.

The mode of a newly created IPC object is determined by ORing these constants into the *flag* argument:

0400 Read access for user.

0200 Alter access for user.

0040 Read access for group.

0020 Alter access for group.

0004 Read access for other.

0002 Alter access for other.

If a new set of semaphores is being created, *nsems* is used to indicate the number of semaphores the set should contain. Otherwise, *nsems* may be specified as 0.

RETURN VALUES

The **semget**() system call returns the id of a semaphore set if successful; otherwise, -1 is returned and *errno* is set to indicate the error.

ERRORS

The **semget**() system call will fail if:

[EACCES]	Access permission failure.
[EEXIST]	IPC_CREAT and IPC_EXCL were specified, and a semaphore set corresponding to *key* already exists.
[EINVAL]	The number of semaphores requested exceeds the system imposed maximum per set.
[EINVAL]	A semaphore set corresponding to *key* already exists and contains fewer semaphores than *nsems*.
[EINVAL]	A semaphore set corresponding to *key* does not exist and *nsems* is 0 or negative.
[ENOSPC]	Insufficiently many semaphores are available.
[ENOSPC]	The kernel could not allocate a *struct semid_ds*.
[ENOENT]	No semaphore set was found corresponding to *key*, and IPC_CREAT was not specified.

SEE ALSO

semctl(2), semop(2), ftok(3)