

```

// Illustration of semctl() of semaphores

// Bosky Agarwal
// Interprocess communication in Linux

#include <stdio.h>
#include <stdlib.h>
#include <errno.h>
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/sem.h>

int main(void)
{
    int semid;
    key_t key;

    union semun {
        int val;
        struct semid_ds *buf;
        ushort *array;
    } arg;

    printf("\n Enter the key of the semaphore :");
    scanf("%d",&key);

    if ((semid = semget(key, 1, IPC_CREAT)) == -1)
    {
        perror("semget");
        exit(1);
    }
    if(semctl(semid,0,IPC_STAT,arg)== -1)
    {
        perror("\n Error in semctl...");
        exit(1);
    }

    printf("The old value of semaphore = %d\n",arg.val);

    //set new value to the semaphore

    arg.val = 5;
    if (semctl(semid, 0, SETVAL, arg) == -1)
    {
        perror("semctl");
        exit(1);
    }

    printf("The new value of semaphore = %d\n",arg.val);
    return 0;
}

```