Practical-8

Write a prgram that demostrats shared memory.

```
#include <stdio.h>
#include <stdlib.h>
#include <sys/ipc.h>
#include <sys/shm.h>
#include <unistd.h>

#define SHMSIZE 1024

int main() {
    int shmid;
    key_t key;
    char *shm, *s;

    key = ftok(".", 'a');

    if ((shmid = shmget(key, SHMSIZE, IPC_CREAT | 0666)) < 0) {
        perror("shmget");
        exit(1);
    }

    if ((shm = shmat(shmid, NULL, 0)) == (char *) -1) {
        perror("shmat");
        exit(1);
    }

    s = shm;
    for (char *msg = "Hello, This is the shared memory!"; *msg != '\0'; msg++) {
        *s++ = *msg;
    }
```

```
    *s = '\0';

    if (shmdt(shm) == -1) {
        perror("shmdt");
        exit(1);
    }

    sleep(3);

    if ((shm = shmat(shmid, NULL, 0)) == (char *) -1) {
        perror("shmat");
        exit(1);
    }

    printf("Message from shared memory: %s\n", shm);

    if (shmdt(shm) == -1) {
        perror("shmdt");
        exit(1);
    }

    if (shmctl(shmid, IPC_RMID, NULL) == -1) {
        perror("shmctl");
        exit(1);
    }

    return 0;
}
```

```
Message from shared memory: Hello, This is the shared memory!
```