

//Inter-thread Communication using Shared memory

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#include <sys/ipc.h>
#include <sys/shm.h>
#include <stdio.h>
#include <pthread.h>

void * sthread() // sender thread
{
    key_t key = ftok("shmfile",65);
    int shmid = shmget(key,1024,0666|IPC_CREAT);
    char *str = (char*) shmat(shmid,(void*)0,0);
    printf("Write Data : ");
    gets(str);
    printf("Data written in memory: %s\n",str);
    shmdt(str);
    flag=1;
    pthread_exit(NULL);
}

void *rthread() //receiver thread
{
    key_t key = ftok("shmfile",65);
    int shmid = shmget(key,1024,0666|IPC_CREAT);
    char *str = (char*) shmat(shmid,(void*)0,0);
    printf("Data read from memory: %s\n",str);
    shmdt(str);
    shmctl(shmid,IPC_RMID,NULL);
}

int main(void)
{
    pthread_t tid1;
    pthread_t tid2;
    pthread_create(&tid1, NULL, sthread, NULL);
    pthread_create(&tid1, NULL, rthread, NULL);
    pthread_join(tid1, NULL);
    pthread_join(tid2, NULL);
    return 0;
}
```