

EXP NO:7 IPC USING SHARED MEMORY

PROGRAM

```
cse81@localhost:~  
#include <stdio.h>  
#include <sys/ipc.h>  
#include <sys/shm.h>  
#include <string.h>  
#include <unistd.h>  
  
#define SHM_SIZE 1024  
  
int main() {  
    key_t key = ftok("shmfile", 65); // Generate unique key  
    int shmid = shmget(key, SHM_SIZE, 0666 | IPC_CREAT); // Allocate shared memory  
    char *shm_ptr = (char *)shmat(shmid, NULL, 0); // Attach shared memory  
  
    sprintf(shm_ptr, "Welcome to Shared Memory"); // Write string to shared memory  
    printf("Message sent: %s\n", shm_ptr);  
  
    sleep(10); // Delay to allow receiver to read the message  
  
    shmdt(shm_ptr); // Detach shared memory  
    return 0;  
}  
  
cse81@localhost:~  
#include <stdio.h>  
#include <sys/ipc.h>  
#include <sys/shm.h>  
  
#define SHM_SIZE 1024  
  
int main() {  
    key_t key = ftok("shmfile", 65); // Generate unique key  
    int shmid = shmget(key, SHM_SIZE, 0666); // Locate shared memory  
    char *shm_ptr = (char *)shmat(shmid, NULL, 0); // Attach shared memory  
  
    printf("Message Received: %s\n", shm_ptr); // Print received message  
  
    shmdt(shm_ptr); // Detach shared memory  
    shmctl(shmid, IPC_RMID, NULL); // Destroy shared memory segment  
  
    return 0;  
}
```

OUTPUT

```
[cse81@localhost ~]$ gcc sender.c -o sender
[cse81@localhost ~]$ ./sender
Message sent: Welcome to Shared Memory

^C
[cse81@localhost ~]$ gcc receiver.c -o receiver
[cse81@localhost ~]$ ./receiver
Message Received: Welcome to Shared Memory
[cse81@localhost ~]$
```