

OS LAB MANUAL

(CS23431)

Lab:3

Roll No:230701246

EX.NO:7

IPC USING SHARED MEMORY

Aim: To write a C program to do Inter Process Communication (IPC) using shared memory between sender process and receiver process

Program:

Sender.c:

```
#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);
    int shmid = shmget(key, SHM_SIZE, 0666 | IPC_CREAT);
    if (shmid == -1) {

    }
    char *str = (char *)shmat(shmid, NULL, 0);
    if (str == (char *)-1) {
        perror("shmat failed");
    }
}
```



```
    shmctl(shmid, IPC_RMID, NULL);  
    return 0;  
}
```

Input:

```
praveen@LAPTOP-Q0D806DB:~$ gcc sender.c  
praveen@LAPTOP-Q0D806DB:~$ ./a.out  
Writing to shared memory...  
Message sent successfully!
```

Output:

```
praveen@LAPTOP-Q0D806DB:~$ gcc sender.c  
praveen@LAPTOP-Q0D806DB:~$ ./a.out  
Writing to shared memory...  
Message sent successfully!  
praveen@LAPTOP-Q0D806DB:~$ gcc receiver.c  
praveen@LAPTOP-Q0D806DB:~$ ./a.out  
Message Received: hello.what is your name
```