Ex. No.: 7

Date: 26/3/25

# 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.

# Algorithm:

# sender

- 1. Set the size of the shared memory segment
- 2. Allocate the shared memory segment using shmget
- 3. Attach the shared memory segment using shmat
- 4. Write a string to the shared memory segment using sprintf
- 5. Set delay using sleep
- 6. Detach shared memory segment using shmdt

### receiver

- 1. Set the size of the shared memory segment
- 2. Allocate the shared memory segment using shmget
- 3. Attach the shared memory segment using shmat
- Print the shared memory contents sent by the sender process.
- 5. Detach shared memory segment using shmdt

# Program Code:

### sender.c

#include 2 stdio-h>
#include 2 stdlib.h>
#include 2 storing.h>
#include 2 storing.h>
#include 4 conistd.h>

int main () { void & shumen; char buf[100] Shmid=shmget([key-t 2345,1024,0661]IPC\_CREATI print ("Key of shared Memory is /d/n"/shmid): Shumen = shmat shmid, NULL, of point ("Rusess affacked at 1/h/n', shormen); Sleep (5)

print [ "write to shared Memory");

vead (0, buf, 100);

stropy (shumen, buf);

print ( Vser Input: /.s/n'/(chart)shumen);

receiver.c

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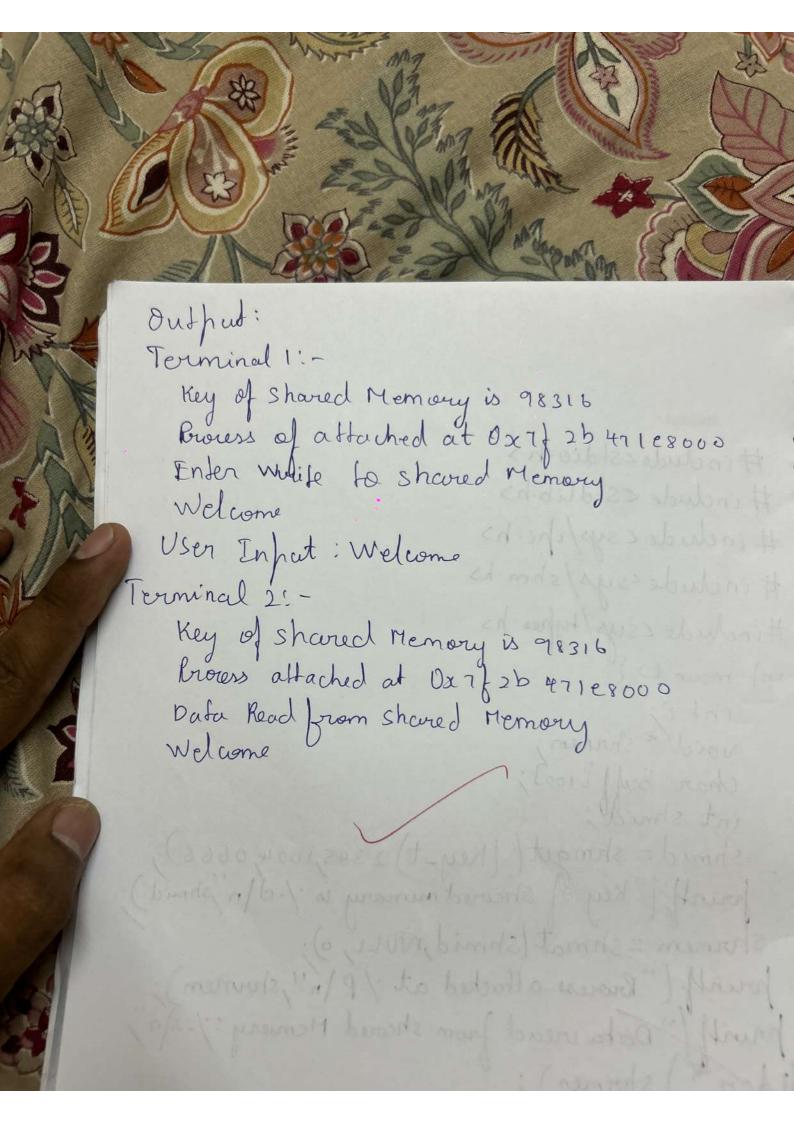
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#include 2stdio.h> # include < Stalib.h> # include (sys/ipi.h) # include sys/shm.hs Hindude csys/types. hs int main 1) { intij void Shumen; char buff [100]; int should; shmid = shmget ([key-t) 2345,1024,0666); fourth, ["key of showed memory is /.d/n/shmid). shrmen = shmat (shmid, NULL, o); hourth ("Rrocess affacked at 1/P /n", shownen); hrustly Data viead from showed Memory: 1/-s/n" (thous shines); shmdt/shumen);



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### Sample Output

### Terminal 1

[root@localhost student]# gcc sender.c -o sender [root@localhost student]# /sender

## Terminal 2

[root@localhost student]# gcc receiver.c -o receiver [root@localhost student]# /receiver Message Received: Welcome to Shared Memory [root@localhost student]#

Hence the Interprocess Communication for Shared Memory is Implement and Executed