OPERATING SYSTEM

Experiment 12 Inter Process Communication

L2 -SWE

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RA1911033010017

12A shared memory
Ref. screenshot:

Writer

roehit@LAPTOP-0SIPK43K: ~

```
roehit@LAPTOP-0SIPK43K:~$ nano writer.c
roehit@LAPTOP-0SIPK43K:~$ cat writer.c
#include <sys/ipc.h>
#include <sys/shm.h>
#include <stdio.h>
int main()
{
// ftok to generate unique key
key_t key = ftok("shmfile",65);
// shmget returns an identifier in shmid
int shmid = shmget(key,1024,0666|IPC_CREAT);
// shmat to attach to shared memory
char *str = (char*) shmat(shmid,(void*)0,0);
printf("Write Data : ");
scanf("%s",str);
printf("%s\n",str);
printf("Data written in memory: %s\n",str);
//detach from shared memory
shmdt(str);
return 0;
}roehit@LAPTOP-0SIPK43K:~$ cc writer.c
roehit@LAPTOP-0SIPK43K:~$ ./a.out
Write Data : RA1911033010017
RA1911033010017
Data written in memory: RA1911033010017
roehit@LAPTOP-0SIPK43K:~$
```

Reader

roehit@LAPTOP-0SIPK43K: ~

```
roehit@LAPTOP-0SIPK43K:~$ nano reader.c
roehit@LAPTOP-0SIPK43K:~$ cat reader.c
#include <sys/ipc.h>
#include <sys/shm.h>
#include <stdio.h>

int main()
{
// ftok to generate unique key
key_t key = ftok("shmfile",65);
// shmget returns an identifier in shmid

int shmid = shmget(key,1024,0666|IPC_CREAT);
// shmat to attach to shared memory
char *str = (char*) shmat(shmid,(void*)0,0);
printf("Data read from memory: %s\n",str);
//detach from shared memory
shmdt(str);
// destroy the shared memory
shmctl(shmid,IPC_RMID,NULL);
return 0;
}roehit@LAPTOP-0SIPK43K:~$ cc reader.c
roehit@LAPTOP-0SIPK43K:~$ ./a.out
Data read from memory: RA1911033010017
roehit@LAPTOP-0SIPK43K:~$
```