**OPERATING SYSTEM - CS23431**

**EXP 7**

**IPC USING SHARED MEMORY**

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**PROGRAM:**

**Sender.c:**

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#include <sys/shm.h>

#include <string.h>

int main() {

int shmid;

shmid = shmget((key\_t)2345, 1024, 0666 | IPC\_CREAT); if (shmid == -1) {

perror("shmget failed"); exit(1);

}

printf("Key of the shared memory segment: %d\n", shmid);  
  
char \*shmaddr = (char \*) shmat(shmid, NULL, 0);  
if (shmaddr == (char \*) -1) {  
 perror("shmat failed");  
 exit(1);  
}  
  
printf("Process is attached at address %p\n", shmaddr);  
  
  
sprintf(shmaddr, "Hello world!!");  
printf("Content written to shared memory: %s\n", shmaddr);

if (shmdt(shmaddr) == -1) {  
 perror("shmdt failed");  
 exit(1);  
}  
  
return 0;

}

**Receiver.c:**

#include <stdio.h>

#include <stdlib.h>

#include <unistd.h>

#include <string.h>

#include <sys/shm.h>

int main() {

int shmid; char \*shmaddr;  
shmid = shmget((key\_t)2345, 1024, 0666);  
if (shmid == -1) {  
 perror("shmget failed");  
 exit(1);  
}  
  
printf("Key of the shared memory segment: %d\n", shmid);  
  
shmaddr = (char \*) shmat(shmid, NULL, 0);  
if (shmaddr == (char \*) -1) {  
 perror("shmat failed");  
 exit(1);  
}  
  
printf("Process is attached at address %p\n", shmaddr);  
printf("Data read from shared memory: %s\n", shmaddr);  
  
if (shmdt(shmaddr) == -1) {  
 perror("shmdt failed");  
 exit(1);  
}  
  
return 0;  
}

**OUTPUT:**

