CS23431 - OPERATING SYSTEM

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: