Process A

```
#include<stdio.h>
#include<stdlib.h>
#include<unistd.h>
#include<sys/shm.h>
#include<string.h>

int main()
{
int shmid;
void *shm_add;
char buffer[100];
shmid = shmget((key_t)1500,1200,0666|IPC_CREAT);
printf("Shared memory id is = %d\n",shmid);
shm_add = shmat(shmid,NULL,0);
printf("Process attached at %p\n",shm_add);
printf("Enter the data that to be written on shared memory\n");
read(0 ,buffer,90);
strcpy(shm_add,buffer);
printf("data written = %s\n",(char*)shm_add);
return 0;
}
```

```
ubuntu@UrjitaB59:~/Desktop/A65$ gcc shared_memory.c
ubuntu@UrjitaB59:~/Desktop/A65$ ./a.out
Shared memory id is = 65556
Process attached at 0x7f774e2cf000
Enter the data that to be written on shared memory
I am learning shared memory system mechanism
data written = I am learning shared memory system mechanism
```

Process B

```
#include<stdio.h>
#include<stdlib.h>
#include<unistd.h>
#include<sys/shm.h>
#include<string.h>
int main()
{
int shmid;
void *shm_add;
char buffer[100];
shmid = shmget((key_t)1500,1200,0666);
printf("Shared memory id is = %d\n",shmid);
shm_add = shmat(shmid,NULL,0);
printf("Process attached at %p\n",shm_add);
printf("data read is %s\n",(char*)shm_add);
return 0;
}
```

```
ubuntu@UrjitaB59:~/Desktop/A65$ gcc reader.c
ubuntu@UrjitaB59:~/Desktop/A65$ ./a.out
Shared memory id is = 65556
Process attached at 0x7f1c613d2000
data read is I am learning shared memory system mechanism
```

Message Passing
Sender side

```
#include<stdio.h>
#include<sys/types.h>
#include<sys/ipc.h>
#include<sys/msg.h>
#include<unistd.h>
#include<stdlib.h>
#include<string.h>
#define MAX 512
struct message{
long int type;
char data[100];
};
int main()
{
struct message msg;
char buffer[100];
int msgid;
msgid = msgget((key_t)1235,0666|IPC_CREAT);
printf("Enter the message:\n");
read(0,buffer,100);
msg.type = 1;
strcpy(msg.data,buffer);
msgsnd(msgid,(void *)&msg,MAX,0);
printf("message send is %s\n",msg.data);
}
```

```
ubuntu@UrjitaB59:~/Desktop/A65$ gcc sender.c
ubuntu@UrjitaB59:~/Desktop/A65$ ./a.out
Enter the message:
Hello ,How memory can access it
message send is Hello ,How memory can access it
```

Recevier side

```
#include<stdio.h>
#include<sys/types.h>
#include<sys/ipc.h>
#include<sys/msg.h>#include<unistd.h>
#include<stdlib.h>
#include<string.h>
#define MAX 512
struct message{
long int type;
```

```
char data[100];
};
int main()
{
struct message msg;
long int mtype = 1;
int msgid;
msgid = msgget((key_t)1235,0666|IPC_CREAT);
msg.type = 1;
msgrcv(msgid,(void *)&msg,MAX,mtype,0);
printf("message received is %s\n",msg.data);
}
```