



OPERATING SYSTEM

Experiment 12 Inter Process Communication



L2 -SWE

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12B Message Queue

Ref. screenshot:

Writer

```
roehit@LAPTOP-0SIPK43K: ~  
roehit@LAPTOP-0SIPK43K:~$ nano 12bwriter.c  
roehit@LAPTOP-0SIPK43K:~$ cat 12bwriter.c  
#include <stdio.h>  
#include <sys/ipc.h>  
#include <sys/msg.h>  
#define MAX 10  
// structure for message queue  
struct mesg_buffer {  
    long mesg_type;  
    char mesg_text[100];  
} message;  
int main()  
{  
    key_t key;  
    int msgid;  
    // ftok to generate unique key  
    key = ftok("progfile", 65);  
    // msgget creates a message queue  
  
    // and returns identifier  
    msgid = msgget(key, 0666 | IPC_CREAT);  
    message.mesg_type = 1;  
  
    fgets(message.mesg_text,MAX,stdin);  
    printf("Write Message : %s",message.mesg_text);  
    // msgsnd to send message  
    msgsnd(msgid, &message, sizeof(message), 0);  
    // display the message  
    printf("sent message : %s \n", message.mesg_text);  
    return 0;  
}  
roehit@LAPTOP-0SIPK43K:~$ cc 12bwriter.c  
roehit@LAPTOP-0SIPK43K:~$ ./a.out  
Roehit  
Write Message : Roehit  
sent message : Roehit  
  
roehit@LAPTOP-0SIPK43K:~$
```

Reader

```
roehit@LAPTOP-0SIPK43K:~$ cat 12breader.c
#include <stdio.h>
#include <sys/ipc.h>
#include <sys/msg.h>
// structure for message queue
struct mesg_buffer {
long mesg_type;
char mesg_text[100];
} message;
int main()
{
key_t key;
int msgid;
// ftok to generate unique key
key = ftok("progfile", 65);
// msgget creates a message queue
// and returns identifier
msgid = msgget(key, 0666 | IPC_CREAT);
// msgrcv to receive message
msgrcv(msgid, &message, sizeof(message), 1, 0);
// display the message
printf("Data Received is : %s \n",message.mesg_text);
// to destroy the message queue

msgctl(msgid, IPC_RMID, NULL);
return 0;
}roehit@LAPTOP-0SIPK43K:~$ cc 12breader.c
roehit@LAPTOP-0SIPK43K:~$ ./a.out
```

```
Data Received is : Roehit
```