output:

\$./ Lunder ^C \$

sender is enecuted, after a while it is aborted.

\$./ Listenor

RUCE-CSE

RUCE-CSE

RUCE-CSE

AC

The lietuner is started, allowed to receive messages for a while I then stopped.

The messages are received with a 1s interval.

\$.1 listener

RVCE-CSE RVCE-CSE RVCE-CSE RVCE-CSE RVCE-CSE RVCE-CSE RVCE-CSE The second listener is allowed to nun simultaneously.

It too receives necessages from the cender at an interval of 1s.

```
4. Implement a comple muticast routing mechanism
    1 # Lisbener # 1
     #include < stys/types. h>
    # include < sys / sochet.lr>
     # include Kultinet / in. h.
    Hinclude Karpa/inet.h)
     # Enclude < time. 4>
     # include <string.h>
    # include < stdio.h>
     # include < stolib.h>
     # deline HEALD-PORT 12845
     # define HEMO-GROUP " 265.0.0.37"
     # define MSGBUFSIZE 25
     int main ()
            struct sockaddr in addr;
            llinted
            int for , nbytes , addrlin ; struct ip-muy , muy;
             char might [MSGBUF81ZE];
unt yer = 1;
             of ((fd = socket ( AE INET, SOCK-DYRAM, 0))<0) {
                            paintf ( * socket error");
evit (0); 4 (leout.
```

Teacher's Signature: _

R.V. COLLEGE OF ENGINEERING

OBSERVATION / DATA SHEET

Date	Name	M.C.SOHAN	
Dept./Lab	Class	Expt./No	4
Title	ur - multicast.	3	
1 mo	dify the original so	ocket.	
if (set	sockopt (fd, SOL-SO	OCKET, SO_REUS	EADDR, fyes,
	sizeof (yes)	120)	
use 631, Magesu	printf ("Error")		
hx) faddi,	,0, leternet socialis		}
ll see	t the dubination ad	dness	
, mem	ut (faddr, 0, siz	cof (addr));	
addi	r. 8in-family = AF_	INET ;	
4007	. MM-daux. s-adyr=	htonl (WADDI	2_ANY),
1040	" stri-june = actor	W (HELLO-PODT)	
'}	(bund (fa, csrhuct ~ 0)	sockaddn*)fac	ldn, sizcafladdr)
	printf ("Bind er	cory); enit(o); }
Mtug	, imr_multiald «	addr = int	oddy (HELLA
Mug	. imr_interface. s.	-addr = litori	(INADDR_ANY

Signature of Teacher incharge

```
if (utsockopt (fd, IPPROTO-IP, IP-ADD-MEMBERSH
                     & mmg, sizeof (mmg)) <0)
         prints ("sockops evror"); enit(0); 3
          ll mad-print loop.
      while (1)
       addrlun = sizeof (addr);
             if ( ( nbyfes = recofrom ( fd, meg buf, megou
                       ,0, (struct sockaddr*)faddr,
4 addrlun)×0)
                printf ( Error in necufrom");
               puts (niegbuf);
           adda sin-pont = htms (nesso-rous)
     Intain 0;
  f 11 end of lishner.
                  muy, aux multidals, cader
Fine John Helician
                 Musiq furr linterpace southers
When I webpered
```

R.V. COLLEGE OF ENGINEERING

OBSERVATION / DATA SHEET

Date	Name	M.C.SOHAN.
Dept./Lab	Class	Expt./No9
Titlesunder	= AF INST	adds. Six fairth
# include < # include # include # include	ticant. (eys (types.h) (eys (eocket.h) < nutinut (in.h) < arpa) inet.h) < etdio.h> < etdio.h> < curietd,h>	
# define Alex # define 11 int main () \$ \$fruc int \$fku	fockaddr-in ad focuta ct ip-mreg;	f llend of pragram

```
if ((fd = socket (AF_INET, SOCK_DGRAM, D)) CO) { xpt. No.
           print ( * Socket ever");
           euit (o);
                                                            11 und.
   nument ( & addr, 0, sizeof (addr));
    addr. sin_family = AF_INET;
    addr. sin-addr. saddr = int-addr (HELLO-GROUL addr. sin-port = htons (HELLO-PORT);
   while (1)
       if ( send to ( jd, myg, size of (mg), 0,
                  (struct sockaddr +) faddr, sizeo/(add
             print ( end error "); enit (0);}
           elup(1); Kal d'élites station &
   return of
} llend of pragram.
                            int for cuts
           Char + med = " Ence - case," second
```