NAME: SIDDHANT
ROLL NO: 1906589
SUBJECT: CN LAB 24.08.21

CN LAB

QUES: WAP to implement an UDP Socket through which client will send few commands to the server.

SOL: #server.c
```
/*
** A datagram sockets "server" demo
*/
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <errno.h>
#include <string.h>
#include <sys/types.h>
```

```c
#include <sys/socket.h>
#include <netinet/in.h>
#include <arpa/inet.h>
#include<dirent.h>
#define MYPORT 4952 // the port users will be connecting to
#define MAXBUFLEN 200
int main()
{
int sockfd;
struct sockaddr_in my_addr; // my address information
struct sockaddr_in their_addr; // connector's address information
socklen_t addr_len;
DIR *d;
 struct dirent *dir;
int numbytes;
char buf[MAXBUFLEN],buf1[MAXBUFLEN];
if ((sockfd = socket(AF_INET, SOCK_DGRAM, 0)) == -1) {
perror("socket");
exit(1);
```

```c
}
my_addr.sin_family = AF_INET; // host byte order
my_addr.sin_port = htons(MYPORT); // short, network byte order
my_addr.sin_addr.s_addr = INADDR_ANY; // automatically fill with my IP
//memset(my_addr.sin_zero, '\0', sizeof my_addr.sin_zero);
if (bind(sockfd, (struct sockaddr *)&my_addr, sizeof my_addr) == -1) {
perror("bind");
exit(1);
}
addr_len = sizeof their_addr;
if ((numbytes = recvfrom(sockfd, buf, MAXBUFLEN-1 , 0,
(struct sockaddr *)&their_addr, &addr_len)) == -1) {
perror("recvfrom");
exit(1);
}
char abc[10000];
strcpy(abc,"/home/user/CN_LAB/");
strcat(abc,buf);
char mn[10];
```

```c
strcpy(mn,"exit");
d= opendir(abc);
 if(d)
 {
  while((dir=readdir(d))!=NULL)
   printf("%s\n",dir->d_name);
  closedir(d);
 }
/*printf("got packet from %s\n",inet_ntoa(their_addr.sin_addr));
printf("packet is %d bytes long\n",numbytes);
buf[numbytes] = '\0';
printf("packet contains \"%s\"\n",buf);*/
recvfrom(sockfd, buf1, MAXBUFLEN-1 , 0,
(struct sockaddr *)&their_addr, &addr_len);
FILE *fp;
char ch;
fp=fopen(buf1,"r");
while(1)
{
```

```c
  ch=fgetc(fp);
  if(ch==EOF)
   break;
  printf("%c",ch);
 }
 fclose(fp);
 close(sockfd);
 return 0;
}


#client.c
/*
** A datagram "client" demo
*/
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <errno.h>
#include <string.h>
```

```c
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
#include <arpa/inet.h>
#include <netdb.h>
#define SERVERPORT 4952 // the port users will be connecting to
int main()
{
int sockfd;
struct sockaddr_in their_addr; // connector's address information
//struct hostent *he;
int numbytes;
char arg[30];
if ((sockfd = socket(AF_INET, SOCK_DGRAM, 0)) == -1) {
perror("socket");
exit(1);
}
their_addr.sin_family = AF_INET; // host byte order
their_addr.sin_port = htons(SERVERPORT); // short, network byte order
```
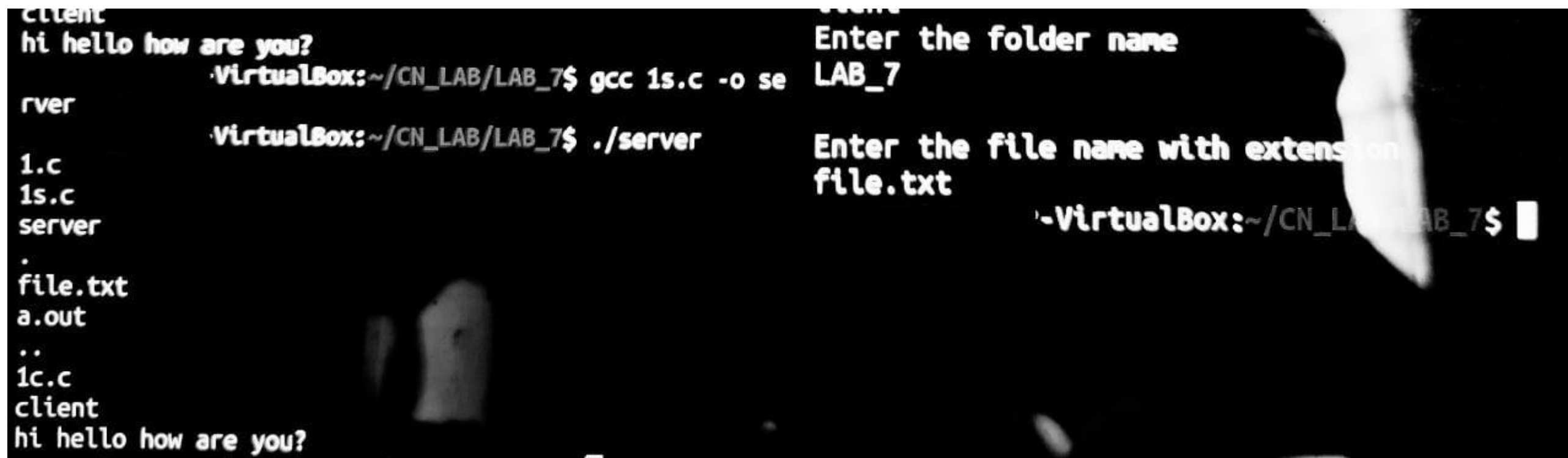
```c
their_addr.sin_addr.s_addr = inet_addr("127.0.0.1");
//memset(their_addr.sin_zero, '\0', sizeof their_addr.sin_zero);
//addr_len = sizeof their_addr;
printf("Enter the folder name\n");
scanf("%s",arg);
if ((numbytes = sendto(sockfd, arg, strlen(arg), 0,
(struct sockaddr *)&their_addr, sizeof their_addr)) == -1) {
perror("sendto");
exit(1);
}
/*while(1)
{
 recvfrom(sockfd, buf, MAXBUFLEN-1 , 0,
(struct sockaddr *)&their_addr, &addr_len);
 if(strcmp(buf,"exit")==0)
  break;
 else
  printf("%s\n",buf);
}*/
```

```c
//printf("sent %d bytes to %s\n", numbytes, inet_ntoa(their_addr.sin_addr));
printf("\nEnter the file name with extension\n");
scanf("%s",arg);
sendto(sockfd, arg, strlen(arg), 0,
(struct sockaddr *)&their_addr, sizeof their_addr);
close(sockfd);
return 0;
}
```

OUTPUT: