

# COMPUTER COMMUNICATION AND NETWORKING LAB (IT205)

## ASSIGNMENT 8

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### Server side code:

```
//server for file transfer:fileserver.cc

#include<stdio.h>
#include<unistd.h>
#include<string.h>
#include<sys/socket.h>
#include<netinet/in.h>
#include<sys/types.h>
#define SERV_PORT 5576
int main(int argc,char **argv)
{
    int i,j;
    ssize_t n;
    FILE *fp;
    char buff[80],res1[5];
    char res[50]="The number of characters in the file is ";
    struct sockaddr_in servaddr,cliaddr;
    int listenfd,connfd,clilen;
    listenfd=socket(AF_INET,SOCK_STREAM,0);
    bzero(&servaddr,sizeof(servaddr));
    servaddr.sin_family=AF_INET;
    servaddr.sin_port=htons(SERV_PORT);
    bind(listenfd,(struct sockaddr *)&servaddr,sizeof(servaddr));
    listen(listenfd,1);
```

```

clilen=sizeof(cliaddr);
connfd=accept(listenfd, (struct sockaddr*)&cliaddr,&clilen);
printf("\n Clinet is connected");
read(connfd,buff,80);
printf("\nThe name of the file sent is: %s\n",buff);
read(connfd,buff,500);

int sum = 0;

for(int i=0;i<strlen(buff);i++){
    if(buff[i]!=' ')    sum++;
}

sprintf(res1,"%d",sum);
strcat(res,res1);
printf("%s\n",res);
write(connfd,res,sizeof(res));
close(listenfd);
}

```

### Client side code:

```

//file transfer client program:fileclient.cc

#include<stdio.h>
#include<unistd.h>
#include<string.h>
#include<sys/socket.h>
#include<netinet/in.h>
#include<sys/types.h>
#include<arpa/inet.h>
#define SERV_PORT 5576
int main()
{
    int i,j;
    FILE *fp;
    ssize_t n;
    char filename[80],recvline[80];
    struct sockaddr_in servaddr;

```

```

int sockfd;
sockfd=socket(AF_INET,SOCK_STREAM,0);
bzero(&servaddr,sizeof(servaddr));
servaddr.sin_family=AF_INET;
servaddr.sin_port=htons(SERV_PORT);
servaddr.sin_addr.s_addr=inet_addr("127.0.0.1");
connect(sockfd,(struct sockaddr*)&servaddr,sizeof(servaddr));

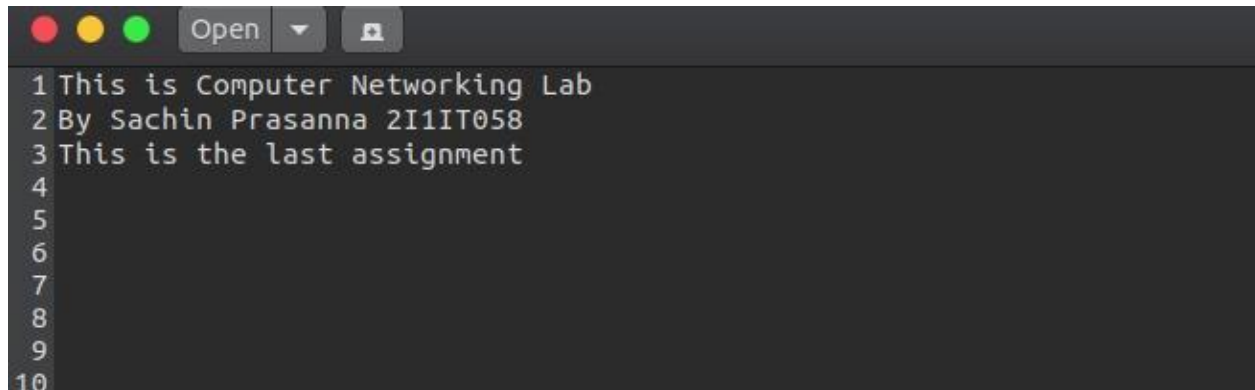
char buff[80];
int sum = 0;
printf("enter the file name :");
scanf("%s",filename);
write(sockfd,filename,sizeof(filename));

fp=fopen(filename,"r");
for(char ch=getc(fp); ch!=EOF;c=getc(fp)){
    buff[sum]=ch;
    sum++;
}
write(sockfd,buff,sizeof(buff));
printf("Data from server:\n");
while(read(sockfd,recvline,80)!=0){
    fputs(recvline,stdout);
}
printf("\n");
close(sockfd);
fclose(fp);
}

```

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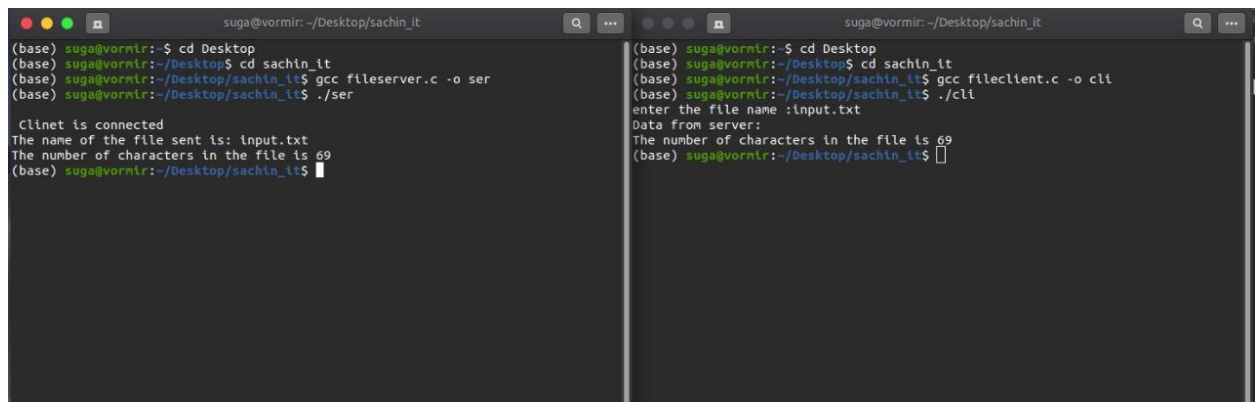
## Input text file:



A screenshot of a text editor window with a dark background. The window has a title bar with three colored buttons (red, yellow, green) and a button labeled 'Open'. The text inside the editor is as follows:

```
1 This is Computer Networking Lab
2 By Sachin Prasanna 2I11IT058
3 This is the last assignment
4
5
6
7
8
9
10
```

## Output Screenshots:



Two side-by-side terminal screenshots showing the execution of a file transfer program. The left terminal shows the server-side execution, and the right terminal shows the client-side execution.

**Left Terminal (Server Side):**

```
suga@vormir: ~/Desktop/sachin_it
(base) suga@vormir:~$ cd Desktop
(base) suga@vormir:~/Desktop$ cd sachin_it
(base) suga@vormir:~/Desktop/sachin_it$ gcc fileserver.c -o ser
(base) suga@vormir:~/Desktop/sachin_it$ ./ser

Clinet is connected
The name of the file sent is: input.txt
The number of characters in the file is 69
(base) suga@vormir:~/Desktop/sachin_it$
```

**Right Terminal (Client Side):**

```
suga@vormir: ~/Desktop/sachin_it
(base) suga@vormir:~$ cd Desktop
(base) suga@vormir:~/Desktop$ cd sachin_it
(base) suga@vormir:~/Desktop/sachin_it$ gcc fileclient.c -o cli
(base) suga@vormir:~/Desktop/sachin_it$ ./cli
enter the file name :input.txt
Data from server:
The number of characters in the file is 69
(base) suga@vormir:~/Desktop/sachin_it$
```