**File Transfer Using TCP**

**Ex: 4**

**Reg no :185001161**

Transfer a file from server to client using TCP socket programming

**Server code:**

#include<stdio.h>

#include<sys/types.h>

#include<sys/socket.h>

#include<netinet/in.h>

#include<string.h>

#include<netdb.h>

#include<stdlib.h>

int main(int argc,char \*\*argv)

{

int len;

int sockfd,newfd,n;

struct sockaddr\_in servaddr,cliaddr;

char buff[1024];

char str[1000];

sockfd = socket(AF\_INET,SOCK\_STREAM,0);

if(sockfd<0)

perror("cannot create socket!");

else

printf("socket is created!\n");

bzero(&servaddr ,sizeof(servaddr));

servaddr.sin\_family=AF\_INET;

servaddr.sin\_addr.s\_addr=INADDR\_ANY;

servaddr.sin\_port=htons(7228);

if(bind(sockfd,(struct sockaddr\*)&servaddr,sizeof(servaddr))<0)

perror("Bind Error");

listen(sockfd,2);

len = sizeof(cliaddr);

newfd = accept(sockfd,(struct sockaddr\*)&cliaddr,&len);

//while(1)

//{

FILE \*fp;

bzero(str,sizeof(str));

printf("\nWaiting for client\n");

n=read(newfd,buff,sizeof(buff));

printf("\nFile to be transferred is %s",buff);

fp = fopen(buff,"r");

fscanf(fp,"%[^.]",str);

write(newfd,str,sizeof(str));

printf("\nFile Transfered!\n");

close(sockfd);

close(newfd);

//}

return 0;

}

/\*Output:

sree@sree-VirtualBox:~/Desktop/Networks Lab/A3 File transfer$ cat hi.txt

Hi this is networks lab session.

sree@sree-VirtualBox:~/Desktop/Networks Lab/A3 File transfer$ gcc server.c -o server

server.c: In function ‘main’:

server.c:38:5: warning: implicit declaration of function ‘read’; did you mean ‘fread’? [-Wimplicit-function-declaration]

n=read(newfd,buff,sizeof(buff));

^~~~

fread

server.c:42:3: warning: implicit declaration of function ‘write’; did you mean ‘fwrite’? [-Wimplicit-function-declaration]

write(newfd,str,sizeof(str));

^~~~~

fwrite

server.c:44:3: warning: implicit declaration of function ‘close’; did you mean ‘pclose’? [-Wimplicit-function-declaration]

close(sockfd);

^~~~~

pclose

sree@sree-VirtualBox:~/Desktop/Networks Lab/A3 File transfer$ ./server

socket is created!

Waiting for client

File to be transferred is hi.txt

File Transfered!

sree@sree-VirtualBox:~/Desktop/Networks Lab/A3 File transfer$\*/

**Client code:**

#include<stdio.h>

#include<sys/types.h>

#include<sys/socket.h>

#include<netinet/in.h>

#include<string.h>

#include<netdb.h>

#include<stdlib.h>

int main(int argc, char \*\*argv)

{

/\* code \*/

int len;

int sockfd,n;

struct sockaddr\_in servaddr,cliaddr;

char str[1000];

char buff[1024];

sockfd = socket(AF\_INET,SOCK\_STREAM,0);

if(sockfd<0)

perror("cannot create a socket!");

else

printf("socket is created!\n");

bzero(&servaddr,sizeof(servaddr));

servaddr.sin\_family = AF\_INET;

servaddr.sin\_addr.s\_addr = inet\_addr(argv[1]);

servaddr.sin\_port = htons(7228);

connect(sockfd,(struct sockaddr\*)&servaddr,sizeof(servaddr));

//while(1)

//{

char path[100];

FILE \*f;

bzero( str,sizeof(str));

bzero( buff,sizeof(buff));

printf("\nEnter the path of the file:");

scanf("%s",buff);

n = write(sockfd,buff,sizeof(buff));

read(sockfd,str,sizeof(str));

printf("\nFile Transfered!\n");

printf("\nSave the file in path:");

scanf("%s",path);

f = fopen(path,"w");

fprintf(f,"%s",str);

close(sockfd);

//}

return 0;

}

/\*Output:

sree@sree-VirtualBox:~/Desktop/Networks Lab/A3 File transfer$ cat newhi.txt

cat: newhi.txt: No such file or directory

sree@sree-VirtualBox:~/Desktop/Networks Lab/A3 File transfer$ gcc client.c -o client

client.c: In function ‘main’:

client.c:26:29: warning: implicit declaration of function ‘inet\_addr’; did you mean ‘h\_addr’? [-Wimplicit-function-declaration]

servaddr.sin\_addr.s\_addr = inet\_addr(argv[1]);

^~~~~~~~~

h\_addr

client.c:38:7: warning: implicit declaration of function ‘write’; did you mean ‘fwrite’? [-Wimplicit-function-declaration]

n = write(sockfd,buff,sizeof(buff));

^~~~~

fwrite

client.c:39:3: warning: implicit declaration of function ‘read’; did you mean ‘fread’? [-Wimplicit-function-declaration]

read(sockfd,str,sizeof(str));

^~~~

fread

client.c:45:3: warning: implicit declaration of function ‘close’; did you mean ‘pclose’? [-Wimplicit-function-declaration]

close(sockfd);

^~~~~

pclose

sree@sree-VirtualBox:~/Desktop/Networks Lab/A3 File transfer$ ./client 10.0.2.15

socket is created!

Enter the path of the file:hi.txt

File Transfered!

Save the file in path:newhi.txt

sree@sree-VirtualBox:~/Desktop/Networks Lab/A3 File transfer$ cat newhi.txt

Hi this is networks lab sessionsree@sree-VirtualBox:~/Desktop/Networks Lab/A3 File transfer$\*/