

# 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 Transferred!\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 Transferred!

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 Transferred!\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 Transferred!

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\$\*/