

Ex: 5 **FILE TRANSFER USING TCP**

Transfer a file from server to client using TCP socket programming

server.c

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <unistd.h>
#include <arpa/inet.h>

void main(int argc, char **argv)
{
    int fd, newfd;
    struct sockaddr_in saddr, caddr;
    int addrlen = sizeof(saddr);
    char buff[1024], fname[1024];
    fd = socket(AF_INET, SOCK_STREAM, 0);
    int option = 1;

    setsockopt(fd, SOL_SOCKET, SO_REUSEADDR, &option, sizeof(option));
    if (fd < 0)
    {
        perror("Socket failure");
    }
    saddr.sin_family = AF_INET;
    saddr.sin_addr.s_addr = INADDR_ANY;
    saddr.sin_port = htons(7228);
    if (bind(fd, (struct sockaddr *) &saddr, sizeof(saddr)) < 0)
    {
        perror("Bind error");
    }
    listen(fd, 2);
    int len = sizeof(caddr);
    newfd = accept(fd, (struct sockaddr *) &caddr, &len);
    if (recv(newfd, fname, sizeof(fname), 0) <= 0)
    {
        perror("Received no filename");
    }
    FILE *f = fopen(fname, "rb");
```

```

    if (f==NULL)
    {
        perror("File not found");
    }
    while(fgets(buff,sizeof(buff),f)!=NULL)
    {
        if(send(newfd,buff,sizeof(buff),0)==-1)
        {
            perror("Send Fail");
        }
        memset(buff,0,sizeof(buff));
    }
    printf("File Transferred\n");
    close(fd);
    close(newfd);
}

```

client.c

```

#include <stdio.h>
#include <stdlib.h>
#include<string.h>
#include <unistd.h>
#include <arpa/inet.h>

void main(int argc,char **argv)
{
    int fd;
    struct sockaddr_in saddr,caddr;
    int addrlen=sizeof(saddr);
    char buff[1024],fname[1024];
    fd=socket(AF_INET,SOCK_STREAM,0);
    if (fd<0)
    {
        perror("Socket failure");
    }
    bzero(&saddr,sizeof(saddr));
    saddr.sin_family = AF_INET;
    saddr.sin_addr.s_addr = inet_addr(argv[1]);
    saddr.sin_port = htons(7228);
    connect(fd,(struct sockaddr *)&saddr,sizeof(saddr));
    printf("Enter filename : ");
    scanf("%s",fname);
    if(send(fd,fname,sizeof(fname),0)==-1)
    {

```

```

        perror("FileName Send failed");
    }
    printf("Save the file in : ");
    scanf("%s",fname);
    FILE *f=fopen(fname,"wb");
    if (f==NULL)
    {
        perror("File not found");
    }
    int n;
    while((n=recv(fd,buff,sizeof(buff),0))>0)
    {
        if(n==-1)
        {
            perror("Failed to recv");
        }
        fprintf(f,"%s",buff);
        memset(buff,0,sizeof(buff));
    }
    printf("File Transeferred Succesfully\n");
    close(fd);
}

```

Output:

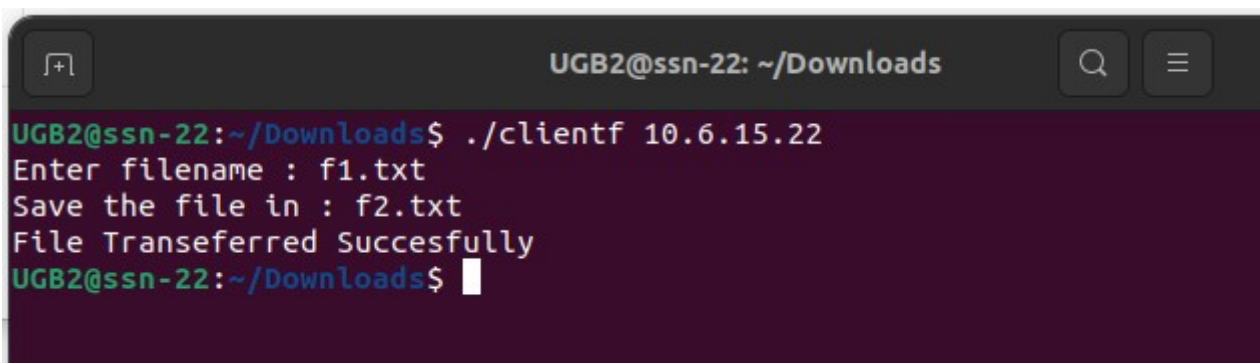


A terminal window titled "UGB2@ssn-22: ~/Downloads" showing the output of the server program. The prompt is "UGB2@ssn-22:~/Downloads\$./serverf". The output is "File Transferred". The prompt returns to "UGB2@ssn-22:~/Downloads\$".

```

UGB2@ssn-22:~/Downloads$ ./serverf
File Transferred
UGB2@ssn-22:~/Downloads$

```



A terminal window titled "UGB2@ssn-22: ~/Downloads" showing the output of the client program. The prompt is "UGB2@ssn-22:~/Downloads\$./clientf 10.6.15.22". The output is "Enter filename : f1.txt", "Save the file in : f2.txt", and "File Transeferred Succesfully". The prompt returns to "UGB2@ssn-22:~/Downloads\$".

```

UGB2@ssn-22:~/Downloads$ ./clientf 10.6.15.22
Enter filename : f1.txt
Save the file in : f2.txt
File Transeferred Succesfully
UGB2@ssn-22:~/Downloads$

```