UCS1511 - COMPUTER NETWORKS
FILE TRANSFER APPLICATION

REG NO : 205001085   **EX.NO : 6**

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OBJECTIVE :

TO create file transfer application using client server program.

CODE :

CLIENT :

```c
#include <netinet/in.h>
#include <stdio.h>
#include <stdlib.h>
#include <sys/socket.h>
#include <sys/types.h>
#include<string.h>
#include<ctype.h>
#include<unistd.h>
#include<fcntl.h>
#include<string.h>

int main(int argc, char const* argv[])
{
   int port=atoi(argv[1]);
      int sockD = socket(AF_INET, SOCK_STREAM, 0);
      if(sockD<0)
      {
```

```c
    perror("[-]Error in socket");
    exit(1);
    }
    printf("[+]Server socket created. \n");



struct sockaddr_in servAddr;
    servAddr.sin_family = AF_INET;
    servAddr.sin_port= htons(port);
    servAddr.sin_addr.s_addr = INADDR_ANY;
    int connectStatus= connect(sockD, (struct
sockaddr*)&servAddr,sizeof(servAddr));
    if (connectStatus == -1) {
    perror("[-]Error in Connecting");
    exit(1);
    }
    else {
    printf("\nEnter filename : ");
    char str[20];
    scanf("%s",str);
    send(sockD, str, sizeof(str), 0);
    char str1[100];
    recv(sockD, str1, sizeof(str1), 0);
    printf("Enter file name to copy contents : ");
    char f1[20];scanf("%s",f1);
    int fd=open(f1,O_WRONLY|O_CREAT);
    if(fd==-1)
    {
    printf("Unable to create file");
    exit(0);
    }
    printf("\nFile contents are : \n");
    printf("%s",str1);
    int nw=write(fd,str1,strlen(str1)+1);
    }
```

}

SERVER :

```c
#include <netinet/in.h>
#include <stdio.h>
#include <stdlib.h>
#include <sys/socket.h>
#include <sys/types.h>
#include<string.h>
#include<ctype.h>
#include<unistd.h>
#include<fcntl.h>

int main(int argc, char const* argv[])
{
    int e ;
    int port=atoi(argv[1]);
        int servSockD = socket(AF_INET, SOCK_STREAM, 0);
        if(servSockD<0)
        {
        perror("[-]Error in socket");
        exit(1);
        }
        printf("[+]Server socket created. \n");

        struct sockaddr_in servAddr;
        servAddr.sin_family = AF_INET;
        servAddr.sin_port = htons(port);
        servAddr.sin_addr.s_addr = INADDR_ANY;
        e = bind(servSockD, (struct sockaddr*)&servAddr,sizeof(servAddr));
        if(e<0)
        {
        perror("[-]Error in Binding");
        exit(1);
        }
```

```c
        printf("[+]Binding Successfull.\n");


        e = listen(servSockD, 1);
        if(e==0)
        {
        printf("[+]Listening...\n");
        }
        else
        {
        perror("[-]Error in Binding");
        exit(1);
        }

        char strData[1000];
        int clientsocket;
        clientsocket=accept(servSockD,NULL,NULL);
        recv(clientsocket, strData, sizeof(strData), 0);
        int fd;
        fd=open(strData,O_RDONLY);
        if (fd==-1)
        {
        printf("Cannot open file");
        exit(0);
        }
        printf("Sending file ... ");
        char buf[1000];
        int nr=read(fd,buf,100);
        printf("\nSent !");
        send(clientsocket,buf,nr, 0);
        return 0;
}
```

OUTPUT :


```
root@spl15:~/205001098/Filetransfer# gcc server.c -o s
root@spl15:~/205001098/Filetransfer# ./s 9836
[+]Server socket created.
[+]Binding Successfull.
[+]Listening...
Sending file ...
Sent !root@spl15:~/205001098/Filetransfer#
```



```
root@spl15:~/205001098/Filetransfer# gcc client.c -o c
root@spl15:~/205001098/Filetransfer# ./c 9836
[+]Server socket created.

Enter filename : f1.txt
Enter file name to copy contents : f2.txt

File contents are :
hiiiiiii
helloooo
welcome
root@spl15:~/205001098/Filetransfer#
```