

CN Assignment 4

Div: B

Roll: 38

SRN: 201901226

Server Side:

```
#include <sys/types.h>
#include <netinet/in.h>
#include <netdb.h>
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#include <unistd.h>
#include <errno.h>
int main()
{
    int sock, size, connect;
    char senddata[50], data[50]; int val, count, i, port;
    struct sockaddr_in ser, cli; printf("\n\n Server Running ");
    if ((sock = socket(AF_INET, SOCK_STREAM, 0)) == -1)
    {
        perror("\n Socket Creation Error"); exit(-1);
    }
    printf("\nEnter the port number : "); scanf("%d", &port);
    ser.sin_family = AF_INET; ser.sin_port = htons(port); ser.sin_addr.s_addr
= INADDR_ANY;
    bzero(&(ser.sin_zero), 8);
    if (bind(sock, (struct sockaddr *)&ser, sizeof(struct sockaddr)) == -1)
    {
        perror("\n\t Error in Bind"); exit(-1);
    }
    if (listen(sock, 2) == -1)
    {
        perror("\n\t Error in Listen"); exit(-1);
    }
    printf("\n\t Waiting for connection "); size = sizeof(struct sockaddr);
    connect = accept(sock, (struct sockaddr *)&cli, &size); if (connect == -1)
    {
        perror("\n\t Connection Failed :"); exit(-1);
    }
    printf("\n\t Connected Successfully"); printf("\n");
    // get the pocket number from client
    recv(connect, &val, sizeof(val), 0); count = val;
    while (1)
    {
        i = recv(connect, &data, sizeof(data), 0); data[i] = '\0';
        if (strcmp(data, "end") == 0)
        {
            printf("\n\t Finished"); break;
        }
    }
}
```

```

        if (count != val)
        {
            strcpy(snddata, "packet missing"); send(connect, &count,
sizeof(count), 0);
            send(connect, snddata, strlen(snddata), 0);
        }
        else
        {
            printf("\n The packet Number is : %d", val); printf("\n The data
is :%s", data);
            count++;
            strcpy(snddata, "send nextdata"); send(connect, &count,
sizeof(count), 0);
            send(connect, snddata, strlen(snddata), 0);
        }
        printf("\n The Expected Packet now is: %d \n", count); recv(connect, &val,
sizeof(val), 0);
    }
    close(connect); close(sock); return 0;
}

```

Client Side:

```

#include <sys/types.h>
#include <netinet/in.h>
#include <arpa/inet.h>
#include <netdb.h>
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#include <unistd.h>
#include <errno.h>
int main()
{
    int sock,val,i,count,port;
    char recvdata[50],sentdata[50]; struct sockaddr_in server_addr;
    printf("\n\n Client
Running.....");
    if ((sock = socket(AF_INET, SOCK_STREAM, 0)) == -1)
    {
        perror("Socket"); exit(1);
    }
    printf("\nEnter the port number :"); scanf("%d",&port);
    server_addr.sin_family = AF_INET; server_addr.sin_port = htons(port);
    server_addr.sin_addr.s_addr= htonl(INADDR_ANY);
    bzero(&(server_addr.sin_zero),8);
    if (connect(sock, (struct sockaddr *)&server_addr, sizeof(struct sockaddr))
== -1)
    {
        perror("Connect"); exit(1);
    }
    while(1)

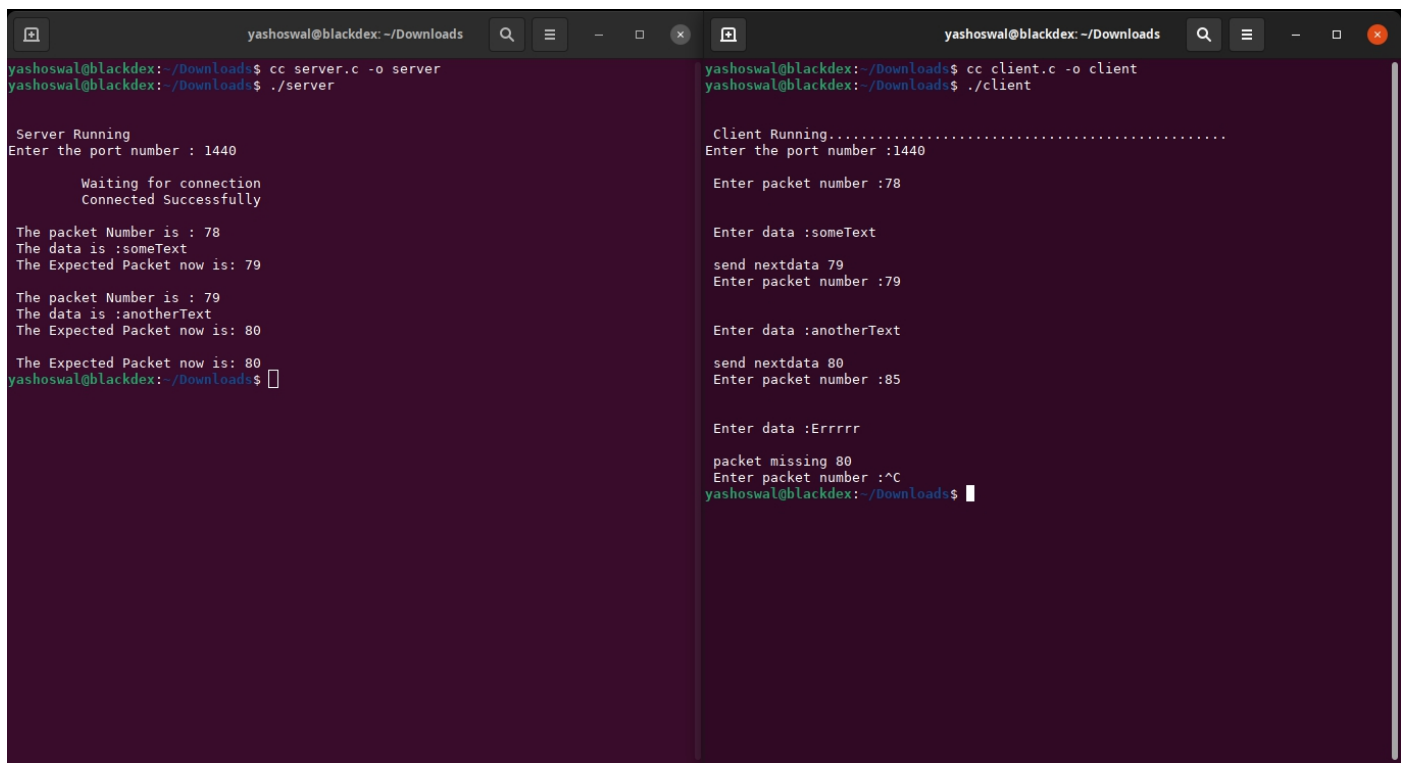
```

```

{
//get the pack number from client
    printf("\n Enter packet number :");
    scanf("%d",&val);
// sent the value to server
    send(sock,&val,sizeof(val),0);
// get the data from the user
    printf("\n\n Enter data :"); scanf("%s",sentsdata);
// sent the to server
    send(sock,sentsdata,strlen(sentsdata),0);
    if(strcmp(sentsdata,"end")==0) break;
// recev the result from server
    recv(sock,&count,sizeof(count),0);
    i=recv(sock,recvdata,50,0); recvdata[i]='\0';
    printf("\n %s %d",recvdata,count);
}
close(sock); return 0;
}

```

OUTPUT:



```

yashoswal@blackdex: ~/Downloads
yashoswal@blackdex:~/Downloads$ cc server.c -o server
yashoswal@blackdex:~/Downloads$ ./server

Server Running
Enter the port number : 1440

    Waiting for connection
    Connected Successfully

The packet Number is : 78
The data is :someText
The Expected Packet now is: 79

The packet Number is : 79
The data is :anotherText
The Expected Packet now is: 80

The Expected Packet now is: 80
yashoswal@blackdex:~/Downloads$ █

yashoswal@blackdex: ~/Downloads
yashoswal@blackdex:~/Downloads$ cc client.c -o client
yashoswal@blackdex:~/Downloads$ ./client

Client Running.....
Enter the port number :1440

Enter packet number :78

Enter data :someText

send nextdata 79
Enter packet number :79

Enter data :anotherText

send nextdata 80
Enter packet number :85

Enter data :Errrrr

packet missing 80
Enter packet number :^C
yashoswal@blackdex:~/Downloads$ █

```