CN Assignment 4

Div: B

Roll: 38

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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(senddata, "packet missing"); send(connect, &count, sizeof(count), 0);

send(connect, senddata, strlen(senddata), 0);

}

else

{

printf("\n The packet Number is : %d", val); printf("\n The data is :%s", data);

count++;

strcpy(senddata, "send nextdata"); send(connect, &count, sizeof(count), 0);

send(connect, senddata, strlen(senddata), 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",sentdata);

// sent the to server

send(sock,sentdata,strlen(sentdata),0);

if(strcmp(sentdata,"end")==0) break;

// recev the result from server

recv(sock,&count,sizeof(count),0);

i=recv(sock,recvdata,50,0); recvdata[i]='\0';

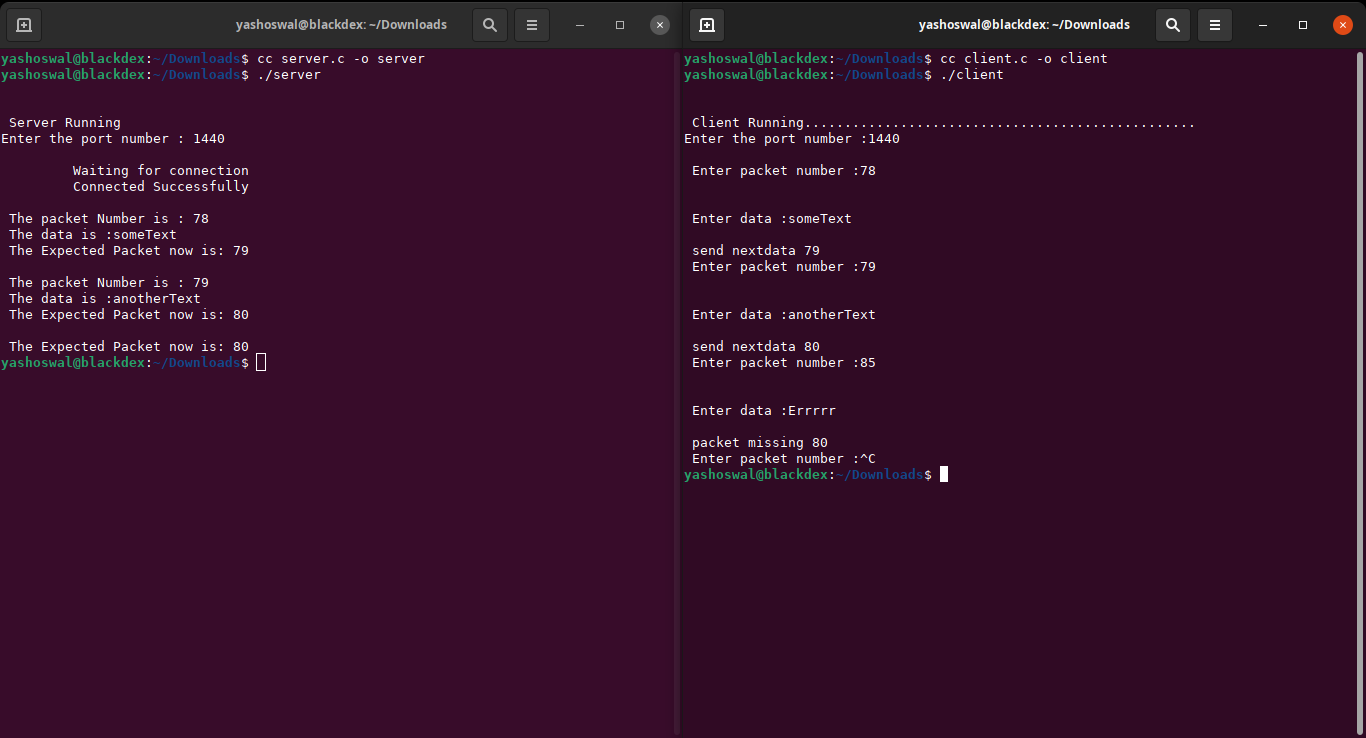
printf("\n %s %d",recvdata,count);

}

close(sock); return 0;

}

**OUTPUT:**

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