

CLIENT

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#include<stdio.h>
#include<string.h>
#include<stdlib.h>
#include<unistd.h>
#include<sys/socket.h>
#include<netinet/in.h>
void check(char str[], int value)
{
    if(value<0)
        printf("%s FAILED\n",str);
}
void main()
{
    int cid,con,size,csend,crec,i;
    char sendbuff[500],recbuff[500], fromaddress[500],toaddress[500],
    mailbody[1000];
    cid=socket(AF_INET,SOCK_STREAM,0);
    check("SOCKET CREATION", cid);
    struct sockaddr_in caddr;
    caddr.sin_family=AF_INET;
    caddr.sin_port=htons(8082);
    caddr.sin_addr.s_addr=INADDR_ANY;
    size=sizeof(caddr);
    con=connect(cid,(struct sockaddr*)&caddr,size);
    check("CONNECTION",con);
    printf("\n<-->\n");
    printf("SENDING HI TO SERVER\n");
    strcpy(sendbuff, "HI");
    csend=send(cid,sendbuff,500,0);
    check("SENDING", csend);
    printf("WAITING FOR SERVER RESPONSE..\n");
    crec=recv(cid,recbuff,500,0);
    check("RECEIVE",crec);
    printf("MESSAGE FROM SERVER:%s\n",recbuff);
    printf("SENDING HELLO TO SERVER\n");
    strcpy(sendbuff, "HELLO");
    csend=send(cid,sendbuff,500,0);
    check("SENDING", csend);
    printf("WAITING FOR OK MESSAGE\n");
    crec=recv(cid,recbuff,500,0);
    check("RECEIVE", crec);
    if(strncmp(recbuff,"250",3))
        printf("OK NOT RECEIVED\n");
    else
        printf("MESSAGE FROM SERVER:%s\n",recbuff);
    printf("ENTER THE FROM ADDRESS:");
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scanf("%s", fromaddress);
strcpy(sendbuff, "MAIL FROM:");
strcat(sendbuff, fromaddress);
csend=send(cid,sendbuff,500,0);
check("SENDING", csend);
printf("WAITING OK FROM SERVER\n");
crec=recv(cid,recbuff,500,0);
check("RECEIVE",crec);
if(strncmp(recbuff,"250",3))
printf("OK NOT RECEIVED\n");
else
printf("MESSAGE FROM SERVER:%s\n",recbuff);
printf("ENTER TO ADDRESS:");
scanf("%s",toaddress);
strcpy(sendbuff, "MAIL TO:");
strcat(sendbuff,toaddress);
csend=send(cid,sendbuff,500,0);
check("SENDING",csend);
printf("WAITING OK FROM SERVER\n");
crec=recv(cid,recbuff,500,0);
check("RECEIVE",crec);
if(strncmp(recbuff, "250",3))
printf("OK RECEIVED\n");
else
printf("MESSAGE FROM SERVER: %s\n",recbuff);
printf("SENDING DATA TO THE SERVER..\n");
strcpy(sendbuff,"DATA");
csend=send(cid,sendbuff,500,0);
check("SENDING",csend);
printf("WAITING OK FROM SERVER\n");
crec=recv(cid,recbuff,500,0);
check("RECEIVE",crec);
if(strncmp(recbuff,"354",3))
printf("OK NOT RECEIVED\n");
else
printf("MESSAGE FROM SERVER:%s\n",recbuff);
printf("Enter mail body\n");
for(i=0;;i++)
{
fgets(mailbody,sizeof(mailbody),stdin);
csend=send(cid,mailbody,1000,0);
if(strncmp(mailbody,"$",1)==0)
break;
check("SENDING",csend);
}
printf("SENDING MAILBODY TO SERVER\n");
printf("WAITING OK FROM SERVER\n");
crec=recv(cid,recbuff,500,0);

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check("RECEIVE", crec);
if(strncmp(recbuff,"221",3))
printf("OK NOT RECEIVED\n");
else
printf("MESSAGE FROM SERVER:%s\n",recbuff);
strcpy(sendbuff, "QUIT");
csend=send(cid,sendbuff,1000,0);
printf("SENDING %s ... \n",sendbuff);
strcpy(recbuff,"");
crec=recv(cid,recbuff,500,0);
if(strncmp(recbuff,"221 OK",6)==0){
printf("Exiting.....");
}
printf("CONNECTION CLOSED\n");
close(cid);
}

```

SERVER

```

#include<stdio.h>
#include<string.h>
#include<stdlib.h>
#include<unistd.h>
#include<sys/socket.h>
#include<netinet/in.h>
void check(char str[], int value)
{
if(value<0)
printf("%s FAILED\n",str);
}
void main()
{
int sid, sbind, size, slisten, saccept, srec,ssend,i,n=5;
char recbuff[500], sendbuff[500], fromaddress[500],
toaddress[500], mailbody[1000];
sid=socket(AF_INET,SOCK_STREAM,0);
check("SOCKET CREATION",sid);
struct sockaddr_in saddr;
saddr.sin_family=AF_INET;
saddr.sin_port=htons(8082);
saddr.sin_addr.s_addr=INADDR_ANY;
size=sizeof(saddr);
sbind=bind(sid, (struct sockaddr*)&saddr,size);
check("BINDING",sbind);
slisten=listen(sid,5);
check("LISTEN",slisten);
saccept=accept(sid, (struct sockaddr*)&saddr,&size);
check("ACCEPT",saccept);

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printf("\n.....\n");
srec=recv(saccept, recbuff,500,0);
check("RECEIVE",srec);
printf("MESSAGE FROM CLIENT:%s\n",recbuff);
printf("SENDING RESPONSE FOR HI...\n");
strcpy(sendbuff,"220 192.168.9.138");
ssend=send(saccept, sendbuff,500,0);
check("SENDING",ssend);
printf("WAITING FOR CLIENT RESPONSE...\n");
srec=recv(saccept, recbuff,500,0);
check("RECEIVE",srec);
if(strncmp(recbuff, "HELLO",5))
printf("ERROR\n");
else
printf("MESSAGE FROM CLIENT:%s\n", recbuff);
printf("SENDING RESPONSE FOR HELLO...\n");
strcpy(sendbuff,"250 OK");
ssend=send(saccept, sendbuff,500,0);
check("SENDING",ssend);
printf("WAITING FOR FROM ADDRESS\n");
srec=recv(saccept, fromaddress, 500,0);
check("RECEIVE",srec);
if(strncmp(fromaddress, "MAIL FROM:",10))
printf("From address error\n");
else
printf("FROM ADDRESS:%s\n", fromaddress);
printf("SENDING OK TO FROM ADDRESS\n");
strcpy(sendbuff, "250 OK");
ssend=send(saccept, sendbuff,500,0);
check("SENDING",ssend);
printf("WAITING FOR TO ADDRESS\n");
srec=recv(saccept, toaddress,500,0);
check("RECEIVE", srec);
if(strncmp(toaddress, "MAIL TO:",8))
printf("To address error\n");
else
printf("TO ADDRESS:%s\n", toaddress);
printf("SENDING OK TO TO ADDRESS\n");
strcpy(sendbuff,"250 OK");
ssend=send(saccept, sendbuff,500,0);
check("SENDING",ssend);
printf("WAITING FOR DATA...\n");
srec=recv(saccept,recbuff,500,0);
check("RECEIVE", srec);
if(strncmp(recbuff, "DATA",4))
printf("DATA NOT RECEIVED\n");
else
printf("MESSAGE FROM CLIENT:%s\n",recbuff);

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printf("SENDING OK TO CLIENT\n");
strcpy(sendbuff,"354 GO AHED");
ssend=send(saccept, sendbuff, 500,0);
check("SENDING",ssend);
printf("MAILBODY:\n");
for(i=0;;i++)
{
srec=recv(saccept, mailbody, 1000,0);
check("MAIL BODY RECEIVE",srec);
if(strncmp(mailbody,"$",1)==0)
break;
else
printf( "%s ", mailbody);
}
strcpy(sendbuff,"221 OK");
ssend=send(saccept, sendbuff, 500,0);
printf("\nSENDING OK TO CLIENT\n");
check("SENDING",ssend);
srec=recv(saccept, mailbody, 1000,0);
if(strncmp(mailbody, "QUIT",4)==0)
{
strcpy(sendbuff,"221 OK");
ssend=send(saccept, sendbuff, 500,0);
printf("Sending 221 OK...");
}
printf("CONNECTION CLOSED\n");
close(saccept);
close(sid);
}

```

[karthikeyan@lenovo client]\$./a.out

```

<-->
SENDING HI TO SERVER
WAITING FOR SERVER RESPONSE..
MESSAGE FROM SERVER:220 192.168.9.138
SENDING HELLO TO SERVER
WAITING FOR OK MESSAGE
MESSAGE FROM SERVER:250 OK
ENTER THE FROM ADDRESS:hello@gmail.com
WAITING OK FROM SERVER
MESSAGE FROM SERVER:250 OK
ENTER TO ADDRESS:world@gmail.com
WAITING OK FROM SERVER
MESSAGE FROM SERVER: 250 OK
SENDING DATA TO THE SERVER..
WAITING OK FROM SERVER
MESSAGE FROM SERVER:354 GO AHED
Enter mail body
hello world
goo
d
bye

```

[karthikeyan@lenovo server]\$./a.out

```

.....
MESSAGE FROM CLIENT:HI
SENDING RESPONSE FOR HI...
WAITING FOR CLIENT RESPONSE...
MESSAGE FROM CLIENT:HELLO
SENDING RESPONSE FOR HELLO...
WAITING FOR FROM ADDRESS
FROM ADDRESS:MAIL FROM:hello@gmail.com
SENDING OK TO FROM ADDRESS
WAITING FOR TO ADDRESS
TO ADDRESS:MAIL TO:world@gmail.com
SENDING OK TO TO ADDRESS
WAITING FOR DATA...
MESSAGE FROM CLIENT:DATA
SENDING OK TO CLIENT
MAILBODY:

hello world
goo
d
bye

```