

Computer Network Assignment # 5

Course code: CS307

Instructor: Dr. Usman Habib

Marks: 10

Due Date: 5th December, 2019.

Warning

In case of copy/paste straight zero will be given to that person.

Evaluation Criteria

- Each individual will be called for viva.
- Marks will be assigned on the basis of viva.

Note

This assignment is divided into 2 task. Each Task carried equal marks. Each Task require basic programming skill like function, pointer, structure etc. The assignment should be coded in C. Expect the renege on request for another language. Repercussion will be rejection of assignment and will not be compensated in viva.

Helping Material:

You can take help from Beej's Guide to Network Programming Using Internet Sockets book. Click [here](#) to download the book.

Task 1 Marks: 5

Your task is to create simple client server chat application for one message. In client server application we had client program and server program. Both start communication when run simultaneously. First we run the server program which continuously listen for client. After running the server, then we will run client program. Now using definition of client server, establish the communication between client and server. Upon establishing the connection send "This is client" message from client to server. After the receiving the message from client side, the server will stop it's communication and terminate itself.

You should submit the following program e.g.

- client.c
- server.c

Direction: You can take help from Beej's Guide to Network Programming Using Internet Sockets book. Click [here](#) to download the book.

Task 2 Marks: 5

In task 2, you should extend previous code to create an email server. The following information should be used:

- 1) Create a dummy database of clients, passwords, number of send and receive emails at server side.
- 2) The client should send email address and password for login. If the username and password matches he should be shown the following details:
 - a. Send Emails: e.g. 1
 - b. Received Emails: e.g.5
- 3) The client will be able to send email to other valid user in the database at email server. Server will reply back to that message that is sent to user or will say “user not in directory” and client should terminate the program. In case of valid users the sent and received emails number should be increased.

You should submit the following program e.g.

- Client_Server.c
- Email_Server.c

Direction: Follow the beej's Guide