

German University in Cairo
Computer Science Departement
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CSEN503: Communication Networks, WS 2006
Project One: Chatting Program

INTRODUCTION

In this project you are required to design a chatting application program that allows different clients to chat through a server. Your application is based on a client/server architecture, where you have to implement a server side and client side. The server will run on a machine at port number 8000. The clients will contact the server in order to exchange message simultaneously with the server, as well as allowing multi users to chat together. Your application should operate over TCP/IP and you should develop this program using Java.

TASKS

- Task 1:
You should form a team of 2. Please submit your team members (names and application number to your TA by email next week)
- Task 2:
Build your application following the instructions below. Submission should be done by email and evaluation time will be announced.

SUBMISSION PHASES:

1. Phase A: 1-1 Chatting *Submission: 28.11.2006 at 12:30 p.m.*

- Part I
In this part you are asked to design a simple chatting program that does the following: A server runs on a machine waiting for a client to connect over port 8000. A client runs on another machine and connects to the server. After the connection takes place, the client starts sending messages and the server will reply to these messages. When the client send the word **BYE** or **END** the connection should be closed.

- Part II

In this part you will modify your program so that server and client can exchange messages simultaneously. This means that either of both sides can send messages without waiting for the other side to reply.

2. Phase B: n-1 Chatting *Submission: 26.12.2006 at 12:30 p.m.*

In this phase you are asked to modify your program so that the server can handle multi clients at the same time. In other words, the server can exchange messages with more than one client. Notice that each client must send a nickname when it connects to the server and the server should accept the connection only if this nickname is not used by other clients.

3. Phase C: n-n Chatting *Submission: 09.01.2007 at 12:30 p.m.*

In this phase you should further modify your program so that it will be more like a chatting room (something like IRC). When a client is connected to server, he can see all the online clients, then he can choose any of these clients to chat with. Note that he can chat with more than one client at the sametime. Also, there must be an area where all clients can chat with each other. Don't forget to update the client lists at all clients when a new client is connected or disconnected.