

COMP4621: Computer communication networks I
Fall 2014
Programming Project

Handout Date: 15/10/2014

Due Dates: Intermediate Report: 1/11/2014 | Final Submission: 16/11/2014 | Demo: 21/11/2014

Name/student ID/email =

Please submit the intermediate report before or after the tutorial. In case of identical/copied solutions you will be asked to explain in detail your solution to the TA. You should submit your final project via CASS. All of you have to give a demo of your implementation during the tutorial.

Project Description

In this project you will implement a file transfer service that runs in a public space and helps people share files. In details:

Server.

The server should be multithreaded and support the following functionality:

- Allow multiple clients at the same time.
- Any client should be able to download any saved document in the server
- Any client should be able to see all the files that are uploaded to the server.
- Any client should be able to upload a document in the server. If any client tries to upload a file with a name that belongs to another existing file, the server should save both files and you have to propose a solution for that.
- Whenever a client uploads a file, all the connected clients are informed about the new file.
- Feel free to use your imagination and propose something cool.

Client.

The client should support the following functionality:

- Connect to the server
- See all the available files
- Upload a file
- Download any file from the server
- Receive notifications for new uploads.
- Feel free to use your imagination and propose something cool

Deliverables.

- Intermediate report: An abstract description of your implementation. Draw a figure to visualize the connections between the server and the clients. Describe how many classes you will use and how they are connected. Explain how many sockets you need between the server and a client and why? Also explain the type of each socket. The report should be at most 2 pages.
- Final report: A final description of your implementation. You will update the content of your intermediate report in case of changing something in your design. Design an execution of your project that shows all the functionalities and take some snapshots of the executions. Explain in the report what are you doing in your execution. Add your report and your code to a folder with name your name and your student id and zip them together. Submit the zipped file via CASS.

Almost all of the required functionalities have been demonstrated during the tutorial. You can use the given code but you should know what it is doing.

For any question please send an email to dcab@cse.ust.hk