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|  |  | *Business Information Systems*  *Course*  633-2  *Project*  Professor: Antoine Widmer |

Specifications

# Introduction

For privacy reasons, the government of Valais asks you to create a service to share big files among people. They ask you to develop a server java app and a client java app using java sockets. Each client will be able to upload and download files on the server. Multiple clients can be connected to the server at the same time:



# Features

**Minimal** specification of the **server**:

* The server must be able to:
  + Register new clients
  + Accept and store the files that are sent by the clients and store the associated password
  + Send a file asked by a client
  + Delete a file asked by a client if the password match the one set in the creation
  + Send the list of files that are stored on it
  + Accept multiple clients simultaneously
* The server must be able to write logs
  + On a file
  + The history must be kept (on file per day)
  + 3 levels of log (info, warning, severe) should be handled
    - Info for all the useful operation
    - Warning for all the possible network errors
    - Severe for exceptions
* You can use command words to discuss between the client and the server or use different ports on the server for the client communications

**Minimal** specifications of the **client**:

* The client will be able to connect to the server through socket connections
* The client will be able to upload a file to the server and set a password for deletion
* The client will be able to download a file from the server
* The client will be able to delete a file on the server using a password

The features described hereafter are examples of possible add-on that could be developed according to the progress of your project:

* A client can handle multiple download/upload of files simultaneously
* Your imagination

***Please notice that you will work on this project during the class, but you will also need to work on it outside the school.***

***Ask if one feature is not clear for you!!***

***If one feature in the minimal specifications is not finished, no point will be given to the extra-features finished***

# Deliverables

* 2 running applications in production state.
  + Commented code
  + The 2 applications must behave properly without bugs
  + **No useless code or libraries should remain**
  + All the features described under « work to do » must be implemented.
    - If all the functionalities are developed properly and coherently the project will be evaluated with a 5.
    - Adding new functionalities will increase the evaluation to reach a 6.
* Use Java with Eclipse, provide a .jar for both the client and the server.
* Provide technical documentation of you work.
* Provide a user manual for the client application (short but clear, snapshots welcome).
* 1 log book per person that will help us to understand your project sequence events, the difficulties you had, with a half day resolution.
* How to prepare the presentation of your project
  + Presentation of the project by the 2 students. During this presentation the professors should be able to clearly determine the contribution of each student.
  + Demo first and then explain what you have done

# Organisation

### Details

* 2 Java programs
* Beware the copy paste! a check of the code against plagia will be performed
* The code should be developed by 2 people at maximum.

### Technical aspects

* Implementation / Development
  + Programming language : Java with Eclipse
  + The programs must run on windows 10

### Tips

* Start directly with an excellent code writing (comments, exceptions, naming, etc…) instead of trying to repair things at the end of the project.
* Respect the development standards and the concepts seen in the lessons
* We do prefer clean code and functions without bugs than buggy half backed solutions. The server must be coded to insure a 24/7 exploitation.

### Organization:

The presentation will be scheduled on Thursday January 9 2019, the full project will be delivered at the same time.

As a copy of your work we would like a zip file containing:

* The complete source code with a description on how to recompile it on an Eclipse environment using Java
* The log book that will allow us to understand the tasks you’ve carried out, the problems you encountered, with a half day resolution.

# Evaluation

Evaluation will depend on your work and your implication in this project:

* Evaluation will be individual and based on tests of your project functionalities. It will take place on the **last week of the course**
* Project will be evaluated following this list of criteria:
* Working or not?
* Clean code, no useless code and best practices are used
* Correct use Java Sockets
* Thread
* Log
* Your project should be fully functional and in an “in production” status
* Available functionalities should be fully implemented
* Bug free
* Evaluation should include questions about your project (architecture, development choices, …)