

## LAB 1: CHAT SYSTEM

### 1. Goals

- Building distributed systems
- Synchronous communication systems
- Introduction to Java Remote Method Invocation (RMI)

### 2. Prerequisites

- Java programming

### 3. Description

- a) Build an RMI-based chat system, where participants can dynamically join, leave, exchange messages
- b) Add a history feature to the chat system
- c) Make the chat system persistent (persistent history of messages)
- d) Implement a graphical user interface for the chat system

### 4. Methodologie

- a) Define the interface of the remote object
- b) Define the protocol for the interactions between the clients and the server. Who will call what method? For what? Which methods are remote?
- c) Implement the object
- d) Implement the server
- e) Implement the client
- f) Test

### 5. Software environment

#### *Used software*

- Java 2 SDK
- IDE (e.g. Eclipse)

#### *Directory organization*

Organize your directory as follows:

```
src/
    .java files
classes/
    .class files
doc/
    Javadoc API and HTML files
lib/
    .jar files
```