Advanced Programming, a.y. 2016/2017
Homework 4
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Quick start and optional assignment

The project concerns the implementation of an IRC-like chat server in Scala. A simple client is also provided, though the server works even with a basic Telnet connection.
The chat has support for multiple rooms; when a user sends a message to a room, every participant in that room (excluding the sender) will receive the message. Rooms are simple (name, list_of_users) pairs; message propagation is actually done in a multicast way by the server, and is a publish-subscribe pattern (the publisher being the sender user, while the subscription is represented by the room joining). The chat service also includes direct messages between users. Both server and client use configuration files to retrieve information about the connection parameters.
Included in the submission are jar files for both the server and the client, together with basic configuration files. Executing them "*as is*", the server waits for connections on port 42311 and accepts a maximum of 250 concurrent users, while the client opens the connection on the localhost address on port 42311. Telnet users can connect using these same parameters.
Finally, a comprehensive ScalaDoc documentation is included in the /doc folder.

Concluding remarks

The project is written in Scala 2.12.1 (Java 8), using the IntelliJ IDEA IDE with its Scala plugin, on macOS Sierra 10.12.3. While I wrote the entirety of my code, the solution has been designed and debated with the help of fellow student Alessandra Fais.