13. Java Sockets

This lab is about echo servers and clients, using UDP or TCP. The source codes for this lab are available on the [course website](#).

1. UDP
Download the UDP Server and the UDP Client code.

Compile the code and execute it

- first in such a way that the client is running on the same machine as the server,
- then on two different machines (you may use the IP of the lab teacher's machine that is written on the blackboard)

2. TCP
Download the TCP Server and the TCP Client code.

Compile the code and run it. Then change the code

- Modify the server so that it also prints out the IP address of the client that contacted it.
- Modify the client so that you can repeat sending strings to the echo server.

2. Explore on your own
- Modify the code so that the user can manually choose the port to use.
    - What happens if the user chooses a port that is already in use?
    - What happens if the user chooses system port (<1024)?
- Modify the code so that received messages are broadcasted to all connected clients