

# Chat

## Foundations of Distributed Systems Lab Guide 1

2019/2020

Consider a simple multi-threaded chat server using Java and sockets, where lines sent by any client are broadcast to all currently connected clients.

### Steps

1. Implement the server using the simplest strategy possible.
2. Implement an interactive client.
3. Implement a non-interactive client to generate load (*bot*) that sleeps a configurable amount of time between sending or receiving messages.
4. Run clients with different delay configurations.

### Questions

1. How does one client affect other clients?
2. How do clients affect server memory usage as observed with jconsole?

**Learning Outcomes** Recall basic distributed systems programming with Java, sockets and threads. Relate interactive performance and memory usage with server programming.