EDA031 - News Project

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1   Introduction

The objective of this project is to implement a news server and news client. The server contains a database with newsgroups and articles. A user connects to the server using the client. The client has a text-based user interface which allows users to create and delete news groups and articles.

2   tillfälligt

OBS
"Create a directory username (i.e., your own username) with subdirectories src and bin. Collect all source files in the src directory and write a makefile. make all should create the executables (the two versions of the server and the client), make install should copy the executables to the bin directory."
Kul sak jag nyss hittade i sharelatex: ctrl + alt + piltangenter för att sätta markörer på flera rader samtidigt (op!). Esc för att avbryta.

Om någon lägger till grejer i mappen utifrån klienten kaosar allt

3   Requirements

- Each newsgroup has a unique name and a unique ID greater than zero.

- Each article has a title, an author, a text and a unique ID greater than zero.

- Newsgroup and article IDs cannot be reused.

4   System Design

5   Classes

5.1   Server

The server listens to a port and handles multiple connections.

5.2   Connection

Used to connect the server with the client.

5.3   MessageHandler

Uses `protocol.h` to decode and encode messages.

5.4 MyServer

Main program for the server. Run by the user to start a server with a given host (hur vara formulera sig?) and port.

5.5 MyClient

Main program for the client. Run by the user to start a client that connects to a given port.

5.6 Database

Database interface. Contains member functions for creation, deletion and listing of news groups and their articles.

5.7 InMemoryDatabase

This database handles everything in the primary memory and is initiated from scratch every time the user starts a server.

5.8 FileSystemDatabase

This database uses a file system to store news groups and articles between runs. Newsgroups are represented by folders named after newsgroup ID. Each folder contains a meta file with the folder name and the ID that the next created article will get. A newsgroup folder also contains one file for each article. These files are named after the article IDs and contain title, author and article text.

5.9 Newsgroup

A newsgroup is identified by a unique name and ID number. It may contain any number of articles.

5.10 Article

An article is identified by a unique ID number. Each article has a title and an author and contains a text with the contents of the article.

6 Conclusion