

Computer Networks and Applications, Fall 2023

Programming Assignment Part 2

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Compile

I use the gcc compiler to compile the c++ source code into executable program. The command is as follow:

```
g++ -o server server.cpp
```

Execution

The server program is a text-based terminal application. To run the program, type `./server <port_number>` in the containing folder's terminal. Then a text-based interface will appear in the terminal if the provided port number is valid.

Once the server is successfully attached to the socket with provided port number, it will spawn a new thread to listen to incoming clients. The program statically allocate memory for 64 concurrent threads, one thread will start when accepted a new connection and terminate when the client disconnects.

Also, the server program provides authentication capability. One client can only perform the List command once logged in, and will prevent any other client to login to active accounts.

Environment

This program is written and tested on the Ubuntu 22.04 linux distribution with x86-64 architecture CPU.

Reference

1. GeekForGeeks [link](#)