
CNLINE

Final Project

Intro

- Build your own messaging system
- at most 3 members in a team

Requirements

- Registration
- Messaging
- File transfer
- User interface

Registration

- Signup
- Login with username and password
- Users are identified by their username

Messaging

- **Online** — online users can send messages to each other.
- **Offline** — server will store messages for offline users, and sends them when users go online.
- **Historical** — server keeps a log on sent and received messages for users to query.

Messages must persist after server restarts, you may store them into files.

File Transfer

- Online user can send/receive files to/from others.
- More than one file sharing requests can be send at the same time.
- (Which method to transfer complete files is up to you)
- Don' t store transmitted files as users' historical Messages.

User Interface

- It has to be usable and simple.
- Both command line and graphical interface are acceptable.
- You will **not** get extra credits for a fancy UI.

Technical Requirements

- You may use **any** programming language
- Design your **system architecture** and **protocol**
- You can assume server and clients use public IP
- Welcome to use libraries
- But don' t use out-of-box messaging libraries
- If you are not sure, ask TA.
- Provide a build script

Report

PDF file with following

- Protocol Specification
- User & Operator Guide
- Instructions on how to run server & clients
- System & Program Design
- Other things you want to say if any

Bonus

- Encryption
- Auto reconnect
- Or other ideas

Each bonus credits for 5%

Grading

5 min demo to TA to get the credits for the following items

- Registration (10%)
- Messaging (20%)
- File transfer (20%)
- User interface (10%)
- Bonus (at most 30%)
- Report (30%)
- Build Script(10%)

Submission

Your source files and report should be stored in the following hierarchy, and then submit to CEIBA in “.tgz” or “.zip” compressed form.

- src/<all source files>
- Build.sh or makefile
- Report.pdf

Deadlines

Demo: 2017/1/14 (Sat.) 10~12, 14~17.

Submission Due: 2017/1/15 (Sun.) 01:00:00.

Delay Submission will not accept!!!

Important Things

- Submit team members here (before 12/18 24:00)

goo.gl/forms/FFxcRj2XkmWUWemr2

Make use of “Look for teammate” forum on CEIBA

- Schedule demo time here

goo.gl/dbll86

- At least **1 person** must come to demo. If you cannot make it, schedule another time **before 1/14** with TA.