

Final Project - cnMessage

Computer Network 2019



Goal |||

- To build your own message system.
 - Design your own system architecture.
- You need to implement following functions:
 - Registration
 - Messaging
 - File transfer
 - User interface
- It's a team project.
At most 3 members in a team.



Registration |||

➤ Signup

- The username should be unique.
- The password should be encrypted.
You can't store the password directly to the database.

➤ Sign in

- By username and password

The background of the slide features a stylized, artistic illustration. On the left, there are several blue solar panels arranged in rows, set against a backdrop of vibrant, swirling blue and white clouds. The overall aesthetic is clean and modern, with a focus on renewable energy themes.

Messaging |||

➤ Online

- Online users can send messages to each other.

➤ Offline

- Server will keep messages for offline users and send messages to them when users go online.

➤ Historical data

- Server will keep a log on historical messages for users to query.



File Transfer |||

➤ Online user can send/ receive files to/ from others.

- Offline users can't send or receive files.
- No need to store transferred files as users' historical data.

➤ More than one file can be transferred at the same time.

➤ File size

- At most 10MB

■ <https://reurl.cc/W4bLLx> (mp3)

■ <https://reurl.cc/k5pD0b> (jpg)

■ <https://reurl.cc/24a586> (txt)



User Interface



- Be usable and simple.
 - You will not get extra credits but a smile from TA for a fancy UI. 😊
- Both command line and graphical interface are acceptable.



Technical Requirements |||

- You may use any programming language.
- You can assume server and clients use public IP.
- Welcome to use libraries.
- You should provide a build script.
- If you have any other question not mentioned above, feel free to ask TAs.

Grading Policy |||

➤ 5 mins DEMO to get credits for the following functions :

- Registration (10%)
- Messaging (20%)
- File Transfer (20%)
- User Interface (10%)
- Build Script (10%)
- Bonus (at most 20%, each for 5%)
 - Encryption · Auto reconnect · other interesting ideas...

Grading Policy |||

- Report (30%) **.pdf**
 - Please use the following template to write your report.
 - <https://reurl.cc/Qp28nq>
 - Don't modify the order.

A watercolor illustration on the left side of the slide. It features a vibrant green leaf with detailed vein patterns, positioned above a hand holding a brown, textured rock. The background is a soft, light blue and white wash.

Submission |||

Demo : 2020.1.18(Sat.)

<https://reurl.cc/rlkNZb> (group sheet, close at 12/3 23:59)

Submission Deadline : 2020.1.19(Sun.) 23:59

Late submission will not be accepted.

You should upload your **.zip** file named [teamID_final] including a **folder**[teamID_final] that contains:

- src(folder)/<all source files>
- build.sh or makefile
- Report.pdf

to ceiba.

The background is an abstract composition of various shades of blue and teal, with darker and lighter patches creating a textured, watercolor-like effect. Scattered throughout are numerous small, dark speckles and larger, lighter-colored splatters, giving it a dynamic and organic feel.

Any question?