Project - Distributed Computing System - Spring 2019

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Overview

In this project, you are going to develop a **chatting software** using some distributed computing mechanisms in **Java** and / or **Python**.

Your software should at least implement the following features,

- A user interface
- User identification
- Sending and receiving text messages
- Working in a local area network

There is no limitation for other functions or improvement. You can design and add more accordingly. Here are some examples you can consider,

- Sending and receiving files, music, video, etc.
- A pretty graphical interface
- Running program code remotely

You will be grouped in 4 people, then develop the application, and finally organize a presentation on your work.

Please continue to read the detailed requirements.

Implementation Requirements

You **must** use at least one of the distributed computing technologies, including the technologies we taught or not taught during the classes. Such as Java RMI, CORBA, IIOP we introduced during the classes. Or modern RPC framework like GRPC and Dubbo.

HTTP and WebSocket is also allowed, but direct use of any existing software like Apache, Nginx is not allowed.

Direct socket programming is not allowed.

You can only use **Java** and / or **Python** as your programming language. No other language is allowed.

You can try your best to make better designs in software interfaces and structures. Then show them during your presentations.

Grouping

We follow the semi-random grouping mechanism. Each of the four-people groups will be formed by two pairs and the pairs will be chosen by yourselves. A draw will be held to form pairs into groups.

Presentation

Each of your presentations will be 20 minutes in length including demo and Q&A sections.

Your presentation should include a brief introduction of your feature, structure, and technologies used.

Your demo can be done on the PCs at computer lab. Please be prepared in advance and your time will be counted and no pause is allowed during your whole presentation.

All of your member should speak during the whole presentation.

All of you should attend all of the presentations.

Grading

The grading will follow the rubric. A satisfactory grade will be given once you get the basic features done. You will get a higher grade if you get more functions done and / or a better structure design.

Initially the grades of members in same groups will be same. A survey will be done after your presentations which allows you to indicate who contributes significantly more. A weight will be added on these well-performed students (how much on it will be decided later).

Submission

Your presentation slides and your code should be submitted to iSpace. The due day will be set on iSpace.

No late submission is allowed.

Tentative Timeline

Week	Date	Work
6	Mar. 29	Timeline announcement, pair matching starts
9	Apr. 11	Pair matching dues

Week	Date	Work
9	Apr. 12	Group forms, requirement releases
14	May 15 & 17	Presentations
Make-up	May 22	Presentations, submission dues