

Machine Problem 3: Open Project

Post Date 10/25/2009

Due Date 12/07/2009

In MP3, program any interesting and fun phone application in your mind. You have the shot to win Kindles and store gift cards.

What to submit for MP3

Each group should:

- [5pt] Cleanup Java source code. See MP1 for instructions. Please document your source code and function carefully and thoroughly, since your code are to be utilized and reviewed by classes of following semesters. Documentation score will be assigned based on how well your comments are.
 - Documentation of each major source code
 - Documentation of each function in your Java file as MP1
- [10pt] Prepare Report (PDF format) document. Refer to report section for requirement.
- [5pt] Power point presentation + Q&A for 10-15 minutes. In your presentation, please cover the following 5 topics with at least 1 slide per topic. Use key words, pictures, diagrams and other visual aids as much as you can for an impressive presentation.
 - Architecture for your distributed system
 - Major function/service/data and their locations
 - User interface (demo)
 - Networking protocols
 - Implementation challenges: please list and explain top 5 or more technical challenges and difficulties. 35 pts from implementation part are assigned proportionally to your difficulty level.
- [80pt] Group representative(s) comes to the lab 0216 SC at the scheduled time. Please sign-up at <http://spreadsheets.google.com/ccc?key=0AmVHs8Rfyiz8dDJXX2ZoTmduVEcyc1Bta24wUFFTYVE&hl=en> for demo time between 10am and 4:30pm on Monday, Dec. 7th. You will give both a powerpoint presentation and the phone demo. The whole process for one group should take around 30 minutes. Set up applications on dev phones, and be prepared to show us your source code in programming environment when being asked.

Attention: Please wrap everything in a *compressed* file (your code directory, report PDF file, and ppt slide), place the file in your SVN directory, and notify [TA](#) the link to download the file by Dec. 9th. Like before, you have additional 2 days to document your code and prepare for report.

Point Assignment (100pt)

There will be 10% penalty if you demo on emulator.

Part	Points	Comments
Running Correctly 'n' Smoothly	20	-2 pt for each system error and application logistic/consistency bug. Example for application logistic bug: A user inserts a file into P2P system via GUI; however, the file is invisible to other peers
Service Novelty	5	Excellent: 5pt; Good: 3pt; Fair, 0pt.
Implementation	35	Enhance mp1, mp2 with new content

Difficulty		New service: differentiate groups for admission control; locations; calendar; chat with TA Complex processing and computation
GUI Friendliness	10	-1 per tedious input
Logging capability	5	Log the important events in the phone and archive in the server side
Q&A	5	
Documentation	15	10pt for report; 5pt for code documentation
Presentation	5	

Requirement for REPORT (PDF File)

On the first page of your report file, write project title, group number, and the members of the group. Document your whole project from both user's and programmer's points of view in 2 parts.

- Users' perspective: Please present how to deploy the web server, how to install the application, what are the functionalities, and how to use those functions via the user interface.
- Programmers' perspective: Please write down all the implementation details as a complete and self contained documentation.
 - Architecture for your distributed system
 - Major function/service/data and their locations with data structure
 - Networking protocols and message formats
 - Algorithm to deal with unpredictability, failure and peer churn.
 - Implementation challenges
 - Other aspects.

Do **NOT** write as a README file. For effective communication, please use visual elements in your REPORT when needed.

Prize Competition

Only **phone** demonstration will be qualified for final competition. Top 5 projects will be selected from pre-competition demos on Dec. 7th. We will release the list of top 5 projects and competition schedule in the course website and newsgroup around 6pm, on Dec. 7th. The competition will be held on Tuesday, December 8th, in 216 SC between 2pm until 4:30pm, each group getting 30 minutes, plus some time for additional deliberation. Qualcomm representatives then will join us as external judges. Prizes will be awarded to the top 3 projects.

1st place An Kindle /group member 2nd place Bestbuy gift card/group member

3rd place Bestbuy gift card/group member

Return procedure: Please return G1 Dev phones to Paula Welch/Rick Van Hook, 9-4pm, during Dec 14th-18th, in room 1330SC. Before return, remember to **erase** your personal data completely by "setting->SD card & phone storage->factory data reset", and **check** that your ad password is gone in file wpa_supplicant.conf.