

# ECLT 5820 Distributed and Mobile Systems

## Project Specification

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### Instruction:

- Project grouping deadline: Oct. 25, 2019
- Proposal deadline: Nov. 6, 2019 (electronic version)
- Final report deadline: 23:59:59, Dec. 8, 2019, Monday (electronic version)
- Presentation file Submission deadline: Dec. 3, 2019 (electronic version)
- Presentation time: Dec. 4, 2019, Wednesday (in class)
- Submit to [eclt5820@cse.cuhk.edu.hk](mailto:eclt5820@cse.cuhk.edu.hk)

### Introduction:

The course project is to conduct a research work on a topic related to this course. Each team should be composed of **2 students** to work on the project. Please send your group members' names, student IDs, and students' Emails to the project account before the above mentioned deadline. We would randomly group students if they did not submit the group information before the deadline.

No plagiarism is allowed for the project. The submitted documents will be compared with all the Internet documents using plagiarism detection software (namely Veriguide, <http://veriguide1.cse.cuhk.edu.hk>). Copying materials from the Internet or published papers without proper acknowledgement will be detected easily using this plagiarism detection software. Violations of this policy will result in a failing grade in the course for all the members in the team.

### Grading Criteria:

Your project will be graded primarily based on the following weighting scheme:

- Project proposal 10%
- Presentation: 40%
- Final Report: 50%

Late submissions within three days will be deducted 30% of the score, while late submissions more than three days will get 0 marks on that phase.

### Pick a Topic:

You can choose from one of following categories to conduct a comprehensive or in-depth research work. All topics relevant to this course are of interest:

- Characterization of Distributed Systems
- Communication and Remote Procedure Call " Security
- Naming, Trading and P2P Systems
- Time, Coordination and Agreement
- Concurrency Control
- Transactions
- Fault Tolerance and Replication
- Data-driven Distributed System Management
- Web Services
- Mobile and Ubiquitous Computing
- Distributed Multimedia Systems
- Cloud Computing
- Other topics covered by the textbook
- Business issues relating to distributed and mobile systems topics listed above

You are encouraged to choose one hot term in which you are interested within the scope specified above, and explore the techniques around the term. For your reference, we list some hot terms as follows.

- Mobile Payment System
- Indoor Positioning System
- Recommendation System
- Smartphone Security Procedure " Big Data Application ☑☑Smart Home
- Autonomous Car
- Blockchain
- Artificial Intelligence System

You are free to discuss your project with the instructor anytime after the weekly lecture is conducted.

### Write a Proposal:

After selecting a topic, you are required to write a brief proposal (1 A4 page). The proposal should include the title, and a brief introduction of the project work. Each group should send the proposal (softcopy in PDF or Word format), either in class or to the project account, by the due date specified above. In the proposal, you should provide the information of: Group IDs, student names, student IDs, and email addresses.

### Work on the Project:

To conduct a solid research work, you need to survey 5-10 related published papers, make a summarization, propose novel ideas if possible, and write a final report.

### Present the Course Project:

Each project team is expected to make an oral presentation of the project on Dec. 4, 2019. Each group is required to prepare a Powerpoint presentation file and submit it on Dec. 3, 2019 to the class account. The structure of your presentation should roughly follow your

final report. The presentation time is 20-minute per team, including 15-minute presentation and 5-minute Q&A.

Your presentation will be graded mainly based on the technical contents of your work, the clarity of your slides, and the fluency of your presentation. Think about how you can best present your work so as to make it as easy as possible for your audience to understand your main messages. Try to be concise and to the point. Pictures, illustrations, examples, and system demonstrations are generally more effective than text for explaining your project. All group members are expected to participate in the presentation.

### Write a Final Report:

You should write your report as if you are writing a conference paper. You should address the same questions as those you have addressed in the proposal, only with more details, especially regarding some of the challenges that you have solved in your selected research topic. Furthermore, it would be good to include a brief discussion of how your current work can be further extended. You are required to use ACM proceedings templates (ACM Standard) at this link:

<https://www.acm.org/publications/proceedings-template>

You could use either Latex or Word to write the final report. For Latex user, you may use the online latex platform Overleaf to edit your report (ACM Standard), and the link is:

<https://www.overleaf.com/latex/templates/acm-conference-proceedings-master-template/pnrfvrrdbfwt>

Note that your group needs to submit a PDF file to the project account before the final report deadline. The page requirement is 6- 8 pages for main contents, plus up to 1-page references. If you have not written such a report before, you may want to take a look at research papers from conferences or journals. The submission deadline is Dec. 8, 2019.

Grading of a project report will be based on following factors:

- The quality of your project as reflected in the importance of problem being addressed, the quality of solution, and the impact of your project.
- The novelty of your project.
- The significance of your project.
- Clarity and completeness of the report itself (i.e., whether you have clearly described what you have done and addressed all the questions that you are supposed to address).