CE2001/CZ2001 ALGORITHMS

General Information of Project 1 and Project 2

The learning objectives of these two projects are to apply, design and analyse algorithms. Moreover, students will train their practical skills in implementation, empirical analysis, presentation and report writing in the projects. The performance of a student in each project will constitute 15% of his/her final marks for the course.

Students will attend 4 lab classes, each of 2 hours. The first two lab classes are dedicated to Project 1 and the last two to Project 2. Labs 1 and 3 are for project discussions and Q&A, while Labs 2 and 4 are for project presentations. It is compulsory for students to attend their project presentations. If a student is absent from the presentation without a valid justification (e.g., MC), he/she will receive zero mark for the presentation assessment.

Project Grouping

Students will be allocated into groups each of 4 – 5 members. Students are to form groups by themselves and finalize the grouping within the first 20 minutes of Lab 1. After that, no swap across groups will be allowed unless absolutely necessary.

Assessment

Each project will constitute 15% of the final marks of this course. In general, all members of the same group will be given the same grade for each project. However, the lab supervisor can award a student with outstanding performance a higher grade than the group grade, if he/she finds it justified. On the other hand, if a student makes little contribution to the group (such as, not actively participating in the project), the lab supervisor can deduct his/her marks. Every student has the responsibility to ensure the statement of contribution (to be included in project submission) is correct and complete.

Each project will be assessed the following components and each component's grading percentage is given below:

Components	Percentage
Design of Algorithms	30%
Analysis of Algorithms	30%
Presentation	20%
Report	20%

Design of Algorithms: Before presentation class, each group should have finished the coding and testing of programs (in any programming languages, e.g., Python, Java, C++, C, etc.) on their own computers. Codes which reuse any online resources, libraries or software programs will not be considered in the assessment. The lab supervisor will evaluate the work based on their correctness, completeness, difficulty level and originality.

Analysis of Algorithms: Each group is required to analyse all the implemented algorithms in the project. The assessment will be purely based on students' analytical skills and empirical analysis work. No comparison with the state-of-the-art work will be considered in the assessment. Students should not worry that the time complexity of their proposed algorithms does not outperform any published research work. The lab supervisor will evaluate your work based on the correctness of analysis, and originality of the proposed algorithms. All reference materials have to be stated clearly in the report.

Presentation and Demonstration

Each group has 10 minutes to present their work and give demonstrations. Each group are free to decide the number of students to take part in the presentation. The lab supervisor will focus on their presentation skills and the presentation contents but not the number of students. Students should fully utilise the given 10 minutes to let your lab supervisor understand your work. Presenters should highlight the significance, novelty and uniqueness of their work in 10 minutes. NO additional time will be given to any group. Each team member is required to be familiar with the whole project as the lab supervisor can choose any one of you to answer some questions after the 10-minutes presentation. It will be considered as a part of the assessment under presentation.

Work Submission

After the presentation, each group is required to submit the following items to their lab supervisor on the same day.

1. A short report (maximum of 5 pages including cover page, reference page etc.) in a **.pdf file**
2. All implementation codes, executable files and any necessary documents in a **.zip file**
3. A statement of contribution (no more than 100 words) to summarize each team member's contribution. It is attached in the pdf report.

Each group should make sure that their lab supervisor is able to reproduce their work from the submitted codes and executable files. A clear setup, compile and execution instruction has to be provided. Only the pdf report and zip file will be accepted. Other materials will be ignored. Each group has to take full responsibility on their submission work and make sure that all required materials are completely and correctly submitted to their lab supervisor on the same day of the presentation. Lab supervisors reserve the right to reject any multiple submission.

Plagiarism is strictly prohibited. If the program or report of a group is found to have a similarity of more than 50% with another group or web materials, all members of the group will receive zero mark for the project. Further academic disciplinary actions may be taken.

Late submission: If any work is submitted *n* days after the presentation, the mark will be deducted by *n**20%. For example, suppose a group receives 80 marks (out of 100) for a project, but because they submitted the report one day late, the deduction will be 80*20% = 16 marks, hence the final mark for this group will be 80 – 16 = 64. If the delay is longer than 5 days, the group will receive zero mark for the project.