CISC3026 – Software Engineering Principles
Project

Introduction:
Each student in this course must do a project to practice the content taught in this course. Projects must be done as a group, with each student contributing to each part of the project.

Group size:
Each group should consist of 4-5 students.

Topic:
Each group should decide on a topic of a system to be engineered. Choose a system that involves multiple actors (both humans and other systems), and multiple services (i.e. activities, functions, use cases). The complexity of the system should correspond to the number of students in a group. The larger the group, the more complex the system.

Scope:
Your project should go through the software engineering activities of analysis, design and test preparation. For this project, you should not build any software, i.e. you should not do any programming.

Schedule:
- 24 September 2022: Project title, project description, group nomination via UMMoodle.
- 21 November 2022: Report and presentation slides submission via UMMoodle.
- 22, 25, 29 November 2022: Project presentations.

Deliverables:

1. Project group nomination (5%):
    - Project title
    - List of student numbers (including all digits) and student names in English as printed on student ID.
    - Project description (100-200 words).
2. Project Report (75%):
    (a). Requirements model:
        - List of users
        - List of functional requirements for each user
        - Use case model (s)
        - Use case definitions
        - List of non-functional requirements
    (b). Design model:
        - Static system model: class diagrams
        - Dynamic system model: sequence diagrams, activity diagrams, state diagrams
    (c). Test specification:
        - Test case specifications for each functional requirement

- Test case specifications for each non-functional requirement

3. Presentation (20%):
    - Students must submit presentation file (covering project description, requirements, design, and testing)
    - Detailed schedule for the presentation will be announced later.
    - Presentation arrangement is tentative meaning that, in case if in-class presentation is impossible because of the COVID outbreak in Macau, the presentation will be cancelled. In that case, the marks for presentation will be re-allocated to the mark for project report.

Format:

Deliverable 1 must be submitted as an editable MSWord file.

Deliverable 2 must be submitted as a single PDF file with the following format:

- A4 sized paper.
- 12-point font size (Times New Roman or similar serif font).
- 1" margin at top, bottom, left, right.
- There is no maximum page limit.
- Cover page of the report must include group number, project title, student number and full name of each student. Group number will be assigned after the submission of deliverable 1.
- Introduction about your system (200-300 words).
- Requirement model and Design model should include UML diagrams. Students can choose any UML modelling tool to create the diagrams. The UML diagrams should be saved as a PNG image and insert the image into your report**. All diagrams must be clearly visible**.
- No header.
- Footer: page number centred on the line.

Deliverable 3 must be submitted in both PPT and PDF file with the following format:

- Cover slide with group number, project title, student number and full name of each student.
- The presentation file must have an appropriate number of slides for a presentation.

Penalty:

Penalty for Late Submission of Deliverables 1, 2:

- 50% deduction for every 24 hours. Any late submission after 48 hours from the deadline will be given zero points.

Penalty for absence/late presentation:

- If any group fails to present the project in assigned time slot, presentation mark will be given zero points. All members of the group must attend the presentation and should be available for Q&A.