



COMP 3820SEF / S380F / S380W Web Applications: Design and Development Group Project (50% of OCAS)

You are required to form a group of at most 4 members **from the same course**; each member shares similar workload.

Theme: You are required to implement a web application for an **Online Course Website**.

Basic Features (60% of the project):

1. Your web application should fulfill the following basic requirements on web pages and functionalities:
 - a. Using major techniques introduced in the lectures and labs, like **Jakarta EE, JSP, EL, and JSTL**. You are NOT allowed to use a non-Jakarta EE server for the system. Using CSS and Bootstrap are allowed.
 - b. You are required to use **Spring MVC and Spring Boot and Spring Security**.
 - c. Dynamic pages generation is based on the user's input or request.
 - d. Using the **H2 database** as backend for data storage (**necessary** for uploaded files).
 - e. The web application should be easy to use for normal users.
2. In the basic part, you must implement ALL of the following features to receive full mark:
 - a. Website hierarchy:
 1. The website has an **index page**, which shows the course name, a list of lectures, and a list of multiple-choice (MC) polls.
 2. Each lecture has a **course material page**, which shows
 - the *lecture title*,
 - the *download links* of lecture notes,
 - a list of *comments* from registered users (including the teachers and students).
 3. Each poll has a **poll page**, which shows
 - a *poll question* (e.g., "Which date do you prefer for the mid-term test?"),
 - **exactly four** *MC options* (if a user has selected an option, the selected option will be shown and can be edited),
 - the *current number of votes* for each MC option,
 - a list of *comments* from registered users (including the teachers and students).
 - b. Student registration (for unregistered users) and login function:
 1. Information includes username, password, full name, email address, and phone number.
 - c. Unregistered users can read all contents on the index page but not the other pages.
 - d. Registered students can read content on all pages, and do the followings:
 1. Write new comments.
 2. Vote for polls (If the user has voted, the chosen option can be edited by the same user).
 3. Update the user's personal information except the username.
 - e. The teachers (at least one and can be more than one) can do anything a registered student can do, plus the followings:
 1. Edit (add, remove, update) the list of admins and registered users, and their information.
 2. **Add and delete** course material pages and poll pages.
 3. **Add and delete** course materials or comments.

Note that all features are supposed to be fully functional.

Additional Features (30% of the project):

You are required to implement a number of features in the following list. Each COMP 3820SEF group is expected to implement **any two features**, and each COMP S380F/S380W group is expected to implement **any three features**.

1. A voting history page of a registered user (including the teachers and students).
2. A comment history page of a registered user (including the lecturer and students).
3. Batch uploading of multiple files for course materials.
4. Multiple languages (e.g., English, Traditional Chinese); note that using translation service (e.g., Google Translate) is not allowed.

Demo Video (5% of the project):

You are required to record a demo video to demonstrate the functionality of your web application. You may use Zoom and its “Share Screen” function to record the demo video. There is no limitation on the duration of the demo video.

Submission Form (5% of the project):

You are required to fill in a submission form (provided on OLE) with the following items:

- Member list with student IDs,
- Link (e.g., Google Drive and YouTube) for your demo video (in case it is not included in your zip file),
- Database name, username, and password for your **H2** database,
- Usernames and passwords for some teacher and student accounts, and
- Any additional information (e.g., SQL for creating tables and inserting initial data if they are not stored in the project folder).

Submission and Assessment:

Source code submission

Deadline: ~~13 April 2025~~ **18 April 2025 (Sunday) 23:59**

- Select one group member as the group leader to submit the source code and documents of the web application in a single zip file. All the name of your files should **not** contain any non-ASCII characters.
- Clean your Gradle web application project to remove all the compiled files to make the zip small in file size.
- Submit the single zip file to the OLE submission page; your zip file should contain the two items: (1) Gradle Web Application, (2) Submission Form, and (3) Demo Video.

Assessment

- Your web application will be tested by the course instructors according to a procedure that can test all the functionality. Unreasonable UI and UX will lead to mark deductions.
- The web application will be built and deployed to a server computer, and other computers will be used as clients for testing the functionality. It is expected that all clients can access the web application when the web application is deployed alive.
- Note that you should **fill in your database with enough initial data** such that the functionality in your web application can be tested properly or understood more easily. For example, your database should already have some teacher and student accounts.