The Hong Kong Polytechnic University
School of Professional Education and Executive Development

SEHS4517 Web Application Development and Management
Semester 1, 2025-2026

<u>Project and Presentation</u> <mark>(Updated)</mark>

Group Project (30% of the assessment of this subject)

This group project aims:

- To conduct **research** on relevant reference materials or sources.
- To design an interactive web application using relevant web systems and technologies.
- To manage your group assignment <u>efficiently</u> and <u>effectively</u> in **teamwork** within the given schedule.

Project Instructions:

1) Students have to form their own group with **4 to 6 members**, who come from the **same lecture class (e.g., 101, 102 or 103)**.
2) Choose one member in your group to be the group leader.
3) Fill in the **group registration form**.
4) The group leader uploads the **completed group registration form** to Blackboard by **10PM, 27 September 2025 (Saturday)**.
5) If your name is not in the group registration form, the lecturer will form a group for you and choose the group leader for your group.
6) All members in a group should exchange their contact information (e.g., phone number and email address) with each other for communication and collaboration.

Project Specification:

- Design and develop a reservation system for a facility of an organization (e.g., a room in a hotel, a music hall in a community hall, a classroom in a school, a seat in a cinema, a theatre for performing arts, a storeroom in a warehouse, a container of a cargo ship, a car of a car rental company, a fitness equipment in a fitness center, …)
- Develop 5 web pages with your own design as follows:
  - The first web page is an "introduction" web page which introduces your organization (e.g., hotel, community hall, school, cinema, theatre, warehouse, shipping company, car rental company, fitness center, …). The number of words for this introduction should **NOT** exceed 600 words. This web page contains a logo of your organization created by you and hyperlinks/buttons to connect to the second or third web page.
  - The second web page is a "member registration" page which requires the user to enter the last name, first name, mailing address, contact phone number, email address and

password. This page contains a button labelled with "Register" for the user to press and send the user input to a PHP program which is used to store the user input in a table in MySQL database. This page also contains a button labelled with "Clear" which is used to clear the user input and allow the user to re-enter the particulars. This second web page contains hyperlinks/buttons to connect to the first or third web page.

- The third web page is a "login to reserve" page which requires the user to enter the email address and password which are then sent to a PHP program that checks with MySQL database if the email address and password are correct. If they are incorrect, the PHP program generates a web page showing the "sorry, login failed" message created by you with a button for the user to press and go back to the first web page. If the email address and password are correct, the PHP program generates the fourth web page.

- The fourth web page is a "reservation" web page which asks the user to enter the date and time slot for reserving a facility. Then, this page shows the facility items available for the user to reserve according to the user-entered date and time. Then, the user can choose a particular item (e.g., a particular hotel room, music hall, classroom, seat(s) in cinema, theatre, storeroom, container, car, fitness equipment, …) and press a button labelled with "Reserve". After that, the user-entered date and time and the chosen facility item are sent to a PHP program which stores the reservation information in a table in MySQL database and sends the user's email address and the reservation information to a Node.js server program using Express.js. This Express.js program generates the fifth web page. Or, the user presses a button labelled with "Clear" which is used to clear the user input and the user can enter the date and time for reservation again. Or, the user presses a button labelled with "Cancel" which links to the first web page.

- The fifth web page just shows "thank you" message, the user's email address and the reservation information. This is a button labelled with "OK" on this page for the user to press and go back to the first web page.

Project Implementation:
- Install Apache, Node.js, and Express.js.
- Use HTML5 that follows XHTML syntax rules, JavaScript, jQuery to develop client-side web pages.
- Use PHP and Node.js with Express.js to develop server-side programs.
- Test your web pages and programs with Apache server and Node.js server.

Project Submission:
1. Put the source codes (e.g., codes at **.html**, **.js** and **.php** files) and the MySQL statement(s) used (e.g., Create Table statement) into a Microsoft Word document. The Microsoft Word document should also contain this subject code (i.e., SEHS4517), this subject name (i.e., Web Application Development and Management), submission date, all members' full names and

student ID numbers on the top of the first page.

2.   Put the .html, .js, .php files and the Microsoft Word document into a folder.

3.   Make a zip file of the folder containing all your work:
   o   Click on the folder and go **outside** of the folder where your work is saved.
   o   Right-click on the folder that contains all your work, then, depending on your computer, do EITHER of the following:
      ▫   Select **7-Zip** then select the second-last option **Add to "project.zip"** (assuming that you are in a folder called **project**)
      ▫   Select **Send-to** and then **Compressed (zipped) folder**
   o   A new **.zip** file should be created.
   o   Note: **7-zip** is a freeware downloadable through Internet.

4.   Right-click on this **.zip** file, then select **Rename**, then change the name to be the group number (to be provided by the lecturer) and the group leader name. If the group number is **3** and the group leader name is **Chan Tai Man**, then the filename should be **3_ChanTaiMan.zip**.

5.   The group leader submits the **.zip** file to Blackboard by **10PM, 29 November 2025 (Saturday)**.

6.   Note: **NO** videos and **NO** audios are allowed in this project submission.

While submitting the softcopy via Blackboard, a timestamp will be placed on the softcopy of your assignment. There is a sharp cut-off time at Blackboard, so late submission will be recorded at Blackboard. Softcopy submitted via email or other means will **NOT** be accepted unless Blackboard is not available. As many students will submit their assignments to Blackboard at around the deadline time, it normally takes longer for uploading your assignment, so it is strongly suggested that you start submitting earlier, say at least 45 minutes before the deadline. Marks will be deducted for late submission. Successful submission of this assignment includes the submission of all the items specified in this section.

Peer Evaluation:

Upon completion of the assignment, **each** student will have to fill in a peer evaluation form (to be downloaded from Blackboard) on self-evaluation and performance of the members in the same group and send the completed form to the lecturer via the Blackboard's Assignment Submission System. In case the Blackboard's Assignment Submission System is not available, send the completed peer evaluation form to the lecturer via e-mail. 25% of marks will be deducted for NOT submitting the completed peer evaluation form.

Peer Evaluation Submission:

•   Each student fills in the **peer evaluation form**.

•   Each student uploads the **completed peer evaluation form** to Blackboard by **10PM, 29 November 2025 (Saturday)**.

Project Marking Scheme:

Correctness • Accurate functionality, including validation and realistic details • HTML5, PHP, JavaScript, jQuery, Node.js, Express.js and SQL used properly • Specification (above) is followed	50 marks
Readability * • See details below	20 marks
Design • Website looks good and neat (more marks for professional looking website with intuitive and user-friendly interface)	30 marks
Total	**100 marks**

* Readability

- Commenting is expected for JavaScript and PHP codes as well as complex or potentially ambiguous code in HTML5.
- Marks are awarded for using good coding style, including, but not limited to:
  - Following standard coding conventions, including XHTML and HTML5
  - Proper indentation
  - Simplicity and clarity
  - Avoiding code repetition

- Marks will be deducted for unnecessary code:
  - Writing extra code that makes the code easier to understand is considered unnecessary.
- Extremely bad coding style or grossly unnecessary complexity may also result in loss of marks.
- If you copy code or comments from your notes or lectures, and do not meet the specification, marks may also be deducted.
- Full marks will only be awarded for good coding style with no ambiguity.

The content of the web page will be marked. The design of the web page using the knowledge you have learned in this subject will also be marked, Use of graphics, background, table and highlighting effect will be marked but **DO NOT** include any video or audio effect to the web pages. Use of hyperlinks to provide a convenient way to navigate around different sections in the web page will be marked.

Plagiarism will be penalized severely. Marks will be deducted for assignments that are plagiarized in whole or in part, regardless of the sources. Mark deduction items include spelling mistakes, poor writing style, copy and paste directly from the web resources or any other resources. **Late submission** is liable to a **penalty of 5%** of the available marks for **each day late**; Saturdays, Sundays and holidays are counted.

Individual Presentation (20% of the assessment of this subject)

This individual presentation aims:
- To demonstrate effectively and attractively your web page and web server program design.
- To explain clearly and concisely the program logic of your web application.

Presentation Instructions:
1) Each student makes a 2-minute video in mp4 format. In the video, you present your work orally in English. The presentation should cover the following:
   - Introduce yourself (just your full name).
   - Demonstrate the important operations and features developed by you.
   - Explain the important program logic developed by you.

Presentation Submission:
- Name the video file to be your group number appended with your name and your student ID number. If your group number is **3**, your name is **Chan Tai Man** and your student ID number **24012345S**, then the filename is **3_ChanTaiMan_24012345S.mp4**.
- Each student submits the **.mp4** file to Blackboard by **10PM, 29 November 2025 (Saturday)**.

Presentation Marking Scheme:

Demonstration	
• Content, Presentation Skills, Time Management	50 marks
Explanation	
• Clarity and Logic	50 marks
Total	**100 marks**

Late submission is liable to a **penalty of 5%** of the available marks for **each day late**; Saturdays, Sundays and holidays are counted.

END