DT211C BSc. (Honours) Degree in Computer Science (Infrastructure)
DT282 BSc. (Honours) Degree in Computer Science (International)

WEB DEVELOPMENT & DEPLOYMENT [CMPU3047]

Group Project

Published date: Tuesday 2 October 2018
Due Date: Sunday 25 of November 2018, 23:59

For this assignment you are required to:

1. Team up with another student within your lab group and self-enrol with your pairing by **Monday 9 October 2018** using the Group Project Student Pairings Sign Up Sheet in webcourses;
2. Set up a private Git repository[1] and add your lecturer and lab instructor as collaborators (tanyathompsonDIT, ckdit and/or Cindyliu); and
3. Develop a web application that interacts with a MySQL database via PHP and includes an authentication mechanism. The application has to implement the 4 CRUD operations (Create/Read/Update/Delete).

Software Specification

You are free to choose the exact application, ensuring that it includes the required components as outlined in the **Marking Scheme** below.

An example is a book library application, with a pre-populated DB, that allows users to:

1. Register: create, read, update or delete a profile with personal information, including a profile picture and password management (change, recovery);
2. Log in and log out;
3. Search for books that match certain criteria (e.g. publication year, title or author containing a word), any user can search for books and see the results;
4. See the details of search results;
5. Filter the search results; and
6. Add books to a personal area (e.g. "My Books"), with this capability restricted to only logged in users.

Deliverables

Source code, Design Document, and Demo.

Implementation

The assignment must be implemented using HTML, CSS, Javascript, MySQL and PHP, with only web development frameworks covered within the module (e.g., jQuery and Bootstrap).

[1] Get free private repos on https://education.github.com/pack.

Submission Guidelines

1. You must provide a Project Reference Document stipulating your configuration and deployment information.

   The Project Reference Document should not exceed 1 page, and must include the following:
   1. The name and student number of each group member;
   2. The GIT repository name used for the project;
   3. The module title, i.e., Web Development and Deployment;
   4. The assignment title, i.e., Group Project;
   5. The assignment publication date, i.e., 1 October 2018;
   6. The assignment due date, e.g., 25 November 2018;
   7. The following declaration: "We declare that this work, which is submitted as part of our coursework, is entirely our own, except where clearly and explicitly stated."; and
   8. A clear statement of how to configure and deploy the web application.

   If your Project Reference Document does not include all these details, it will not be marked, and you may be considered as having failed to submit the assessment.

2. Each student should also provide a Student Reference Document outlining their contributions to the project and their understanding of the web application as a whole.

   The Student Reference Document should not exceed 2 pages, and must include the following:
   1. The name and student number of the relevant student;
   2. The module title, i.e., Web Development and Deployment;
   3. The assignment title, i.e.. Group Project;
   4. The assignment publication date, i.e., 1 October 2018;
   5. The assignment due date, e.g., 25 November 2018;
   6. The following declaration: "I hereby declare that the information provided herein was completed by me, and is true to the best of my knowledge."; and
   7. A clear statement of how the student contributed to the project and how the web application works.

3. All the code (e.g., .html, .php, .css, and .js files) and documentation must be submitted using webcourses – in a compressed ZIP folder. The zip file should include the XAMPP deployment folder and all relevant files, an SQL dump of the database, and a readme.txt file with the configuration and deployment information.

4. Students are not allowed to share their own code outside their group. Any external code snippets, libraries or frameworks used must be properly acknowledged (e.g., with comments in the code). Remember the policy on plagiarism – facilitators and perpetrators, both get zero.

Assessment Criteria

1. Failure to provide the code and the Project Reference Document, or to demo will result in 0 marks.

2. Students will be penalised an absolute value of 5 marks for every day that a submission is late.

3. The application must be demoed. The demos will be scheduled between **26 November** and **4 December**.

4. **Marking Scheme**
    1. This assignment is worth 85% of the overall module mark.

    2. Each project will be assessed using the criteria set out below to determine the **Group Grade**.

    3. Each assessment criteria will be rated using the following levels of achievement:
        i. **Unacceptable**: worth 0 - 20% of the assessment criterion marks;
        ii. **Needs Improvement**: worth 21 - 40% the assessment criterion marks;
        iii. **Acceptable**: worth 41 - 60% of the assessment criterion marks; and
        iv. **Proficient**: worth 71 - 80% of the assessment criterion marks; and
        v. **Advanced**: worth 81 - 100% of the assessment criterion marks.

Assessment Category	Assessment Criteria	Marks
Functionality	Authentication and Personal vs Public areas	10
	CRUD operations with MySQL including profile management	10
	Advanced Search and Filter mechanism	5
	Form Validation	5
	File Upload Mechanisms	5
	Asynchronous Communication (AJAX, with DB, JSON or XML file)	5
Usability/User Experience	Communication with Users (error messages, etc.)	5
	jQuery (for animations)	5
	Bootstrap (for visuals)	5
	Page Layout and Content	5
Code Quality/Security	MVC Design Pattern	5
	DRY Principle	5
	Prepared Statements (to avoid SQL injection)	5
	General Coding (e.g., error handling, comments)	5
Group Documentation	Project information with Configuration and Deployment instructions (readme.txt or readme.docx)	5

5. During the demos, each student will be asked to discuss their contributions to the project and their understanding of the web application as a whole. This discussion and the Student Reference Document provided by each student as part of the submission will form the basis for the **Student Discussion Mark** assigned to each student. Thereafter, an **Individual Grade** will be calculated for each student.

   Each student's **Individual Grade** will be determined by multiplying the **Student Discussion Mark** (i.e., the mark given to the student for their individual discussion of the project during the demos) with the **Group Grade** (i.e., the overall project mark assigned to the group.

   For example:

   Student A and B Group Grade = 50 marks (of the 85 available)

   Student A Discussion Mark = 80%
   Student A Individual Grade = 50 * 80% = 40 marks

   Student B Discussion Mark = 100%
   Student A Individual Grade = 50 * 100% = 50 marks

   Failure to provide a Student Reference Document or to appear for a demo will result in the relevant student being allocated 0 marks. Students will also be penalised an absolute value of 5 marks for every day that a Student Reference Documentation is late.

Please contact the lecturer in case any aspect of this assignment is not clear to you. Have fun!