On completion of the assignment you should be able to demonstrate the following learning outcomes:

CLO2: Construct an effective and interactive web application by using the scripting languages. (C3, PLO2).

CLO3: Demonstrate an understanding of the process of using web connections to gather and process information in a secure and compatible way. (A3, PLO5)

No.	Course Learning Outcomes	Assessment
1	Explain the principles and technologies of the Internet and World Wide Web. (C2, PLO1)	Final Exam
2	Construct an effective and interactive web application by using the scripting languages. (C3, PLO2)	Essay
3	Demonstrate an understanding of the process of using web connections to gather and process information in a secure and compatible way. (A3, PLO5)	Presentation

Project Scenario:

APU Solution Sdn. Bhd. is a company which specializes in web development. As one of the web development team in the company, your team has been requested by your manager to show the skills at designing and implementing a web application.

The topic of the web application site can be one of the following but not limited to these:

- Online Travel Web Portal
- Bus Ticket Reservation System
- Interactive Learning System

- Online Pet Store
- Employee Management System
- Library E-Book Management System

Rules of Project

- *Maximum of 3 students* in a group.
- The exact topic must be agreed with the lecturer before commencing.

Minimum requirements of the system:

- **Group of Two Members** :
  Minimum 2 user roles should be included in the system.
- **Group of Three Members** :
  Minimum 3 user roles should be included in the system.
- **Inclusion expected in the system:**
  1. **HTML and Cascading Style Sheet (CSS)**
     - Bootstrap templates are allowed to use. However, modification on the templates should be done and evident.
  2. Use **appropriate graphics** in the system.
  3. Create adequate **JavaScript** by own.
  4. Create dynamic web pages **using PHP**
  5. Pages should be working with Database technology (**using MySQL**)
     - Perform create, read, update and delete together with login (and sign up) functionality to access the pages
  6. Form Validation and User Authentication.

Step by step guidelines to complete the Project:

To ensure all the requirements and components are completed at the end of this module, students are suggested to follow the stages as listed below:

Stage	Activities
One	▪ Form a group. ▪ Identify the topic and concepts of the website. ▪ Construct a wireframe and navigational structure for your team website. Your team should start thinking about the look and feel of the pages at this stage. – *Investigate some other websites for ideas on structure, colors and information layout.* ▪ Construct the database related diagrams. – *Identify the data that need to be stored in the database.*
Two	▪ Develop the website based on the wireframe that has been done in Stage One. ▪ Provide the initial stages of a login facility – *With username and password text fields.* – *Connect the login form to a simple debug PHP script that just provides feedback, so your team members can check whether the form does what they expect.* – *Your system are not expected to connect to a database at this stage.*
Three	▪ Complete a basic Login page and allow a user named **_test_** with the password **_pass_** to log into your system site. ▪ Read the data from the database and show it in a form that your team would expect, depends on the topic that has been selected. ▪ This means that your team members will need to be able to: – *Write code to step through database tables. E.g. read data* – *Write the data out in a simple HTML table for viewing.*
Four	▪ Upgrade the login capabilities from stages one and two to include session-based security. ▪ Use the database to check usernames and passwords. ▪ Get your system initial screens working (including the Register new user page) and linked together. ▪ The login and registration pages must be fully working but do not have to have finalized user interfaces (artwork, color schemes, layout).
Five	▪ Complete the application. Ensure that all of the elements. ▪ Get your short report finished and checked.

Assessment Components and Criteria

1. **Part 1: Report (35%) – [CLO2 – PLO2]**

    ● Write a report (*approximately 3500 words*) which includes the following:

      1. Cover Page and Table of Contents (inclusive of actual page numbers)
      2. Gantt chart (project plan)
      3. Introduction and objectives of the project
         – An introduction of your topic including a reflection on the web site that your team have built stating how it has met the objectives set out.
         – Justification of your style design choice and targeted audience.
      4. System design
         – Produce *wireframes, navigational structure, flowchart / activity diagram, and Entity Relationship diagrams (ERD)*.
         – *Give explanation for each of the above diagrams except navigational diagram and ERD.*
      5. Implementation (scripting, database connectivity, etc.)
         – Each of the group members should include code snippets for below operations:
             1. Create - HTML Form, PHP
             2. Read - HTML Form, PHP
             3. Update - HTML Form, PHP
             4. Delete - HTML Form, PHP
             5. Login - HTML Form, PHP
             6. Signup – HTML Form, PHP
             7. Self-created CSS and JavaScript
         – Attach an appropriate explanation for each of the CRUD and login operations.
      6. Main section (user guidance & sample screens)
      7. References (in Harvard Format) – Refer to http://library.apiit.edu.my/harvard-reference-style.html for more details.

                                                                (Total: 100 Marks)

2. Part 2: Presentation (25%) – [CLO3 – PLO5[

- *30 - 45 minutes* presentation time will be given to each group of students.

- *System Demonstration: Q&A and Evaluation*
  - ❖ **Appropriate graphics**
  - ❖ Good usage of **Cascading Style Sheet (CSS)** and **JavaScript**
  - ❖ Dynamic web pages (**using PHP**)
  - ❖ Working with Database technology (**using MySQL**)
  - ❖ Form Validation and User Authentication

(Total: 100 Marks)

Remarks:

The soft copy of the project should include *ALL* the source (*HTML, PHP, JavaScript and CSS*), database and media files (*images, video, and audio*) used in the production the project. Database with all related table and existing data must be exported into **.sql file format*.

Code Reuse

You may use the code you find from research in your assignment. However, you must reference this code whenever you use it. Code taken from the work of other students is plagiarism, as is working together to produce code – this is not group work. Your code will be checked using specialist checking software, any instances of plagiarism will be taken very seriously.

Plagiarism is a serious offence and will be dealt with APU's regulations on plagiarism.

Good Luck!

Grading Criteria

Marking Key		Equivalent Marks
A+	**Distinction** Superior achievement in assignment, outstanding quality; complete in every way	**80 - 100**
A	**Distinction** Very high achievement in all objectives, excellent quality assignment.	**75 - 79**
B+	**Credit** Very good/High achievement in most objectives, high quality assignment.	**70 - 74**
B	**Credit** Good/High achievement in most objectives, shows some of the qualities but lacks, comprehensiveness nevertheless quality assignment.	**65 - 69**
C+/C/C-	**Pass** Satisfactory/competent achievement in most objectives, all essential points covered plus some of the minor ones.	**50 - 64**
D/F+/F/F-	**Marginal Fail / Fail** Unsatisfactory, Improvement essential/poor achievement; poor quality assignment, some essential objectives not covered.	**Below 49**