MCAST

ASSESSMENT AND INTERNAL VERIFICATION FRONT SHEET (Individual Criteria)

(Note: This version is to be used for an assignment brief issued to students via Classter)

Course Title	**Bachelor of Arts (Honours) in Interactive Digital Media**		**Lecturer Name & Surname**	**Matthew Cumbo**	
Unit Number & Title	**CASFT-506-2206 | PHP & Databases**				
Assignment Number, Title / Type	**System #2**				
Date Set	17/06/2025	**Deadline Date**	**31/07/2025**		
Student Name		**ID Number**		**Class / Group**	

Assessment Criteria	Maximum Mark
KU1 Construct basic web pages using HTML, CSS, and JS for use in a PHP project.	10
KU2 Indicate the requirements of a dynamic website using Sitemaps, UML Data Models, and IPO Charts.	10
KU3 Describe own use of programming practices in PHP and MySQL in a technical document.	10
AA1 Use basic programming practices to display content dynamically using variables, conditions, and loops.	10
AA2 Use Session Management, Cookies, and HTTP Requests and Responses to personalize website content.	10
AA3 Devise an appropriate database structure using correct data types and attributes.	10
AA4 Use PHP functions and SQL operations to create, read, update, and delete records from a database.	10
SE1 Assemble web pages from defined templates using appropriate PHP rendering techniques.	10
SE2 Manage table relationships in a n SQL database using appropriate SQL operations.	10
SE3 Design a testing strategy to ensure project functionality and completeness.	10
Total Mark	100

Notes to Students:

- This assignment brief has been approved and released by the Internal Verifier through Classter.
- Assessment marks and feedback by the lecturer will be available online via Classter (http://mcast.classter.com) following release by the Internal Verifier
- Students submitting their assignment on Moodle/Turnitin will be requested to confirm online the following statements:

Student's declaration prior to handing-in of assignment

- ❖ I certify that the work submitted for this assignment is my own and that I have read and understood the respective Plagiarism Policy

Student's declaration on assessment special arrangements

- ❖ I certify that adequate support was given to me during the assignment through the Institute and/or the Inclusive Education Unit.
- ❖ I declare that I refused the special support offered by the Institute.

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Purpose and Aims

The purpose of this Unit is to teach learners the fundamental theory behind server-side web development and consolidate knowledge by employing a hands-on approach to integrating a Server-Side programming language (PHP) with a Database using Structured Query Language (SQL). This Unit draws on the practice covered in previous units and builds on the knowledge and skills gained in implementing web design.

Scenario

Using backend Programming Languages like PHP in conjunction with Databases to hold all our data, we can develop complex web applications or websites with highly developed functionalities. This unit will push you towards building a fully-fledged web application, including saving, reading and updating data on a database through the UI designed for the user to interact with.

For this assignment, you will be proposing the design and features of **Student Information System**, as well as building a working prototype, along with performing testing on your project. You need to create a database to hold all your data, a PHP project to interact with this data, and use HTML and CSS for the layout and design of your web application.

This system should allow admins to create new teacher and student accounts. They should also be able to create classes, add students to the classes, and assign classes to teachers. Teachers should be able to create assignments, including linking a document to these assignments, and link these assignments to classes. Students in those classes should be able to see the assignment document, and submit their own document as their assignment submission. The teacher who assigned this assignment should then be able to give the student a mark out of 100. If the student gets at least 50 marks, they should see that they passed, otherwise, they should see that they failed.

All the work for all tasks in this assignment will be submitted through a **new GitHub repository** (NOT the same one as your original submission). **Anything that is submitted by any other means will not be accepted.** If work is not submitted in a single repository, only the initial repository (including Task 1) will be accepted.

NB: You are **encouraged and EXPECTED** to back up your work regularly using GitHub.

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Task 1

For your first task, you are to establish your planning for your web application. It is extremely important that this work is done to a high level of detail to have some solid groundwork for the next tasks.

Before starting any code-related work, you are to generate a **Planning Document**. This document should include the following:

- A description of the web application to be created and who its Target Audience is
- A Sitemap, showing the Navigational Structure of the web application
    - Remember that this should include all unique pages in your application
- An ERD showing the database structure, including data types, relationships, etc
    - Your database must include at least 10 tables

Your application should eventually, at minimum, include 5 major elements, for which you must implement the CRUD operations for. For example, Accounts, Classes, etc. This does not mean that these 5 elements are the only things to be implemented. Make sure they are supplemented with other functionality to make your project a high quality Student Information System.

Submission: Planning Document in PDF format hosted in a GitHub repository

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Task 2

For this Task, you are to build your web application based on the planning outlined in your Planning Document. Your project is to be hosted on GitHub for backup and version control purposes. Comments need to be added throughout your code, explaining what is being done.

Part 1

Following the ERD created for Task 1, set up a database which is to include the correct implementations for the following:

- Tables
- Fields
- Data Types
- Constraints
- Relationships

Part 2

Create a PHP project that will serve as the backbone of your Student Information System. For this part of the project, make sure to:

- Connect to the database using the correct PHP functions
- Execute SQL CRUD Operations from within your PHP files
    - All 4 elements of CRUD need to be implemented for at least 5 tables
- Use basic PHP syntax to render your pages
    - Make sure to make proper use of Variables, Loops, Conditions, etc.
- Use Session Management to implement a Login/Logout function
- Use PHP Templating system to render web pages
    - These templates need to contain valid HTML
- Make sure your project is properly structured and that proper naming conventions are adhered to

N.B. You are required to back up your work using GitHub. It is recommended that you use branches to define new functionalities and merge them into the main branch when they are done. When pushing Commits to your repository, make sure to add a proper description to explain the work done in that Commit. Also, make sure to include a README.md file documenting your project. Keep in mind that the ReadMe file is there to aid any other developers that might join you on this project.

Submission: Project Files and Database Export added to Task 1 GitHub repository

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Task 3

For your final Task, you are to write up a **Technical Document** which will represent your experience in developing your web application.

Without using any screenshots of your code, make sure to:

- Explain how your database was set up.
- Explain techniques used to manipulate data in your database through your web application.
- Explain how a virtual server was set up locally on your device to mimic a live server.
- Explain techniques used to build a dynamic web application.
    - Include a table of Test Cases, making sure to cover every element that interacts with the database in some way or other
    - Your Test Cases must include:
        - Test Action
        - Expected Output
        - Actual Output
        - Pass/Fail
        - Notes

Submission: Technical Document PDF added to Task 1 GitHub repository

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Minimum Evidence List

1	**T1:** Planning Document PDF via GitHub	☐
2	**T2:** Project files via GitHub	☐
3	**T2:** Datbase export via GitHub	☐
4	**T3:** Test Report PDF via GitHub	☐

Print this page and hand in with your assignment on final hand in date.

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