**Web Application Development (COM336) Assignment 2:**

**Team Assignment:** Creation of a database driven e-commerce website

**Total Available Marks: 25% of overall course mark for the module**

The second item of coursework will consist of the design and implementation of a database driven e-commerce website using PHP and MySQL. Security concerns and authentication procedures should be evident as should knowledge of practicalities of site deployment to a cloud-based platform (AWS). The site produced should meet current professional standards of functionality, reliability and presentation. This is a team assignment (typically 5-6 students). Feedback is provided electronically within 3 weeks of the assignment submission on Blackboard. Submission details, marking scheme and hand back date are as follows;

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Assignment | Type | Weighting | Week | Hand Out | Week | Due Date | Time | Submission |
| 2 | Team | 25% | 1 | 30/1/23 | 12 | 7/5/23 | 23:59 | Blackboard |

There will be regular project progress meetings held during the practical sessions with individual teams starting formally in week 5. All team members are expected to be present for these meeting and to provide an update on overall progress, individual contributions, team milestones, challenges and achievements. The schedule for team meetings is to be confirmed. Groups will be selected in week 2.

**Assignment details**

* You are required to develop an e-commerce website using PHP and MySQL. As a team you must select and agree on one of the topics/store types provided below.
* It is recommended you use a GitHub repository to manage and collaborate between the team members on the project code base.
* As part of the final submission process, you are required to submit a zipped folder in the required format containing all website folders/files, including the MySQL database and the “.sql” file which contains the SQL code used to create and populate your database. The ‘.sql’ file MUST contain the SQL-DDL queries used to create, link and populate the MySQL tables.
* In addition, you must include in the root of your submission a Word document (help document) with a description of the key files that make up your site, the required usernames and passwords and location of the MySQL database files.
* You **MUST** use **Trello** and **Slack** to record group communication and task planning, allocation and completion throughout the assignment. A document containing snap/screen shots of group activity from Slack/Trello over the complete project duration, clearly showing individual student contributions should be included.
* As well as running locally, the final e-commerce site should be hosted on an external AWS site you setup on AWS educate. The web address/URL (with admin login) of the site should be included as part of the submission as a separate file.
* This part of the submission should be zipped using the following naming convention, COM336\_assignment2\_2023\_TeamX (where X is replaced by your individual team number) and uploaded to the Blackboard Learn in the COM336 Assignment Upload area by the deadline specified above.
* In addition to this, you are required to create two short videos (no more than 10 minutes each) which must be uploaded to Blackboard using Panopto (or other recording software) by the specified deadline. Each video should have a voiceover, annotations where necessary, a start/finish screen/slide with group details and be of good quality in terms of audio and video. Video 1 should discuss/show the site development/implementation process. Video 2 should be a walkthrough of the functionality of the completed site and include demonstrations of elements 1-9 of the marking scheme below. Features/functionality can be demonstrated locally (localhost) but ideally should be working on the AWS site.
* As part of the final assignment submission, you are required to put the completed project (with related readme file and documentation etc) on each of your individual personal GitHub accounts as part of your portfolio for placement/employability. A document should be included with a web link for each project member on their individual personal GitHub account along with a screenshot of each individual project.
* Finally, you must submit an individual component to serve as a peer review of team members’ contribution to the group assignment. This will determine an individual student mark as determined by the team.

No extension to the deadline will be granted unless there are extenuating circumstances, in which case you MUST submit an EC1 form to your course director. The module co-ordinator must be informed before the assignment submission deadline. Plagiarism will be dealt with according to the university policy.

**Submission Details**

Assignment should be submitted online using Blackboard and Panopto in required format. The following folder layout, files and naming conventions are required for Blackboard.

Graphical user interface, text, application

Description automatically generated Logo

Description automatically generated

COM336\_assignment2\_2023\_ GroupX.zip

## Deliverables

* Fully functional dynamic e-commerce website developed using PHP and MySQL
* Website files/folders and scripts with sql file
* Help document
* Document with selection of Slack and Trello screenshots
* Document with GitHub links and screenshots for each team member
* File with externally hosted website AWS URL (including username(s)/password)
* 2 x annotated videos (development and functionality) with voice overs (Panopto)
* Peer review assessment (signed agreed level of contribution)

**E-commerce website topics**

* Topic 1: e-commerce enabled bookstore site

Design an e-commerce site that sells Books from a single author. The site should be supported by a database that contains (at a minimum) information about the customers, stock, reviews of the books, and on-line ordering system. A password control system should be implemented to enable the database administrator to manipulate the database.

* Topic 2: e-commerce enabled car dealership site

Design an e-commerce site for a car dealership that works with a single car maker. The site should be supported by a database that contains (at a minimum) information about customers, stock, reviews of the different car models, and on-line ordering system. A password control system should be implemented to enable the database administrator to manipulate the database.

* Topic 3: e-commerce enabled clothes site

Design an e-commerce site for a shop that deals in clothes. The site should be supported by a database that contains (at a minimum) information about the customers, stock, reviews and appraisals of the clothes, and on-line ordering system. A password control system should be implemented to enable the database administrator to manipulate the database.

**Assignment 2 Marking Scheme and Rubric**

|  |  |  |  |
| --- | --- | --- | --- |
| **Team number** | |  | |
| **Total 100%** | | **Possible** | **Actual** |
| 1 | MySQL Database with multiple linked tables. Password provided, SQL code for creating DB provided and runs with no errors, Customer Table, Stock Table, Review/Appraisals, Ordering | 20 |  |
| 2 | Functionality of the website. All pages linked, forms used appropriately, data validation | 10 |  |
| 3 | Password control system implemented. Login and logout using session or cookies | 10 |  |
| 4 | Able to Add/Delete/Search Customers. Including full customer manipulation from Admin | 10 |  |
| 5 | Able to make a purchase. Purchase stored on the database | 5 |  |
| 6 | Able to add/display a review | 5 |  |
| 7 | Automatic stock update on ordering | 5 |  |
| 8 | General website presentation and aesthetics | 5 |  |
| 9 | Deployment of working site on external AWS hosting with URL | 5 |  |
| 10 | Help file with description of files, site passwords | 5 |  |
| 11 | Effective use of Trello/Slack for project development and management | 5 |  |
| 12 | Site development video walkthrough with annotation and voiceover | 10 |  |
| 13 | Site functionality video walkthrough with annotation and voiceover | 5 |  |
| **Comments** | | | |
| **Total** | | 100 |  |

**Assignment 2 Marking Rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Criteria | Level 0 (0%) | Level 1 (20%) | Level 2 (40%) | Level 3 (60%) | Level 4 (80%) | Level 5 (100%) |
|  | | | | | | |
| 1. MySQL Database |  |  |  |  |  |  |
| Multiple linked tables.  Password provided, SQL code for creating DB provided and runs with no errors, Customer Table, Stock Table, Review or Appraisals, Ordering | No database | Major elements missing. High level of error/ omissions. Tables content not suitably detailed with required elements. Not fully linked or complete. | Some required elements present. Table contents within minimum specification with main required elements partially linked. Minor errors. Some SQL code provided. | Majority of required elements present. Table contents have main elements and linked. No errors. Main SQL code provided. | All required elements present and linked with minor omissions. Detailed SQL code provided. | The database with the required linked tables is complete. It has been successfully tested and is currently bug free. All required elements are present, it runs. |
| 2. Website functionality |  |  |  |  |  |  |
| All pages linked, Forms used appropriately, data validated. | No site | The site has significant glitches, it cannot run fully. Majority of elements and pages are omitted or not linked. No data validation. | The site has some glitches. Majority of elements and pages are present and linked. Little data validation. | The site has minor glitches, Majority of elements and pages are present, and it is largely stable. Some data validation. | The site is marred by minor glitches and bugs, but these  are rare, and do not impact negatively on performance or stability. | All pages are linked, Forms used appropriately. Data is validated. |
| 3. Password control |  |  |  |  |  |  |
| Password control system implemented | No password control system implemented. | Significant glitches or elements missing but some attempt made. | Minor glitches or some elements missing. Evidence of attempted use of session and cookies. | Most elements present. Some use of session and cookies. Login or login functionality present. | All main elements present. Login and logout functionality present and functional. Minor omissions. | Full password control system implemented.  Login and logout using session or cookies |
| 4. Customers admin |  |  |  |  |  |  |
| Ability to Add, Delete and Search Customers Including full customer manipulation from Admin account | No customer management system implemented. | Significant glitches or elements missing but some attempt made. Limited administrator functionality. | Minor glitches or some elements missing. Some functionality present e.g. Add or Delete or Search customers. | Most elements present. All functionality present i.e. Add, Delete and Search customers. | All main elements present. High level of admin functionality. Minor omissions. | Fully functional. Able to Add, Delete and Search Customers with Full customer manipulation from Admin |

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| --- | --- | --- | --- | --- | --- | --- |
| Criteria | Level 0 (0%) | Level 1 (20%) | Level 2 (40%) | Level 3 (60%) | Level 4 (80%) | Level 5 (100%) |
|  | | | | | | |
| 5. Purchase functionality |  |  |  |  |  |  |
| Ability to purchase items and store/retrieve from the database | No purchasing functionality implemented. | Significant glitches or elements missing but some attempt made at implementation. | Minor glitches or some elements missing. Some elements of purchasing functionality working. | Most elements present.  Main elements of purchasing functionality working. | All main elements present. High level of functionality. Minor omissions or bugs. | Fully functional. Ability to purchase items and store, retrieve from the database |
| 6. Reviews |  |  |  |  |  |  |
| Able to add/display a review | No review functionality implemented. | Significant glitches or elements missing but some attempt made at reviews functionality implementation. | Minor glitches or some elements missing. Some elements of reviews functionality working. | Most elements present.  Main elements of reviews functionality working. | All main elements present. High level of functionality. Minor omissions or bugs. | Fully functional. Ability to add, sort and retrieve reviews. |
| 7. Stock updating |  |  |  |  |  |  |
| Automatic stock update on ordering | No stock updating functionality implemented. | Significant glitches or elements missing but some attempt made at stock updating implementation. | Minor glitches or some elements missing. Some elements of stock updating functionality working. | Most elements present.  Main elements of stock updating functionality working. | All main elements present. High level of functionality. Minor omissions or bugs. | Fully functional. Ability to automatically update stock on ordering. |
| 8.Presentation  /aesthetics |  |  |  |  |  |  |
| How is the site presented and how does it look aesthetically? | No site | The site does not use an identifiable, consistent and  appealing presentation and aesthetic design. | The site has beginnings of consistent visual and aesthetic design, but is inconsistent and  unappealing in places. | The site uses a mostly consistent visual design which is  occasionally appealing.  Aesthetics are appropriate and add to the overall experience. | The site uses a consistent visual presentation and aesthetic feel throughout which is appealing and greatly enhances the overall experience. | The site presentation and aesthetics are consistent and demonstrate an understanding of the overall function and related experience. |
| 9. AWS Deployment |  |  |  |  |  |  |
| Deployment of working site on external AWS hosting (with URL) | No external site or evidence of use of AWS or evidence of attempts to setup and deploy. | Some attempt made at use of AWS or evidence of attempts to setup and deploy. | Some elements of  AWS deployment and setup attempted and some  functionality working. | Main elements AWS deployment and setup working. Majority of site working. | All main elements present. High level of site functionality. Minor omissions or bugs. | Site and full functionally accessible on external AWS hosting using external URL provided. |

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| Criteria | Level 0 (0%) | Level 1 (20%) | Level 2 (40%) | Level 3 (60%) | Level 4 (80%) | Level 5 (100%) |
|  | | | | | | |
| 10. Help file description of files |  |  |  |  |  |  |
| Detailed help file included to assist in installation, setup, configuration, FAQS and deployment of site. | No help file | Basic help file, poorly structured and presented with little meaningful content. No contents page or relevant supporting images | Some element(s) of structure and material aligned with project. Use of contents page with some relevant images. | Solid help file covering main site installation, setup, and configuration. Generally well structured and presented. | Detailed help file covering main site elements and files. Well structured, good use of supporting images | Comprehensive help file covering all elements of site installation, setup and configuration, with images, contents page and references |
| 11. Trello & Slack |  |  |  |  |  |  |
| Use of Trello and slack to track, manage and document development process | No use of Trello or Slack | Some use of either package. Irregular contributions of poor quality, contributions of little relevance with no interest or enthusiasm. | Regular use of one package. Regular and relevant contributions with some engagement and follow up. | Regular use of both packages. Regular and relevant contributions with high engagement and follow up | Regular and effective use of both packages and features. Regular and relevant contributions. High impact on project progress. | Comprehensive use of both packages and use of advanced features. Team working and leadership shown to meet deliverables. |
| 12. Video 1 development |  |  |  |  |  |  |
| Is the video created coherent, well planned and structured, professionally produced and of appropriate length. Covering necessary elements of development process in sufficient depth. | No video | Poorly organised video. Over required time. Poor quality visual aids with poor quality video. No introduction or end slide. No annotations or voice over. Material covered not relevant to brief with little or no focus on development process. | Acceptable structure and organisation. Over required time. Poor quality visual aids with poor quality video. No introduction or end slide. No voice over. Material covered has some relevance to development process. | Organized and coherent. Within time. Accepted quality visual aids and audio. Good level of enthusiasm shown.  Good discussion of  main steps in development process | Well organized and coherent. Within time. Accepted quality visual aids and good quality audio. High level of enthusiasm and some insights.  Detailed discussion of  stages and development process  . | Well organized and coherent. Within time. High quality visual aids and audio. High level of enthusiasm and critical insights.  Comprehensive discussion of  site development & related tasks with reflection on process.. |
| 13. Video 2 functionality |  |  |  |  |  |  |
| Is the video created coherent, well planned, and structured, professionally produced and of appropriate length. Covering necessary elements of functionality in sufficient depth. | No video | Poorly organised video. Poor quality visual aids with poor quality video. No introduction or end slide. No annotations or voice over. Material covered not relevant to brief with little or no focus on functionality. | Acceptable structure and organisation. Over required time. Poor quality visual aids with poor quality video. No introduction or end slide. No voice over. Material covered has some relevance to functionality. | Organized and coherent. Within time. Accepted quality visual aids and audio. Good level of enthusiasm shown.  Good discussion of  main functionality | Well organized and coherent. Within time. Accepted quality visual aids and good quality audio. High level of enthusiasm and some insights.  Detailed discussion of  main features & functionality | Well organized and coherent. Within time. High quality visual aids and audio. High level of enthusiasm and critical insights.  Comprehensive discussion of  main features & functionality  with reflection on process.. |

FACULTY OF

COMPUTING, ENGINEERING & BUILT ENVIRONMENT

**Assignment Cover Sheet**

Students are requested to complete **all** details **prior** to submission.

**Module:** COM336

**Assignment 2: Creation of a database driven e-commerce website**

Individual team members must agree on the level of individual contribution to the completion of this assignment. The students mark is determined by the agreed level of contribution as decided by the group. Each student must identify the individual tasks they carried out. This document needs to be completed/submitted with assignment 2.

The total for the agreed level of contribution column should be 100%

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Number** | **Student Name** | **Main tasks carried out** | **Level of agreed contribution (%)** |
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We declare that this is all our own work and does not contain unreferenced material copied from any other source. We have read the University’s policy on plagiarism and understand the definition of plagiarism. If it is shown that material has been plagiarised, or that we have otherwise attempted to obtain an unfair advantage for myself or others, we understand that we may face sanctions in accordance with the policies and procedures of the University. A mark of zero may be awarded and the reason for that mark will be recorded on our files.

Student Signature

Date