

# CE154 – Assignment 2

Spring 2024

School of Computer Science and Electronic Engineering - University of Essex

Electronic Submission URL:

<https://www.essex.ac.uk/e-learning/tools/faser/>

Please also see your student handbook for rules regarding the late submission of assignments

## On Plagiarism

The work you submit must be your own. Any material you use, whether it is from textbooks, classmates, the web or any other source must be acknowledged in your work. Also, you are assumed to have read the booklet at [http://www.essex.ac.uk/plagiarism/docs/Plagiarism and how to avoid it.pdf](http://www.essex.ac.uk/plagiarism/docs/Plagiarism_and_how_to_avoid_it.pdf)

**OBJECTIVE:** Develop and deploy a portfolio website for an artist including an online store.

## SUBMISSION, ASSESSMENT AND RULES

- This is assignment 2 (of 2) for CE154.
- The assignment is to be submitted individually. **This is not a group assignment.**
- Be sure to put your registration number as a comment at the top of all code and other files.
- The assignment must be submitted on FASER in a single zipped archive containing the following subfolders:

CE154/	All html files (.html .php)
CE154/images	All website image files (.gif .jpg)
CE154/css	All css files (.css)
CE154/inc	All common include files (.js .php)
CE154/docs	All supporting documentation (.doc .pdf .jpg .ppt)

**Note:** You are free to use any software you like for this assignment; however, we cannot provide support for packages other than *Notepad++*, *Firefox* and *Web Development tools (Firefox add-on)* on a Windows PC.

## DESIGN BRIEF

### **Develop and deploy a website for an artist including an online store.**

Your client is happy with the work you have done in Assignment 1! They now want you to develop the template into a fully functional dynamic website using PHP and MySQL.

In this second phase (Assignment 2), you will:

- Discuss your understanding of the client requirements in a one-to-one 5 minute interview
- Compile “real” content and fix any template bugs from Assignment 1
- Create dynamic webpages using efficient PHP includes
- Use a MySQL database as the backbone of your website functionality
- Deploy the site to CSEEMyWeb
- Evaluate your website using combination of methods

All client requirements from Assignment 1 are still required for Assignment 2.

The website should be coded correctly, with HTML used for structure and CSS for styling. The website must be optimised for a laptop screen of 1080 pixel width, but you may also make it suitable for viewing on a smart phone screen of 480 pixel width without horizontal scrolling. The website should be accessible to users with visual impairments.

The website should contain at least five pages:

- Homepage
- About the artist / biography
- Merchandise listing (at least 5 items)
- Merchandise details (including id, title, description, item type, published date, thumbnail image)
- Basket (edit and remove items)

You may also wish to include other pages/functionality including user registration, featured merchandise on the homepage, a facility for users to leave reviews of the merchandise, etc. The navigation and design should be consistent across all pages.

No payment functionality is required. For this assignment you can use content (text, images, etc) from other sources but you must have the source credited.

#### Technical Requirements

You should only use HTML, CSS, PHP, MySQL and (possibly) JavaScript.

**Bootstrap and Java frameworks (Angular, React, Vue) are expressly forbidden for Assignment 2.**

## **TASK 1: Client interview**

You need to attend a 5 minute client interview during a lab session to discuss your understanding of the client requirements and the designs you made for Assignment 1.

It is your responsibility to attend a lab session to do this (no invitations will be sent out). The interviews will be conducted on a first-come, first-served basis. If you decide to leave your interview until the last available day you risk not being seen. Interviews will only be conducted once per student.

Interviews will be available 9-11am on the following dates only:

- Friday 1, 8, 15, 22 March (on campus only)

In your assignment document **CE154\_assignment\_2.doc** you must indicate the date that your interview took place.

---

## **TASK 2: Prepare the website content and template**

The client wants you to deploy a “real” version of the website. You need to compile real content so you can replace the Lorem ipsum text you used for Assignment 1. The content needs to look real but doesn’t need to be true, i.e., you can use content copied from a different website and change the name (citing in your code or assignment document **CE154\_assignment\_2.doc** where this content was from). You are advised not to spend time writing “true” content. Replace the content directly in your web pages.

If you have any unfixed bugs or minor changes that are required from the template you produced in Assignment 1, now is the time to fix them. In the **CE154\_assignment\_2.doc** indicate what changes you have made and why.

---

## **TASK 3: Convert static web pages to dynamic PHP webpages**

Using your website template from Assignment 1, convert the web pages into an efficient, dynamic PHP website using header and footer includes. Use PHP to create on-states for your navigation buttons. Marks are awarded for correctly formatted code, use of indentation and code commenting.

Additional marks will be awarded for other PHP-driven functionality. No payment pages are required for the basket.

Write a concise overview of your use of PHP to create a dynamic website in **CE154\_assignment\_2.doc**.

## **TASK 4: MySQL database for data management**

For this task, you need to use a database for the information about the items in your store. At a minimum, the items in the list should have the following fields associated with them but you may wish to include more:

- ID
- description
- category
- published date
- URL to a thumbnail

You should have a minimum of 5 items in the store.

You may wish to use the database for additional functionality:

- User registration and management
- Content management
- Featured items on the homepage
- A mechanism for users to leave reviews

This extra functionality will not score you as many marks as the functional minimum so ensure you have done a good job on the minimum requirements before adding anything more. Marks are awarded for correctly formatted code, use of indentation and code commenting.

All data transfer should be secure from SQL injection attacks. User registration (if you use one) should require a password at least, but you may wish to include further security.

Write a concise overview of your use of PHP/MySQL to create dynamic functionality in **CE154\_assignment\_2.doc** (this can be combined with Task 3). Include an SQL database dump in your zipped file upload on to FASER.

---

## **TASK 5: Deploy your website to CSEEMyWeb**

Your fully functional website with real content should be deployed on the CSEEMyWeb server. The site must appear polished and finished so remove any half-finished functionality. There must be no “Page under construction” messages! A snapshot of the server will be taken at the time of the submission deadline, changes to your site after the deadline will not be assessed.

You must state the URL of your website in **CE154\_assignment\_2.doc** e.g.:

`http://cseemyweb.essex.ac.uk/~username/CE154`

...where you change “username” to your actual username.

If your website is not in the specified location, it may not be marked.

## **TASK 6: Evaluation of your website**

You need to provide the client with evidence of evaluations you have done on the website. These may include:

- Unit testing (description of website functionality, expected behaviour and confirmation the website conforms to this behaviour).
- User testing (either iterative or final evaluation testing with users, similar to Assignment 1)
- Automatic web page testing

Provide a short report of your results in **CE154\_assignment\_2.doc**. You may wish to fix any bugs in the code and rerun the evaluation (if so, provide a log of bugs you fixed).

Consider how you would like to change your development, what limitations are you facing, what PHP/MySQL techniques do you need to learn, etc. Be honest with your appraisal of your own work. Include these thoughts in **CE154\_assignment\_2.doc**.

Finally, redo the skill tree (from Lab 1) and include a screenshot of your new skill tree alongside the skill tree you generated in Lab 1.

## **MARKING BREAKDOWN** (out of 100%)

### **Task 1. Client interview (marks not included in this assignment but worth 10% of the module)**

- Discuss user requirements and the design of your site (conducted in the lab)

### **Task 2. Prepare content and template (10%)**

- Prepare suitable “real” content for the website
- Address any bugs or issues with the template (from Assignment 1)

### **Task 3. Convert static web pages to dynamic PHP webpages (25%)**

- Use of includes for efficient coding
- Use of on-state navigation

### **Task 4. MySQL database for data management (35%)**

- Use a database for items in the store
- Additional functionality (user management, content management, etc)
- Security of data transfer

### **Task 5. Deploy to CSEEMyWeb (10%)**

- Successfully deploy the website

### **Task 6. Evaluation (20%)**

- Evaluation of the site using automatic tools
- User feedback and evaluation
- Self evaluation and skill tree