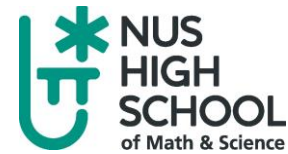


CS6131

DATABASE DESIGN



Name: _____

Date: _____

ASSIGNMENT 1 [10 MARKS]

Date issued: **16 Dec 2024**

Date Due: **T1W2 | 18th Jan 2025 | 2200hrs**

Estimated Time Required to complete Assignment: ~4 to 8 hours

(more time will be needed if you are completely new to HTML/CSS, please factor in some time to learn your HTML/CSS)

SUBMISSION INSTRUCTIONS

Zip up all files and upload to Coursemology > Assignment > Assignment 1

Ensure relative file path is used in your file referencing. If images are used, please ensure you upload the images together in the submission.

LATE WORK

2% of total assignment marks will be deducted per day you are late.

Please plan your time wisely.

PLAGIARISM & USE OF AI TOOL

Plagiarism, the **unattributed copying** of ideas, pictures, program code, or any product of others (including AI tools), is forbidden. **If you use anything that you did not produce yourself, you are expected to cite it.**

The use of ChatGPT and/or related AI tools are allowed in this Assignment.

However, you should take note of the following:

- **Understand AI's limitations**
ChatGPT and related AI tools are powerful, but it's not perfect. It may generate incorrect or suboptimal answers, and its performance is dependent on the quality and relevance of its training data.
- **Verify and validate results**
Always verify the information provided by AI tools by cross-referencing with reputable sources or consulting textbooks, online resources, or teacher. Validate the generated code snippets or advice to ensure it aligns with your task objectives.
- **Leverage AI for learning**
Use AI tools as a **learning resource**, not a shortcut. Take advantage of its capabilities to clarify doubts, learn and explore new topics, or generate ideas, but don't rely on it to complete the task without fully understanding the concepts and techniques involved.
- **Maintain Academic Integrity**
When using AI-generated content in the task, ensure that **proper attribution is given**, and avoid plagiarizing or misrepresenting AI-generated work as your own. You are expected to share the link of your full chat log of ChatGPT if you use GPT in your work.

Cite everything where it is used.
Students who are caught plagiarizing will face academic and disciplinary consequences.

Assignment Overview

The key aim of this assignment is to get you kick started on basic web development over the holidays (in particular HTML, CSS and a basic web development framework). At the end of the assignment, you should have a good working knowledge of HTML, CSS and a basic web development framework, and have some template webpages you can use for your project.

The goal of the database project in this course is to implement a database system application (both backend and frontend) for an organization to manage their data. The backend will be a relational database, and the frontend will a simple web application for admin user to manage the data stored in the database.

You are free to choose any theme you wish for the project. However, the database system proposed must be useful in real life context, and the data from the proposed must be suitable for storage in a **relational database system**. We will cover the details of relational database system and specific project requirements when the course starts.

The materials submitted for this assignment **can (and should) be used** as the template pages for the front-end of your final database project in this course.

Introduction to Bootstrap

Bootstrap is a powerful front-end framework for faster and easier web development. It includes HTML and CSS based design templates for creating common user interface components like forms, buttons, navigations, dropdowns, alerts, modals, tabs, accordions, carousels, tooltips, and so on.

Bootstrap gives you the ability to create flexible and responsive web layouts with much less efforts. Learn more about how to use Bootstrap here:

- <https://getbootstrap.com/>
Bootstrap official website
- [Bootstrap 5 Crash Course Tutorial #1 - Intro & Setup - YouTube](#)
Recommended bitesize tutorial to get you started and familiar with bootstrap. Source code covered in videos are available for download to allow you quick customization of the webpages for this assignment
- <https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/>
Another Bootstrap tutorial

Note: Other Bootstrap equivalent web styling framework is allowed. The main purpose is to adopt a framework for building responsive, mobile-first sites, with a template starter page.

Assignment Task

Your main assignment task is to design a static website using Bootstrap or equivalent. Ideally the website theme is related to your project theme.

The website should consist of the following pages:

- a landing homepage
with some appropriate content given
- a navigation bar for all the sections
Your final website should consist of a few pages. The links on the navigation should work properly.
- a login page
The login page does not need to work. You are only required to DESIGN the look and feel of the login form.
- a page to allow the admin user to search and browse data records
The search function does not need to work. You are only required to DESIGN a search form. You can display some static data in the form of a table, list or card to show how the data will look like after a search is done.
- a reference page
list down all the references link used to complete this assignment, including the link to the full chatlog of any AI tools (e.g. ChatGPT / Gemini / Claude / Copilot etc).

Note that all layout (including tables/forms etc) should be formatted with Bootstrap or equivalent framework. You may add any other relevant content you like.

The focus of the assignment is the design of the webpages, not the functionalities (i.e. no login function or search is required to be coded, you only need to design the look and feel of the login and search pages). However, the hyperlinking on the navigation bar should work (i.e. one should be able to navigate to different pages via the navigation bar).

You are strongly advised to spend good time doing proper templating and UI design so that you do not need to spend time on this during the project development in term 2.

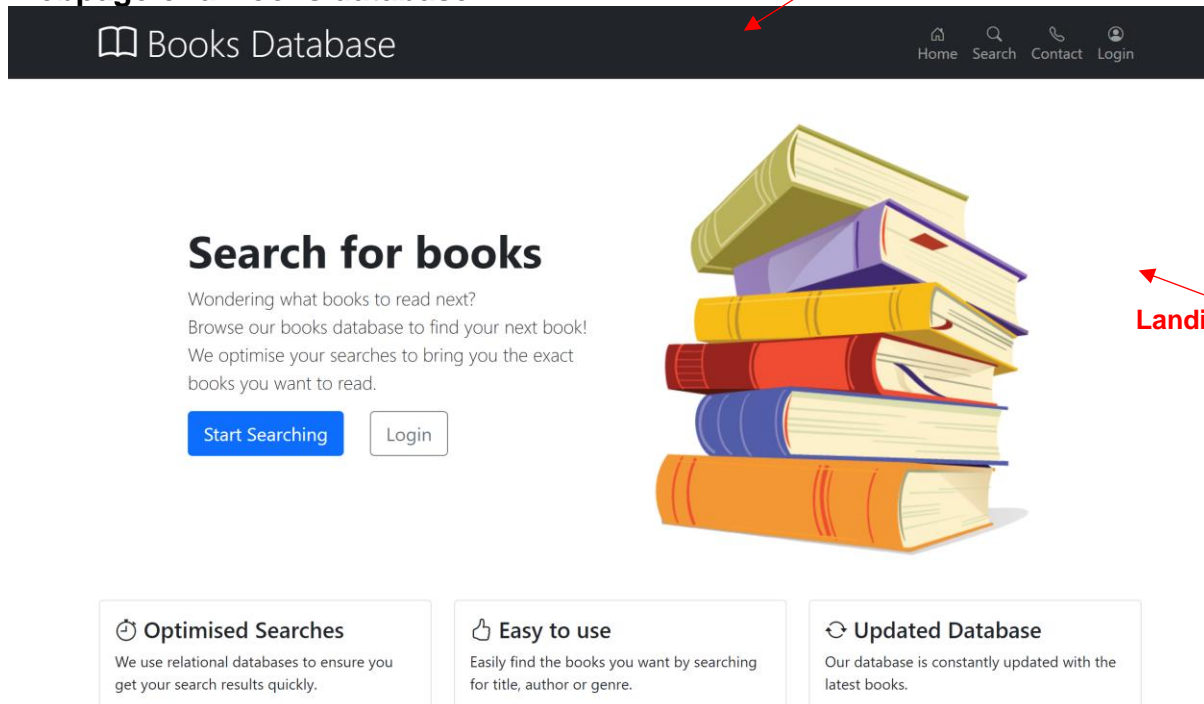
Marking Guide

You will be graded based on the following:

| | Description |
|---|---|
| Functionalities and Code | All required pages and functionalities are completed. An appropriate styling framework is adopted. Code is well-organized, effort made to ensure HTML/CSS code is clean and easily reusable. |
| Aesthetic Appeal | Webpages are aesthetically appealing, with good use of color, a consistent theme design, appropriate content, use of icons and various appropriate UI elements to enhance look and feel. <i>Note: You should spend some time to design the look and feel of the website. A standard default Bootstrap layout / template will not score high on this section.</i> |
| Ease of navigation and user-friendliness | Navigation bar is well planned. Website is well laid out, user friendly and easy to navigate around. Hyperlinks work as intended with no broken links. |

Sample of components required from the assignment.

Webpage of a Books database



Search by title

Search

Search Bar

1 2 3 4 5

| # | Title | Author | Year | Genre | Rating |
|----|--|-----------------|------|----------------------|--------|
| 1 | The Hobbit | J.R.R. Tolkien | 1937 | Fantasy | ★★★★★ |
| 2 | Harry Potter and the Philosopher's Stone | J.K. Rowling | 1997 | Fantasy | ★★★★★ |
| 3 | And Then There Were None | Agatha Christie | 1939 | Mystery | ★★★★★ |
| 4 | Charlotte's Web | E.B. White | 1952 | Children's fiction | ★★★★☆ |
| 5 | The Da Vinci Code | Dan Brown | 2003 | Thriller | ★★★★☆ |
| 6 | Nineteen Eighty-Four | George Orwell | 1949 | Science Fiction | ★★★★☆ |
| 7 | The Hunger Games | Suzanne Collins | 2008 | Action and Adventure | ★★★★☆ |
| 8 | The Chronicles of Narnia | C.S. Lewis | 1950 | Fantasy | ★★★★☆ |
| 9 | Jaws | Peter Benchley | 1974 | Thriller | ★★★★☆ |
| 10 | Dune | Frank Herbert | 1965 | Science Fiction | ★★★★☆ |

Sample Search Results (Table View)

Login/Register

Username

Password

Login

Note that this sample is to illustrate the components required. You should spend more time designing the look and feel (above is an example of default bootstrap design, which will not score too high on the aesthetic component).