**Project description:**

**Project Title: Online Book Library Management System**

**Project Description:**

Imagine you are tasked with building an Online Book Library Management System, a web application that allows users to browse and manage a collection of books of different genres. This project will involve both frontend development using HTML and backend development using Python and MySQL.

**Project Scenario:**

You are working for a local library that wants to modernize its book management system and make it accessible to patrons online. They have a vast collection of books across various categories, including novels, foreign language books, mathematics, history, and medical literature.

**Project Requirements:**

1. Frontend Development (HTML/CSS/JavaScript):

* **Homepage:**
* Create a welcoming homepage that displays the library's logo and a search bar.
* Shows a list of buttons to click on:
  + List books per category
  + Insert new books.
    - Books must have: Name, Genre, Author, ISBN, and Year of publish.
  + Delete books.
    - Entering ISBN or book name should be enough to locate and delete the book

* **Book Listings:**
  + Develop pages for each book category (e.g., Novels, Foreign Language, Math, History, Medical) that list the available books. Each book should have a title, author, cover image, and a brief description.
  + Search Functionality: Implement a search feature that allows users to search for books by title, author, or category.
  + Book Details: When a user clicks on a book, a detailed page should display more information about the book, including a synopsis and available copies.

**- Insert new books:**

* + To insert new books, the user must enter book title, author, and genre. All other fields like ISBN, year, etc should be optional to fill.
* **Delete books from store:**
  + For simplicity, assume all users can delete books from the bookstore. This is not the case in real libraries. You can think of it as borrowing a book from the library.
  + Assume there is exactly one book available in the library so if one deletes the book, that book won’t available for other users.
* **User Interaction:** Create a user-friendly interface where users can insert/delete books. A nice graphical user interface is desired (note: think CSS)

2. Backend Development (Python/MySQL):

* **Database Setup:** Design and create a MySQL database to store book information.
  + The database must get updated when:
    - A book is added to the system
    - A book gets removed the system

**- Data Validation:** Ensure data entered into the system is validated to prevent errors and security issues (e.g., names instead of ISBN or year > 2023).

**- Back-end development package:** Use Flask on Python to implement the back end

3. Project Evaluation:

Students will be evaluated based on the following criteria:

**- Functionality:** Does the web application meet all the specified requirements, including search, , book management, and data validation?

- **User Interface:** Is the frontend user-friendly, visually appealing, and easy to navigate?

- **Database Design:** Is the database well-structured, efficient, and capable of handling the library's data needs?

- **Code Quality:** Is the code well-organized, well-commented, and adheres to best coding practices?