Assignment

Description

For this assignment you will develop a basic book review web application.

The web application must accomplish the following requirements:

- Manage Authors (name, date of birth, country of origin, short description).
- Manage Books (name, summary, date of publication, number of sales).
- Manage Reviews (book, review, score from 1 to 5, number of up-votes).
- Manage Sales by year (book, year, sales).

Assignment

Description

The web application should have the following views:

- CRUD for authors, books, reviews, sales and any other model/relation you might need to add.
- A table that shows authors, number of published books, average score and total sales. This table should have a sort and filter for each column.
- A table that shows the top 10 rated books of all time, with their most popular highest and lowest rated review.
- A table that shows the top 50 selling books of all time, showing their total sales for the book, total sales for the author, and if the book was the on the top 5 selling books the year of its publication.
- A search window, that lets me input text, and returns a paginated list of books whose description contains any of the words in the search.

Assignment

Description

You will develop a your web application under the following constraints:

- Each group will be randomly assigned a combination of the following web frameworks and database engines:
  - Web Frameworks
    - Django (Python)
    - Rails (Ruby)
    - Express.js (JavaScript)
    - Phoenix (Elixir)
    - Rocket (Rust)
  - Database Engine
    - SQLite
    - PostgreSQL
    - MongoDB

Assignment

Deliverable

For this assignment, you must deliver the following:

- The code of your application
- A way to populate your database with mock data (script, seeds, etc. . . ...)
  - 50 authors
  - 300 books
  - Between 1 to 10 reviews per book
  - At least 5 years of sales per book
  - The data can be procedurally generated, or obtained from:
    - https://openlibrary.org/developers
    - https://docs.hardcover.app/api/getting-started/

Assignment

Deliverable

- A short report in English that outlines the following points:
  - A short description of the programming language, web framework and database engine used.
  - How familiar was your group with those technologies.
  - How did you connect your web framework with your database engine, if you used a database abstraction layer, describe how it works.
  - How much time did it take you, and what were the challenges you found while:
    - Connecting the web framework with the database engine.
    - Configure and start using the web framework.
    - Implement the CRUD for the different models.
    - Implement the different queries for the tables.
    - Implement the views for the tables.

Assignment

Deliverable

- 3 randomly selected groups will do a presentation in English of their assignment and report on the next class.
  - The presenting groups will be notified alongside their assigned web framework and database engine.
  - The presentation should be between 5 to 10 minutes per group.