Topic Name : Free Public Library Draft 1

Objectives : Create a free public library website where a user can read books and download them. It has profile logging system which keeps its past history. A system where user can upload and remove books on the website.

Features : It has light theme and dark theme for whole website.

User can bookmark books and divide them into plan to read, reading, on hold, completed. etc

There is a text to speech option where user can use it as audio book.

A home page button which takes user back to home page.

Book can be read by the user in multiple ways : Two page mode and a single page mode.

Page curling animation and other various 3D effects with css styling etc.

Book can be read in full screen mode that covers entire screen.

Reduced time complexity and space complexity of the website.

A randomize button at the top which can suggest few random books at a time to the user to select from.

Your library feature where the books being read and their last left page is automatically stored.

A browsing section which shows the collection.

A search bar where user can search the books on the basis of publisher, author and book name.

Below the browsing section exists a browse categories section for selection of different categories of books.

A for you section which suggests you the entire collection of books of the series you are currently reading or were reading.

At the end a footer consisting of all the basic details.

A top recommendations section that has a sliding mechanism for top 7 books most trending in a loop at regular interval with author name and the logo.

Various enlargement, hovering mechanisms present in the website.

A magnifier for the books and size reducer for personalized user experience.

A fallback mechanism incase something goes wrong.Project Topic: Free Public Library (Draft 1) **Date:** October 21, 2025 **Status:** Initial Specification

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1.0 Core Objectives

The primary goal of this project is to develop a comprehensive, user-centric website for a free public library. The platform will serve as a repository for readable and downloadable e-books, managed by a community of users.

The three main programming objectives are:

1.

Book Access: To create a system where users can read books directly on the website and download them for offline use.

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3.

User Management: To implement a secure profile and logging system that maintains a user's personal history, preferences, and reading activity.

4.
5.

Content Management: To build a system that empowers users to contribute to the library by uploading new books and managing (removing) their own contributions.

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2.0 Detailed Feature Specifications

To achieve the core objectives, the following features are specified for implementation.

2.1 User Account and Personalization

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Profile System: Secure user registration, login, and profile management.

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Reading History: The system must automatically track and display a user's past reading activity.

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Personal Library ("Your Library"): A dedicated user dashboard that automatically saves currently reading books and bookmarks the last page read.

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Bookmark & Shelving System: Users must be able to categorize books into distinct shelves, including:

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    Plan to Read

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    -

    Reading

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    -

    On Hold

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    -

    Completed

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2.2 Book Discovery and Navigation

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Home Page: A central landing page with a clear "Home" button for easy navigation.

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Search Bar: A robust search utility allowing users to find books by **Title**, **Author**, and **Publisher**.

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Browsing Section: A main page displaying the entire library collection.

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Category Section: A dedicated area below the main browsing section for filtering books by genre/category.

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"For You" Recommendations: An algorithmic section that suggests other books in a series that the user is currently reading or has read.

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"Top Recommendations" Slider: A dynamic, auto-looping slider on the home page showcasing the top 7 trending books, displaying the book's logo (cover) and author name.

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Randomizer: A "Randomize" button that suggests a small selection of random books to the user.

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Footer: A website-wide footer containing basic site details, links, and contact information.

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2.3 Reading Interface and User Experience (UX)

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Dual-Theme Support: The entire website must support both a **Light Theme** and a **Dark Theme**, with a toggle for user selection.

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Text-to-Speech (TTS): An accessibility feature that functions as an "audio book," reading the book's text aloud to the user.

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Multi-Mode Reader: The book reader interface must support:

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Single Page Mode

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Two Page Mode

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Full-Screen Mode: A toggle to allow the reading interface to cover the entire screen, hiding browser and OS UI elements.

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Personalized View: Tools within the reader to **magnify** text or **reduce** text size for a personalized experience.

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Advanced CSS Styling:

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Implementation of a realistic **page-curling animation** when turning pages.

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Various **3D effects**, hovering mechanisms, and enlargement effects on book covers and interactive elements to create a dynamic UI.

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3.0 Non-Functional & Technical Requirements

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Performance: The website's architecture must be optimized for **reduced time complexity** (fast load times, quick search results) and **reduced space complexity** (efficient database and asset management).

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Reliability: A **fallback mechanism** must be implemented to handle potential errors gracefully (e.g., 404 pages, server connection issues) without crashing the user's session.

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