Name- Aditya Narayan (B20BB002)

Audiobook - Project Documentation

Key Features

1. **Advanced Search and Filtering**: Users can search for audiobooks using various criteria such as author, narrator, series, language, minimum length, minimum rating, and minimum number of votes.
2. **Data Scraping**: The application scrapes audiobook data from Audible.com, ensuring an up-to-date and comprehensive database of audiobooks.
3. **Database Management**: Utilizes SQLite to store and manage audiobook data efficiently.
4. **User Reviews**: Allows users to read and submit reviews for audiobooks, enhancing the community aspect of the platform.
5. **Responsive Web Design**: The user interface is designed to be responsive and user-friendly across different devices.

Technical Stack

- **Backend**: Python, Flask
- **Database**: SQLite
- **Frontend**: HTML, CSS, JavaScript
- **Web Scraping**: BeautifulSoup, Requests
- **Data Processing**: Pandas

Code Structure

The project consists of several key components:

1. **audible scrape.py**:
    - Handles web scraping from Audible.com
    - Manages the SQLite database operations
    - Implements the `AudibleDB` class for database interactions
2. **webapp.py**:
    - Flask application setup

- Defines routes for the web application
- Handles user requests and data filtering

3. **index.html**:
   - Main page template
   - Displays search form and audiobook results

4. **review_page.html**:
   - Template for individual audiobook review pages
   - Displays book details and user reviews
   - Includes a form for submitting new reviews

How to Run the Project-

Prerequisites-

- Ensure you have Python 3.x installed on your machine.
- You'll need pip (Python package installer) to install dependencies.

Set Up a Virtual Environment-

- python -m venv venv
- source venv/bin/activate # On Windows use `venv\Scripts\activate`

Install Dependencies-

- pip install -r requirements.txt

Initialize the Database-

- python audible_scrape.py

Run the Flask Application-

- python webapp.py

Key Implementations

Data Scraping and Storage

- Implemented robust web scraping using BeautifulSoup to extract audiobook data from Audible.com.
- Designed a SQLite database schema to efficiently store audiobook details and user reviews.

Search Functionality

- Developed a flexible search system that allows filtering by multiple criteria simultaneously.
- Utilized Pandas for efficient data manipulation and filtering.

User Interface

- Created a clean and intuitive user interface using HTML and CSS.
- Implemented responsive design principles for cross-device compatibility.