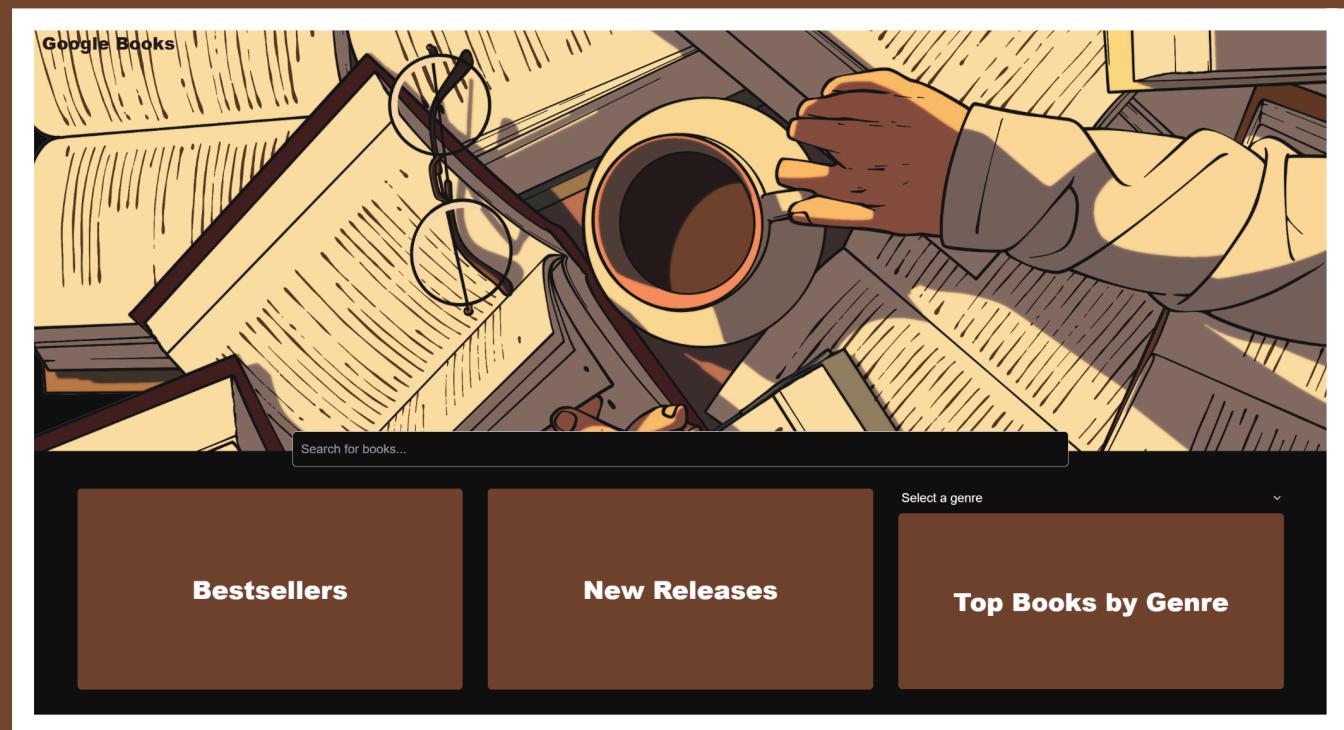


Google Books Browser User Guide

An app by Cătălina-Adela Chirteş

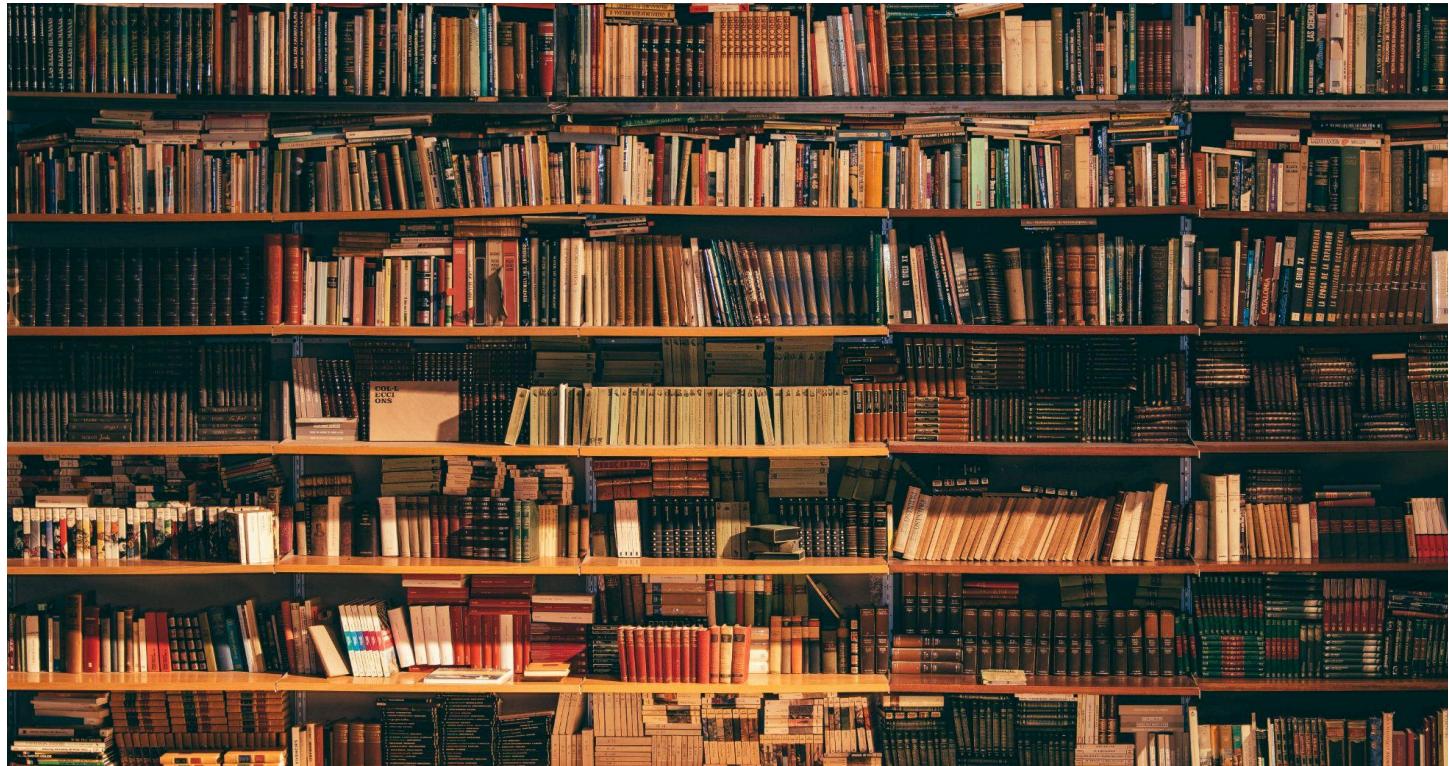


User guide

For navigating the Google Books Browser

01

Getting started



Overview

This application started as a passion project, rooted in the love of reading books and immersing in various stories. By trying to create a user-friendly book browser, to find faster, all the details about the books that we already know, or about ones that we didn't even know we needed in our lives, we built this project.

The Google Books Browser is a web-based platform designed to create a user-friendly interface for searching a vast library of books, making use of the external APIs from Google Books API and the New York Times Best Sellers API. This full-stack client-server application allows users to search for books and receive real-time updates on new releases, gaining access to useful details on the books of interest, bestsellers, and categorized recommendations.

Understanding the structure

This user guide is structured into 3 main chapters which we will shortly summarize here:

GETTING STARTED

- Oh but what a surprise, you are currently located in this very chapter, the general overview was presented, but the structure is not yet fully disclosed, so keep reading.

USING THE APPLICATION

- This is the most fun part, explaining in detail, visually, with pictures, every functionality that you can explore, and every use case that this application has.

KEY TECHNICAL FEATURES

- This section is mostly dedicated to all the geeks out there who want to also explore the behind-the-scenes, from both the usability and implementation perspectives. If you are not interested in how the application was coded and deployed, you can simply skip this chapter.

Frequently Asked Questions (FAQ)

1 Is this app free to use?

Absolutely! 🎉 This app is completely free, no hidden fees, no subscriptions, just pure book-loving goodness. You can search for books, explore genres, and check out bestsellers without spending a dime.

2 What can I search for here?

You can search for books by title, author, or even specific genres! 📚 Looking for the latest sci-fi masterpiece? Or maybe a timeless classic? Just type in a keyword, and we'll fetch only the best for you.

3 How often is the book data updated?

The app pulls live data from the Google Books API and the NYT Best Sellers list, so you're always getting the freshest recommendations! 🌟 If a new bestseller drops today, you'll see it right away.

Availability



The app is live and can be accessed by anyone following this address:

[Google Books Browser](#)

02

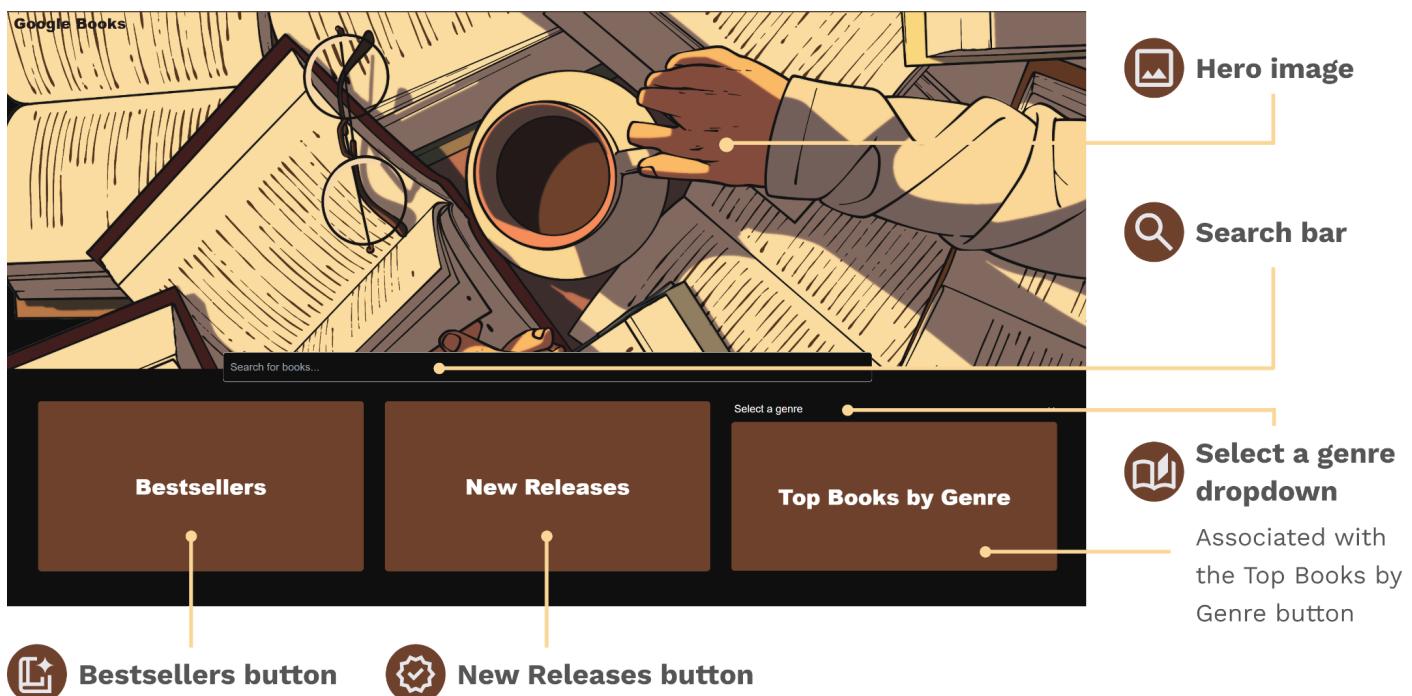
Using the application



Basic outline of the application

The application is built as a single-page application, with the core elements, the hero image, the search bar, and the three targeted results buttons, always keeping the same positions. As soon as you perform any request within the interface, the results will be displayed below the navigation bar, highlighting the top nine most relevant results for the specific search/filtering. These results are shown as a series of clickable cards, which, as soon as focused, bring forward a modal with a more detailed overview of the selected book.

The landing screen is composed of 5 main components that allow the user to easily identify the main features of the application:



HERO IMAGE

- The application hints at its use case and creates a pleasant visual experience with the help of the hero image, displayed in the hero section. A graphic representation of a vast collection of books is depicted, showcasing also the hand of a person, representing the personal journey that you, the user, will be able to embark on, at your own pace, while exploring this app. Additionally, in the top left corner, the title of the app is visible, a small detail that clarifies the purpose of the app, to explore the vast library that Google Books puts at our disposal.

SEARCH BAR

- Below the hero section, you can identify the first key feature of the application, the search bar. By clicking on this item, you will be able to type in any search query relevant to the book/article you are looking for, as the search has the ability to recognize the correct answers based on both the title of the book, but also on the name of the author.

🔍 Example usage of the search bar for finding a specific title.

The screenshot shows the Google Books homepage with a search bar at the top containing the word 'Dune'. Below the search bar are three main navigation sections: 'Bestsellers', 'New Releases', and 'Top Books by Genre'. A dropdown menu labeled 'Select a genre' is visible. The main content area displays a grid of book results. One result, 'Dune' by Frank Herbert, is highlighted with a yellow border. The book cover features a desert landscape with two figures. Below the book details are the author's name, Frank Herbert, and the genre, Fiction.

Book Title	Author(s)	Genre
The Science of Dune	Kevin R. Grazier	Social Science
Discovering DUNE	Dominic J. Nardi, N. Trevor Brierly	Literary Criticism
Dune	Frank Herbert	Fiction
Sands of Dune	Brian Herbert, Kevin J. Anderson	Fiction
The Worlds of DUNE	Tom Huddleston	Biography & Autobiography
A Dune Companion	Donald E. Palumbo	Literary Criticism
Coastal Dune Management	John Houston, Paul J. Rooney, Sally E. Edmondson, P. J. Rooney	Technology & Engineering
Sand Dune Mining, Generic EIS.	Unknown	Uncategorized
Sisterhood of Dune	Brian Herbert, Kevin J. Anderson	Fiction

🔍 Searching by the title

By typing the title 'Dune' and pressing Enter, we receive the top results relevant to this keyword

🔍 Example usage of the search bar for finding author-related results.

The screenshot shows the Google Books homepage with a search bar at the top containing the name 'Jane Austen'. Below the search bar are three main navigation sections: 'Bestsellers', 'New Releases', and 'Top Books by Genre'. A dropdown menu labeled 'Select a genre' is visible. The main content area displays a grid of book results. One result, 'Jane Austen' by Heather Lehr Wagner, is highlighted with a yellow border. The book cover features a portrait of Jane Austen. Below the book details are the author's name, Heather Lehr Wagner, and the category, Authors.

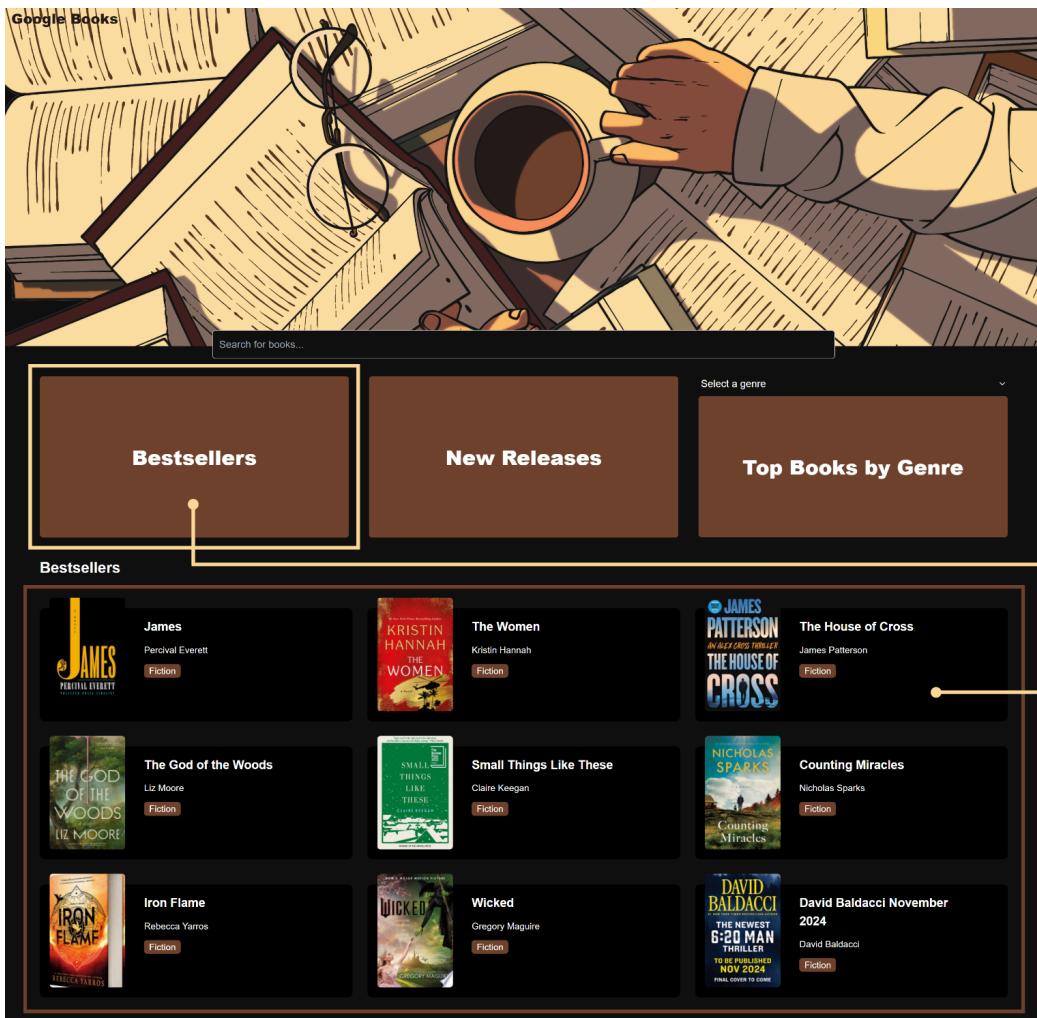
Book Title	Author(s)	Category
The Cambridge Companion to Jane Austen	Edward Copeland, Juliet McMaster	Literary Criticism
JANE AUSTEN	50Minutes,	Literary Collections
Jane Austen	Heather Lehr Wagner	Authors
Jane Austen's Erotic Advice	Sarah Raff	Literary Criticism
30 Great Myths about Jane Austen	Claudia L. Johnson, Clara Tuite	Literary Criticism
The Making of Jane Austen	Devoney Looser	Literary Criticism
IN SEARCH OF JANE AUSTEN	Ingrid Tieken-Boon van Ostadé	Language Arts & Disciplines
Jane Austen the Novelist	J. McMaster	Literary Criticism

🔍 Searching by the author

By typing the author 'Jane Austen' and pressing Enter, we receive the top results relevant to this keyword

BESTSELLERS BUTTON

- The 3 main buttons to explore start with the ‘Bestsellers’ button, which, after clicking, displays below this navigation part a new section, with the corresponding results, the top 9 most popular books at the time, based on the NYT Best Sellers list combined with the Google Books API, that always stays up to date and updated with the latest trends. The books are displayed as a list of clickable cards, with their most relevant details.



NEW RELEASES BUTTON

- The next button to explore, the ‘New Releases’ button, displays a selection of the latest books and articles published according to the Google Books API timeline. This encourages you to check out what is new across different fields, and even start reading something that sparks your interest from the selection.

The screenshot shows the Google Books homepage. At the top, there's a search bar with the placeholder "Search for books...". Below it are three main categories: "Bestsellers", "New Releases", and "Top Books by Genre". A yellow callout points to the "New Releases" button. The "New Releases" section displays a grid of book covers with titles like "Main Character" by Lizzie Trainier, "Pampering you to the bone" by Ethan Cole, and "Creating iOS apps with Xcode" by Aaron L Bratcher. Another yellow callout points to the "Top Books by Genre" button.

Pressing the New Releases button

By pressing this button the most recent publications available on Google Books will be displayed, in order to explore the newest releases

TOP BOOKS BY GENRE SELECTION

- You additionally have the option to visualize a selection of the most popular books by genre. Firstly, you have to select a genre from the dropdown list that opens up as soon as clicking on it.

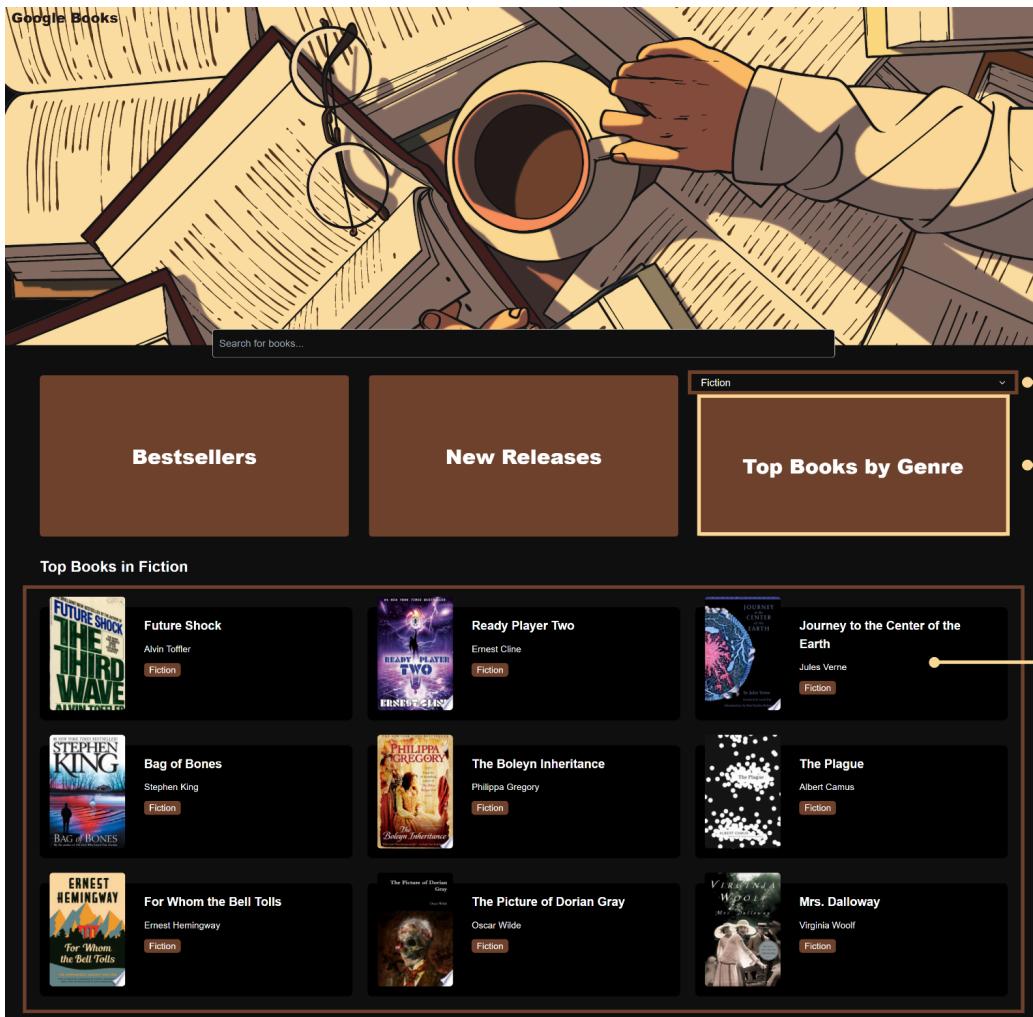
The screenshot shows the Google Books homepage again. The "Top Books by Genre" section is highlighted with a yellow callout. A dropdown menu is open, listing various genres: Adventure & adventurers, Architecture, Armies, Art, Art museum curators, Biography, Biography & Autobiography, Business & Economics, Classic fiction, Computers, Ego (Psychology), England, Fiction, History, Juvenile Fiction, Language Arts & Disciplines, Literary Criticism, Man-woman relationships, Mathematics, and Select a genre. Another yellow callout points to the "Top Books by Genre" button at the bottom right of the section.

Opening the genre dropdown

By clicking on this genre selection dropdown, a vast collection of most popular genres appear from the Google Books API library

Clicking on the Top Books by Genre

- Then, after making your choice, you have to click on the 'Top Books by Genre' button so that the selection is recorded and the results displayed. You will now see, based on your selection, the top 9 most relevant books for the genre you chose. You can click and explore all the genres if this is what your heart desires.



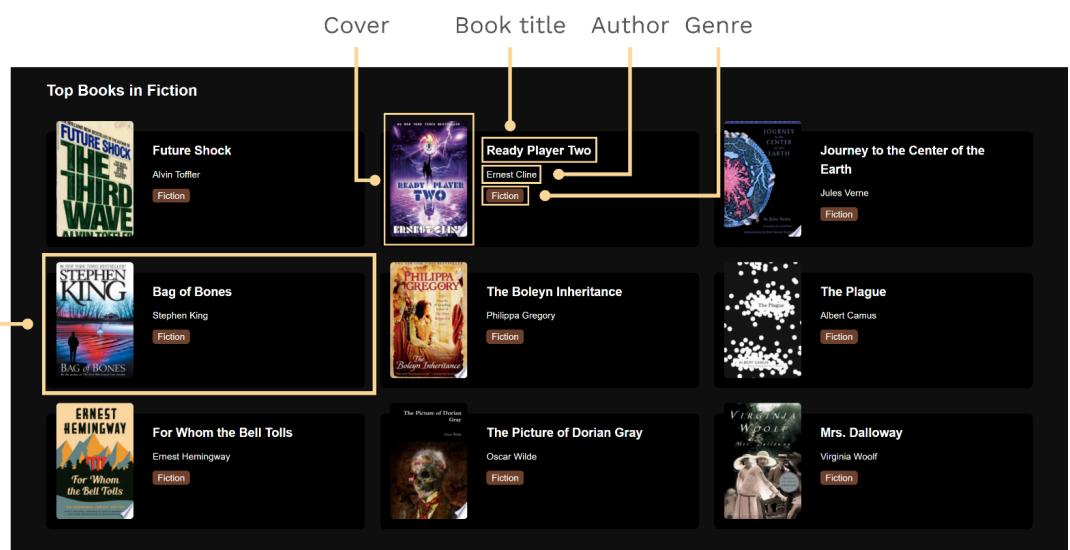
Selecting a genre

After selecting a genre from the dropdown and then clicking on the 'Top Books by Genre', so that the selection is processed, the most popular books come forward for that specific selection, in this case for the genre 'Fiction'

BOOK CARD

Clicking on a book card

By clicking on a book card, a modal will pop up with more details on the book



- Now that you understand the main functionalities of the landing page, you can further explore outside of the context of the app. All the book cards are clickable, which means that as soon as you select a book and click on it, a modal will pop up on the screen, with a more expanded overview of the selected book. If initially on the page you could see only the most essential details, the cover, title, author, and genre, now you can visualize also the rating, the publish date, the description, and most importantly, the ‘More info’ button that will redirect you in a new tab to the page of the book from Google Books. The close button, placed in the top right corner of the modal, allows us to return to the page we previously were in, and continue our exploration.

Cover

Book title

Author

Genre

Rating

Close modal button

Publish date

Description

More info button, redirect to Google Books page

Opening the book information modal

After clicking on a book card, a info modal appears with a more expanded overview of the book

- When reaching Google Books, you can find here even more details about the book and author, more similar books, and in some cases, a preview or even the entire book/article are available to be read freely online within the page.

Google Books subject:Fiction

Books Add to my library

GET PRINT BOOK Bag of Bones

No eBook available

Amazon.com Amazon.de Amazon.fr Amazon.it Amazon.es Amazon.ca Amazon.co.uk

Buchkaliste.de Weltbild.de

Find in a library All sellers >

My library My History

Bag of Bones

Stephen King

Pocket Books, Jun 1, 1999 - Fiction - 752 pages

From #1 New York Times bestselling author Stephen King, a powerful tale of grief, of love's enduring bonds, and the haunting secrets of the past. Four years after the sudden death of his wife, forty-year-old bestselling novelist Mike Noonan is still grieving. Unable to write, and plagued by vivid nightmares set at the western Maine summerhouse he calls Sara Laugh, Mike reluctantly returns to the lakeside getaway. There, he finds his beloved Yankee town held in the grip of a powerful millionaire, Max Devore, whose vindictive purpose is to take his three-year-old granddaughter, Kyla, away from her widowed young mother, Mattie. As Mike is drawn into Mattie and Kyla's struggle, as he falls in love with both of them, he is also drawn into the mystery of Sara Laugh, now the site of ghostly visitations and escalating terrors. What are the forces that have been unleashed here—and what do they want of Mike Noonan? It is no secret that King is one of our most mesmerizing storytellers. In Bag of Bones, he proves to be one of our most moving as well.

From inside the book

Search

Contents

Section 1

Section 2

29 other sections not shown

1 Section 3

22 Copyright

35

Other editions - View all

May 23, 2023 Limited preview... Mar 22, 2010 Limited preview... 1999 Limited preview... Sep 1, 2006 Limited preview... 2011 No preview... Dec 6, 2011 No preview... 2014 No preview... Aug 6, 1998 No preview... 1999 No pr...

In this particular case, when looking at more info about the book ‘Bag of Bones’ by Stephen King, we got redirected to this page ([link](#)).

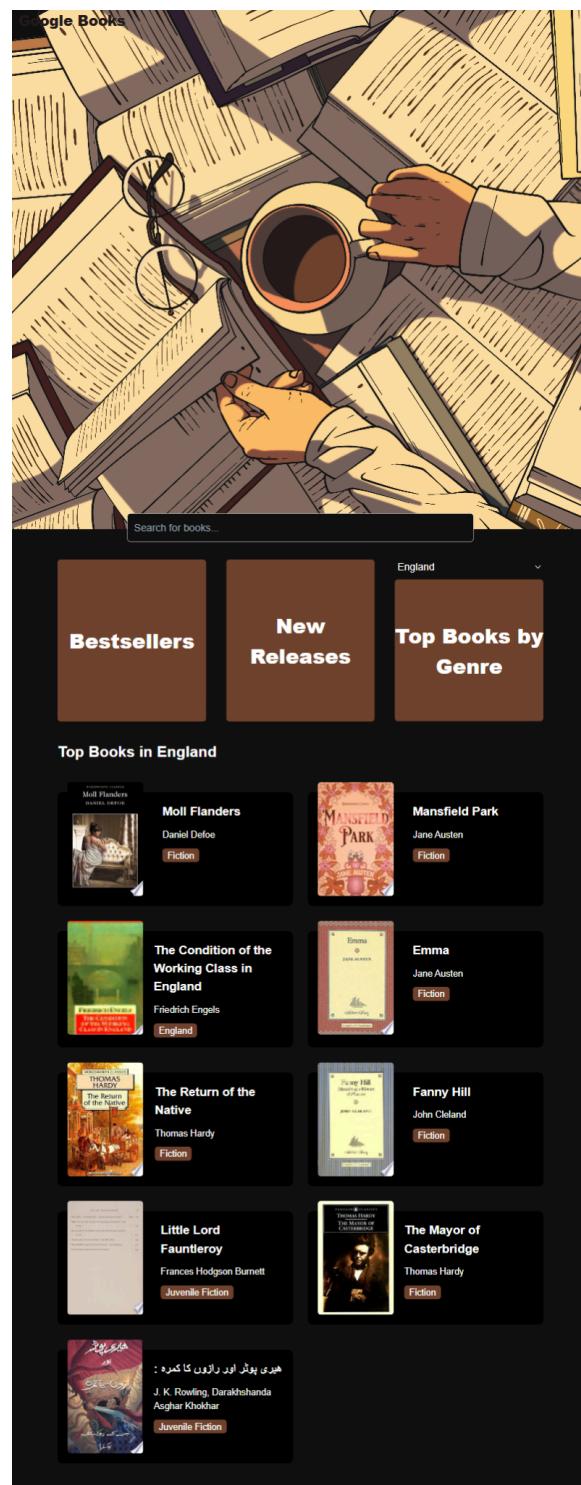
RESPONSIVE DESIGN

- Lastly, from the usability side, we want to just let you know that this project was designed with a responsive mindset, so that you, the user, can access it from anywhere, no matter what device you are using. No matter if it is a smartphone, a tablet, or a laptop, you can search for your books with no problem.

Mobile view

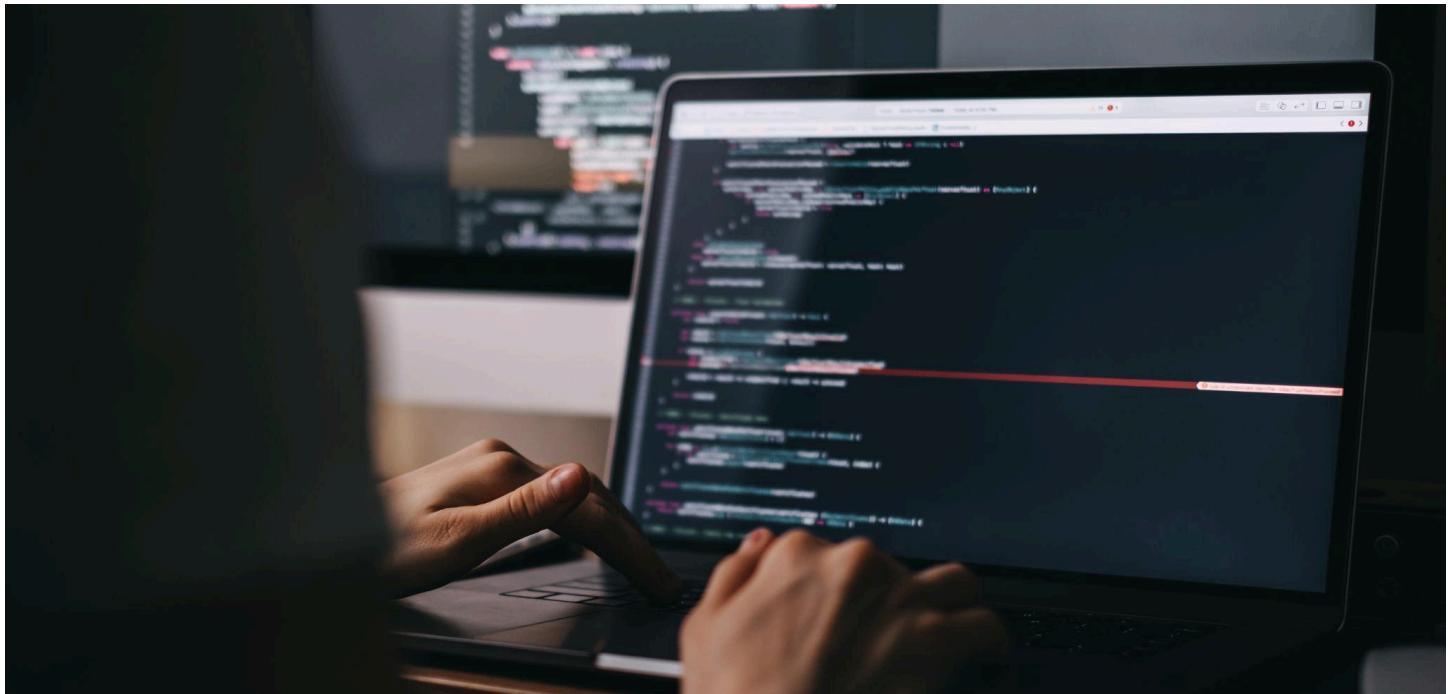


Tablet view



03

Key technical features



Before deep diving into the technical part of the application, we would like to disclaim that we would be trying to explain the concepts as easily to understand as possible, highlighting the key features, from both the usability and implementation perspectives.

Frontend Implementation

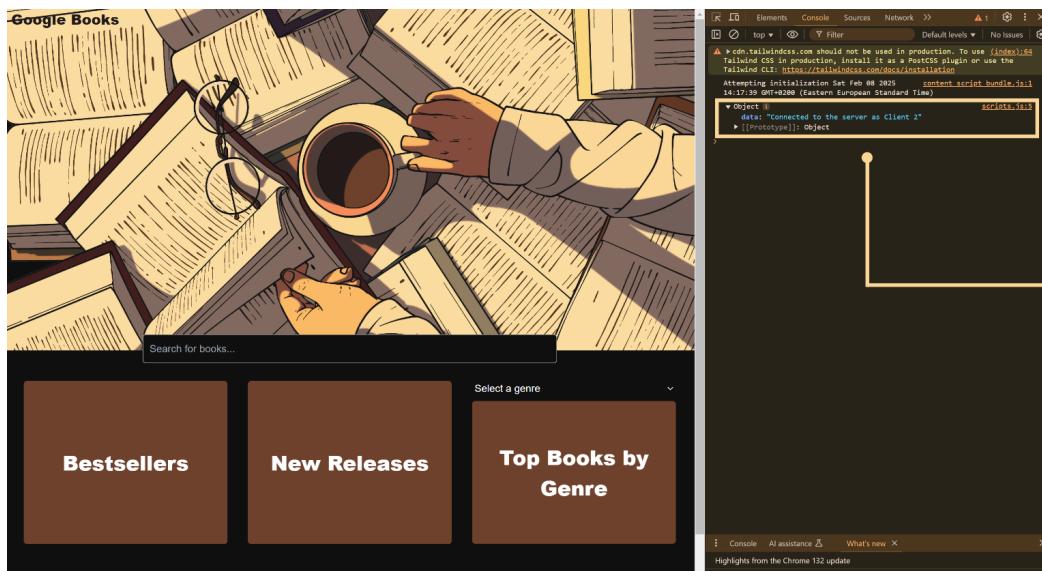
- On the client side, a responsive and modern frontend was built using HTML, Tailwind CSS, and JavaScript. The frontend interacts with the server through Socket.IO, enabling users to search for books by title or author and get results dynamically.

Backend Implementation

- On the server side, a Flask application was developed that handles RESTful API requests using Flask-RESTx and manages WebSocket connections with Flask-SocketIO to handle real-time interactions. WebSockets are leveraged to reduce request-response latency and improve the user experience such that clients receive instant updates on book queries, new releases, and bestsellers. Additionally, as a testing mechanism, and a quirk we left in the final app, in the console, you can see as which client you are connected to the socket.

Below you will find a list of the key WebSocket Events used throughout the application:

- **book_query**: Searches books in real time.
- **bestsellers**: Retrieves bestsellers dynamically.
- **top_books_by_genre**: Fetches books based on user-selected genres.
- **new_releases**: Sends real-time updates on the latest book releases.
- **available_genres**: Provides a list of genres available for search.



Inspecting the apps' page

By looking in the console of the application you can observe that a communication with the socket was made, showcasing the Client connection

Public APIs Usage

- The server asynchronously fetches book data from external APIs, specifically the Google Books API and the New York Times Best Sellers API, using aiohttp and asyncio to ensure non-blocking data retrieval. Additionally, CORS was configured for cross-origin communication for the API requests. This setup ensures a smooth user experience with efficient data fetching that reduces the impact of API request limits by handling requests efficiently.

Books API 1.0

[Base URL: /]
/swagger.json

Search for books using Google Books API

books Book Search Operations

The screenshot shows the Books API search interface. At the top, there's a blue button labeled "GET" and a green button labeled "/books/genres". Below these are two tabs: "POST" and "/books/search". The "/books/search" tab is active, showing a "Parameters" section with a "Cancel" button. Under "Parameters", there's a table with columns "Name" and "Description". A red box highlights the "payload" row, which has a "required" status and a "Model" type. The payload value is set to a JSON object with a "query" field containing "Game of Thrones". Below the table is a "Cancel" button. Under "Parameter content type", it says "application/json" with a dropdown arrow. At the bottom of the search interface are "Execute" and "Clear" buttons.

The screenshot shows the search results for "Game of Thrones". It includes a "Responses" section with a "curl" command and a "Request URL" (https://books-app-yp3d.onrender.com/books/search). The main area displays the search results for "Game of Thrones", listing various editions and their details. A large portion of the page is occupied by the detailed description of the HBO series, which spans multiple lines of text. At the bottom right, there's a "Download" button.

Cloud Deployment

- The entire application is currently deployed as a web service on Render, a cloud platform designed to offer automatic scaling, HTTPS, and continuous deployment from Git repositories, supporting a various selection of programming languages and frameworks. For deploying the application, we made a free tier ‘Hobbie’ account that allowed us to simply create our project, link to the GitHub account where it is published, set the needed environment, and use their platform with a resource allocation of a maximum 512MB (RAM) and 0.1 CPU per month, more than enough for the size of this project.