

Title

Libramate the Online Book Store, Part 1

Topics Covered

HTML

CSS

Java Servlets

AJAX

Introduction

For this assignment, you will be creating a web application that will allow users to search for books access useful information of each book including reviews, ratings, and descriptions. This assignment will test your proficiency with HTML and CSS to design the web pages and using Servlets to connect front-end and back-end code.

Instead of handing you a JSON with all the information and a folder of images, you will be using the Google Books API to retrieve the information of the books.

API Introduction

An Application Program Interface, or API is a set of routines, protocols, and tools for building software applications. More practically, many technology companies create API's of their software to give developers some access to their technology without having to implement it from scratch. For example, the Google Maps API allows developers to embed Google Maps into their application.

To work with the API in your Java code, you will have to add the appropriate JAR file into your build path. You can download the appropriate files here: <https://developers.google.com/api-client-library/java/apis/books/v1>. After downloading the zipped folder, look at the readme.html and add the appropriate jar files for Servlet Dependencies.

Here is some documentation on making requests from the API:

<https://developers.google.com/books/docs/v1/using#RetrievingVolume>.

<https://developers.google.com/books/docs/v1/reference/volumes/list>

Here is some documentation on the Google Books API Library:

<https://developers.google.com/resources/api-libraries/documentation/books/v1/java/latest/>.

Here is the API key which is essential to accessing the API Library:

AIzaSyCqNvWSPrTyTvAPuOgvq_wRu5glxbmRsJg

Assignment

For this assignment, you are expected to construct some central features of a web app that will allow users to search for books and read information on the books. You are required to make three pages for this assignment, a home page **Figure 1**, a search result page **Figure 2**, and an information page **Figure 3**.

Your webpages should look reasonably similar in style to the examples shown in the figures. All pages should have a search bar with which book titles, book authors, ISBN, and subject may be searched. Given the search information, you must retrieve results from the API and display them to the user.

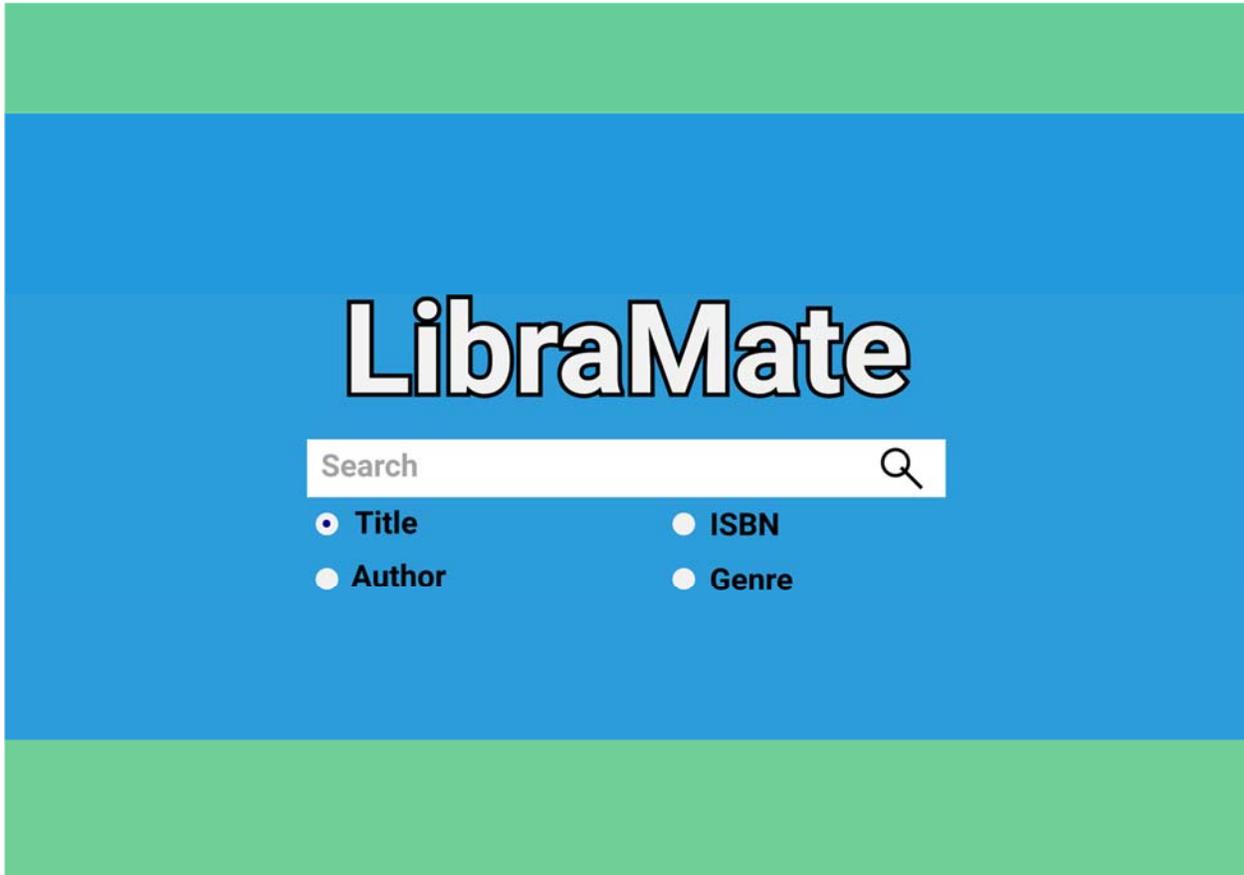


Figure 1: Home Page

LibraMate Harry Potter 🔍

- Title
- Author
- ISBN
- Genre

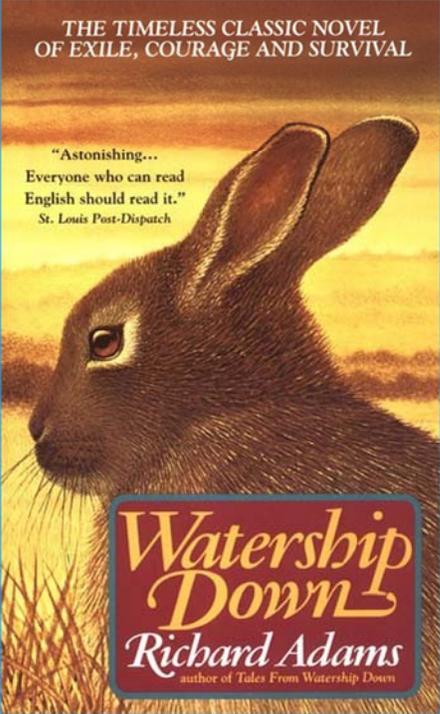
Book Title	Author
Harry Potter and the Philosopher's Stone	J.K. Rowling
Harry Potter and the Chamber of Secrets	J.K. Rowling
Harry Potter and the Prisoner of Azkaban	J.K. Rowling
Harry Potter and the Goblet of Fire	J.K. Rowling
Harry Potter and the Order of the Phoenix	J.K. Rowling
Harry Potter and the Half-Blood Prince	J.K. Rowling
Harry Potter and the Deathly Hallows	J.K. Rowling
Fantastic Beasts: Where to Find Them	J.K. Rowling

Figure 2: Search Page

NOTE: When searching “Harry Potter”, you won’t necessarily get these exact thumbnails in the exact order as shown above.

LibraMate

- Title
- ISBN
- Author
- Genre



Watership Down

by Richard Adams

Publisher: 201 Productions

Description:

A phenomenal worldwide bestseller for over forty years, Richard Adams' spellbinding classic *Watership Down* is one of the best-loved novels of all time. Set in the beautiful English countryside of the Berkshire Downs, a once idyllic rural landscape, this stirring tale of adventure, courage, and survival follows a band of very special rabbits fleeing the destruction of their home by a developer. Led by a stout-hearted pair of brothers, they leave the safety of Sandleford Warren in search of a safe haven and a mysterious promised land, skirting danger at every turn. Also, Matteo's favorite book.

Rating:

★
★
★
★
★

Figure 3: Information Page

NOTE: The description above is probably not going to be the same description you get when you search for Watership Down by Richard Adams.

Search Functionality:

On the side of the Search bar, there should be an option to search should be radio buttons giving the user the choice to search by author, title, ISBN, or subject. Both ISBN 10 and 13 should work, but we will test with ISBN 13.

Your response from the API may return many volumes, but you are only to display twelve titles at most.

Information Page:

The user may click on a title which will direct them to the information page. This page should contain relevant data including the title, authors, publisher, description, and average rating along with the thumbnail, as similar as possible to the screenshot above.

Home Button:

You will notice on the top left corner of the results and information page is the title of the web application. Clicking on this should redirect the user to the home page

The screenshots above were taken with a resolution of 1440x1024. Make sure that your application performs similarly at that (or a similar) resolution.

Notice that the scrollbar is only on the bottom part of the search and information pages. The scrollbar should NOT be on the entire page, so the search bar will remain at the top of the page the entire time.

Grading Criteria

Web Design (1.5%)

0.5% - The home page looks similar in style to the sample

0.5% - The search results page looks similar in style to the sample

0.5% - The information page looks similar in style to the sample

Functionality (3.0%)

0.1% - Clicking the logo on any page returns the user to the home page

0.5% - Searching by book displays appropriate titles

0.5% - Searching by author displays titles written by the author

0.5% - Searching by ISBN displays the appropriate title

0.5% - Searching by subject displays titles of relevant subject

0.9% - The information page of a title contains all relevant information