Ebook Site Documentation

1. Introduction

The ebook site allows users to search for books, read them online, and download them.

It integrates multiple APIs for fetching book information, displaying book previews, and downloading books in various formats (PDF, EPUB).

2. Features

- Search Books: Users can search for books by title, author, or genre.
- Read Books: Users can read the books in a preview format (e.g., PDF or EPUB).
- Download Books: Users can download books in various formats (e.g., PDF, EPUB).
- Responsive Design: The site is designed to work on mobile, tablet, and desktop.

3. APIs Used

- Google Books API: Fetches metadata and preview links for books.
  - Endpoint: https://www.googleapis.com/books/v1/volumes
  - Request Example:

```
axios.get('https://www.googleapis.com/books/v1/volumes', { params: { q: 'searchTerm', key: 'your-api-key' }});
```

- Open Library API: Provides free books, mainly public domain.
  - Endpoint: https://openlibrary.org/search.json
  - Request Example:

```
axios.get('https://openlibrary.org/search.json', { params: { q: 'searchTerm' } });
```

- Cloud Storage (Firebase or AWS S3): Hosts book files for download.
    - Example download URL for Firebase:

https://firebasestorage.googleapis.com/v0/b/your-app.appspot.com/o/ebooks%2Fyour-book.pdf?alt=media

4. Front-End

The front-end is built using React.js and integrates the following components:

- Book Search: Users can search for books by title, author, or genre.
  - Input field to capture search terms.
  - Display book results with title, author, and a preview link.

- Book Reader: Displays a book preview.
  - Uses PDF.js for displaying PDF files.
  - Alternatively, uses Readium for EPUB files.

- Download Link: Users can download the book by clicking a download button linked to a cloud storage URL.

5. Sample Code

Book Search Component:

```javascript
import { useState } from 'react';

import axios from 'axios';
```

```
const EbookSearch = () => {
  const [searchTerm, setSearchTerm] = useState('');
  const [books, setBooks] = useState([]);

  const searchBooks = async () => {
    try {
      const response = await axios.get('https://www.googleapis.com/books/v1/volumes', {
        params: { q: searchTerm, key: 'your-api-key' },
      });
      setBooks(response.data.items);
    } catch (error) {
      console.error('Error fetching books:', error);
    }
  };

  return (
    <div>
      <input
        type="text"
        value={searchTerm}
        onChange={(e) => setSearchTerm(e.target.value)}
        placeholder="Search for an ebook..."
      />
      <button onClick={searchBooks}>Search</button>

      <div>
        {books.map((book) => (
          <div key={book.id}>
            <h3>{book.volumeInfo.title}</h3>
            <p>{book.volumeInfo.authors?.join(', ')}</p>
            <a href={book.volumeInfo.previewLink} target="_blank" rel="noopener noreferrer">Read Preview</a>
          </div>
        ))}
      </div>
    </div>
  );
};

export default EbookSearch;
```

PDF Reader Component (using PDF.js):

```javascript
import { useEffect } from 'react';
import pdfjsLib from 'pdfjs-dist';

const EbookReader = ({ fileUrl }) => {
  useEffect(() => {
    const loadPdf = async () => {
      const pdf = await pdfjsLib.getDocument(fileUrl).promise;
      const page = await pdf.getPage(1);
      const scale = 1.5;
      const viewport = page.getViewport({ scale });
      const canvas = document.getElementById('pdfCanvas');
      const context = canvas.getContext('2d');
      canvas.height = viewport.height;
      canvas.width = viewport.width;

      page.render({ canvasContext: context, viewport });
    };
    loadPdf();
  }, [fileUrl]);

  return <canvas id="pdfCanvas"></canvas>;
};

export default EbookReader;
```

6. Deployment

To deploy the ebook site:

- Use Netlify or Vercel for deploying your React app.
- For cloud storage, configure Firebase or AWS S3 to host your ebook files.

7. Conclusion

This site will allow users to explore a wide range of books, read previews, and download them directly to their devices.

Integrating APIs like Google Books and Open Library enhances the search and book discovery process.