

Front-End UI/UX Mini Project CIA-3 Report

On

Personal Portfolio Website and E-Book Reader Web App

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• Course: UI/UX Design Fundamentals

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E-Book Reader Web App

1) Abstract

The **E-Book Reader Web App** is a responsive, browser-based reader that lets users browse a personal library, view book details, and read books inside a lightweight web reader. It focuses on a clean dark-themed UI, quick filtering/search, basic library management (favorites, add/remove), and a reader with table-of-contents, font/line-height controls, themes (light/dark/sepia), and page progress tracking.

2) Objectives

- Provide an accessible, distraction-free reading experience in the browser.
- Let users browse and filter a library (search, genre/format/status filters).
- Display book metadata and reading progress; allow favorites and library toggling.
- Create a reader with adjustable font size, font family, line height, themes, and simple pagination.
- Use standard, lightweight web technologies for portability (HTML5/CSS3/vanilla JS + Bootstrap/Font Awesome).

3) Scope of the Project

- Local, client-side demo app (no backend) to manage and read sample books.
- Supports text-based reading (sample content in script.js), with indication of EPUB/PDF formats.
- Good starting point for adding persistence (localStorage), real EPUB/PDF rendering (e.g., epub.js / PDF.js), user accounts, cloud sync, or online library integration.



4) Tools and Technologies Used

- HTML5 (semantic structure)
- CSS3 with a custom theme + Bootstrap 5.3 (layout, forms, responsive grid)
- JavaScript (Vanilla) for state, DOM rendering and interactivity
- Font Awesome for icons
- Images: Pexels (covers used in sample data)
- Dev tools: any code editor (VS Code recommended), browser devtools for debugging

5) HTML Structure Overview

- nav.navbar top navigation (brand, sidebar toggle, tagline).
- .container-fluid > .row main layout: left #sidebar and right .main-content.
- .view-section variants: #libraryView, #bookDetailView, #readerView only one visible at a time.
- #booksGrid grid where book cards are injected by JS.
- #readingContent reader content area (chapters loaded by JS).
- Structural decisions: responsive columns, separate panels for contents/settings inside reader view, sticky reader header/footer

6)CSS Styling Strategy

- Dark blue theme using CSS variables (:root) for consistent palette and easy overrides.
- Bootstrap for base components + custom classes (bg-navy, bg-dark-blue) to keep visual identity.
- Card-based library UI: .book-card with hover effects, overlay, and floating action buttons for quick actions.



- Reader styling: centered .reading-content with theme classes (theme-light, theme-dark, theme-sepia), adjustable line-height, font-size, and fonts for readability.
- Accessibility/UX touches: focus outlines for form controls, readable font stacks, sticky header/footer for reader, keyboard-friendly large click targets.
- Responsive: media queries for sidebar and reader height changes so reading works on mobile.

7) Key Features

- Library view with dynamic rendering of books array.
- Search (title/author/ISBN) + filters for genre, format, reading status.
- Quick filters: Favorites and My Library.
- Book detail view showing metadata, synopsis, tags, progress bar and actions: favorite, add to library, change status.
- Reader view with: pagination (prev/next), progress bar, table-of-contents, font size, font family, line-height, themes, and reading progress tracking.
- Visual cues: badges for format/status, progress bars on cards and detail view, rating stars.

8) Challenges Faced and Solutions

Below I list the real issues found in your JavaScript (mostly template literal / string quoting mistakes and selector typos) and how to fix them. Fixing these will make the app run as intended.

9) Outcome

 A polished UI for browsing a sample library of 6 books with cover images, metadata and badges.



- Working filters/search (once the template literal fixes are applied).
- A detailed book view with progress visualization and quick actions.
- A functional reader UI that supports pagination, font/line-height adjustment and theme switching (after fixes).
- A strong visual, responsive design ready for extension (PDF/EPUB integration, persistence).

10) Future Enhancements

Short term

- Save user state (favorites, progress, readingStatus) to localStorage for persistence.
- Keyboard navigation in reader (left/right arrows for pages; b for toggle bookmarks).
- Debounced search input to reduce re-rendering on each keystroke.

Mid term

- Integrate EPUB reading with [epub.js] to display real EPUB content and handle real TOC.
- Integrate PDF rendering with [PDF.js] for in-app PDF reading.
- Allow uploading of local files and parsing metadata (or at least adding user-provided books).

Long term

 User accounts + cloud sync, bookmarking across devices, social features (sharing highlights), notes & annotations, text-to-speech (TTS) mode, reading statistics & achievements.



11) Sample Code

Index file





```
| Color | Colo
```



```
| ch5 class="text-light mb-0" id="readerTitle"></h5>
| cmall class="text-muted" id="readerAuthor"></small>
| cdiv| class="reader-controls"|
| cdiv class="btn btn-outline-light me-2" id="contentsBtn">
| cdiv class="fas fa-list"></i>| cdiv class="fas fa-list"></i>| cdiv class="fas fa-list"></i>| cdiv class="fas fa-list"></i>| cdiv class="fas fa-lookmark*]></i>| cdiv class="fas fa-bookmark*]></i>| cdiv class="fas fa-bookmark*]></i>| cdiv class="fas fa-bookmark*]></i>| cdiv class="fas fa-cog"></idiv>| cdiv class="fas fa-cog"></idiv>| cdiv class="fas fa-cog"></idiv>| cdiv class="progress" style="height: 3px;">
| cdiv class="progress" style="height: 3px;">
| cdiv class="progress" style="height: 3px;">
| cdiv class="progress style="height: 3px;">
| cdiv class="progress bar bg-primary" id="readerProgress" role="progressbar">
| cdiv class="progress-bar bg-primary" id="readerProgress" role="progressbar">
| cdiv class="reader-container d-flex">
| cdiv class="reader-container d-flex">
| cdiv class="reader-container d-flex">
| cdiv class="contents-ist">| cdiv class="contents-spanel bg-dark-blue p-4 d-none" id="contentsPanel">| contentsPanel">| cdiv class="contents-spanel bg-dark-blue p-4 d-none" id="contentsPanel">| cdiv class="contents-spanel bg-dark-blue p-4 d-none" id="contentsPanel">| cdiv class="contents-spanel bg-dark-blue p-4 d-none" id="contents-spanel bg-dark-blue p-4 d-none" id="contents-spanel bg-dark-blue p-4 d-none" id="contents-spanel bg-dark-blue p-4 d-none" id="contents-spanel bg-dark-blue
```



```
| C|-- Reading Area --> | c|-- Reading Area ---> | c|-
```



CSS File















Javascript File



```
symposis: 'Set in the distant future amidst a feudal interstellar society, Dume tells the story of young Paul Atreides as his family accepts control of the desert planet Arroxis, the only source of the spice melange, the most important substance in the universe.', readingstatus: Reading', progress: 36, is avortice: true, intibrary: true, tags: ['sci-fi', 'epic', 'space'], publishedDate: '1965-08-01'

| did: '3', title: 'Pride and Prejudice', author: 'lane Austen', cower: https://images.pexels.com/photos/l130980/pexels-photo-l130980.jpeg?auto-compress&cs-tinysrgb&w=300&h=460&fit-crop', description: 'Romantic novel about manners, upbringing, and marriage', pener: 'Romantic novel about manners, upbringing, and marriage', peners: 'Romantic novel about manners, upbringing, and marriage', peners.' 'Romantic novel about manners, upbringing, and marriag
```

```
cover: 'https://images.pexels.com/photos/2041540/pexels.photo-2041540.jpeg/auto-compress&cs=tinysrgb&w=3008h=400&fit=crop',
description: 'Dystopian novel about totalitarian surveillance',
genne: Dystopian Fiction',
language: 'English',
format: 'PDF',
pages: 228,
isbn: '9708051524935',
reting: 4.5,
review: 3200,
synopsis: 'Set in Airstrip One, a province of the superstate Oceania, 1984 follows Winston Smith, a diligent and skillful rank-and-file worker who secretly
hates the Party and dreams of rebellion.',
readingstatus: 'To Read',
progress: 0,
isfavorite: false,
inlibrary: false,
inlibrary: false,
dags: ['dystopian', 'political', 'classic'],
publishedbate: '1949-06-08'
},
itile: 'The Hobbit',
author: '3.R.R. Tolkion',
cover: https://images.pexels.com/photos/1130623/pexels-photo-1130623.jpeg?auto-compress&cs-tinysrgb&w=300&h=400&fit=crop',
description: 'Fantasy'
language: 'English',
format: 'English',
pages: 366,
pages: 366,
synopsis: 'Bilbo Baggins is a hobbit who enjoys a comfortable, unambitious life. But his contentment is disturbed when the wizard Gandalf and a company of
dwarves arrive on his doorstep to whisk him away on an adventure.',
```



```
readingstatus: 'Reading',
propress: 60,
isfavorite: true,
inlibrary: true,
```

```
let currentPage = 1;
let totalPages = 106;
l
```



```
// Initialize filters
updatebookCount();

function setupEventListeners() {

// Sidebar toggle

didabarToggle. additventListener('click', toggleSidebar);

// Sidebar toggle

// Sidebar toggle

searchingut.additventListener('input', handlescarch);

generiliter.additventListener('change', handlefilter);

// Search and filters

searchingut.additventListener('change', handlefilter);

// Search and filters

searchingut.additventListener('change', handlefilter);

// Search and filter.

statusfilter.addiventListener('change', handlefilter);

// Olick actions

document.getElementById('favoriteStn').addEventListener('click', () >> filterByFavorites());

document.getElementById('favoriteStn').addEventListener('click', () >> filterByFavorites());

// Book detail actions

document.getElementById('roadBookStn').addEventListener('click', () >> toggleFavorites());

document.getElementById('favoriteStn').addEventListener('click', () >> toggleFavorites());

document.getElementById('favoriteStn').addEventListener('click', 0) >> toggleFavorites();

document.getElementById('statusSelect').addEventListener('click', 0) >> toggleTavorites();

document.getElementById('statusSelect').addEventListener('click', 0) >> toggleTavorites();

document.getElementById('statusSelect').addEventListener('click', 0) >> toggleTavorites();

document.getElementById('statusSelect').addEventListener('click', 0) >> toggleTavorites();

document.getElementById('contentBin').addEventListener('click', 0) >> toggleTavorites();

document.getElementById('contentBin').addEventListener('click', 0) >> toggleTavorites();

document.getElementById('contentBin').addEventListener('click', 0) >> toggleTavorites();

document.getElementById('fontSelep').addEventListener('click', 0) >> toggleTavorites();

document.getElementById('fontSelep').addEventListener('click', 0) >> toggleTavorites();

document.getElementById('fontSelep').addEventListener('click', 0) >> toggleTavorites();

document.getElementById('fontSelep').addEventListener('click', 0) >> toggleTavorites();

documen
```

```
document.gettlementById('lineWeightRange').addfventListener('input', changeLineWeight);

// theme buttons
document.queryselectorAll('.theme-bbn').forEach(bbn >> {
    btn.addfventListener('click', () >> changeTheme(btn.dataset.theme));
});

// close sidebar when clicking outside on mobile
document.addfventListener('click', function(e) {
    if (window.innerWidth < 992 && sidebar.classList.contains('show')) {
        if (isidebar.cotassList.remove('show');
        }
    }
});

// thick all views
library/iws.classList.toggle('show');

// blookBetailView.classList.add('d-none');
readerview.classList.add('d-none');
readerview.classList.add('d-none');
// show selected view
wwitch(view) {
    // blook selected view
wwitch(view) {
    // show selected view
    wwitch(view) {
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    // show selected view
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    wwitch(view) {
    // show selected view
    // show
```





```
| div class="book-info">
| div class="book-info">
| div class="book-author">by $[book.author]
| div class="book-description">s{book.author}
| div class="book-description">s{book.author}
| div class="book-description">s{book.author}
| div class="rating-reviews">(s{book.rating})
| span class="rating-reviews">(s{book.rating})
| span class="rating-reviews">(s{book.reviews}) reviews)
| span class="rating-reviews">(s{book.reviews}) reviews)
| span class="rating-reviews">(s{book.reviews}) reviews)
| span class="badge statusclass]">s{book-span}
| span class="badge statusclass]">s{book-format}
| span class="badge statusclass]
```



```
function generatestars(rating) {
    let stars = ";
    for (let i = 1; i < 5; i++) {
        if (i < Rkth.floor(rating)) {
            stars = ' < class='fas fa-star'>(j)';
        } else if (i = 0.5 < rating) {
            stars + ' < class='fas fa-star-half-alt'>(j)';
        } else if (i = 0.5 < rating) {
            stars + ' < class='fas fa-star-half-alt'>(j)';
        } else {
            stars + ' < class='fas fa-star'>(j)';
        }
        }
        return stars;
    }
}

function viewBookDetail(bookid) {
    selectedBookid = bookid;
    const book = books.fin(b >> b.id === bookId);

    if (lbook) return;

    // Populate book detail view
    document.getElementById('detailCover').src = book.cover;
    document.getElementById('detailCover').alt = book.title;
    document.getElementById('detailCover').alt = book.title;
    document.getElementById('detailCover').textContent = book.title;
    document.getElementById('detailRating').inemfFHHL = generatestars(book.rating);
    document.getElementById('detailRating').inemfFHHL = generatestars(book.rating);
    document.getElementById('detailRating').inemfFHHL = generatestars(book.rating);
    document.getElementById('detailStatus').textContent = book.taling');
    document.getElementById('detailStatus').textContent = look.inguage;
    document.getElementById('detailStatus').textContent = book.language;
    document.getElementById('detailInguage').textContent = new Date(book,publishedDate).getFullYear();
    document.getElementById('detailFormat').textContent = new Date(book,publishedDate).getFullYear();
    document.getElementById('detailFormat').tex
```



```
showliew('detail');

function openReader(bookId) {

selectedBookId = bookId;

const book = books.find(b => b.id === bookId);

f(|book|) return;

f
```

```
function toggletibrary(bookid) {

const book = books.find(b ⇒ b.id === bookid);

if (book) {

book.intibrary = lbook.intibrary;

if (currentView === 'library') {

renderBooks();

}

if (currentView === 'detail' && selectedBookId === bookId) {

viewBookDetail(bookId);

}

function handlestatuschange() {

const nestatus = document.getElementById('statusSelect').value;

const book = books.find(b ⇒ b.id === selectedBookId);

if (book) {

book.readingStatus = nesStatus;

if (nesStatus === 'Finished') {

book.progress = 108;

} else if (nesStatus === 'To Read') {

book.progress = 08;

}

// Reader functions

function toggleContentty() {

const panel = document.getElementById('contentsPanel');
```



```
panel.classList.toggle('d-none');

// Hide settings panel if open
document.gettlementhyId('settingsPanel').classList.add('d-none');

// Hide settings() {
    const panel = document.gettlementhyId('settingsPanel');
    panel.classList.toggle('d-none');

// Hide contents panel if open
document.gettlementhyId('contentsPanel').classList.add('d-none');

// Hide contents panel if open
document.gettlementhyId('contentsPanel');

// Hide contents panel if open
document.gettlem
```



```
content.inerHTML = sampleContents;
contents.list.innerHTML = sampleContents.list.');
contents.list.innerHTML = sam
```



```
applyReaderSettings();

function applyReaderSettings() {
    const content = document.getElementById('readingContent');

    content.style.fontSize = $[readerSettings.fontSize]px;
    content.style.lineHeight = readerSettings.lineHeight;

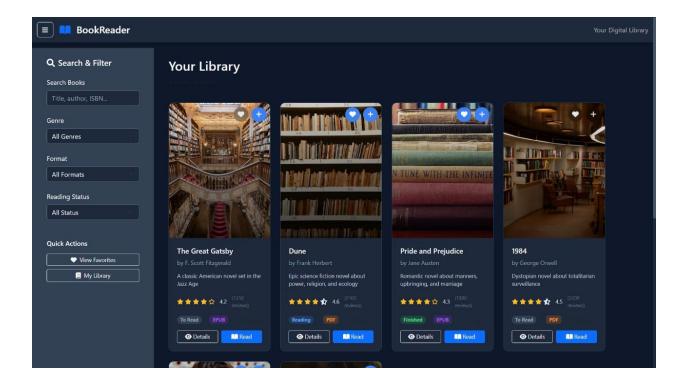
    // Apply font family
    switch(readerSettings.fontFamily) {
    case 'serif':
        content.style.fontFamily = 'Georgia, serif';
        break;
    case 'sans-serif':
        content.style.fontFamily = 'system-ui, sans-serif';
        break;
    case 'monospace':
        content.style.fontFamily = 'Monaco, monospace';
        break;

// Apply theme
content.className = reading-content flex-grow-1 p-5 theme-$[readerSettings.theme];

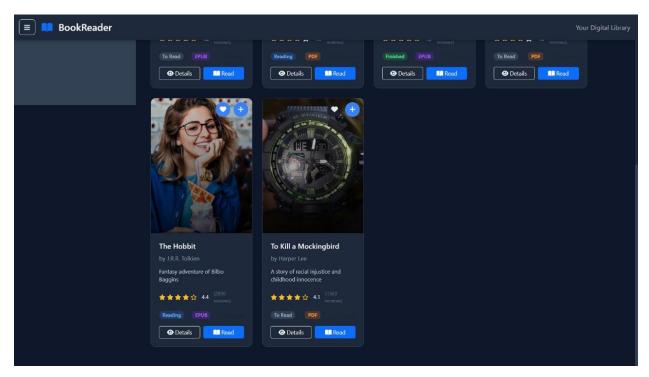
// Apply theme
content.className = reading-content flex-grow-1 p-5 theme-$[readerSettings.theme];

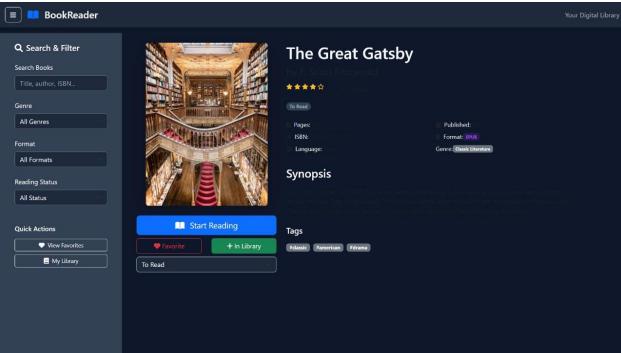
// Apply theme
content.className = reading-content flex-grow-1 p-5 theme-$[readerSettings.theme];
}
```

12. Screenshots of Final Output

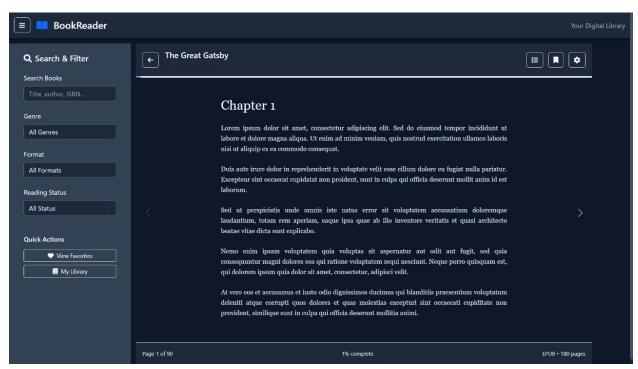


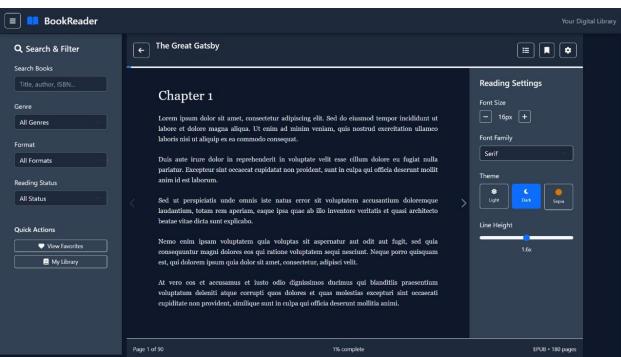














13) Conclusion

You've built a strong, well-structured front-end for an E-Book Reader Web App with thoughtful UI and reader options. Fixing the JS string/template issues and adding persistence will turn this from a demo into a reliable local app. The current CSS design and HTML structure make it production-friendly once EPUB/PDF integration and backend/persistence are added.

14) References

- Bootstrap 5 docs layout, forms, responsive grid.
- Font Awesome icons.
- MDN Web Docs DOM API, querySelector, classList, template literals, localStorage.
- CSS-Tricks patterns for responsive cards, -webkit-line-clamp, and custom scrollbars.
- Epub.js for rendering EPUB files in-browser (future integration).
- Mozilla PDF.js for rendering PDF files client-side (future integration).
- Pexels cover images (you used Pexels images in sample data).