BookLeaf

Vision Document

Version 2.0

Revision History

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Table of Contents

1. Introduction 3

1.1 References 3

2. Positioning 3

2.1 Problem Statement 3

2.2 Product Position Statement 3

3. Stakeholder and User Descriptions 3

3.1 Stakeholder Summary 3

3.2 User Summary 3

3.3 User Environment 3

3.4 Summary of Key Stakeholder or User Needs 3

3.5 Alternatives and Competition 3

4. Product Overview 3

4.1 Product Perspective 3

4.2 Assumptions and Dependencies 3

5. Product Features 3

6. Other Product Requirements 3

Vision (Small Project)

# Introduction

* These days, owning physical books can prove itself to be a daunting task (ie. Taking care, preserving, storage place, etc.). Because of that, the demand for digital (or e-books) are becoming more and more popular and necessary for all demographics.
* BookLeaf, an online website dedicated to e-books, meanwhile still keeps the experience realistic to that of reading a real book. For example, highlighting interesting/important parts, comments, user’s thoughts, set reading goals, etc. as well as still providing basic needs like upload (.pdf, .epub, .mobi,...), download, add to personal library, share,.... and more.

# Positioning

## Problem Statement

| The problem of | Owning physical books, as well as maintaining a library |
| --- | --- |
| affects | teachers, students, book-lovers and online library managers, |
| the impact of which is | Tremendous, affecting our users’ methods of storing, accessing and maintaining an e-library. |
| a successful solution would be | allowing users to upload, download unimpededly books, essays and publications. Also, allowing users to edit, as well as highlight the materials. |

| The problem of | Lack of social and community features in digital reading platforms |
| --- | --- |
| affects | Book club members  Teachers and educators  Readers with friends |
| the impact of which is | Reduced reading engagement and motivation  Limited knowledge sharing opportunities  Difficulty finding like-minded readers |
| a successful solution would be | Allow progress sharing  Enable shared annotations and highlights  Support reading challenges and goals |

| The problem of | High costs of maintaining physical book collections |
| --- | --- |
| affects | Readers, students, teachers |
| the impact of which is | Financial burden of purchasing and maintaining books  Physical storage limitations in homes/offices  Reduced accessibility to reading materials |
| a successful solution would be | Enable seamless book access across devices  Support multiple file formats (PDF, EPUB, ...) |

| The problem of | Loss of traditional reading experience features when transitioning to digital formats |
| --- | --- |
| affects | Researchers needing note-taking capabilities  Visual comfort-sensitive readers |
| the impact of which is | Reduced reading comprehension  Difficulty in maintaining focus  Lost reading immersion |
| a successful solution would be | Multiple viewing modes  Seamless note-taking system |

## Product Position Statement

| For | everyone, especially those who love reading books. |
| --- | --- |
| Who | is looking for a community driven books sharing platform. |
| The BookLeaf | is an e-book reader. |
| That | is a cross-platform application; helps users to store their books, manage their reading process, highlight things,... within a reasonable price. |
| Unlike | Kindle (expensive, not available on website), Google Playbook (only mobile app, no realistic book reading experiences), Wattpad,... |
| Our product | is reasonably priced, user-friendly, convenient. |

| For | University students, researchers, and academic professionals |
| --- | --- |
| Who | Need an efficient way to manage, read, add notes, add highlight digital academic materials and textbooks |
| The BookLeaf | Is a web-based digital library platform |
| That | Supports multiple document formats (PDF, EPUB)  Offers synchronization  Support highlighting, taking notes |
| Unlike | Kindle (expensive device required, limited file support)  Moon Reader (doesn’t offer synchronization) |
| Our product | Provides seamless cross-platform access  Maintains affordability for students  Create an efficient way to manage academic content |

| For | Book enthusiasts, reading groups, and digital book collectors |
| --- | --- |
| Who | Want a personalized reading experience with community features and library management |
| The BookLeaf | Is a social-first digital reading platform |
| That | Creates an engaging reading community  Maintains traditional reading experiences |
| Unlike | Goodreads (focus on reviews, not reading)  Wattpad (emphasis on user-generated content)  Apple Books (platform-locked, expensive) |
| Our product | Supports multiple reading styles  Creates a community-driven experiences |

Our product:

* Have an affordable pricing
* Focus on format flexibility
* Community focus

# Stakeholder and User Descriptions

## Stakeholder Summary

| **Name** | **Description** | **Responsibilities** |
| --- | --- | --- |
| Team members | Developers and designers. | Ensure that the system is working normally, not riddled with bugs and is maintainable.  Ensure that the system meets the demand of the targeted demographic and market. |
| Course teacher | Academic supervisor overseeing the project development  Evaluates project deliverables and progress  Provides technical and methodological guidance | Closely monitors the progress, process of the project.  Make remarks (approval or disapproval) of certain project’s mechanism (copyright infringement, privacy infringement, etc.)  Ensures project aligns with course learning objectives |
| Project Team Lead | Student responsible for team coordination and project management | Coordinates team meetings and assignments  Manages project documentation  Maintains project schedule  Ensures equal participation among team members |
| End-users | Users who use this app to read materials, read books | Provide feedback on user experience  Report bugs and technical issues  Suggest community features  Request features |
| Technical team | Platform administrators with elevated system privileges | Provide technical support  Maintain system health  Manage storage allocations |
| Regulators | Digital rights management  Copyright compliance monitors  Enforces academic integrity | Review terms of service  Advise on content restrictions  Enforce university guidelines |

## User Summary

| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| --- | --- | --- | --- |
| Students | Low budget, free users  Heavy users of academic materials. | Request features for academic use  Share usage patterns and needs  Validate academic feature requirements | End-users |
| Freelance authors | Aspiring authors who want to share their works. | Share works, personalize reading experiences, and engage in quality control.  Validate sharing capabilities  Upload and manage content  Set sharing permissions  Monitor content usage | End-users |
| Individual Readers | General readers  Personal library collectors  Various reading preferences | Report bugs.  Personalize reading experience, share thoughts, and contribute to content quality.  Suggest personal library features  Track reading progress | End-users |
| Administrative Users | Technical team members with administrative access  Platform maintenance supervisors | Handle user registration issues  Manage user roles and permissions  Address user complaints  Generate system reports  Monitor system performance | Technical Team |
| API Users | Developers using platform API  Automation users | Suggest API improvements  Monitor API performance  Test API functionality | Technical Team, Team Leader |

## User Environment

* **Team size:** Varied user base from individuals to larger groups, with possible changes in user engagement levels.
* **Task Cycle:** Flexible, with reading sessions lasting anywhere from minutes to hours.
* **Platforms:** Web and mobile for easy access across devices.
* **Integration Requirements:** Potential for cross-compatibility with common file formats like PDF and EPUB.

**Task Completion Environment**

* Number of Users: 1 user per session and not changing
* Task Duration (can change depending on each user):
* Average reading session: 30-90 minutes
* Quick reference sessions: 5-15 minutes
* Study sessions: 2-4 hours
* Activity Distribution (can change depending on each user):
* Reading: 60% of time
* Note-taking: 20% of time
* Navigation/Organization: 10% of time
* Social interaction: 10% of time

**Location Types**

* Indoor environments (primary): Libraries, Classrooms, Home study areas, Offices,...
* Mobile environments: Public transport, Cafes, Outdoor spaces,...

**Technical Environment**

* Internet Connectivity:
* Stable broadband: 70% of usage
* Mobile data: 20% of usage
* Offline mode: 10% of usage
* Minimum requirements: 3G connection
* Preferred: 4G/5G or WiFi
* Device Types:
* Laptops: 45% of access
* Tablets: 30% of access
* Smartphones: 25% of access

**Platform support**

* Current Platform: Web browsers (Chrome, Firefox, Edge, ...)
* Future Platform: Native mobile apps (iOS/Android), E-reader integration

**Integration Requirements**

* Storage Integration: Google Drive, Dropbox, Onedrive,...
* Social Platform: GoodReads

## Alternatives and Competition

* Competitors: Kindle and Google Play Book.
* Major strengths:
  + Consistent and friendly UX.
  + Google Play Book provides live editing tools while users are reading a book (font change, highlight, etc.).
* Major weakness:
  + App-based.
  + Can be costly (Subscription or pricing on products, etc.).
  + Limited file format: Kindle only allows .azw3.
* Alternatives are Apple Kindle, Google Play Book, Wattpad.

**Amazon Kindle**

* Strengths:
* Extensive book marketplace
* Seamless device integration
* Strong brand recognition
* Advanced e-ink technology for dedicated devices
* Established user base
* Weaknesses:
* Limited file format support (primarily .azw3)
* Requires expensive dedicated devices for optimal experience
* Closed ecosystem
* Subscription costs
* No web-based reading interface

**Google Play Books**

* Strengths:
* Cross-platform compatibility
* Integration with Google ecosystem
* Strong mobile app presence
* Font customization options
* Weaknesses:
* Higher pricing for books
* Limited community features
* Restricted file format support

# Product Features

**User authentication System**

| *No.* | *Feature* | *Description* | *Priority* |
| --- | --- | --- | --- |
| 1 | Registration | Email-based registration  Username selection  Password creation with security requirements  Email verification process | High |
| 2 | Login System | Email/username and password login  Remember me functionality  Multi-device login support | High |
| 3 | Password Management | Allow changing password | High |

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**Profile Management**

| *No.* | *Feature* | *Description* | *Priority* |
| --- | --- | --- | --- |
| 1 | User Profile Setup | Basic information editing  Profile picture upload | High |
| 2 | Account Setting | Email address updates  Session management | High |
| 3 | Account Deletion | Account deactivation option  Data export capability | Medium |

**Reading Features**

| *No.* | *Feature* | *Description* | *Priority* |
| --- | --- | --- | --- |
| 1 | Documents, Books viewer | PDF, EPUB rendering  Reading mode (single/double page)  Page-by-page navigation | High |
| 2 | View customization | Font size adjustment  Font family selection  Theme selection (light/dark)  Background color options | Medium |
| 3 | Tracking reading progress | Automatic progress tracking  Reading time statistics  Page count tracking  Reading speed calculation  Chapter completion tracking | High |
| 4 | Note-Taking | Text highlighting  Multiple highlight colors  Note-taking capability  Bookmark creation | High |
| 5 | Reading Goals | Daily reading targets  Reading streak tracking | Low |

# 

**Library and Book Management Features**

| *No.* | *Feature* | *Description* | *Priority* |
| --- | --- | --- | --- |
| 1 | Upload PDF | Upload books/articles/publications/personal works in the form of PDFs. | High |
| 2 | Upload EPUB | Upload books in their original and most used format. | High |
| 3 | Personal shelf | Allow verified users to create their own ebook library(s), add & remove their collection of books, either private or public them for forum usage. | High |
| 4 | Download | Download books in the formats of either PDF or EPUB | Medium |
| 5 | E-books manipulation | Users are able to draw highlight(s) on books, add comment(s), make bookmark(s) according to their own needs as well as sharing their notes to others. | Medium |
| 6 | Set deadlines/goals | Make personal deadlines/goals on your book reading experience (Chapter checkpoint, etc.) | Low |
| 7 | Library Organization | Collection management  Tags and categories  Sort and filter options | High |
| 8 | Books Upload | Features for adding books to the platform  PDF upload support  EPUB upload support  Format validation  Metadata extraction | High |

**Social Features**

| *No.* | *Feature* | *Description* | *Priority* |
| --- | --- | --- | --- |
| 1 | Social Sharing | Share reading progress  Share collections | Medium |
| 2 | Manage Friends | Basic friend functions: add friend, remove friend, block users | Low |

**Admin Features**

| *No.* | *Feature* | *Description* | *Priority* |
| --- | --- | --- | --- |
| 1 | User Management | Monitor and manage user accounts  Suspend or deactivate problematic accounts  Register admin account | High |
| 2 | Content Moderation | Ability to remove inappropriate or illegal content | Medium |
| 3 | User Reading Statistics Overview | Real-time active users tracking  Current reading monitoring  Monitor users session durations and frequency | Low |

# Non-Functional Requirements

* **Performance:** Must be fast and responsive on both web and mobile devices, with minimal lag in loading and switching between pages.
* Page load time: < 3 seconds under normal conditions
* Document rendering: < 4 seconds for standard PDF/EPUB files
* **Robustness:** Capable of handling high user volumes with low error rates
* Maintain performance with 1000+ total users.
* Support minimum 100 concurrent users
* **Usability:** User-friendly, intuitive interface with easy navigation.
* Consistent navigation patterns
* Maximum 4 clicks to reach any feature
* Support for keyboard navigation
* **Security:** Compliance with privacy standards, especially regarding copyrighted content.
* Password requirements: Minimum 8 characters, mixed case, numbers
* Secure storage of user data and files
* **Compatibility:**
* Browser support: Latest 2 versions of major browsers
* Mobile responsiveness
* Support for high-DPI displays
* **Resource Utilization:**
* Client-side memory usage: < 512MB RAM
* Browser storage usage: < 100MB per session
* CPU utilization: < 30% on standard operations