



Group 10

Members:

Đinh Mỹ Kỳ

Nguyễn Minh Uyên

Trương Nhật Minh

Phạm Việt Hoàng

1. Problem statement

Observation → problem:

- Not enough 100% free resources of ebooks for book readers.
- Have to go to the library to borrow printed books.
- A lack of interaction among book readers.

Affect



- Book readers (teachers, students, book hunters...)
- Those who want to share printed books but don't know how to share

Impact:

- Read or download a limited number of ebooks on some websites.
- Book hunters may not be able to find ancient and rare books.
- Going to the library to find, borrow printed books and give books back takes much time.
- Library books are often in old editions (must be published for a while).

Impact



Some people **love both ebooks and printed books** but can't find, read and borrow books based on their favorite formats.



Book readers **can't discuss on their favorite books** with those who have the same interest.



Some people **want to share their books with others** (free ebooks or printed books or both) but **cannot share**

Sucessful solution?

- E-book + printed books → satisfy different types of users:

read, download e-books; book appointment to borrow printed books on available days to borrow (not conflict with other people who are borrowing those books).

- Book borrowers can chat or call with book lenders

→ ship printed books / meet book lenders directly at the given address and borrow books.

- Bidirectional interaction:

- Book readers can share books for others (upload pdf ebooks or some previewed photos of printed books taken by users who upload)
- People can discuss on their favorite books

1. Product position statement

- For?

Book readers (teachers, students, book hunters...)

- Who?

- Students: use books to study (mostly prefer free books, need to borrow printed books),
- Teachers: use books as teaching resources, need to know about new updates / new editions of the text books
- Book hunters who love to collect ancient and rare books.

1. Product position statement

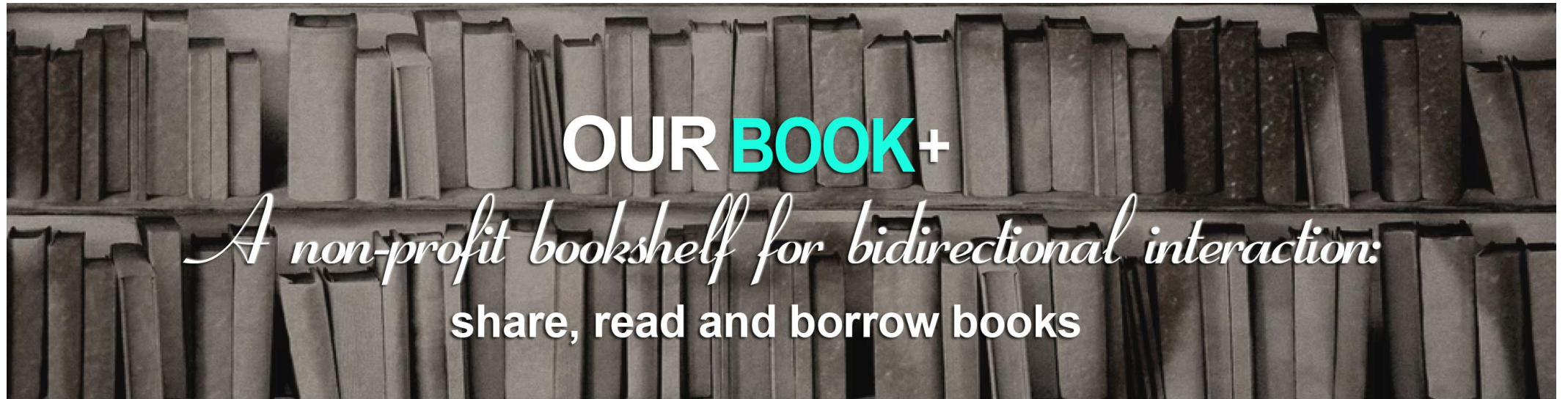


- Allows people to read, download ebooks for free
- Book appointments to borrow printed books
- Share their own books with other people to build up our “bookshelf”
- Interact bidirectionally by discussing their favorite books or new updates of the books using our Q&A feature.



- Online books sites such as gutenberg.org, tusachvui.com that only share online ebooks for people to read and download
- Non-profit library like LittleFreeLibrary let people go directly to the public bookcase and exchange printed books

1. Product position statement



Our product:

Website that combines both 100% free ebooks for reading, download and printed books for borrowing, connect book readers effectively.

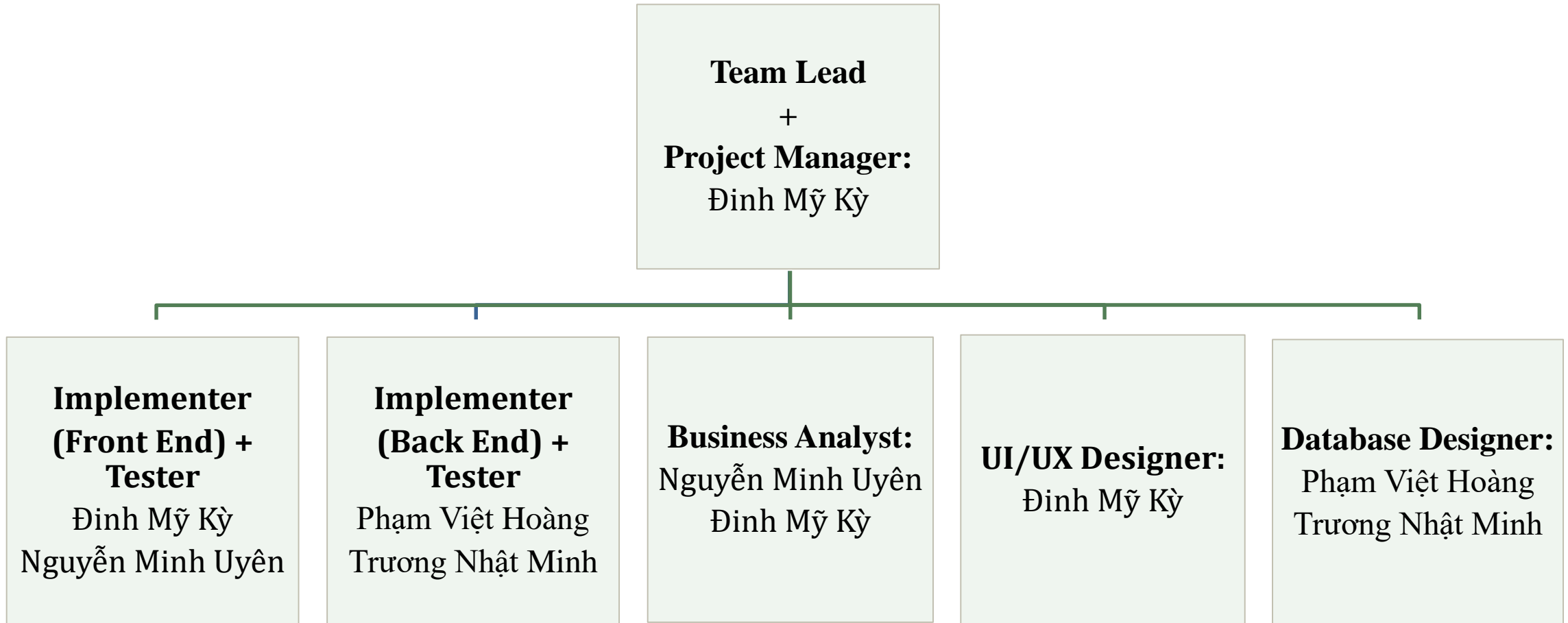
1. Users/market

- Anyone who reads books such as teachers, students, book-hunters.
- These people can share books for other users, or the old generation can share valuable and rare books for the young generation, which contribute to the non-profit bookshelf for book lovers.

=> Environment: Web, easy to use on mobile phone, computer, laptop



2. Team structure



2. Responsibility of members

Team Lead, Project Manager (Đinh Mỹ Kỳ)

- Plan the project
- Assign tasks for members
- Keep track of each member's work to ensure that tasks are completed on time
- Ensure software requirements (System and User requirements)
- Monitor the meetings
- Write weekly reports
- Edit documents and submit the group's work

2. Responsibility of members

Implementer (Front end): Đinh Mỹ Kỳ and Nguyễn Minh Uyên

- Write source code for web front end:
 - Uyên: Login/Signup, Share book, View cart, Q&A
 - Kỳ: Homepage, Search book, View book detail, Borrow book
- Review source code
- Collaborate with backend developers

2. Responsibility of members

Implementer (Back end): Phạm Việt Hoàng and Trương Nhật Minh

- Write source code for web back end:
- Review source code
- Collaborate with frontend developers

Business Analyst: Nguyễn Minh Uyên and Đinh Mỹ Kỳ

- Clarify the purpose of the product
- Document requirements
- Communicate with team members about the requirement

2. Responsibility of members

UI/UX Designer: Đinh Mỹ Kỳ

- Design the user interface for the product based on product's features and requirements
- Create UI prototype
- Communicate with team members on user interface that corresponds with product's features

Database Designer: Phạm Việt Hoàng and Trương Nhật Minh

- Design the database schema for the product based on product's feature
- Communicate with team members on how database corresponds with product's features

2. Responsibility of members

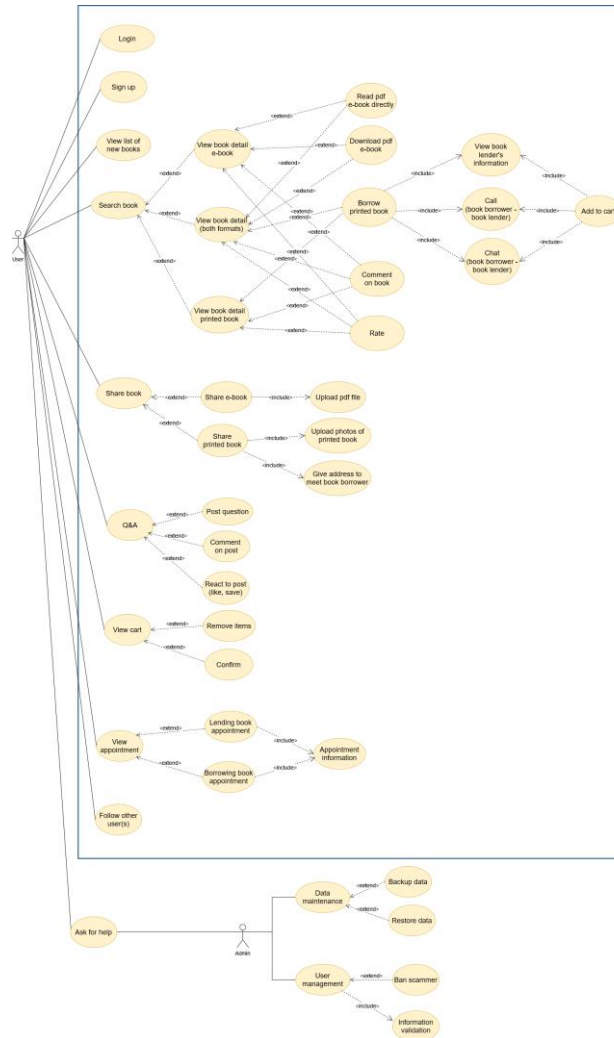
Tester: All members

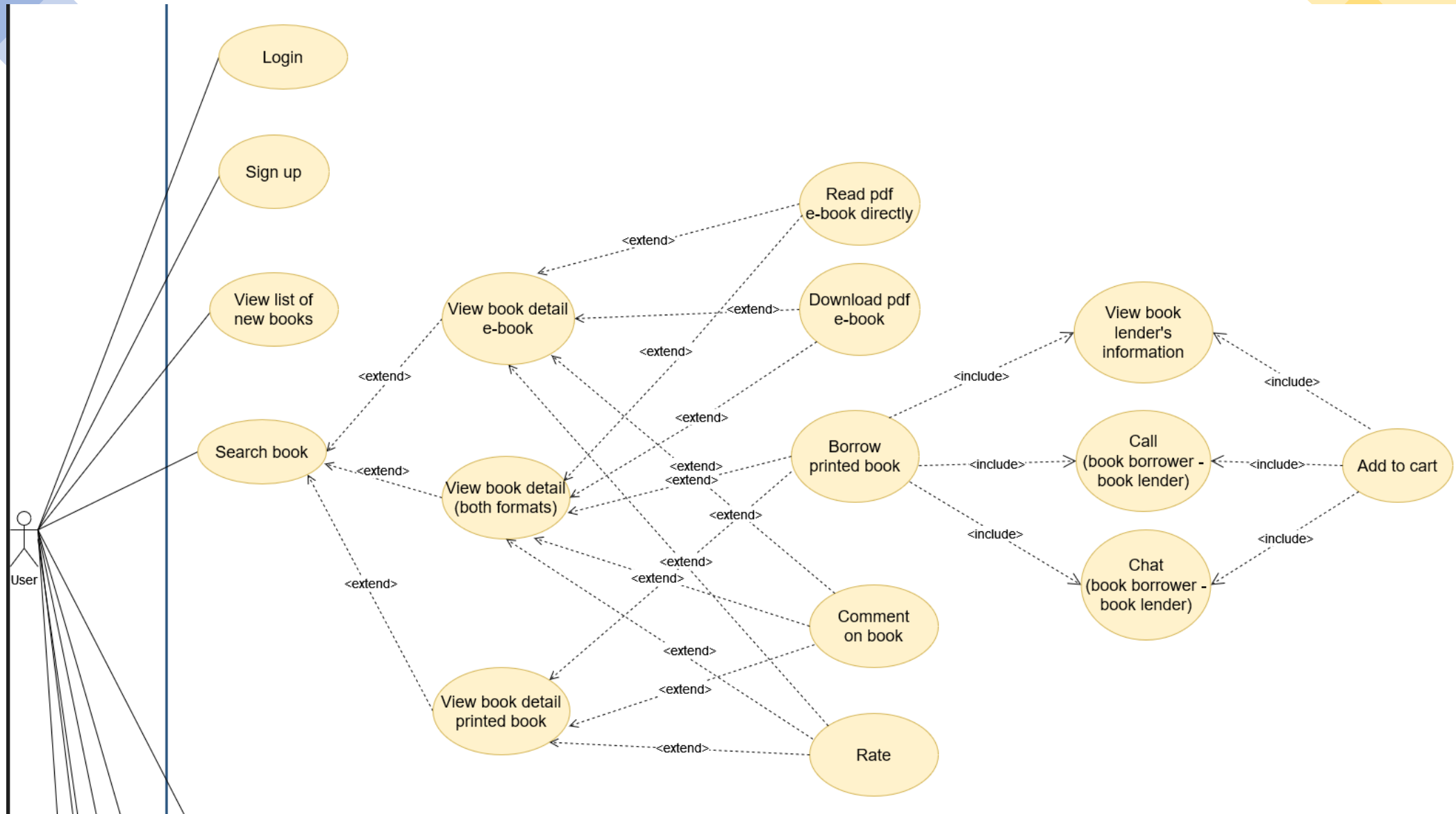
- Write test plan, test cases, test scripts
- Perform unit test
- Perform test on different devices: computer, mobile phone
- Analyze and recover from test failures

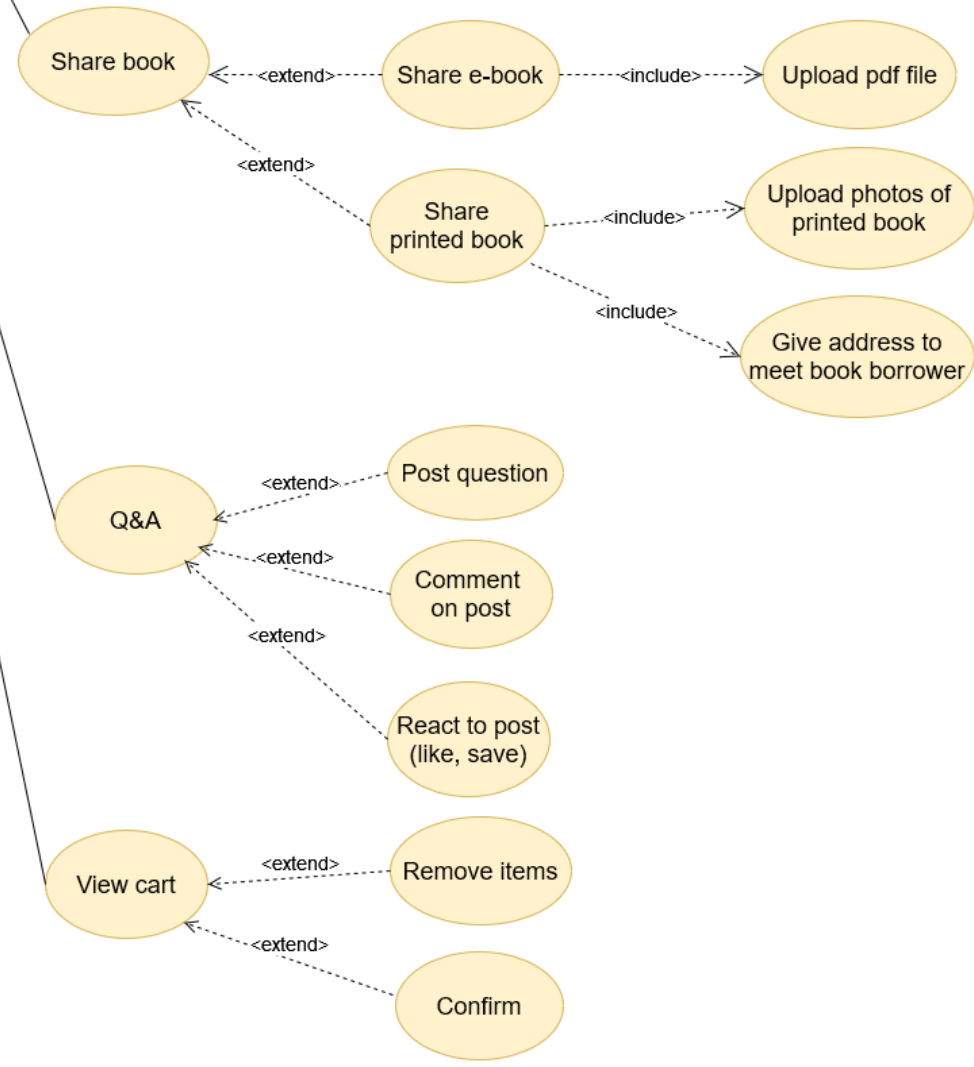


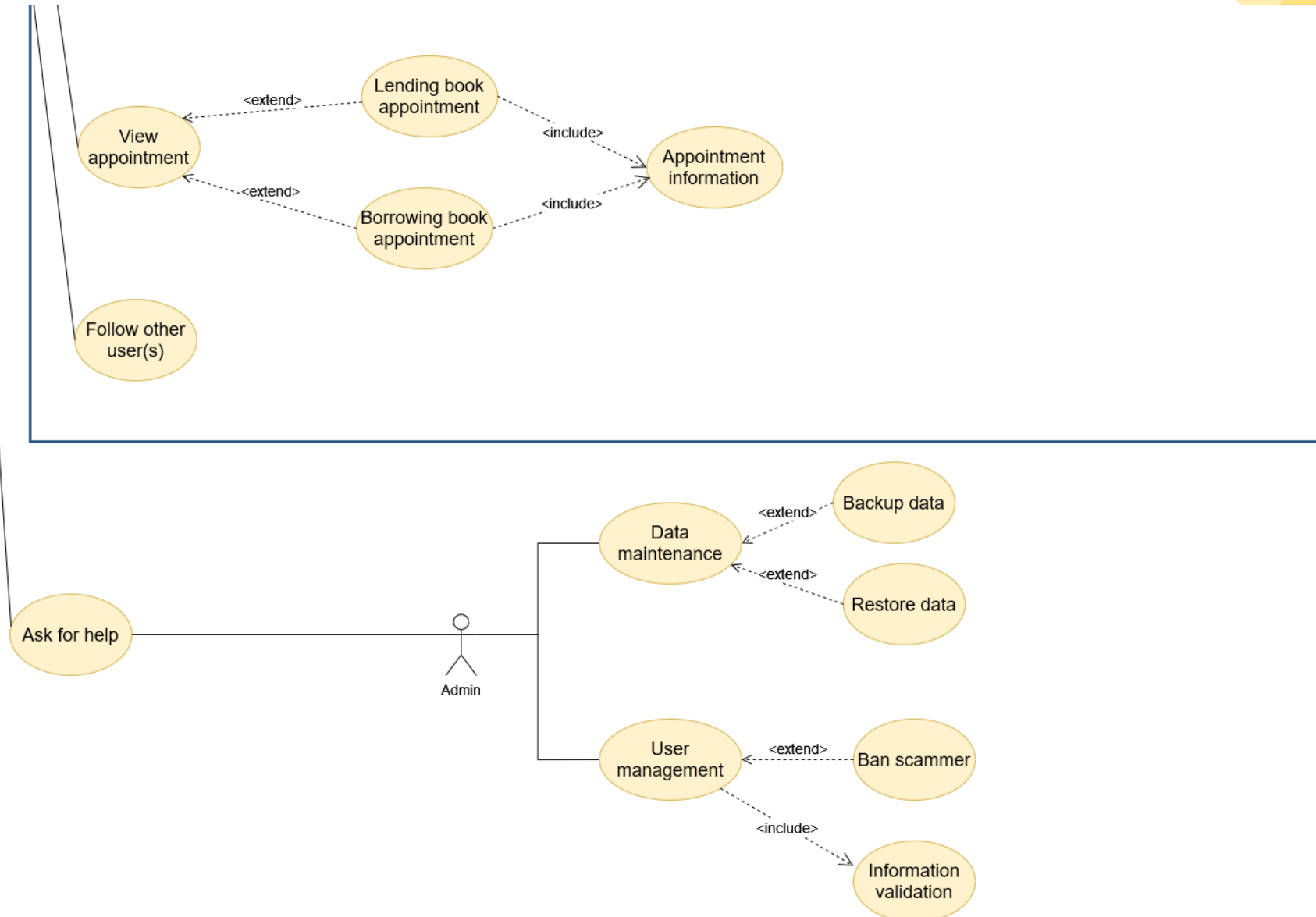
Software Requirements

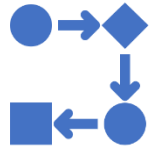
Use-case model





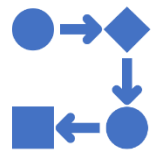






Non-functional requirements:

- UI response time $< 0.5s$
- Delay time (view search results) $< 0.5s$
- Text clear + button not too small
- Localization: The date format used for booking appointment: MM/DD/YYYY
- Efficiency: Based on the chosen book formats, users are provided with different sets of options (as buttons) when viewing book details to avoid situations that users make mistakes, which means users will never perform actions with other types of book formats:
 - + E-book: read, download
 - + Printed book: previewed photos of the printed book, borrow button
 - + Both formats: previewed photos of the printed book, read, download, borrow



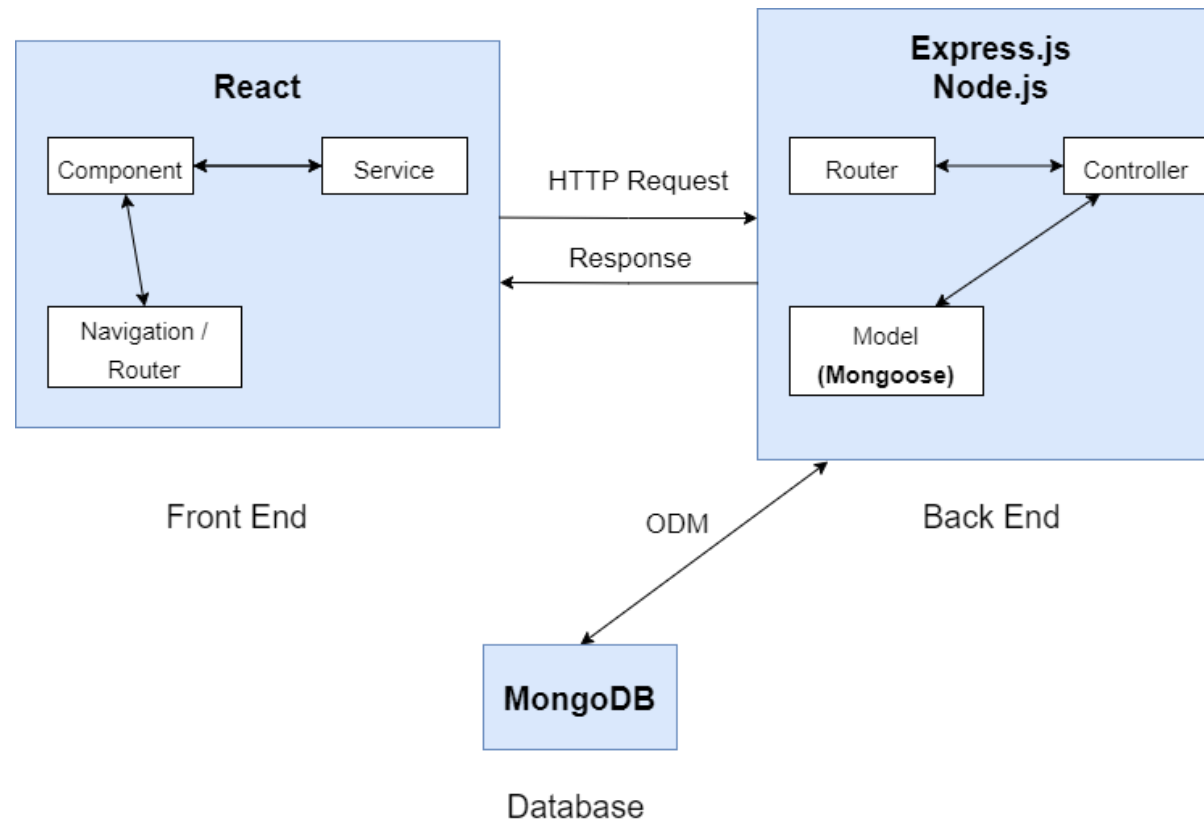
Non-functional requirements:

- Borrow book feature is on the separate page for easier use.
 - Accessibility: can ask for help.
 - Reusability: Q&A section is for users to discuss with others anything related to books. This is useful :
- +Look up important information about books (new editions released, new changes confirmed by authors but weren't mentioned in the old edition, etc.)



Analysis and Design

Architecture



- + Front End sends HTTP requests to Back End. The Back End receives these requests and responds to the Front End.
- + API is called in Node.js and Express.js. We use Google Map API, and API for chat, call functions.
- + Mongoose used for model to connect Node.js with MongoDB.
- + Use ODM (Object document mapper) to connect back end with MongoDB database and vice versa.

Technology used: MERN stack:

+

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The MongoDB logo consists of a dark blue rounded rectangle behind a light gray rounded rectangle. The text "MongoDB" is centered in the light gray rectangle.

MongoDB

The Express.js logo consists of a dark blue rounded rectangle behind a light gray rounded rectangle. The text "Express(.js)" is centered in the light gray rectangle.

Express(.js)

The React.js logo consists of a dark blue rounded rectangle behind a light gray rounded rectangle. The text "React(.js)" is centered in the light gray rectangle.

React(.js)

The Node.js logo consists of a dark blue rounded rectangle behind a light gray rounded rectangle. The text "Node(.js)" is centered in the light gray rectangle.

Node(.js)

Software testing

Test environment

Software name	Purpose	Version	Type
Firefox	Check how the web operates	108.0	Internet Browser
Google Chrome	Check how the web operates	108.0.5359.124	Internet Browser
Safari	Check how the web operates	15	Internet Browser

Test plan

1. Target test item

- Performance and efficiency
- Usability testing
- Main features

Environmental Needs

Hardware Requirements

Software in the Test Environment

Productivity and Support Tools

Test result

Each feature is tested thoroughly using multiple test case, with detailed recorded test step, expected result, actual result and whether it pass or fail.

Function/Feature ID	Case ID	Test case name	Test step	Expected Result (ER)	Actual Result	Status	Tester
Function 1: Upload photos of printed book							
UC01	UI01	Choose correct photo format to upload	1. Choose share printed book option 2. Click on each of 4 cards to upload 4 photos from devices step by step, photos in jpg, png format	Each card will be replaced with photo of the uploaded photo.	Each card will be replaced with photo of the uploaded photo.	Pass	Đinh Mỹ Kỳ
UC01	UI02	Replace 1 of the photos after	1. Choose share printed book	After user uploads new photo,	After user uploads new photo,	Pass	Đinh Mỹ Kỳ
Function 2: View cart							
UC02	UI01	View cart with empty cart	1. Add nothing to cart 2. Click cart button to view cart	1. Nothing appears in the cart	1. Nothing appears in the cart	Pass	Nguyễn Minh Uyên
UC02	UI02	View cart with one book	1. Add one book to cart 2. Click cart button to view cart	1. One item appears in the cart	1. One item appears in the cart	Pass	Nguyễn Minh Uyên
UC02	UI03	View cart with several books	1. Add several books to cart (for 2. Click cart button to view cart	1. A list of several items (for example, 10)	1. A list of several items (for example, 10)	Pass	Nguyễn Minh Uyên
Function 3: Remove item from cart							
UC03	UI01	Remove one item from the	1. Click X button to remove a 2. A message appear to confirm 3. Confirm deleting	1. That specific item should be deleted from	1. That specific item should be deleted from	Pass	Nguyễn Minh Uyên
UC03	UI02	Remove one item from the	1. Click X button to remove a 2. A message appear to confirm 3. Click cancel	1. There should be no changes to the cart	1. There should be no changes to the cart	Pass	Nguyễn Minh Uyên

DEMO

Thank you