\<Group09 - The Hand\>

\<Wellib\>

Vision Document

Version \<1.3\>

Revision History

Date	Version	Description	Author
<21/Jun/23>	<1.0>	<Complete 3.1. Stakeholder Summary, and 3.2 User Summary>	<Phan Thái Khang>
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<06/Jul/23>	<1.3>	<Complete 4. Product Features and 5. Non-functional Requirements>	<Phạm Gia Tuấn Khải>

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Vision (Small Project)

1.   Introduction

Today with the strong development of computers, all jobs have been supported to increase productivity and create the most convenience for users. Library work must also keep up with that trend, to be able to serve readers in the best way. That is why the Wellib project was formed.

This is a project to help readers and librarians find and manage books in the most efficient and convenient way.

This document will detail the audience and goals that Wellib aims to. Through the lines below, users can visualize the general structure, functions of Wellib and notes during use.

1.1   References

[1] Introduction to Software Engineering Lecture slides, 2023, Faculty of Information Technology, University of Science, VNU-HCM.

[2] Project Instruction documentation and videos, 2020, Faculty of Information Technology, University of Science, VNU-HCM.

[3] Django documentation, 2023, Django Software Foundation.

[4] SLiMS documentation, 2023, SDC - Senayan Developers Community (Republic of Indonesia).

[5] Python Django web programming course (Youtube playlist), 2020, Son Nguyen.

[6] Course Registration System (CRS) Project Web, 2001, Rational Software Corporation.

2.   Positioning

2.1   Problem Statement

The problem of	How to follow and manage library books effectively and have a friendly reading community for the library.
affects	Readers who want to find available library books (also want to have a suitable suggestion of books by the readers community) and librarians who have to manage books.

the impact of which is	Readers take a lot of time to find the book they need on the bookshelves (if they can't find it on the bookshelves, it will also take time to ask librarian during working hours and it is not easy to find someone to share their reading experience) and librarians can't control data of books update immediately in a convenient way when just working on paper.
a successful solution would be	Helping readers follow and search book information on websites anywhere, anytime they want in an easy way, and librarians by digitizing books data on our websites. Help everyone share their reading experience by giving them opportunities to share it on our Wellib forum, in the news, and in comments.

2.2   Product Position Statement

For	readers and librarians
Who	- Readers: following book basic information and book status (loaned, available) - Librarians: managing library's books
The (product name)	Wellib (website)
That	Allow readers to follow book information at their place whenever they want (rather than having to go to the library during working hours) and allow librarians to manage books on their PC (rather than managing on paper, which costs more space to store, more time to analyze and less sharing)
Unlike	many traditional library websites
Our product	Not only where to find and manage books but also allowing everyone to share their feelings about books (by sharing on News, Forum or comment section of Wellib website)

3. Stakeholder and User Descriptions

This section describes the users of the Wellib Library System. There are 3 types of users of the Wellib Library System; the Admin, the Librarians, and the Readers.

3.1 Stakeholder Summary

Name	Description	Responsibilities
IT executive	IT Department and the University of Science as a whole.	IT professionals support the library management system, ensuring its smooth operation, security, and integration with other technologies, in collaboration with librarians and staff.
Theory lecturer	Nguyễn Thị Minh Tuyền Teacher	Theory lecturers in a project provide guidance, support, and evaluation, helping students apply theoretical concepts and foster critical thinking.
Practical instructor	Bùi Tấn Lộc Teacher, Hồ Tuấn Thanh Teacher	Practical instructors in a project guide and mentor students, providing hands-on support to help them apply practical skills and achieve project objectives.
Administrators/ Management:	The administrative and data entry personnel.	Administrators manage the library system, making strategic decisions and enhancing efficiency through upgrades and resource allocation.
Readers	Readers	Readers are essential users of the library management system, accessing resources, borrowing materials, and utilizing services. Their feedback drives system improvements.
Librarians	Librarians	Librarians manage book requests and borrowing transactions, ensuring an organized and accessible library for patrons.

External Partners	External Partners	Libraries collaborate with external partners, including consortia, publishers, interlibrary loan networks, and other libraries. The library management system supports these collaborations through seamless integration and interaction.

3.2 User Summary

Name	*Description*	*Responsibilities*	*Stakeholder*
Admin	The administrative and data entry personnel.	The library management system administrator oversees system configuration, user management, maintenance, troubleshooting, customization, data analysis, training, and security. They ensure smooth operation and support the library's mission to deliver efficient and high-quality services.	self-represented
Librarians	Facilitate access to information, support users in their research and learning needs. Allow readers to loan/return books.	Librarians oversee collection management, reference services, user assistance, catalog maintenance, collaborations, and continuous learning. They ensure efficient access to information, support research and learning, and maintain the library system's effectiveness.	self-represented
Readers	Search for books in the management system. Readers browse, select, and borrow materials from the library's collection.	Readers in a library system access and use library resources and services, such as reading, borrowing materials, conducting research, utilizing reference assistance, developing information literacy skills, participating in community activities, and providing feedback	self-represented

		for an improved library experience and support in their personal and educational pursuits.	

3.3   User Environment

The Reader Community is a large sophisticated community that demands the flexibility and response time that a library management system can provide.

Users of the library management system are typically well-educated, possess computer literacy skills, and often have personal computers at home. Enabling them to search for books on their personal computers and borrow books online would significantly enhance the efficiency of the library management system. As a result, the Library management system will be designed to be expandable, and all user community data will be table driven and easily modifiable upon system installation.

In every iteration of the library system, the primary focus has always been to provide public access to books. This principle holds true for our model as well, as our goal is to bring the joy of reading to people worldwide. We aspire to create a diverse reader community that transcends boundaries of race or nationality. Our library membership is open to anyone aged 13 or older, without any specific restrictions. Our aim is to foster a sense of inclusivity and embrace the richness of diversity among our readers across the globe.

3.4   Summary of Key Stakeholder or User Needs

Need	Priority	Concerns	Current Solution	Proposed Solutions

Searching books by title, author, or call number.	High	- Searching for books is slow and ineffective. - Keyword accuracy - Limited visibility of physical materials - Limited visibility of physical materials	Currently, searching for a book in a library in person involves physically navigating the library's layout to find the relevant section. Readers browse through bookshelves, visually scanning titles, authors, and covers to locate their desired book. They may refer to catalog cards or signage for additional information or seek assistance from library staff.	Streamlines the process by offering a user-friendly search interface. Users can enter keywords, titles, or authors to quickly find relevant results. The online catalog provides comprehensive information about each book, including availability and location details. This digital solution eliminates the need for physical browsing and enables users to search for books conveniently from any location with internet access.

Loan a book in the library management system	Medium	Concerns regarding borrowing books in a library management system include system reliability, user interface usability, book availability accuracy, reservation and hold management, privacy and data security, and fines and penalties.	To borrow a book in person from a library, users typically locate the book, present their library card, and have the book checked out by library staff or a self-checkout system. They are responsible for returning the book by the specified due date.	Provide a user-friendly online interface with real-time availability information, online reservations, and renewals. The system would prioritize data security and privacy while improving accessibility and convenience for borrowers.

3.5   Alternatives and Competition

Library management systems have various alternatives and competitors. These include open-source systems like Koha and Evergreen, commercial systems offered by companies such as SirsiDynix and Ex Libris, integrated library systems like Alma and Symphony, cloud-based systems like LibraryWorld and Apollo, and digital asset management systems like DSpace and Omeka. Factors such as cost, scalability, features, and support should be considered when selecting the most suitable system for a library's needs.

4.   Product Overview

This section provides a high level view of the Wellib Library System's capabilities, interfaces to other applications, and system configurations.
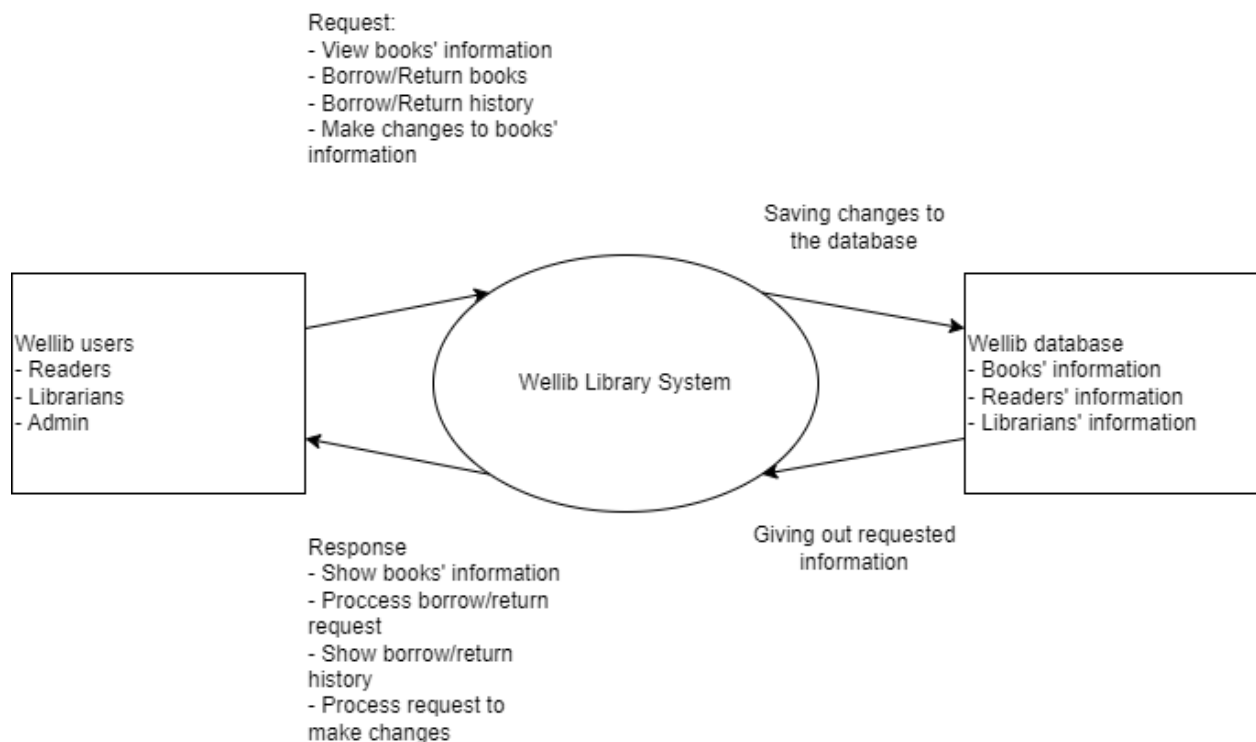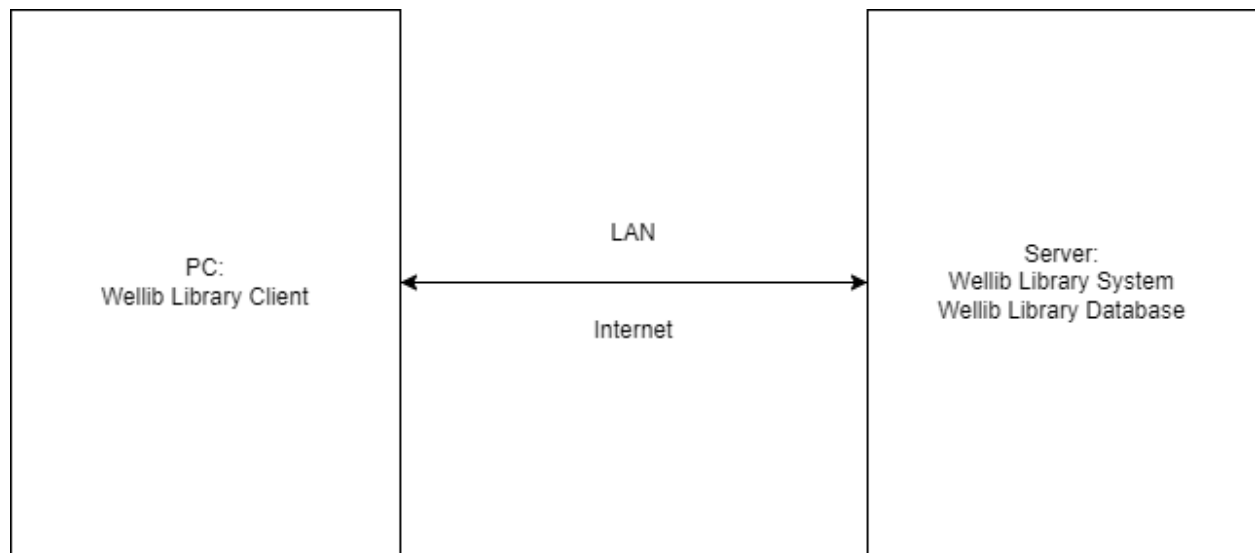
4.1 **Product Perspective**

The Wellib Library System will interface with the existing database as shown in the context diagram below (see Figure 6.1.1).

The Wellib Library System will consist of a client component and a server component as illustrated in Figure 6.1.2. The server component resides on the Local Host, supported by the Django framework. This interface is supported by SQLite.

The client component resides on a personal computer. The user may access the Wellib Library System from the PC through the LAN or Internet. A valid ID number and password must be entered in order for access to be granted.

4.2 Assumptions and Dependencies

The following assumptions and dependencies relate to the capabilities of the Wellib Library System as outlined in this Vision Document:

- The Database Systems that depend on SQLite will continue to be supported until at least 2050.
- Considering the current pace of development, Wellib Library System is expected to make its first release by the third quarter of the year.
- Technology Compatibility: The availability and compatibility of specific versions of Django, Python, HTML, CSS, and SQLite3 can impact the features and functionality of the website. Incompatibilities or limitations in certain versions may require adjustments to the envisioned features.
- Browser Compatibility: Different web browsers have varying levels of support for HTML and CSS features. Ensuring cross-browser compatibility may influence the features and design choices made in the Vision document.
- Performance Considerations: The performance of the website, including page load times, response times, and efficient handling of data, can affect the user experience. Performance optimizations and considerations may influence the choice of features and implementation decisions outlined in the Vision document.
- Project Timeframe and Resources: The availability of time, budget, and skilled resources can affect the scope and complexity of features outlined in the Vision document. Limitations in these areas may require prioritization or adjustments to feature implementation.

5. Product Features

No.	Feature	Description	Priority
1	Login/Register accounts	Readers can create their own account to manage their transactions.	High
2	Searching books	Readers can find the books they want by typing in keywords	Medium
3	Showing list of search results	Suggested book results will be shown and can be filtered based on certain criteria (published date, category, etc.)	Medium
4	Viewing books' detailed information	Each book has its own page to show its information as well as its available status (whether it can be borrowed or not).	Medium
5	Comment	There is a comment box for each book page to help readers give their opinions.	Low
6	Allowing readers to borrow/return books	The librarian will update the information about loaning/returning books on Wellib when readers want to borrow/return books.	High
7	Request to add/delete/edit book information	When librarians want to add/delete/edit book information, they will send a request to the administrators along with required data.	Medium
8	Add/delete/edit information	The admin handles requests from librarians and decides what to do afterwards.	Medium
9	Create and manage reader and librarian accounts	All accounts will be managed only by the admin.	Medium

No.	Feature	Description	Priority
10	Reports	The admin can export a listing on book information, borrow/return status, etc. The listing serves as an annual or monthly report to give insights on the library's current state.	Low

6.   Non-functional Requirements

- Security: Users' accounts must be protected. The system would provide direct account managing access to a few selected users. It will be secure on the network and only authorized people can use it.
- Maintainability: Well-structured code and documentation for easy maintenance and updates.
- Protection: Robust data backup, integrity checks, and compliance with data protection regulations
- Reliability: Responsive system for efficient searching, borrowing, and returning of books.
- Performance: Stable server with little to no interruption or lagging. The system can store a large number of users and books, a maximum of 1000 books/ users.
- Scalability: The system can support 1000 readers and handle 100 borrow transactions at the same time while maintaining optimal performance.
- Availability: The website is available to access during specific time of the day (from 7am to 10pm everyday)
- Portability and Compatibility: The website for the library system must be able to run in the following browsers:
  - Google Chrome 54 or later
  - Microsoft Internet Explorer 11 or later
  - Mozilla Firefox ESR 45 or version 48 or later
- Usability: User-friendly interface prevents readers and librarians from getting confused