***Enhancing the Book Exchange platform***

**Group members: Liu Ruoyang A23MJ4022,**

**Kahlan Sultan Mohammed A23MJ4021,**

**Bu Guoshun A23MJ4019**

**STARTING THE PROJECT**

**1.1 Project Overview (refer to 1):**

We found that users face significant difficulties when trying to exchange books due to the complexity of the current system. The issues include difficulty in searching for specific books, challenges in contacting the other party, and lack of real-time updates on book availability. Furthermore, there is no system in place to keep exchange records, which leads to disputes when returning books. To address these problems, we plan to build a new online book exchange platform. This platform will offer a streamlined, one-step process for book exchanges.

**1.2 Problem Statement (refer to 2)**

We are planning to create an online book exchange platform to address the shortcomings of the current system. The main issues with the current platform are as follows:

**1.Difficulty in Finding Specific Books:** Users struggle to find specific books due to inadequate search functionality.

**2.Communication Barriers:** It is challenging for users to contact each other to arrange exchanges.

**3.Lack of Real-Time Updates:** The current system does not provide real-time updates on book availability, making it difficult to know if a book is available or already lent out.

**4.No Exchange Records:** The absence of exchange records makes it difficult to resolve disputes when returning books.

**1.3 Proposed Solutions (refer to 3)**

To address the identified problems, we propose the following solutions:

**1.Enhanced Search Functionality:** Implement a robust search feature that allows users to filter books by keywords such as category, title, author, etc., making it easier to find specific books.

**2.Direct Communication Channels:** Provide a dedicated communication page for borrowers and lenders, enabling them to send messages and arrange exchanges directly.

**3.Real-Time Availability Updates:** Ensure real-time updates on the availability of books. When a book is borrowed, the system will automatically mark it as lent and close its public exchange link.

**4.Exchange Records:** Maintain exchange records containing the personal information of both parties on the platform. This record will be accessible through the dedicated communication page until both parties mark the exchange process as completed. In case of disputes, users can seek help through the platform. The records will be destroyed once the exchange process is finalized.

**INFORMATION GATHERING**

**2.1 Gathering Information from the Current System (refer to 4.1)**

AS-IS Analysis The current book exchange system has several inefficiencies:

**Difficulty in Finding Specific Books:** The search functionality is inadequate, making it hard for users to find the books they are looking for.

**Communication Barriers:** Users face challenges in contacting each other to arrange exchanges, leading to delays and misunderstandings.

**Lack of Real-Time Updates:** The system does not provide real-time updates on the availability of books, requiring manual checks to see if a book is available.

**No Exchange Records:** The lack of a record-keeping system leads to difficulties in resolving disputes when books are returned.

This analysis highlights the key issues that need addressing in the new system.

**2.2 Methods Used to Gather Information (refer to 4.2)**

**1.Questionnaires**

**a.Process:**

**Design:** Create a structured questionnaire with a mix of multiple-choice, Likert scale, and open-ended questions.

**Distribution:** Distribute the questionnaire to a large sample of users via email and online survey platforms.

**Collection:** Collect responses over a specified period, ensuring a high response rate by sending reminders.

**b.Data Characteristics:**

**Quantitative Data:** Responses to multiple-choice and Likert scale questions provide numerical data that can be statistically analyzed to identify common issues and trends.

**Qualitative Data:** Open-ended responses offer detailed insights into specific problems and suggestions for improvement.

**2.Interviews**

**a.Process:**

**Selection:** Select a diverse group of participants, including users, librarians, and administrative staff, to gain multiple perspectives.

**Preparation:** Develop a semi-structured interview guide with key questions and topics to cover, allowing flexibility for in-depth exploration.

**Conducting:** Conduct one-on-one or small group interviews, either in person or via video conferencing, and record the sessions for accurate transcription.

**b.Data Characteristics:**

**Qualitative Data:** Detailed, narrative data that provides deeper insights into user experiences, pain points, and suggestions for improvements.

**Contextual Information:** Rich, contextual information that helps understand the underlying reasons behind user challenges and preferences.

Using a Mixed-Method Approach Using both questionnaires and interviews offers several advantages:

**Comprehensive Data:** Combining quantitative and qualitative data provides a more complete picture of the current system's issues and user needs.

**Validation:** Cross-verifying information from questionnaires with in-depth interviews ensures the reliability and validity of the findings.

**Flexibility:** The mixed-method approach allows for both broad trend analysis and detailed exploration of specific issues, leading to more effective and targeted solutions.

(Made by LIU RUOYANG A23MJ4022 until here)