(Made by Kahlan Sultan Mohammed A23MJ4021)

5.0

Requirement analysis based on an As-is analysis, includes understanding the current state of a the book exchange platform and determining what needs to be developed or changed.

5.1 current business process (scenarios, workflow)

1. student registration and profile creation

. Student use emails or any other social media account to register in this platform.

. They make profiles listing their universities, programs and selection.

1. List of books for exchange

. Students can list the book they want to exchange.

. students give details for the book they want to exchange Ex. Books’ title, books’ condition

1. Book search for exchange

. students can search for the available books by looking at the title or author.

1. Requesting books.

. students can ask for books exchange directly from each other

5.2 Functional requirements (input, process and output)

. input:

1. Students registration information

Input:

Email.

Name.

password.

institution.

process:

. Students gives their information during registration.

Output:

. Profiles created based on information provided.

1. Details for the list of books

Input:

book title

book author

book condition

process:

students enter books details when they list books for exchange

output:

search outcomes meet the student’s query.

. process:

1.User Authentication and Authorization:

Input:

student name

password

process:

test student certificate during login to allow access to the platform.

Output:

Access accepted or denied base on the authentication

1. Book listing management

. input:

book details.

. process:

Prove and store book listings in the platform's database.

Output:

The list of books displayed on the platform for students to view.

Output:

1. Book listing:

Output:

Book title

Book author

Process:

Show book listing for students to view

1. Search outcomes:

Output:

List of books meet the search standard

Process:

Present search results based on the user's query

5.2 Non-functional Requirement(performance and control)

1. Performance requirements

. Response time: the system should reply to students request within specified time.

**. Throughput :** The platform should handle a certain number of concurrent users or transactions per minute without significant degradation in performance, ensuring smooth operation during peak times.

**. Scalability:** The system should be able to manage increased load by scaling resources such as servers, databases, and network bandwidth automatically.

**. Reliability:** The platform should be available and dependable , with minimal downtime or service interruptions, aiming for at least 99.9% uptime.

1. Control Requirements:

Access control **:** students authentication and authorization procedure should make sure that only legal students can access some attributes or data

Privacy and Compliance: The platform should adhere to information security rules.

Error Handling: strong error procedure should be in place to gracefully handle unexpected errors or exceptions.

These requirements will help ensure that your book exchange platform not only performs well under various conditions but also maintains control over access, data integrity, and security