Lab-2

① **Library management system**

1 Introduction:

1.1 Purpose of this document:

This document specifies the requirements for the design and implementation of a library management system.

1.2 Scope of the document

The library management system is designed to help users to request for the articles they require and obtain it. The development cost is estimated to be $20,000 and it will take 4 weeks to complete (approximat -ely)

1.3 Overview

Users will be able to see a catalogue of available articles and browse through them. They can select the articles they require, pay for them and receive them immediate -ly. They can get either downloadable or print-only articles. They will be able to login and save their profiles for faster transactions.

2. General description

· The objectives of the user are to browse and purchase the articles they desire. The system will have multiple payment modes for the benefit of the users along with a smooth user experience and an easy to understand UI.

3. Functional Requirements

* The librarians should be able to update the catalogue of books and articles.

* Users should be able to view the catalogue
of articles available to them.
* A proper payment interface should be
setup to allow users' to payments to
reach the accounts of the organization
* Prices should be calculated based on the
articles in the cart.

4. Interface Requirements
* The interface should allow users to
browse through the catalogue of books
and select them accordingly.
* The interface should allow users to
login and save their profiles.
* The interface should provide a smooth
user experience.
* It should facilitate light and dark
modes.

5. Performance Requirements
* There should be a fail safe to
prevent transactional errors.
* The download links should be working
present efficiently.
* Routing should be fast
* The system should be broken down into components
-s

6. Design constraints
* A team of programmers who are
experienced in handling data structures
and perform operations on databases.
* Dynamic rendering frameworks like ReactJS

* A lot of phressing power is required to simultaneously handle multiple user operations.

7. Non-functional requirements
   components
   * The system should be reusable
   * It should be compatible with popular operating systems like windows, MacOS, Linux, Android and ios.
   * Transactions should be secure
   * Data should be handle null values and it should be possible to modify the schema.

8. Preliminary Schedule and Budget
   The project is estimated to be completed in 4 weeks and is estimated to cost approximately $20,000

Classes
* User
* Librarian
* Login page
* Article catalogue
* Article database
* Payment interface
* Bank database.