MINI PROJECT – IS2106

LibraryMate - Library Management System

Group 25

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1.0. INTRODUCTION

1.1 Purpose

This document outlines the requirements for developing a public library management system. It provides guidance for project design, development and testing.

1.2. Intended Audience

The intended audience here includes:

- System developers
- Project managers
- Users of the library management system such as librarians and students.

1.3 Scope

The project facilitates library operations including user authentication, student registration, book management, book ordering, periodic retrieval of books and communication between librarians and students in the library system.

1.4 Definitions, abbreviations and acronyms

SRS : Software Requirements Specification

DBMS : Database Management System

UI : User Interface

API : Application Programming Interface

2.0. OVERALL DESCRIPTION

2.1 Product Perspective

The public library management system is accessible through standard web browsers. It interacts with a back-end database to store and retrieve data related to users, books, orders and deadlines. The system will be developed, scaled and maintained using modern web technologies.

2.2 Product Functions

The system will provide the following functionalities

- User Authentication and Authorization
- Registration of students
- Book catalog management
- Book ordering and order management
- Last date reminder for books received
- Communication between librarians and students

2.3 User Characteristics

The system fulfills two primary user roles

Students ***:*** users who browse, order and borrow books from the library.

Librarians : Users responsible for library management, including book inventories, orders and deadlines.

2.4 Assumptions and Dependencies

Assumptions

The system requires that

- Users must have a modern web browser and an internet connection.
- The database management system (DBMS) used to store the data is available and properly configured.
- The hardware and infrastructure used in the hosting of the web application is in place.

Dependencies

- Implementation is dependent more on external factors. This is largely because the system will rely on a number of external API's or external libraries for functionality such as user authentication and sending e-mail notifications among others.
- Stakeholders must also be able to quickly provide feedback and to work in the development of the application.

3.0. SYSTEM FEATURES AND REQUIREMENTS

3.1 Functional Requirements

Functional requirements describe the specific tasks the system must perform to meet user needs. It includes:

- User authentication
- Student registration
- Book cataloging and management
- Order placement and management
- Notification of last date for delivery of books
- Communication functions

3.2 Non-Functional Requirements

Non-functional requirements indicate scenarios that can be used to test system functionality.

It includes**:**

- Performance : The system should handle a large number of users efficiently.
- Security : A robust security process should be followed to protect user data.
- Reliability : The system should be reliable with reduced downtime and continuous data connectivity.
- Usability : User interfaces should be intuitive and easy to navigate.

3.3 User Interfaces

This web system is designed to suit the needs of librarians and users. The interface is simple and user-friendly. Searching, ordering, and finding the due dates for books can be easily managed.

3.4 Software Interfaces

The system works with data systems such as database management systems to store and retrieve data. Works with library data systems and master data systems for user identification and email notifications.