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 machine two number one person roles:

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

Librarians : Users answerable for library management, which includes e book inventories, orders and closing dates.

2.4 Assumptions and Dependencies

Assumptions

The system calls for that:

- Users ought to have a contemporary internet browser and an internet connection.
- The database management machine (DBMS) used to keep the statistics is to be had and well configured.
- The hardware and infrastructure used within the website hosting of the web software is in vicinity.

Dependencies

- Implementation is dependent more on external elements. This is essentially because the gadget will rely on a number of outside API's or external libraries for functionality along with person authentication and sending e mail notifications among others.
- Stakeholders ought to additionally be able to quick provide remarks and to work in the improvement of the software.

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.