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Acknowledgments

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1. Project Stakeholders:

Thanks to **ADEDOKUN FATIMO ADEBISI AND OGBATUE PRECIOUS CHIWEIKE** who provided the vision and requirements for this project. Your insights and feedback were crucial in shaping the direction and functionality of the GUI application.

2. Project Team:

A special appreciation to **LAWAL HUSSEIN TAIWO** who worked tirelessly to bring this project to fruition. Your dedication, expertise, and collaborative spirit have been instrumental in overcoming challenges and achieving our goals.

This project would not have been possible without the collective effort of everyone mentioned above. Thanks to everyone for the successful completion of the development of this web application.

eProject Synopsis

Project Title: Library Management System

Objective:

The primary objective of this project is to develop a comprehensive Library Management System (LMS) that automates the management of library resources, facilitates efficient tracking of books, and streamlines the borrowing and returning processes.

Scope:

- Develop a user-friendly interface for library staff and patrons.
- Implement functionalities for adding, updating, and deleting book records.
- Enable tracking of book availability and borrowing status.
- Integrate a search feature for books based on various criteria (title, author, genre, etc.).
- Provide reports on book borrowing statistics and inventory management.

Technology Stack:

- **Frontend:** Java (GUI)
- **Backend:** MySQL database for storing book and user information
- **Tools & Libraries:** ** JavaFX for GUI development, JDBC for database connectivity

Methodology:

1. Requirement Analysis:

- Gather requirements from library staff and patrons to understand their needs.
- Define functional and non-functional requirements.

2. System Design:

- Design the system architecture, including database schema and application flow.
- Create wireframes and mockups for the user interface.

3. Implementation:

- Develop the frontend interface using JavaFX.
- Implement backend functionalities using Java and JDBC.
- Integrate the frontend and backend components.
- And we also use mysql as the database

4. Testing:

- *Perform unit testing for individual components.*
- *Conduct integration testing to ensure seamless interaction between components.*
- *Execute user acceptance testing (UAT) with library staff and patrons.*

6. Maintenance:

- *Provide ongoing support and maintenance.*
- *Implement feedback and update the system as needed.*

Expected Outcomes:

- *Improved efficiency in managing library resources.*
- *Reduced manual effort and errors in tracking book transactions.*
- *Enhanced user experience for both library staff and patrons.*
- *Detailed reporting capabilities for better decision-making.*

Timeline:

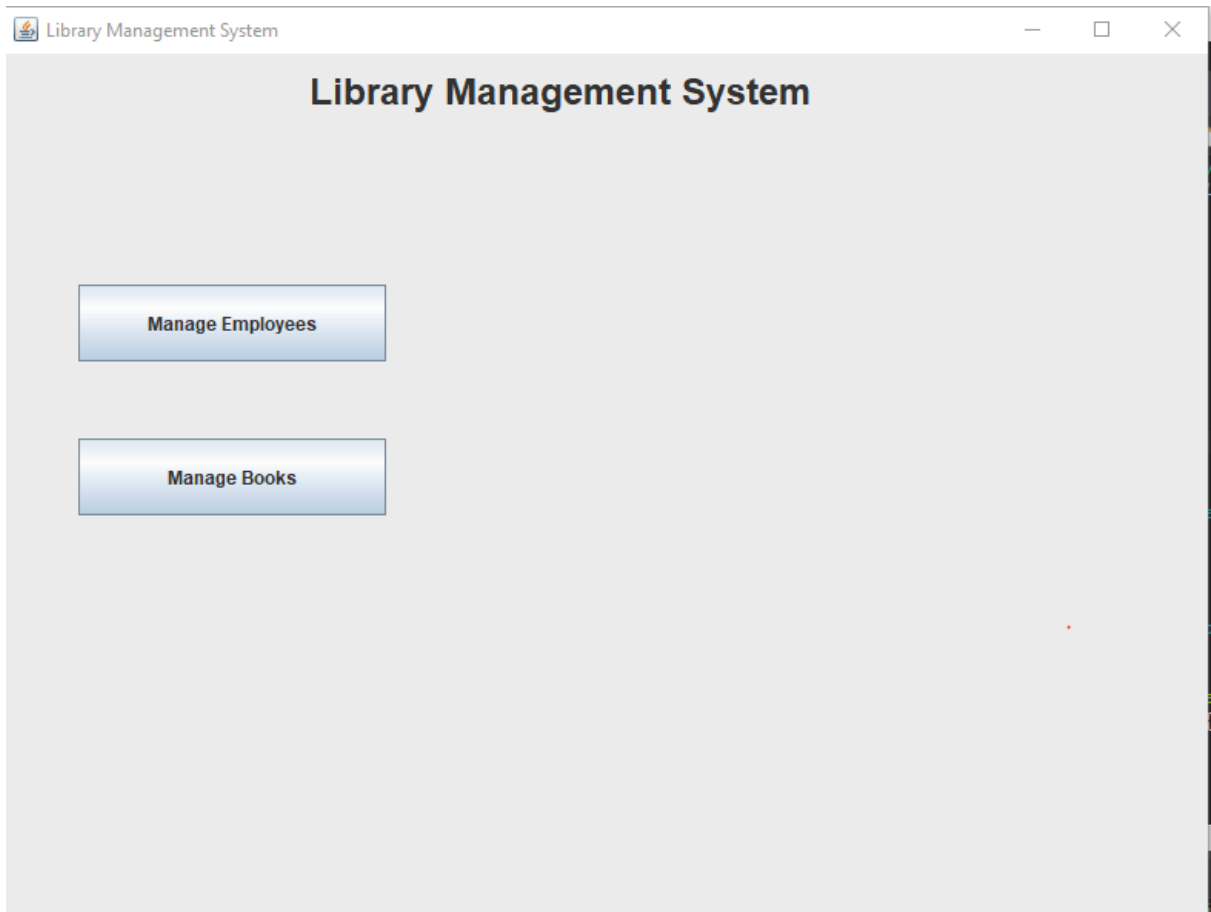
- *Requirement Analysis: 5 days*
- *System Design: 1 weeks*
- *Implementation: 4 days*
- *Testing: 3 days*
- *Deployment and Training: 1 day*

Conclusion:

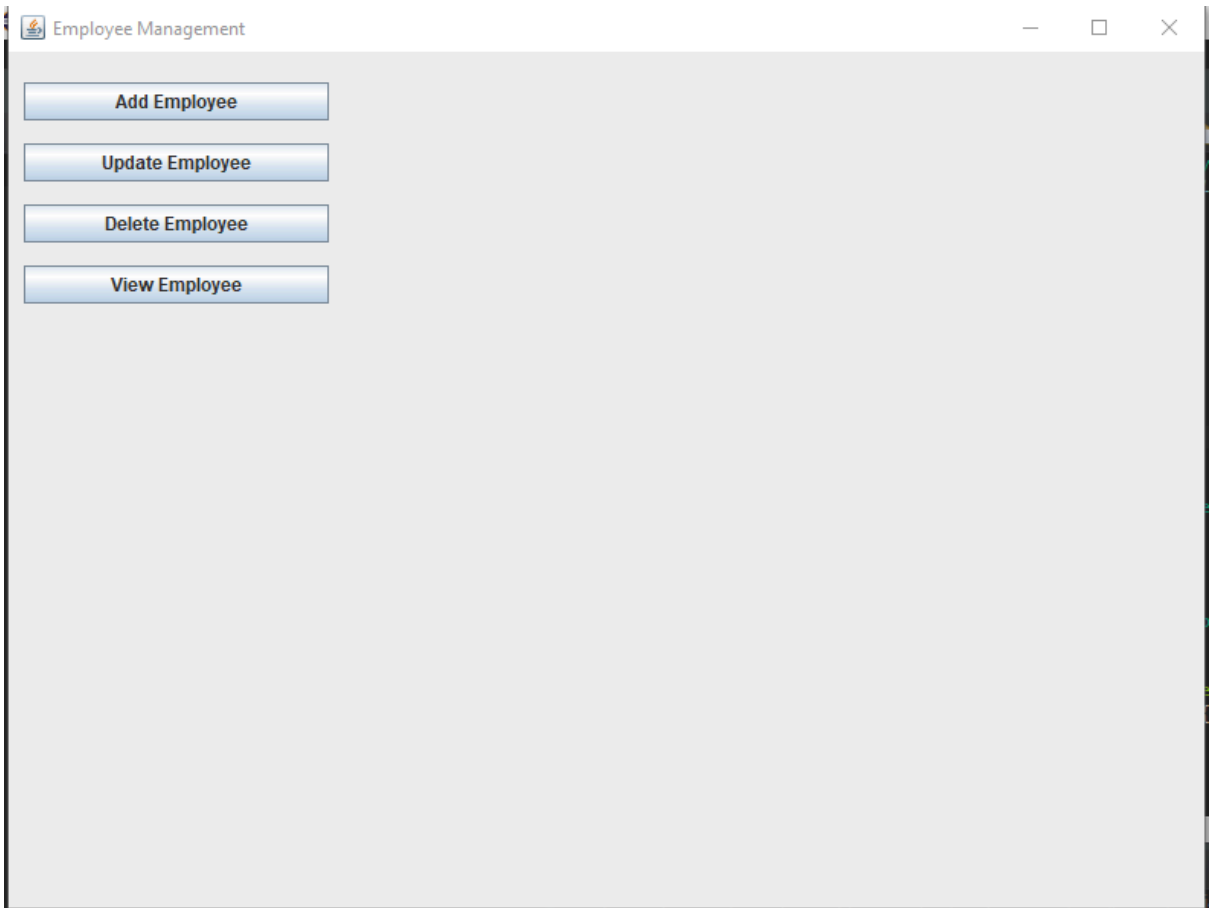
The Library Management System aims to revolutionize the way libraries operate by leveraging technology to manage resources efficiently and provide a seamless experience for users. With its robust functionalities and user-friendly interface, the LMS will serve as a valuable tool for library management.

Screen Shots

Main:



Employee:



Employee Management

Add New Employee

Name:

Address:

Phone Number:

Department:

Add Employee

Employee Management

Update Employee

Employee ID:

Name:

Address:

Phone Number:

Department:

Delete Employee

Delete Employee

Employee ID:

Book Management

Add Book

Update Book

View Books

Delete Book

Add Book

Call Number:

ISBN:

Title:

Author:

Add Book

Update Book

Call Number:

New ISBN:

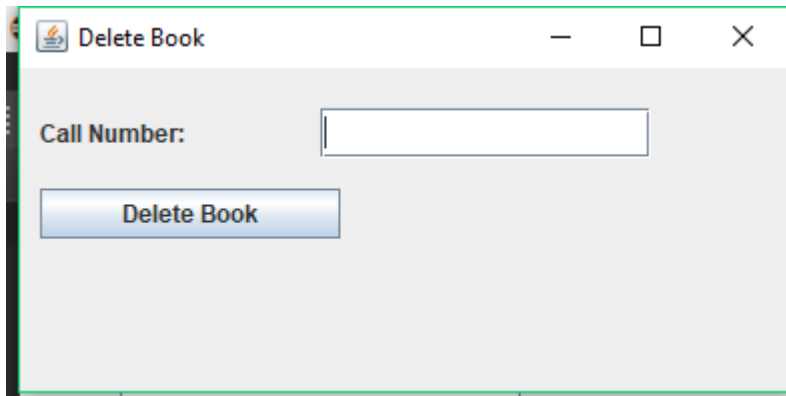
New Title:

New Author:

Update Book

View Books

Call Number: 09-13-344, ISBN: 98193, Title: barbie, Author: lee junkock
Call Number: 57689, ISBN: 678790, Title: tgy, Author: ggv



Source Code

Source Code will be attached to this document.

User Guide

The Library Management System (LMS) helps libraries efficiently manage resources and streamline book transactions.

System Requirements

- OS: Windows 10+, macOS 10.14+, or Linux
- JDK: Version 11+
- Database: MySQL 5.7+
- Memory: 4 GB RAM
- Storage: 500 MB

Installation Guide

- Install JDK: Download and install from Oracle.
- Set Up MySQL: Install MySQL and create a database named `library_db`.
- Configure LMS: Download LMS files, update database settings in the configuration file, and compile and run the application.

Developer's Guide

The codes have lightweight comments for guidance and easy editing.

