

# Library Management System

Our Library Management System, built with Shell Scripting, efficiently manages books and student records. It offers secure, role-based access, distinguishing between Admins and regular users. The system is user-friendly and designed to streamline everyday library tasks like managing books and students.

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# Objective

Efficient Book Management

Easily add, view, and update book information in the system.

2 Student Data Handling

Securely store and manage student records.

Role-based Access Control

Provide permissions for Admins and regular users.



# Login System

#### Secure Authentication

Users can log in as Admins or regular users with unique credentials.

#### Access Permissions

The login system enforces rolebased permissions, ensuring users can only perform authorized actions.

#### **User Validation**

The system thoroughly validates user input to maintain data integrity.





# Menu Navigation

#### Streamlined Interface

The menu provides a user-friendly navigation experience.

### Role-specific Views

Admins and regular users see menu options based on their permissions.

### Quick Access to Key Features

Users can easily find and interact with the system's core functionalities.





# Book Management

Add New Books

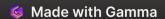
Users can easily input book details, such as title, author, and availability.

View Book

The system provides a comprehensive overview of all books in the library.

Update Book Information

Admins can modify book details as needed, ensuring accurate records.



# Student Management

### Student Registration

Users can add new student accounts with relevant details.

### Borrowing History

The system tracks each student's book borrowing and return records.

### Account Management

Admins can update student information and manage their library accounts.



# Data Handling

### Separate Data Files

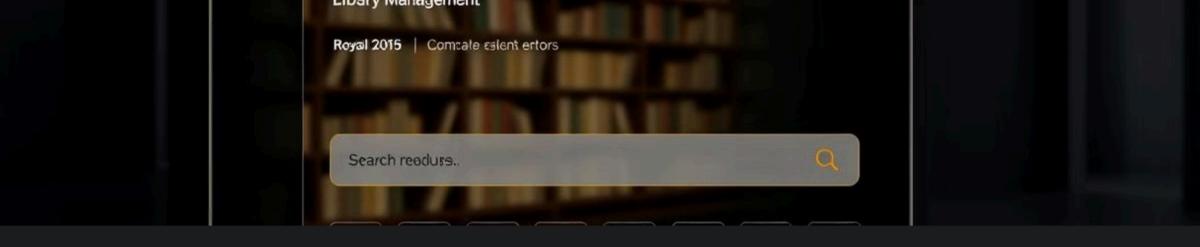
The system stores book and student data in distinct files for better organization and clarity.

#### Data Validation

Stringent input validation ensures the integrity and accuracy of all data entered into the system.

#### Reliable Performance

The efficient data handling mechanisms provide fast and reliable access to library information.



## User Interface



### Intuitive Design

The user interface is designed with simplicity and ease of use in mind, ensuring a smooth experience for all users.



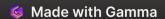
#### Accessible Features

Key functionalities, such as book and student management, are prominently displayed and easily accessible.

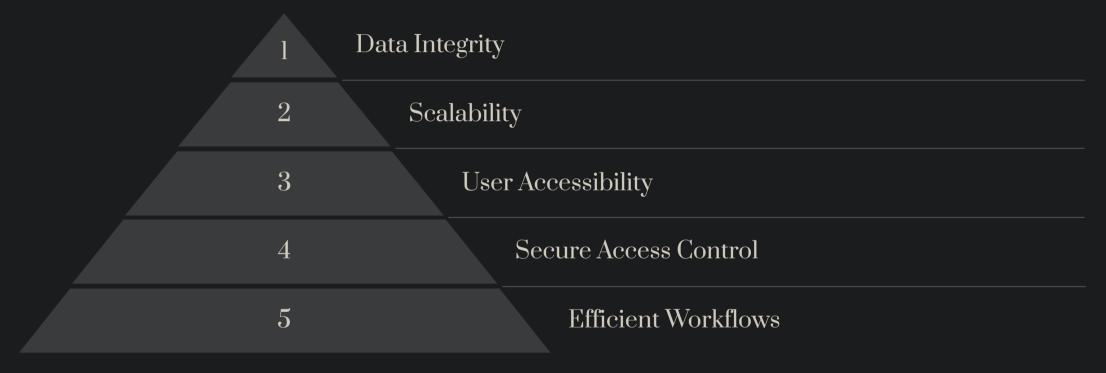


### **Customizable Options**

Users can personalize settings and preferences to further enhance their interaction with the system.

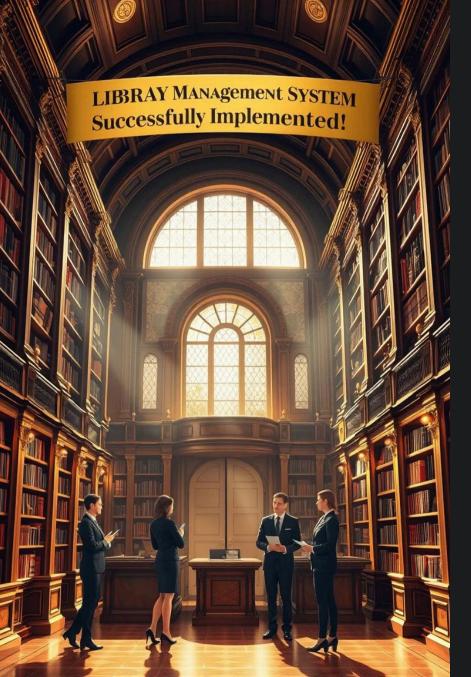


# Challenges & Solutions



The Library Management System organizes data into separate files for clarity and ensures accuracy with input validation. The user interface is simple and intuitive, making key functions easy to access. Challenges like data integrity, scalability, and secure access are addressed through robust design and efficient workflows.





## Thank You

Thank you for your time and attention. We hope this presentation has provided you with a comprehensive understanding of our innovative Library Management System. If you have any further questions or would like to explore the system in more detail, please don't hesitate to reach out.